

**OUTER CONTINENTAL SHELF LANDS ACT AMENDMENTS
AND COASTAL ZONE MANAGEMENT ACT AMENDMENTS**

**JOINT HEARINGS
BEFORE THE
COMMITTEES ON
INTERIOR AND INSULAR AFFAIRS**

**AND
COMMERCE
UNITED STATES SENATE**

**Pursuant to S. Res. 45
The National Fuels and Energy Policy Study**

**AND
S. Res. 222
The National Ocean Policy Study**

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

**OUTER CONTINENTAL SHELF LANDS ACT AMENDMENTS AND
COASTAL ZONE MANAGEMENT ACT AMENDMENTS**

APRIL 8 AND 9, 1975

Serial No. 94-14 (92-104)

PART 2



**Printed for the use of the
Committees on Interior and Insular Affairs and Commerce**

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U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1975

SENATE RESOLUTION 45

NATIONAL FUELS AND ENERGY POLICY STUDY

This publication is printed for the use of Senators participating in the National Fuels and Energy Policy Study, authorized by Senate Resolution 45 of the 92d Congress.

Senate Resolution 45, introduced by Senators Jennings Randolph and Henry M. Jackson, was amended and agreed to by the Senate on May 3, 1971. The resolution authorized the Senate Committee on Interior and Insular Affairs and ex-officio members of the Committees on Commerce and Public Works and the Joint Committee on Atomic Energy to make a comprehensive study of programs and policies required to meet national energy needs.

Subsequently, the Senate approved the addition of ex-officio members from the Committees on Aeronautical and Space Sciences, on Finance, on Foreign Relations, on Government Operations, and on Labor and Public Welfare.

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OCS LANDS ACT AMENDMENTS AND COASTAL ZONE MANAGEMENT ACT AMENDMENTS

TUESDAY, APRIL 8, 1975

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
AND THE COMMITTEE ON COMMERCE,
Washington, D.C.

The committees met, pursuant to recess, at 10 a.m. in room 3110, Dirksen Office Building, Hon. Richard Stone, presiding.

Present: Senators Stone, Johnston, Haskell, Hollings and Mathias.
Also present: Grenville, Garside, special counsel and staff director; and D. Michael Harvey, deputy chief counsel.

OPENING STATEMENT OF HON. RICHARD STONE, A U.S. SENATOR FROM THE STATE OF FLORIDA

Senator STONE. Good morning ladies and gentlemen. This is the fourth of 5 days of hearings on legislation to review the OCS Lands Act. Senator Mathias will Chair this morning's hearings, but I am opening for him.

I have a statement by Senator Bentsen that will be included in the record at this point.

[The statement follows:]

STATEMENT OF HON. LLOYD BENTSEN, A U.S. SENATOR FROM THE STATE OF TEXAS

Mr. BENTSEN. Mr. Chairman, I appreciate this opportunity to testify on behalf of S. 1383, a bill to amend the Outer Continental Shelf Lands Act. I was pleased to appear before this Committee during the last Congress in support of a similar measure, S. 3185. The bill we are discussing today is essentially the same, with the exception of an additional provision for the return of a portion of offshore revenue to the affected Coastal State.

The bill is patterned after a production sharing arrangement first adopted in Indonesia and now in use in eleven countries around the world. Very briefly, the bill would increase from 16 $\frac{2}{3}$ percent to 36 percent the amount which an oil company is required to pay the Government from production revenues, prior to initial exploration costs being recovered. After the initial cost recovery, that payment would increase to 60 percent of production revenues minus actual ongoing operating costs. The bill would apply to all leases awarded after the date of its enactment.

I believe the adoption of this measure will accomplish four things:

First, it would allow the American citizen to receive a substantial benefit from the higher prices being paid for oil produced on his lands.

Second, it will encourage faster development of offshore oil and gas resources by permitting more rapid leasing of Federal offshore lands.

Third, it will increase competition within the petroleum industry, by enabling the smaller oil companies to participate in offshore leasing.

Fourth, it will generate additional Federal revenue so that a portion of such revenues may be returned to the several coastal states without loss to the Federal Treasury. Financial assistance is needed by the Coastal States to encourage development and to compensate them for the adverse impact of Outer Continental Shelf development.

The present leasing system runs counter to all of these objectives.

Under the present system an oil company operating on Federal offshore lands pays the Government a royalty of 16 $\frac{2}{3}$ percent of the oil and gas produced. However, the Government's principal compensation comes from the large cash bonuses which the companies pay in bids for the right to drill on these tracts. Only the very largest oil companies have been able to afford to take full advantage of this type of proposal.

While the present system results in a large initial cash payment, the American citizen receives very little from what may be an extremely valuable oil and gas discovery on his lands. If the lease proves to be undervalued by the companies who bid on the tract, the Government has no way to share in what may be a bonanza. This becomes far more important today than it has been in the past due to higher oil prices and the President's desire to greatly increase the schedule of lease sales. As S. David Freeman of the Ford Foundation's energy project noted in the Washington Post in April of 1974, since the Government does not know the value of what it is selling until wells are drilled, a rapid acceleration of leases under the present system could result in leases going for prices which do not protect the interest of the American taxpayer. I believe my bill increasing the share of the proceeds from the sale of the oil and gas once found and produced would insure that the taxpayer received a fair compensation for these valuable minerals regardless what was paid in initial bonuses. In addition, by taking the bulk of the Government's compensation from the sale of these minerals the Government's revenue will increase with oil prices—allowing the American taxpayer to share in the higher oil prices he is being asked to pay.

Since the high initial bonus payments are presently the Government's principle means of compensation, the concern for maintaining those high payments has been one of the principal restraints to faster leasing schedules.

This became painfully obvious on February 5 of this year when the Interior Department opened bids for 515 tracts off south Texas, but found offers for only 143 of the tracts. Industry officials blamed the high cost of bonus bids and the "capital crunch" for the failure of the lease offering.

Heretofore, lease sales have been timed to maximize bonus bids rather than to maximize the exploration and development of offshore lands. And the recent Texas situation points to the folly of continuing this set of priorities.

Increasing the number and size of these sales is one of the fastest ways of making our Nation more energy self-sufficient. Less than 3 percent of the 186 million acres in the Federal Outer Continental Shelf is presently under lease yet we are producing more than a million barrels of oil a day from these leases. The Secretary of Interior has testified that the potential recoverable petroleum resources remaining on the Outer Continental Shelf is estimated to be 200 million barrels of crude oil and natural gas liquids and about 850 trillion cubic feet of natural gas.

Just the oil and liquids alone would increase our present reserves six times over. We must accelerate our leasing of these tracts but we must do so in a manner which insures the American taxpayer gets his fair share of the value of that production. As leasing is accelerated there is sincere and justified concern that the bonus bids will continue to decrease in size as greater number of bids are required. Thus there is a need to move away from bonus bidding in order to protect Federal revenue. I believe my bill substantially increasing the amount paid once production is found will meet this need.

Mr. Chairman, a rapid acceleration of lease sales under the present system would not only endanger the taxpayers interest, it would award leases to those who could raise the most money the fastest rather than those who could best evaluate and develop our natural resources. One of the worst features of the present system's reliance on high initial cash payments is the advantage it gives the large companies over the smaller ones—the major over the independents. In an offshore lease sale last year one tract went for a record \$211 million—\$100 million over the next highest bid. If more independent producers and more smaller companies are going to play an active role in the development of

offshore lands, these bonuses must be brought down. Not only are larger companies in a better position to raise the high initial bonus, they can better afford to lose it if they guess wrong on a lease and the lease does not prove as productive as was hoped. Under my measure providing the principle Government payment out of production after it is found, the smaller company's loss will not be so severe if the lease turns out to have been overvalued. In addition, these bonuses are unproductive capital being expended before one drop of oil is found. The present high initial payments out of cash badly needed for exploration and low Government participation once production is found makes no sense if we want to increase domestic oil and gas production and if we want to enhance competition within the petroleum industry.

My legislation would retain the bonus bids as an impartial means of determining who would be awarded the right to drill on the lease. However, the measure would so increase the amount to be paid to the Government once production is obtained that these bonuses would be greatly de-emphasized.

Payments out of production of the magnitude required in this bill would force lower initial bonus bids thus allowing greater participation by smaller companies while still protecting the American taxpayers' interest. One independent producer has estimated that initial bonuses would be reduced to one quarter of the current expenditure. But in the long run, the Government would receive more revenue from the production on its lands. And it would get that production sooner than it will under the present system, due to accelerated lease sales. And again it would help avoid lease sale failures like the one which occurred in February of this year.

Mr. Chairman, since I originally urged this change in the offshore leasing system, the concept has been endorsed by the Joint Economic Committee in an annual report, the President of the Coastal States Organization and by the Executive Committee of Texas Independent Producer and Royalty Owners, a group representing smaller producers. In fairness, I would add that it has been criticized by some members of the industry, particularly major oil companies. But my proposal only requires the operating company to give the United States the same type of arrangement being used in eleven countries around the world. My bill requires them to give the American taxpayer the same deal they are giving foreign governments.

Mr. Chairman, I would add, that while this legislation requires the Secretary of Interior to lease future oil and gas tracts on the basis of production sharing, he has the authority to do so under existing law. I would urge the Secretary not to wait for a legislative requirement but to act now to increase the share of production which the American taxpayers receive on future lease sales.

Mr. Chairman, as I mentioned earlier, my amendment would also allow Outer Continental Shelf revenue to go to the several Coastal States to compensate for the environmental, social and economic impact of offshore drilling. Because the measure greatly increases Federal revenues, it is not anticipated that this portion of the bill would reduce Federal revenue from today's levels.

The Senate recognized that there is a need to compensate the several Coastal States for the impact of outer Continental Shelf development when it passed S. 3221 last year. However, it has become evident that the Coastal States Fund set up by S. 3221 would be woefully inadequate to meet the State's actual needs.

The Coastal States Organization, which represents all the various Coastal States has conducted a careful survey to determine the actual financial needs of the several states in regards to Outer Continental Shelf development. The Organization's able President, Texas State Senator A. R. Swartz has testified that the Coastal States need between \$800 million and \$1.2 billion annually to cope with energy resource development and related facility siting. The average of this range, or one billion dollars is roughly 15% of the \$6.7 billion that the Federal Government earned from Outer Continental Shelf leasing in 1974. For that reason, my amendment would allocate 15% of the Federal revenue from offshore oil and gas production to the Coastal States in the following manner:

— $\frac{2}{3}$ of that amount would be paid into a special fund to be known as the Coastal States Fund, and

— $\frac{1}{3}$ of the amount would be paid directly to the several Coastal States in proportion to the amount of oil and gas produced off the coast of each such State.

The Coastal States Fund would be administered by the Secretary of Commerce and would be administered to the States in the form of impact grants. The grants would be approved by a formula which would take into consideration the actual

or anticipated environmental, social or economic impact of the energy development of the Outer Continental Shelf. The formula would also take into consideration the amount of energy production off the State's coast and would be developed in coordination with the Coastal Zone Management Act of 1972. There is precedence for the development of such a formula in the form of the Texas input-output model which demonstrated that the development of the Outer Continental Shelf off Texas' coast has resulted in a net cost to the State of \$62.1 million a year. A similar study for the State of Louisiana has indicated a yearly net loss to that State of \$40 million.

Thus actual impact figures for offshore energy development are available, and establishing a fund to meet these costs will fairly distribute the Federal funds that are needed by the several States. And combining this impact formula with direct payments will greatly reduce the Coastal State hesitancy to develop the energy that can be obtained off their coasts.

But to be effective the funds going to the States must be sufficient to meet the States' needs. Other legislation on this topic now before the Senate all contain the intent of fully compensating the several States for the adverse impact of offshore oil and gas development. However, in each case, arbitrary numbers are used to set the levels of funds available, and this has proven to be inadequate. It is for that reason that I have gone to the Coastal States Organization to obtain the actual State estimates of impact need. In setting the compensation at the level that the States estimate they need, and combining the compensation with an offshore payment system that will substantially increase Federal revenues, I feel confident that this is a logical package to meet this portion of the challenge of offshore energy development.

Mr. Chairman, I appreciate this opportunity to present testimony on behalf of this proposal. To aid in your consideration, I offer a brief summary of the bill to be entered in the hearing *Record* at this point.

Thank you.

SUMMARY OF THE PROVISIONS OF AMENDMENT TO OUTER CONTINENTAL SHELF LANDS ACT

1. The present method of awarding leases on the basis of impartial bonus bids is retained.

2. In place of the present royalty payment a production sharing concept is adopted under which the following division is made:

(a) Up to 40% total production will be assigned to the operating company for recovery of actual costs as long as those costs justify a 40% share and if not, whatever lesser percentage of production is necessary to fully recover actual costs. In the later stages of production the Secretary may approve a payment for actual costs in excess of 40% of total production, if the Secretary finds that such expenditures are necessary to obtain the maximum recovery of oil and gas.

(b) The remaining 60% of total production or whatever amount in excess of the production being devoted to costs in Subsection (a) will be divided between the Government and the operating company. The Government will receive 60% of the proceeds from the sale of this production and the operating company will receive 40%, unless the Secretary prescribes a lower percentage for the Government prior to the time of the notice for bids on the lease. However, in no instance can the Secretary prescribe a Government share less than 50%.

3. All actual costs on offshore lands will be submitted and justified to the Secretary of Interior under such regulations he may prescribe.

4. The Government will be authorized to take up 16⅓% of total production (out of its share) in oil and natural gas, i.e. "in kind", as they can under present payment procedures. This provision will insure that small business refiners who currently have first call on this production continue to have it available.

5. Present system for the number of acres to be offered for lease would remain the same as today's.

6. To compensate for the adverse impact of offshore energy development, 15% of the Federal revenue obtained from offshore leasing and energy production will be divided in the following manner:

(1) $\frac{1}{3}$ shall be paid into a fund to be administered by the Secretary of Commerce. The Secretary shall make grants from this fund to the various Coastal States according to an impact formula, and in accordance with the Coastal Zone Management Fund.

(2) $\frac{1}{3}$ shall be paid directly to the several Coastal States in proportion to the amount of oil and gas produced off the coast of each such State.

In essence, the effect of this legislation would be to provide the Government with a firm 36% of the proceeds from the sale of oil and gas produced from Federal lands before the operating company recovers initial costs. (I.E. 60% of 60% under the normal 60-40 split.) This would be over twice the 16 $\frac{2}{3}$ % share of production presently being received by the Government. After the operating company recovers initial costs the Government's share would increase from 36% to 60% of total production, minus the operator's on-going actual production costs. While bonus bidding will be continued as a means of awarding leases, the size of the bids will be reduced due to the higher participation payments being required. The reduction in these bonuses will allow greater participation by smaller operators in offshore exploration and development while still insuring the American taxpayer receives substantial compensation for the sale of his resources. The increased revenue to the Federal Government would allow the Coastal States to be compensated for the adverse effect of offshore energy development without a net loss occurring for the Federal Treasury.

Senator STONE. The first witness will be Mr. Seymour Orlofsky, President, Columbia Gas Development Association. Mr. Orlofsky.

STATEMENT OF SEYMOUR ORLOFSKY, PRESIDENT, COLUMBIA GAS DEVELOPMENT ASSOCIATION

Mr. ORLOFSKY. I thank you, Senator Stone, for the opportunity to testify and appear before the Committees on Interior and Insular Affairs and Commerce.

I am appearing today on behalf of the American Gas Association which represents over 300 natural gas transmission and distribution companies, serving 160 million consumers. Columbia Gas Development Corporation is a subsidiary of the Columbia Gas System. The system is engaged in all phases of the natural gas business. Columbia Gas Development Corporation is a producing company with extensive operations in Southern Louisiana and in the Gulf of Mexico. Current, it has an interest in 111 producing wells in the Gulf of Mexico.

As we approach the problems being considered at this proceeding, the recent release of data on the nation's proven gas reserves is most pertinent. On April 1, the Association announced that proven reserves in the U.S. including Alaska as of December 31, 1974, were 237 trillion cubic feet a decline of 13 trillion cubic feet from the 250 trillion cubic feet reported as of December 31, 1973. Production of gas in 1974 was 21.3 trillion cubic feet, a decline of 1.3 trillion cubic feet from the 22.6 trillion cubic feet produced in 1973.

This nation has had a decline in proven reserves since the high point of 293 trillion cubic feet at the end of 1967. Over the last 7 consecutive years, the reserves decline has totaled about 56 trillion cubic feet.

Thus, the importance of opening the Outer Continental Shelf—particularly the Atlantic—assumes greater and greater importance.

My presentation before you today is to explore how this vast gas potential can be made available to the American people.

The gas industry is caught in the jaws of a vise in its attempt to acquire critically needed gas reserves on the Outer Continental Shelf.

One jaw of the vise is the inability to move ahead to explore for gas and develop discovered gas reserves in the new off-shore frontier areas. This lack of progress is because of the possibility of adverse environmental and industrial effects which oil development is claimed by some to have on the States' coastal zone. These same claims do not pertain to natural gas. There are no oil spill risks associated with gas production. Besides the charges of an oil spill resulting from exploration and development drilling have been greatly overplayed.

The other jaw of the vise is the major deficiency in present Outer Continental Shelf leasing procedures which require astronomical front-end bonus payments to obtain a lease.

Several points should be clarified at the outset.

No one knows what hydrocarbons exist or where they exist in the Atlantic Outer Continental Shelf. Until exploratory drilling is done, there will be no definitive information as to what is involved. Consequently, the first order of business is to find out what the facts are.

We believe the first step should proceed as promptly as possible. The Department of Interior should accept bids for tracts, with the understanding that it will only issue permits for exploration.

If exploration proves commercial quantities of oil and/or gas exist, development plans must be formulated. At that point, the orderly development of such resources, will take into account the impact of the coastal zones of the Atlantic states. In the case of oil, hearings would be held by the Department of Interior to explore all aspects of the development plan, including an environmental impact assessment. Only after such examination, would a development permit be issued.

In the case of gas, the Department of Interior would examine the development plan and proposed transportation system. If satisfied, it would authorize development of the gas reserves.

The FPC, as well as state agencies, would be involved in authorizing the pipeline delivery system.

No legislation is required as to this second step.

The details of the foregoing proposal are specifically spelled out as follows:

1. Following its usual procedures as to nominations and bidding, Department of Interior would put up for bid and award Atlantic OCS leases.
2. After award of leases, the Department would issue permits only for exploration thereon.
3. When and if commercial quantities of hydrocarbons are found, applications would be made to Interior for permits for development.

(a) The application for natural gas must include a plan for development of the lease and an outline of the proposed delivery system. Since no facilities can be constructed without an FPC certificate, the Department would issue the permit for development if satisfied with the plans. The application for an FPC certificate will include a report, as the basis for an Environmental Impact Statement, of the impact of the pipeline on the coastal area. Notice of and hearings on such application are required.

(b) The application for oil must include a plan for development of the leases and an outline of the proposed delivery system and the onshore facilities where the oil would be processed. A report to be the basis for an Environmental Impact Statement developed by the Department, and take appropriate action upon the application.

The foregoing plan, which can be permitted under the Outer Continental Shelf Lands Act of 1953, would allow for the early exploration of oil and gas and would provide for all interested parties to participate in the orderly resolution of environmental and socio-economic concern on the basis of better information.

As part of awarding leases, legislation is requested to provide leasing procedures that will markedly reduce the financial strain on many companies such as the smaller oil and gas companies.

Total bonuses received from outer continental shelf lease sales to date amount to about \$15 billion. Over \$10 billion alone has been received from the nine most recent Federal sales held since September 1972. A large shore of these front-end bonus payments need to be redirected to pay for exploration and development costs of the leases.

American Gas Association recommends a fundamental revision to the Federal leasing procedures aimed at eliminating the staggering initial capital requirements needed to secure a lease. The American Gas Association's proposal contains the following principal elements:

1. In conjunction with competitive bidding for Federal leases, the bidder would submit, along with its bid, a certified check for 10 percent of the bonus offered for the lease. The Bureau of Land Management would award the lease to that bidder offering the largest bonus. In the event that a bonus bid of \$1 million or more is submitted for a lease, the Bureau of Land Management could not reject the bid on the grounds of insufficiency.

2. The successful purchaser of each tract would provide a bond, within 20 days to the Bureau of Land Management, in a satisfactory form to assure the purchaser's performance of his obligations, including eventual payment of the balance of the bonus, under the purchase conditions outlined below.

3. At the end of each 12-month period from the date of the award of the lease, a payment of an additional 10 percent on the lease bonus, less expenditures made on the lease during the during the preceding 12 months, would be required. The amount of this annual

payment would be credited against the balance of the total bonus obligation. Such yearly payments would cease under one of the following three conditions:

First, on any lease where commercial production has been established within 5 years from the date of the granting of the lease; The balance of the bonus would be paid, commencing with the date of first commercial production, in annual amounts equal to the greater of (a) 25 percent of the annual revenues, after payment of royalties, derived from the hydrocarbons produced from the lease, or (b) an amount equal to one-fifth of the bonus payment as of the date of the commercial production or the end of the fifth year, until the balance is paid in full.

Second, on any lease where commercial production has not been established within 5 years from the date of the awarding of the lease: The balance of the bonus would be paid in five equal annual installments starting on the fifth anniversary of the lease award.

Third, on any lease where it is determined that the lease is not commercially productive and the lease is surrendered within 5 years from the date of the awarding of the lease: The balance of the bonus remaining when the lease is surrendered would be canceled and no further payments required of the purchaser.

By adopting the proposed leasing procedure, the payment of the lease bonus has been spread over a number of years, reducing the initial outlay of capital prior to the time production starts on a lease. The capital saved can then be used in exploration and development of a lease. Your endorsement of the proposed leasing plan is strongly urged.

The environment and economic arguments used by the states should not be permitted to further delay exploration for oil and gas. American Gas Association believes that during the next 2 years while the first phase—exploration of OCS leases—takes place, the Federal Government and Atlantic States should develop an acceptable plan so that the Atlantic States would be spared any costs resulting from the development of the Outer Continental Shelf. American Gas Association does not deem itself competent to make recommendations as to the percentage of revenues that should flow to states and the percentage retained by the Federal Government.

The American Gas Association also supports the concept of a fund to cover liability resulting from oil spills, both for cleanup operations and for potential damages. The burden of absolute liability upon a producer for potential oil spill damages is an intolerable one. Perhaps most important, it would discourage independent producers, and natural gas companies from undertaking exploration and development efforts. We note that various bills before your Committee provide for raising of revenues from the Outer Continental Shelf. These bills would propose, for example, that the oil spill liability fund be financed from an excise tax on production

revenues. We would oppose this additional excise tax. Any OCS revenue sharing plan with the states and revenues financing the oil liability fund should be derived solely from OCS lease bonus and royalty payments.

The American Gas Association proposal separating exploration and development provides the most efficient, least costly, and appropriate means to evaluate the oil and gas resources in the Outer Continental Shelf before development is permitted.

The plan would permit industry to conduct the exploration phase, and not the Government. We are opposed to the Federal Government's engagement in exploration or development activities.

By entering the oil and gas business, the results will most likely be a frustrating collision of interests between Government and industry.

We have suggested a method for proceeding forthwith for the exploration of both natural gas and oil and for proceeding separately with oil and gas development programs. We have also outlined a leasing method that will eliminate the need for high capital outlays for securing leases and still provide the Federal Government its fair market value for the leases. In view of the urgency of acquiring new gas reserves, we believe these suggestions are in the public interest.

By permitting the States to share in Outer Continental Shelf revenues, there would be no need for any special Federal appropriation of funds to be paid to the States for the so-called adverse environmental effect and costly economic impact caused by Federal energy resource development. We do not believe that the Outer Continental Shelf oil and gas development conducted with existing technology and safety procedures will have any adverse effects on the coastal zone. Quite to the contrary, Outer Continental Shelf development will prove to be an economic asset to the States and the Nation.

Exploration drilling that commenced for the first time on September 1, 1974, on the Outer Continental Shelf of Mississippi, Alabama, and Florida has progressed without terrifying results. A total of 10 exploration wells have been drilled to date with 4 drilling. The heavy equipment, supplies and service, such as logging tools, cementing materials, drilling mud and chemicals, and rental tools and casing to support this Outer Continental Shelf exploratory drilling are from a relatively few ports situated on the Florida Panhandle and Southeastern Alabama where existing warehouses, ship berths, and storage yards have been converted for use. Also, one of the permanent bases in Louisiana is being used. There will be no permanent bases established until oil and/or gas is discovered, which has not occurred thus far. The same practice would be followed for Atlantic offshore exploration. However, the Atlantic coast has far greater flexibility in providing numerous locations for permanent

offshore operations that already exist in industrial port areas such as the Brooklyn Navy Yard, in Baltimore, Boston, Philadelphia, and New Portneus to name a few. It is of interest to note that Panama City, Florida, which prides itself as a vacation community with beautiful beaches, in a March 3, 1975, "Oil and Gas Journal" advertisement, made the following statement:

Shortest Run to the Rigs—Oil industries and support companies requiring onshore bases to service the Destin Dome are invited to investigate Port Panama City. You'll find Panama City the nearest deepwater port facility to most of the tracts in the eastern Gulf. You'll also find a cooperative community searching for new industry and believing in the importance of economic expansion.

This 94th Congress needs to adopt the democratic principle of allowing companies who know how to do the job and who grapple with the problem every hour of the day to proceed to achieve national objectives as defined by the Federal Government.

Mr. ORLOFSKY. Mr. Chairman, that concludes my presentation and I thank you.

Senator MATHIAS. Thank you very much, Mr. Orlofsky. I have one question.

In your statement you detailed your plan for separating exploration and development. Now I am wondering if you can envision a situation where the exploring would not necessarily also be the development company?

Mr. ORLOFSKY. No, if I understand present practices I do not see where that would occur because the successful bidder would acquire the lease and the rights to hydrocarbons under those leases. So he would go through the exploratory phase.

Senator MATHIAS. And he would own the information that he developed as in the exploratory phase?

Mr. ORLOFSKY. Yes. I do not see how there would be another company moved in except that would dispose of the lease, farm it out or sell it.

Senator MATHIAS. So that essentially the present practice would prevail, a single company operating from the initial steps through the production phase?

Mr. ORLOFSKY. Yes, yes or a group of companies that might purchase the lease through a single operator, yes.

Senator MATHIAS. Senator Johnston.

Senator JOHNSTON. Mr. Orlofsky, under this proposal, as soon as you determine that there was no oil in commercial quantities, then the lease would be released from his obligations, is that correct?

Mr. ORLOFSKY. Yes, any further obligations whatever the 10 percent bonus that he paid initially, plus any exploration costs or any additional bonus payments that he made up to that time.

Senator JOHNSTON. The 10 percent less exploration costs?

Mr. ORLOFSKY. Yes. He pays the 10 percent initially, that is paid initially, then the credit.

Senator MATHIAS. That is the first 10 percent?

Mr. ORLOFSKY. Yes, that is the first 10.

Senator JOHNSTON. That is not subject to any later reduction?

Mr. ORLOFSKY. No, the credits count against the 10 percent that ensue in the following years.

Senator JOHNSTON. Who is to determine that the area is condemned?

Mr. ORLOFSKY. That it has no commercial value?

Senator JOHNSTON. Right.

Mr. ORLOFSKY. Well, the owners of the lease would determine that.

Senator JOHNSTON. At their discretion?

Mr. ORLOFSKY. Yes, it would be at their discretion. Of course all of the information, as you know, has to be made available to the USGS within 30 days after the suspension of drilling or the completion of a well. The USGS would also have all the information on the lease.

Senator JOHNSTON. Well would this—would this not or I should say would this encourage leases to want to make a cheap look-see? They pay their original 10 percent and they go maybe hoping to sink one or two holes out there for the easiest formation to get to and then when they do not produce, they do not find it in commercial quantities, they just walk away from it and pay only 30 percent of their bonus on it. In other words, just a fraction of it. Would it not encourage that kind of thing as opposed to the full search in exploration out there?

Mr. ORLOFSKY. Yes, this point has been brought up that you have framed in your statement. I do not really believe, myself, that that would occur because the cost of doing business on the Outer Continental Shelf is so great today that any company that secures a lease and what he has to pay for it initially and what is involved is going to utilize all of the means at his disposal to determine whether or not hydrocarbons, exist.

Senator JOHNSTON. Well that is the point though. He would not be paying that much under this proposal that he is now?

Mr. ORLOFSKY. Well of course 10 percent on substantial bonus is a considerable amount of money, plus the cost of drilling exploratory wells.

Senator JOHNSTON. It is not plus the cost though, is it?

Mr. ORLOFSKY. No, he is paying 10 percent and then that 10 percent is paid to the Government, and then any cost that he spends for explorations is out of his pocket. The only thing he is credited against would be the 10 percent bonus obligation that he has in the second year and the third year and the fourth year.

Senator JOHNSTON. In effect about all he would have to pay if he did not find the oil is the 10 percent plus whatever his exploration and development costs are, is that not right?

Mr. ORLOFSKY. That would be the minimum if he was that type of operator which I do not believe really exists today in the Gulf.

Senator JOHNSTON. Why would he have to pay more than that? Is that not only the minimum but the real sum he would have to pay unless his bid was so low that exploration and development costs exceeded the aggregate of the 10 percent per year?

Mr. ORLOFSKY. Well, let us take an example. Say he spends \$20 million for a bonus. He has to pay \$2 million of that down. So then he makes allocation and he drills an exploratory well. Say that exploratory well cost him \$.5 million. Is highly unlikely that he would give up the lease at that point on just the drilling of one dry hole because one well is not going to give you enough information on a 5,000-acre block. So the chances are that he will drill a number of wells. Say he drills three or four wells. Well then he has another 2.5, about another \$2 million involved. Well on that block there are other structural features. He has drilled the best structure supposedly. On that block there are other structures, or other entrapments that he is going to want to investigate, so he will move over and may test a number of these, and it may take a number of years—

Senator JOHNSTON. I understand that—

Mr. ORLOFSKY. [continuing]. Before he has determined whether the entire tract has any value.

Senator JOHNSTON. I understand that. I am just concerned that since his costs are so low compared to today, in other words only the first 10 percent is down the drain and after that he is operating really with just his exploration and development cost. And I am just afraid he will go in and stick the first hole in the best structure, condemn that one structure and then say well it is just not worth it, it is best to collect your losses than to be spending these big sums. That is my only concern. I share with you that we need more capital for the Outer Continental Shelf. It is going to take more not less than we have now. I think we are going to have to find a way to take it away from bonus and put it the development outlay. Bonus obviously does not produce any oil and gas. That is strictly to the exploration activity. I am just concerned about what the best way to do it is.

Mr. ORLOFSKY. I would like to further comment.

We have been in the Gulf of Mexico I guess nearly 20 years, nearly since the time it started or beyond that. We have never seen any instance, either through ours or our partners where this occurs. And in the early days the leases were bought rather inexpensively as you know, and these leases were fully explored to my knowledge.

Senator JOHNSTON. It was a lot cheaper then too.

Mr. ORLOFSKY. Before they were released. It is the same thing today. There are some leases that are being purchased for \$1 million or \$2 million and they are still being fully explored. I think it would be an oddity, really, for the situation to occur that you are describing. The oil companies that are out there need that crude oil so badly, and the gas companies that are out there are in the same shape or even in worse shape. So you really explore the total lease.

The other thing is that once a lease is given up, it can be reoffered and there are a number of locations where leases have been given up, repurchased and hydrocarbon finds have been made, have been made after the producer thought he had fully explored the lease on the basis of later technology and the interpretation of seismic data as an example.

Senator JOHNSTON. Thank you very much. Thank you, Mr. Chairman.

Senator MATHIAS. Mr. Orlofsky, you referred to the impact of sale on the coastal areas. Do you feel that we can presently judge the impact of sale on coastal areas since they are in fact, as far as the Atlantic coast is concerned, been no discoveries made yet?

Mr. ORLOFSKY. Yes, I think we have enough information on the basis of what has taken place in the Gulf of Mexico and what has recently taken place off of Florida, Mississippi, and Alabama. First, nobody is going to put in a permanent facility in—rather until we know that there are commercial hydrocarbons out there, and there have been some evaluations made. But it is our conclusion that existing facilities will be used. They will be converted on a pertinent basis. A lot of these facilities are not even being used to date. So we don't see where there is going to be any proliferation of a lot of new types of installations.

Senator MATHIAS. But in your statement it is referenced to MAFLA, and I believe there have been no discoveries?

Mr. ORLOFSKY. That has been a most dissapointing situation to date.

Senator MATHIAS. So it might not be a typical situation in which to make a judgment?

Mr. ORLOFSKY. We would hope that it would not because there was about \$1.5 billion spent for leases off of that area with the potential of about 36 trillion cubic feet, and nothing has been discovered to date. So it has been very discouraging. We do not know whether that situation will exist offshore Atlantic or not until some exploration. Hopefully, it will not, for the Nation's sake, and hopefully the Florida, Mississippi, Alabama area will essentially prove productive. But in our estimation, it would not prove as productive as the earlier expectations.

Senator MATHIAS. Just one final question.

Under your proposal for separating exploration from development and production, what would happen in the case of a company which submitted an unacceptable development or where there was an assessment that indicated that there were dangers militating against development?

Mr. ORLOFSKY. Well, that would be a risk, of course, but under the existing procedures as you know, when you aquire a lease you have no insurance that you are going to be permitted to develop it under today's procedure. Your issue that an exploration permit and then a drilling permit and then you have to go back for a development permit and then a drilling permit. So that really exists today.

Senator MATHIAS. You feel this risk pattern would fall in the same lines?

Mr. ORLOFSKY. Yes, yes. The reason I say that is that I believe that the coastal States want to see exploration occur and development occur. Their problem is that they do not understand the final relationship between the Federal Government and the States. And once this understanding can be developed, I believe that the States will encourage exploration and development and allow for the development.

Senator MATHIAS. Well, as a representative of one of the coastal States, I would say that our problems are a little more substantive than that. We have difficulties that go beyond just understanding the relationship of the Federal Government to the whole proposal, that problems that have not been settled by the Supreme Court, it's latest statements. But I suppose what it comes to is other than the difference in the payment of the bonus which Senator Johnston has referred to in his question, what differences are between your proposal and the existing practice?

Mr. ORLOFSKY. Well in the existing proposal there is no need to provide USGS with the delivery system plan as part of the development. We do not have to really show the transportation system at that point in time, and once the gas and oil reach these east shores you do not have to show where it moves.

Senator MATHIAS. They are supposed to submit an offshore plan are they not?

Mr. ORLOFSKY. Not for the development permit. No, it is not necessary as part of the development permit, either for oil or gas.

Now the delivery system, I think if you will read the regulations you will find that this is so. Now as far as gas is concerned, once you have enough gas reserves and contracts you then have to go to the Federal Power Commission with the delivery system and approval for the delivery system. In the case of oil, when you want to build the delivery system, you again go to Department of Interior for the right of way and to the Corps of Engineers to construct the line. We are saying that the Department of Interior would hold hearings on the deliveries system. So that is the difference.

Senator MATHIAS. I regret to say those five bells mean that it is time to jog for the floor to make a vote. So the committee will stand in recess.

Mr. Orlofsky, we appreciate you being here, the fact that you keep my house warm in winter gives your words special weight with me.

At this time I will introduce the record my own statement for this morning and the analysis of pending legislation relating to Outer Continental Shelf oil and gas resources prepared by Mr. Thomas B. Lewis.

[The statement and document referred to follow:]

TESTIMONY BY

SENATOR CHARLES McC. MATHIAS, JR.

Before The

Interior Committee and the National Ocean Policy Study

On The Exploration and Development
Of The Outer Continental Shelf

April 8, 1975

I welcome this opportunity to comment on oil and gas leasing and production on the Outer Continental Shelf. For some time now, the OCS has been the subject of an historic legal dispute. The states and the Federal Government, in U.S. v. Maine et al., have tested the very foundations of federalism. The serious questions posed by U.S. v. Maine are now, of course, settled in favor of the Federal government.

Drilling for oil and gas in virgin areas, particularly in the Atlantic, can no longer be considered a futuristic vision. Soon it may well be a reality. I am concerned with this whole process, both as a Senator from a coastal state which is vulnerable to hasty, ill-planned OCS development, and as one concerned with the wider issues of future energy supply and consumption in the United States. I must say that I am heartened by the swift and strong action taken in the United States Senate to enact comprehensive and responsive legislation to govern the OCS. The Court decision settles the issue of ownership of certain parts of the OCS, but it in no way ensures the sound management of these resources. This can only be done by state and Federal legislators and administrators, working in close cooperation and with an understanding of each others problems and concerns.

My study of the OCS indicates that there are certain key elements upon which any reform of the Outer Continental Shelf Lands Act of 1953 must be based. First, all plans and decisions must be founded on an adequate informational base. Before leasing is undertaken in geologically

unknown areas, the Federal government must conduct studies necessary to ascertain the nature and extent of resources involved. In this regard, I note that the draft report by the Office of Technology Assessment on OCS Development indicates that a program of government exploration would be not only feasible, but desirable. Present procedures permit public resources to pass into private hands at prices fixed only by guesses and speculation. Those procedures are irreconcilable with the principle that such limited resources are held in trust for the public, whose interests are served only by the disposition of those resources in an informed manner, calculated to guarantee a fair return to the public. Furthermore, this data is necessary to protect the manner in which various areas will be developed and the probable onshore effects which must be intelligently assessed and anticipated.

This brings us to the question of whether we can permit leasing in unexplored areas even for the period necessary to implement a program of government-directed exploration. This is a question posed directly by the two major OCS bills that we are considering, S. 521 and S. 426. The former describes a gradual implementation of the exploration program and would permit continual leasing without prior exploration until January 1, 1978, while the latter would mandate a moratorium on all future leasing in "frontier areas" prior to implementation of the exploration program and other statutory prerequisites. I believe it is critically important that OCS exploration start on the best footing in virgin areas, consequently, I strongly support the approach taken by S. 426, declaring a moratorium until a Federal exploration program is implemented.

Our concerns must be broader than the adequacy of government revenues. Our public trusteeship extends to carefully monitoring environmental effects of OCS development so that every proper precaution is taken. To fulfill this responsibility, reform of the present Interior program must take place. I am therefore pleased that both bills provide for baseline studies as well as continuous monitoring of environmental quality. This approach will not only provide data needed for initial planning of OCS development, but will also provide feedback which will provide aid in revising the program in the future to assure adequate protection for the environment.

While the U.S. Supreme Court has decided that the Atlantic Coastal States do not have jurisdiction beyond the three-mile limit, this does not in any way affect their need to be equal partners as OCS activities proceed. The states which will necessarily be affected by OCS activities are in varying stages of preparation to accommodate what may occur. Close consultation must be mandated by law and by established procedures rather than founded on the whim of successive Secretaries of the Interior under changing administrations. Both S. 426 and S. 521 would permit a governor to request a reasonable postponement of leasing activities and both require a mechanism to determine whether the Secretary of the Interior has adequately responded to the governor. S. 521 would provide administrative review of the Secretary's decision by a "National Coastal Resources Appeals Board", composed of colleagues of the Secretary of the Interior who have particular responsibility for OCS activities. S. 426, on the other hand, lodges review responsibility in the Congress by permitting either body to overrule the Secretary's determination to go forward with leasing in a particular area. The

approach embodied in S. 426 is, I believe, to be preferred over S. 521. I say this as the author of the language contained in S. 521 because I am persuaded that S. 426 constitutes a refinement of this critical provision. The final point that I would make responds to criticism leveled by the Administration to the effect that such an appeal provision will cause unnecessary delay. It is my view that allowing governors of coastal states participation in OCS decisions is the best way to bring on additional supplies of energy in a reasonable time period. It is anti-productive to short-cut evaluation and review procedures; to exclude valuable centers of knowledge from making a contribution. In short, the surest and quickest way of providing additional supply is to work in close contact with all who have concerns and can contribute to the process. Then, and only then, will a consensus develop that will permit the responsible development of the OCS.

Congress must not only provide for the careful monitoring of the water, the estuaries, the beaches, and marshes for environmental effects, but also closely inspect energy facilities themselves to see that every precaution is taken to protect the safety and health of workers and to prevent the discharge of any substance into the water or air which would tend to degrade the environment. Preventive medicine is the least costly for all concerned. At the present time, responsibilities in this area rest solely with the Department of the Interior. There has been some concern that this regulation of OCS activity should not be delegated to the same Department as is responsible for promoting development. S. 426 responds to this concern by assigning the duties of inspection and enforcement of regulations to the Secretary of the

Department in which the Coast Guard is operating. The Coast Guard is peculiarly qualified to enforce Federal laws in our coastal waters, and its new duties under this program are much the same as those required under the Federal Water Pollution Control Act Amendments of 1972, the Deepwater Port Act of 1974, the Federal measures affecting the territorial seas and contiguous zone. I think that this would do much to restore the public's confidence that every effort is being made to control pollution.

An area of increasing concern to the Congress is the level of competition in energy markets. Of critical importance to this question is what we do with the OCS. There are a number of factors that tend to make OCS oil and gas exploration and production the province of the major oil companies. Congress must work to create a climate where smaller independents can thrive. In the past, small companies have been deterred by the high initial cost of the lease, attributable to the present bonus bid system, and the financial risk inherent in such a venture. I am not convinced that we have all the answers needed to adopt a new system of bidding, but I am certain that every effort must be made to find better ways of transferring public lands to private control. For this reason, I favor the approach embodied in S. 426. It provides the Secretary of the Interior with the greatest flexibility to adopt different systems of bidding. I would hope that if legislation along the lines of S. 426 is finally enacted by the Congress, that the Secretary would take that opportunity to be innovative in responding to the wishes of Congress.

Finally, I would like to discuss how the Congress is going to assist the states as they respond to changes in the character of

their lands and waters. The National Ocean Policy Study has held many days of hearings on just this particular issue. I think the record clearly shows that energy development can be a tremendous burden to coastal states. U.S. v. Maine clearly establishes Congressional responsibility to extend a generous hand to the coastal states. The Ocean Policy Study has examined what must take place to fully develop offshore areas. We have sought to develop an understanding of the character and magnitude of onshore facilities to serve this development. We have heard testimony about the needs of workers for new roads and schools and about the many facilities which must be located onshore to service offshore rigs. We have heard testimony about the growth of energy complexes in areas that are proximate to producing wells. My greatest concern is that in the past the discovery of rich mineral deposits has meant "boom and bust" economies and the rape of our precious land and water resources. Consequently, it is entirely appropriate that revenues generated from oil and gas production be partially devoted to ensure proper planning and provision for the necessary facilities. There are two basic approaches to parcelling out OCS revenues towards this end. Revenues can be accumulated in a fund and grants then made to the states according to an evaluation of their needs. This is the approach taken in S. 521 and in S. 586. These two bills raise three basic questions. Who will administer the fund, what states will be eligible for grants, and what factors will determine the amount of each grant? Since I favor full integration of this grant program into existing coastal zone management mechanisms, and since I believe there is much to be gained by dividing responsibilities among the appropriate Federal departments as opposed to

concentrating everything in the Department of the Interior, I favor the approach taken in S. 530, which places the fund under the aegis of the National Atmospheric and Oceanographic Administration by amending the Coastal Zone Management Act.

Another approach is embodied in Senator Steven's S. 130, which would establish a revenue sharing arrangement with the states. Under this legislation, 25% of all revenues now payable to the Treasury would be assigned to the adjacent coastal states, another 25% would go to states other than adjacent coastal states, and the remaining 50% would be retained in the U.S. Treasury. I am a co-sponsor of this legislation, though I recognize that it does not represent the whole solution and must be integrated into a discretionary grant program as is proposed in S. 521 and S. 585. My hope and recommendation is that Congress would combine discretionary grants and revenue sharing so that each coastal state adjacent to OCS development is given a base minimum through revenue sharing, but can receive additional funds through the discretionary grant program to compensate that state for losses due to OCS development. Such a program would necessarily mean a reduction in the 25% share envisioned by S. 130.

~~Moreover~~ I would like to conclude by complimenting ^{the Chairman, Senator} ~~the~~ Hollings, and other Senators on the Interior and Commerce Committee, as well as the National Ocean Policy Study. The work of these committees has been outstanding. We are dealing here with a critical national resource and the record of the Senate has been both responsive and responsible. We have had many thoughtful proposals and the major bills that are being considered today represent a great step forward.

ANALYSIS OF U.S. SENATE LEGISLATION
RELATING TO OUTER CONTINENTAL SHELF OIL AND GAS RESOURCES

Prepared by Thomas B. Lewis

At the Request Of

SENATOR CHARLES McC. MATHIAS, JR.

A. Introduction

The Outer Continental Shelf Lands Act (O.C.S.L.A.) has stood unamended since its passage in 1953.¹ It established the basic statutory framework within which the United States has conducted the leasing of tracts on the outer continental shelf (O.C.S.) for the recovery of mineral resources, principally oil and natural gas. Since 1953 the importance of these mineral reserves has increased dramatically with the increased energy needs of the nation and the increased uncertainty of various supply sources. In response to this need, areas of the O.C.S. which have never been tapped may be subjected to large scale oil and gas development. Residents of states adjacent to such "frontier" O.C.S. areas are justifiably concerned over the adequacy of administrative safeguards from the sundry environmental and economic misfortunes which have resulted from past offshore oil and gas development.² Present leasing procedures require the payment of huge cash bonuses which are prohibitive expenses to small, independent operators and which effectively limit participation and competition in the O.C.S. arena. Present procedures also allow the leasing of Federal lands which are as yet unexplored; as a result, the United States has no effective way of assuring the public of a fair return from lease sales, nor can the extent of field development be estimated for purposes of assessing environmental impacts and stateside development likely to result.

For these and other reasons a reexamination and revision of the O.C.S.L.A. has become imperative. Two legislative packages have been introduced in the Senate to deal with this issue, each reflecting a different compromise of interests and priorities. During the last session, Senator Jackson introduced the "Energy Supply Act of 1974", (S. 3221) which he has reintroduced with changes as the "Energy Supply Act of 1975", (S. 521).³ An alternative approach to the situation has

1 43 U.S.C.A. sections 1331-1343.

2 See House Report No. 93-1396, "Our Threatened Environment: Florida and the Gulf of Mexico," Committee on Government Operations, October 1, 1974, pp. 8-9, 12-13.

3 Congressional Record, February 3, 1975, at p. S1341

been offered by Senator Hollings in "The Outer Continental Shelf Lands Act Amendments of 1975", (S. 426).⁴ The purpose of this paper is to compare and contrast the central provisions of these bills as they modify and supplement the original O.C.S.L.A.⁵

B. Exploration⁶

Both bills authorize and direct the Secretary of the Interior to conduct a program of exploration calculated to provide information about the location, extent and characteristics of O.C.S. oil and gas resources. Both bills explicitly recognize a need for this data for informed decision-making concerning O.C.S. leasing. There the similarity ends. Whereas S. 521 prescribes a gradual implementation of the exploration program which permits continual leasing without prior exploration until January 1, 1978, S. 426 mandates a moratorium on all future leasing in "frontier areas" prior to implementation of the exploration program and other statutory prerequisites.⁷ Thus, the two bills offer a critical choice as to the data base prerequisite to the leasing of tracts off the Atlantic Coast, off southern California, and in the Gulf of Alaska during the period between the resolution of *U.S. v. Maine et al.* and January 1, 1978.⁸ During that period leasing pursuant to S. 521 would be undertaken notwithstanding the recognized inadequacy of the geological information available to the government.⁹

C. O.C.S. Leasing and Development Plans¹⁰

Leasing and development planning is accomplished in two stages in each bill. The first stage requires the Secretary to prepare and maintain a broad program designed to make available O.C.S. lands where leasing is feasible. Generally this program must schedule the time, location and extent of leasing activities to best meet national energy needs over the next ten years. While the considerations to be integrated in this program are given different priority or emphasis in each version, both bills require coordination with affected states, and the preparation of environmental impact statements. Note, however, that while S. 426 requires that leasing of frontier areas be delayed until this program is prepared (and other steps taken), S. 521 would permit leasing to continue under present procedures until January 1, 1978, unless the Secretary prepares the program prior to that date. At this stage of planning, no explicit approval by Congress is required by either version.

The divergence of the two bills occurs at the stage when the leasing of a specific tract is contemplated by the Department of Interior.

4 Congressional Record, January 27, 1975, at p. S903.

5 Note: For the sake of brevity, descriptions of various provisions are necessarily brief and impressionistic. Refer to cited provisions for details and clarification if needed.

6 S. 521, section 202, "Sec. 19"; S. 426, section 209, "Sec. 19".

7 S. 426, section 209, "Sec. 19".

8 The Dept. of Interior suspended leasing preparations until state claims on the Atlantic OCS were adjudicated, but called for tract nominations within hours following the decision in *U.S. v. Maine et al.*

9 Hearings, Committee on Interior and Insular Affairs, "Oversight on Outer Continental Shelf Lands Act," ser.no. 92-27, 1972, pp. 122-126, 629-630.

10 See generally S. 521 section 202, "Sec. 18"; and S.426, section 209, "Sec. 18".

S. 426 prescribes that the Secretary submit to Congress and nearby states a leasing and development plan relating to the particular tract describing in detail the extent of the resources involved, the anticipated number and location of production units, pipelines, onshore facilities and infrastructure required and a certification of consistency with affected states' coastal zone management programs. A governor of an affected coastal state may request up to a three year postponement if he determines that the proposed lease will affect his state adversely. Such a request may be granted in whole or part, or denied entirely by the Secretary. The particular leasing and development plan and a report on any state requests for delays and the action taken must be submitted to Congress 90 days prior to the lease bid invitation. The lease sale can only proceed if the plan is "approved" by the acquiescence of both Houses of Congress. No individual lease may issue unless its terms are consistent with such an approved plan and provide for termination for non-compliance.

The corresponding provisions of S. 521 require that notice be given to the governor of any state adjacent to an area where lease sales are proposed.¹¹ The governor may request up to a three year delay and the Secretary may grant all, part, or none of the relief requested. His decision may then be appealed to the "National Coastal Resources Appeals Board," consisting of the Vice President, Secretary of the Interior, Administrator of the National Oceanic and Atmospheric Administration (N.O.A.A.), Administrator of the Environmental Protection Agency (E.P.A.) and the chairman of the Council on Environmental Quality (C.E.Q.). This review process requires a maximum of 100 days, at which time the lease sale may be held if the delay is denied.

No site-specific leasing and development plan similar to that reviewed by Congress in S. 426 is envisioned by S. 521. Instead, lease issuance is predicated upon submission of a plan by a prospective lessee for approval by the Secretary. The lease must contain a term that failure to comply with that approved plan will terminate the lease.¹²

In this area, the bills differ in these respects:

- (1) While S.521 places the approval of leasing and development plans in the hands of the Secretary, S.426 permits a Congressional veto of unsatisfactory plans for specific tracts.
- (2) S. 521 creates an administrative review of denials of state requests for delays, whereas S.426 permits, in effect, a Congressional review of the Secretary's action.
- (3) S.426 would halt leasing in frontier areas pending the completion of leasing and development plans, while S.521 would permit present leasing procedures to continue as late as January 1, 1978.

11 S.521, section 210.

12 S.521, section 206(d).

D. Safety Regulations for Oil and Gas Development, Inspections and Enforcement

The first line of defense of both human safety and environmental quality lies in the close regulation of equipment and techniques used in O.C.S. operations. The Secretary is directed in S.521 to establish safety regulations for O.C.S. operations (with the concurrence of E.P.A. and the Coast Guard) aimed at minimizing dangers to the environment, property or human safety. The Secretary is also directed to establish requirements with respect to oil spill contingency plans and equipment (with the concurrence of the Coast Guard, review by E.P.A. and N.O.A.A. and coordinated with the National Oil and Hazardous Substances Pollution Contingency Plan). The responsibility for inspections and the enforcement of these regulations is committed jointly to the Secretary and the Coast Guard, and the Secretary is required to make annual reports and recommendations to Congress on these activities.¹³

S.426 takes a different approach to the problem of regulating the O.C.S. programs which are promoted and administered by the Department of Interior. Regulations are to be established by the Secretary of the department in which the Coast Guard is operating, with the concurrence of E.P.A. and N.O.A.A.¹⁴ The Coast Guard is also charged with inspection and enforcement of such regulations, a function similar to its duties under certain other Federal statutes regulating coastal waters.¹⁵ This high visibility division of the functions of promotion and regulation may help restore the credibility of Federal assurances concerning human and environmental safety of O.C.S. oil and gas operations despite the past record of haphazard regulation, and will assign to the Coast Guard duties which are consistent with those required of it by other Federal programs.¹⁶

The ever present specter of the possible recurrence of a major oil spill such as the infamous Santa Barbara spill is dealt with in both bills. The theory is the same in each version: (a) require certain oil spill contingency equipment and plans, and (b) get assurance of substantial financial responsibility of each operator, (c) create strict liability for spills, and (d) assign an agency as the principal back-up assistance should an operator fail to contain a spill.¹⁷ As a supplement

13 S.521, section 202, "Sec. 20", "Sec. 21" and "Sec. 22".

14 S.426, section 209, "Sec. 22".

15 See 14 U.S.C. section 2.

16 House Report No. 93-1396, op. cit., p.9; see also "OCS Oil and Gas An Environmental Assessment", Report to the President by the Council on Environmental Quality, April 1974, p. 179.

17 Compare S.521, section 202, "Sec. 23" to S.426, section 209, "Sec. 22".

to individual financial responsibility, both bills would establish an "Offshore Oil Pollution Settlements Fund", a non-profit corporate entity funded by a 2½ cent per barrel fee collected on O.C.S. producing wells until the fund reaches its \$100,000,000 maximum. Once established, the responsible operator pays the first \$7,000,000 toward damages. Beyond that amount the fund is liable up to its maximum.

The responding agency in the event that an operator cannot contain a spill is "the Secretary, in cooperation with other Federal, State or local agencies" according to S.521, and in S.426 the Coast Guard has this duty.

E. Assessments of Data on Environmental Quality

Minimum environmental safeguards are routine inclusions for most comprehensive Federal legislative packages. Accordingly, both bills provide for the preparation of environmental impact statements prior to lease sales, in compliance with section 102(2)(c) of the National Environmental Policy Act of 1969.¹⁸ However, such short term studies are by their nature but fragmentary descriptions of ever-changing marine and coastal environmental systems. The information produced by the various impact statements is seldom correlated, often duplicated and does not produce a yardstick against which the continuing impact of the activity under scrutiny can be assessed.

S.426 addresses this problem by designating one agency, N.O.A.A., as the "lead agency" for the purpose of N.E.P.A. requirements, and by requiring thorough baseline studies prior to the formulation of local leasing and development plans and continuous monitoring of leased areas to provide time-series data and trend information. This section also provides for the designation of states eligible to request lease postponements because of the likelihood of adverse stateside effects. A provision such as this should result in more effective, efficient evaluation of all the environmental data relating to the leasing program.

A similar provision has been adopted by S.521, with such studies to be undertaken by the Secretary, "in consultation" with N.O.A.A.¹⁹

F. Promotion of Competition

At the present time, participation in O.C.S. oil and gas leasing programs has been dominated overwhelmingly by the major oil companies.²⁰ Among the factors contributing to the limitation of participation by smaller, independent operators are the high initial cost of a lease

18 42 U.S.C.A. section 4321 et seq., note that S.426 alone requires an impact statement prior to exploratory drilling during the Federal exploration of O.C.S. lands.

19 Compare S.426, section 209, "Sec. 21" to S.521, section 202, "Sec. 30".

20 Hearings (cited above at footnote 9), p. 61.

attributable to the present bonus bid system, and the financial risk inherent in such a venture.

With respect to the bidding system, S. 421, section 203, allows the Secretary three alternative methods for setting the price structure prior to the lease bidding. In addition to the present option (cash bonus plus a minimum 12½ per cent royalty), S.521 would permit a sale on the basis of a cash bonus plus a minimum 30 per cent share of net profits from operations on the tract reserved to the United States, or on the basis of a fixed cash bonus with the net profit share reserved as the bid variable.

S.426 would permit greater flexibility yet in setting the price structure by providing the following options in the discretion of the Secretary:

- (1) cash bonus bid plus a 16 2/3 per cent royalty;
- (2) fixed cash bonus plus variable royalty bid;
- (3) cash bonus bid with diminishing or sliding royalty;
- (4) cash bonus bid plus at least 30 per cent of net profits reserved to the U.S.;
- (5) fixed cash bonus with net profit share as bid variable;
- (6) cash bonus, plus minimum 16 2/3 royalty, plus a net profit share reserved; or
- (7) competitive performance based on work program submitted by bidders.

Obviously, S.426 gives the Secretary the greater number of options to consider in an effort to encourage independent operators to participate in larger numbers. While it cannot be determined with certainty which formula will prove most successful, both bills remedy the basic problem with the original O.C.S.L.A. that the only permissible price system resulted in prohibitively high initial costs to the prospective O.C.S. operator.

Further concern is shown for independent refiners by both bills: both versions permit the Secretary to limit participation in sales of royalty oil where necessary to assure "adequate supplies of oil at equitable prices to independent refiners."

The uncertainty in the search for oil in geologically unknown areas is recognized as substantial. For example, the actual reserves discovered as a result of the 1968 Texas O.C.S. sale were previously overestimated by the Department of the Interior by a factor of 2, and by industry by a factor of 10. Prior to drilling, estimations of recoverable petroleum reserves are not reliable: the structure can appear very promising, based on geophysics, but not have adequate reservoirs or have the reservoirs mostly filled with water.²¹ This area of risk would be reduced considerably by the exploration programs described earlier, which in turn would enable participation by smaller operators less capable of sustaining such losses.

²¹ Hearings (cited at footnote 9), p. 124.

A second area of risk which may affect participation relates to requirements under each bill for demonstrated financial responsibility in anticipation of substantial oil spill damage. When new regulations were enacted following the Santa Barbara spill imposing absolute liability for oil pollution in the Santa Barbara channel, Pauley Petroleum, Inc., and five other operators brought suit against the Federal Government claiming that these regulations made exploitation of their holdings economically and practically impossible. The group stated that it would not have bid for the leases in the face of unlimited liability for spills.²²

Both bills include provisions which would ameliorate this risk to the operator. The operator remains liable for uncontained oil spill damages up to the amount of \$7,000,000. When containment costs or damages exceed that amount, the Offshore Oil Pollution Settlements Fund becomes liable up to its maximum of \$100,000,000. Thus, the OCS operator need only insure a risk of \$7,000,000. (Note: one estimate of costs resulting from the Santa Barbara spill was approximately \$16,400,000).²³

Certainly, the difficulty in promoting competition in the O.C.S. arena cannot be alleviated until appropriate information becomes available and in-depth studies are conducted. Such studies are mandated by S. 426 section 303 and by S. 521 section 128, in substantially identical language.

C. Consideration of State Interests

The original O.C.S.L.A. reflects little concern over the interests of states in minimizing the coastal zone side effects of the Federal leasing program, nor does it provide in any manner that states receive any portion of the revenues generated. Since 1953, Federal policy has shifted toward a position which recognizes the need for coordinated, cooperative management of the coastal zones of the states with a heightened concern for the accommodation of state as well as Federal interests.²⁴ Both S.426 and S.521 have addressed the problem of Federal-state jurisdictional disputes, but this issue will be largely mooted by the decision in U.S. v. Maine et al.²⁵

S.426 section 101 states as a purpose of the bill that affected states be provided an opportunity to participate in policy and planning decisions relating to management of O.C.S. resources. This purpose would be accomplished in several ways:

22 Ibid, p. 1293.

23 Ibid, p. 1303.

24 See generally "Coastal Zone Management Act of 1972", 16 U.S.C. sections 1451 et seq.

25 The problem of boundary disputes with Canada or Mexico is treated by S.426, section 209, "Sec. 28" and S.521, section 202, "Sec. 24".

- (1) by requiring that the overall leasing program, the implementation of the exploration program, the leasing of specific tracts and the environmental assessment and monitoring all conform to state coastal zone management programs and policies, as far as is possible consistent with the national interest;
- (2) by allowing the governor of a state likely to be affected to request a delay of nearby leasing activities for up to three years;
- (3) by not preempting state rules of liability for oil spill damage, and
- (4) by requiring exploration prior to leasing so that the onshore impacts along "frontier areas" can be more accurately estimated and assessed by those states.

S.521 considers state interests in the following ways:

- (1) by allowing review by state and local governments of decisions as to which areas will be offered for leasing and by requiring coordination of lease offerings with state coastal zone management programs;
- (2) by allowing the governor of an "adjacent state" (not defined) to request a delay of nearby leasing activities for up to three years;
- (3) by not preempting state rules of liability for oil spills;
- (4) by eventually requiring exploration prior to leasing such that states can appraise likely onshore effects; and
- (5) by providing financial assistance to impacted states from a "Coastal State Fund" pursuant to regulations passed by the Secretary, in coordination with coastal zone management programs. (Programs relating to grants to states will be considered separately.)

It is readily apparent that under either bill the states have two principal means of participating in Federal decision-making with respect to offshore oil and gas development:

- (1) by developing state management programs which qualify under the C.Z.M.A.²⁶ and
- (2) by gubernatorial requests for leasing delays prior to lease bid invitations.

²⁶ Note that C.Z.M.A., section 307, requires that once a state coast zone management program is approved, Federal agency actions which might affect that zone must be consistent with the plan or necessary in the interest of national security.

Thus, the most significant distinction in the consideration of state policies and interests by these two bills may well be the manner of review available to the state if its request for a leasing delay is denied by the Secretary. As noted previously, S.521 provides for an administrative appeal to the "National Coastal Resources Appeals Board", whereas under S.425 the action of the Secretary is reviewed by Congress and his conclusions may be overturned by a resolution of either House.

H. Financial Assistance to States

In recognition of the economic impacts to states which result from O.C.S. oil and gas development, these legislative proposals have been offered to provide direct grants to the states affected: S. 130, S.521 and S.536. In any such program, three basic questions arise: who will administer the fund, what states will be eligible for grants, and what factors will determine the amount of each grant?

S. 130 would amend Section 9 of the O.C.S.L.A. to provide for a sharing of those O.C.S. revenues "attributable to the portion of the Outer Continental Shelf adjacent to any state", according to the following formula:

- "(1) 25 per centum shall be paid by the Secretary of the Treasury to such adjacent state,
- (2) 25 per centum shall be paid...in equal amounts, to each of the several states other than such adjacent state, and
- (3) 50 per centum shall be deposited in the Treasury of the United States...."²⁷

As written, this bill has two critical weaknesses. First, no attempt is made to define the geographical area of the O.C.S. which is "adjacent to any state." Since the sites of Federal oil leases are all beyond the three mile belt of state submerged lands, no demarcation exists at present separating O.C.S. lands into areas which can be considered adjacent to individual states. Second, the bill is not responsive to true economic needs of coastal states. If one state becomes the site of refineries, tank farms and numerous pipeline corridors, and incurs related expenses for added roads, expanded water and sewer capacity and other services, it would nevertheless receive no greater a share of revenues than would be received by a neighboring coastal state which totally excluded energy facility construction. On the other hand, this bill assures a minimum compensation to coastal states (assuming that "adjacency" can be defined) in recognition of the fact that some level of adverse impact is inevitable because of the regional scope of the O.C.S. program.²⁸ Finally, no justification is

²⁷ S. 130, section 2.

²⁸ See generally C.E.Q. Report (cited above at footnote 16), Chapter 7.

readily ascertainable as to why states other than "adjacent coastal states" should participate in O.C.S. revenues, or why the 25:25:50 formula is preferable to any other arbitrary allocation.

S. 521 takes a different tack entirely by establishing a "Coastal State Fund" to be administered by the Secretary of the Interior. Ten per cent of Federal revenues (or 40 cents per barrel, whichever is greater) from O.C.S. leases would be paid into the Fund, in addition to an initial appropriation of \$100,000,000, not to exceed a total of \$200,000,000 for fiscal 1976 and 1977. Requirements for eligibility are to be established by the Secretary of Commerce, and must require, at a minimum, (1) that the grants directly relate to the environmental, social, or economic impacts of the O.C.S. program, (2) that consideration must be given to the extent of O.C.S. development off a coastal state, and (3) that a state establish pollution containment and clean-up systems to respond to spills from oil and gas development on state submerged lands. Grants are intended to be paid in amounts equal to actual or predicted environmental, social and economic impacts, or in amounts proportionate to the impact borne by a state relative to the total of state impacts where the total exceeds \$200,000,000 for a given year. The grants may be used for planning, construction of public facilities, provision of public services, and other purposes, and are to be coordinated with Coastal Zone Management Act programs.

S. 536, unlike S.130 and S.521, does not amend the O.C.S.L.A. Instead, it modifies the Coastal Zone Management Act in several respects:

- (1) it emphasizes the requirement that leases, as well as licenses and permits, must be administered in a manner consistent with state coastal zone management programs,
- (2) it encourages state programs to provide for adequate access to public beaches and preservation of coastal islands;
- (3) it extends existing C.Z.M.A. grant authority until 1980; and
- (4) it creates three new funds, providing grants for impact assistance, interstate coordination programs, and for state coastal research programs.

The "Coastal Impact Fund" would be financed by a direct Congressional appropriation of \$200,000,000 for each of the next five years, and would be administered by the Secretary of Commerce along with the other C.Z.M.A. programs. The grants do not require matching state funds and may be disbursed to states which the Secretary determines are likely to be impacted by O.C.S. development or the siting of related energy facilities which affect the coastal zone, directly, or indirectly. The grants may be used for studying and managing adverse consequences or for construction of public facilities and provision of services made necessary by O.C.S. development or energy facility siting. The bill establishes two basic eligibility requirements:

- (1) the state must be making satisfactory progress toward development of a coastal zone management program or it must be administering such a program; and
- (2) the state must demonstrate that the grant will be used for one of the purposes mentioned above.

Senator MATHIAS. Our colleague, Congressman Rogers, will be the next witness and I will direct counsel to inform the first member of the committee to return to resume the meeting and request Congressman Rogers to testify.

The committee will stand in recess.

[A short recess was taken.]

Senator JOHNSTON. The meeting will come back to order.

Our next witness will be Mr. Walter Rogers, president of the Interstate Natural Gas Association.

Senator JOHNSTON. Let me say to you, Mr. Rogers, that in addition to welcoming you here, and this statement applies to everyone else, we have got a large number of witnesses and we have got a long afternoon session so we would like each of the witnesses to try to summarize your statements within 10 minutes if possible but a maximum of 15 minutes because that will allow enough time for a few questions so we will not have to pass over any of the other witnesses. With that I would like to welcome you.

Mr. ROGERS. Thank you, Senator. I intended to do that very thing. But let me say that with your permission I ask that the statement be included in the record.

Senator JOHNSTON. It will be included in the record verbatim.

STATEMENT OF WALTER ROGERS, PRESIDENT, INTERSTATE NATIONAL GAS ASSOCIATION

Mr. ROGERS. And I will undertake to summarize my statement.

First I would like to say the Interstate Gas Association of America is made up of the principal interstate gas transmission companies serving all of the lower 48 States, with the exception of Vermont, through an underground pipeline network now totaling approximately 225,000 miles. These companies handle 90 percent of the total interstate sales of natural gas and constitute the vital link between the wellhead at the gas well and the city gate of the gas distribution companies. The members of this organization are particularly sensitive to the declining natural gas supply, for the simple reason that their existence depends upon it. The interstate pipelines are fully regulated by the Federal Power Commission. They do not make any money out of the sale of gas. Their revenue consists of charges for the transportation of natural gas from the wellhead to the metropolitan areas and industrial centers of this Nation. The charges they receive for the transportation of such gas are fully regulated and determined by the FPC. Their ability to survive depends upon their success at buying or contracting for natural gas at the wellhead which they in turn transport and deliver to the other geographical areas of this Nation. Hence, a supply of natural gas is the lifeblood of the interstate gas pipeline industry.

It is generally accepted throughout all segments of the industry—the producer, the transmission company, and the distribution company—that a substantial portion of the supplies of natural gas located onshore have already been discovered and are presently being tapped. The remaining reserves onshore do not appear to be of sufficient capacity to substantially alter the course of the developing

energy crisis. Of course, every cubic foot of gas helps and all exploratory efforts should be conducted onshore. It appears, however, that the deposits of natural gas available for the solution of the energy shortfall will be found offshore in varied water depths. It is in that general area that the industry expects to find the additional supplies so vital to this Nation. Now, in the letter that we received asking us to appear here it was pointed out that in that letter that there were several targets that they wanted us to focus on, and we attempted to do that.

Now the first one is an improved coordination of Federal OCS programs with the States.

There must be early action for mandatory or effective voluntary coordination between the Federal Government and the several coastal States with relation to Federal OCS exploration and development programs. The need for early and expensive development of offshore energy supplies demands early determination of the course to be followed in resolving the conflicts between the Federal Government and the several States. The primary determination must be made as to a time frame within which final decisions must be reached on all questions and conflicts which could be employed to retard or delay physical action in exploration and development. Now, we have pointed out in one particular area here in the center of page 4 and we say however, the request operates, the request of the Governor to postpone a sale in both S. 521 and S. 426, the request operates to postpone the sale or action with relation to a leasing and development plan until the Secretary of Interior within 30 days from the receipt of such request takes certain specific actions with relation there to.

Now the question is if the Secretary of the Interior does not take any action, what does it result in? Does it trigger the entire 3-year period or is it presumed that some action was taken by him which creates the need for other action by the Department of the Interior. If that is not so we feel that it ought to be corrected.

We must recognize that the areas of conflict will include matters of jurisdiction, matters of liability, matters of Federal assistance, matters of ecology and environmental guidelines, matters of taxes, matters of revenue sharing, and a host of others which have probably not yet occurred to either the Federal Government, the States, the municipal entities, or the industries.

Many of these problems I am sure have been touched on in the report, and I am sure the Senator is familiar with that, and that is the one that was provided by the Governor's Offshore Revenue Sharing Committee by the Gulf South Research Institute of Baton Rouge which was included incidentally in hearings last year.

Now the second item was increasing the role of the States in the decisionmaking process and I will sum it up by saying the formula for making determination on the many questions and problems referred to in this section next above should include provisions for participation by the States in the presentation of data, facts, statistics, and arguments related to exploration and development of an area or tract of the Outer Continental Shelf. However, this is not

to say that such participation should constitute or contribute to a means of retarding or delaying the speedy prosecution of the plans for such an exploration or development program. The property in question belongs to the Federal Government and it is our position that the Federal Government should have the final say.

Now, let us skip on down to No. 3. The methods of separating OCS oil and gas exploration activities from decisions to develop and produce the oil and gas.

Although there has been a tremendous advance in the methods and technologies developed through the years to determine the presence or nonpresence of fossil fuels without actual physical drilling, these developments are far from being exact. The fact is that the only way to determine whether or not there is a deposit of oil and/or gas in commercial quantities is to drill a well or perhaps several wells. However, it is our position, and I think the Senator would agree with me, that the only sure way is to sink a hole in the ground and find out what is in that hole or what comes out of that hole. And I think that this is a fact of life that we must appreciate.

Since exploration must precede development, there is no reason why exploratory activities cannot be separated from development activities on a physical basis. The exploratory activities could be conducted without undue interference to the ordinary life patterns in the area being explored, and many of the problems that would arise in full development could be avoided during the exploratory period. However, I would vigorously contend against denying the free enterprise segment of the oil and gas industry the right to conduct appropriate exploratory activities and against attempts to substitute therefore a program by the Federal Government.

Senator JOHNSTON. Let me ask you a question or two, Mr. Rogers.

I have read your statement and I have some questions on it. You say that we can separate the decision on exploration and then whether to produce later on?

Mr. ROGERS. Yes, sir.

Senator JOHNSTON. Now what kinds of factors would say that you could explore and then result in a decision later not to produce?

Mr. ROGERS. Well, I think that the question is this, as we see it. What we are after in the final analysis is oil and gas, is fossil fuels, and I think what we are talking about is a procedural situation in as far as the many problems that are involved. Let us take for instance, environmental and ecological problems. Our position is that if exploration could be confined in the first instance to where you would not have chemical and environmental problems, you can determine where there was a likelihood that oil or gas could be found and then go into your development.

Senator JOHNSTON. I understand that, but once you found it what would tell not to produce it? Why might you not produce that oil that you found?

Mr. ROGERS. I do not know of any reason why you would not produce it, Senator, and I think if there was evidence produced that you had found it and did not produce it, that ought to be forced to or you ought to loose the lease. But now there is a development requirement.

Senator JOHNSTON. I am talking about the Federal Government apparently would be the one to make that decision as to whether to produce or not. I am just wondering what kind of fact—you say you want to separate this question of exploration from production. The idea being that after you go to all the expense to find the oil, then you might not produce it—I am wondering why you would not produce it and if those factors were determinable prior to the time you spent several million dollars making a lease bid and going and finding the oil?

Mr. ROGERS. Well, I do not think there would be any reason not to produce it. I think it ought to be required that it be produced if you found it. Maybe I do not understand your question.

Senator JOHNSTON. Well you say, let us see where is it here methods of separating OCS oil and gas exploration activities from decision to develop and produce the oil and gas.

Mr. ROGERS. Yes.

Senator JOHNSTON. What you are saying is it can be done, to separate exploration?

Mr. ROGERS. Yes.

Senator JOHNSTON. From the decision to produce?

Mr. ROGERS. Well, maybe the word decision is wrong. You can separate the exploration from the production. Really the decision to produce, the word decision probably should not have been put in the statement because I am referring to the general development or production of oil and gas and the decision.

Senator JOHNSTON. Well I want to develop that issue also with other witnesses. I think our environmental friends can give us some ideas on why you would not produce after you found. But I think we ought to, if we are going to separate those decisions, we ought to take as much of the decision—make as much of that decision in advance before we spend the money. Maybe some of these things we cannot decide in advance. We do not want to waste a lot of money finding the oil and deciding not to produce when factors on which to make the decision not to produce were available to us before we spend the money.

Now second, you say it is a little premature now to make the decision on whether to have a coastal State's fund?

Mr. ROGERS. Yes, sir.

Senator JOHNSTON. Do I understand that correctly? Do you know how long they have been drilling off the Louisiana coast?

Mr. ROGERS. Yes.

Senator JOHNSTON. Over 25 years?

Mr. ROGERS. Yes.

Senator JOHNSTON. Do you know how many holes we have out there? Do you know the Gulf South Research Center in which you refer in your statement has made an impact survey to the effect of an OCS drilling indicating a net cost of States for the OCS drilling and indicating some other environmental effects not measurable in terms of money to the State. Are you familiar with that report?

Mr. ROGERS. Yes, my point is this. I am not debating on either side of this but as I point out in my statement there are two schools

of thought. Once that you do suffer damage, that you are entitled to compensation for it. The other is that you gain more benefits than you do detriments by the offshore drilling.

Senator JOHNSTON. Most of the northeastern governors say they suffer more detriments.

Mr. ROGERS. My point is simply this. It is a matter that we can determine, and that we can settle subsequently. I am simply saying that we should not hold the development of the Outer Continental Shelf for fossil fuels depending on questions like this, and that if we set up a coastal States fund now you are going to cause a controversy that if that overlap is the developmental program then we are going to suffer in getting the fossil fuels we need. As far as I am personally concerned, you can set up a coastal rates fund and collect the interest off it. What I am trying to avoid is the controversy.

Senator JOHNSTON. I would suggest to you the controversy is already there and the coastal States fund would help reserve the controversy. I would suggest 25 years ought to be enough experience in all the multitude of studies we have had to tell you that there is an impact and to tell you what the impact is and that the Congress ought now to have sufficient facts in our hands to resolve the controversy.

Mr. ROGERS. I have the same problems with relation to the State of Texas and I certainly agree with you that there is a great deal of argument on both sides, but Louisiana and Texas have never been given any remedy on this that I know of to date.

Senator JOHNSTON. Well, that is what we are searching for, an equitable remedy.

We appreciate your testimony so much, Mr. Rogers and thank you for yourself and for you Interstate Natural Gas Assn.

Mr. ROGERS. Senator, just one thing in conclusion. For whatever is done, the need for this fossil fuel is so urgent that nothing would be thrown in the way, in the way of an obstacle or a difficulty in moving far with it.

Senator JOHNSTON. I agree with you. Thank you very much.

[The prepared statement of Mr. Rogers follows:]

PREPARED STATEMENT OF WALTER E. ROGERS, PRESIDENT,
INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

The principal bills for discussion are the following: S.426, S.521, S.586 and S.740 (Sections 202 and 404). Other bills before the joint session of the Committees are S.81 S.130, S.470, S.825 and S.826.

Mr. Chairman and Members of the Committee— The following statement is presented on behalf of the Interstate Natural Gas Association of America. My name is Walter E. Rogers and I serve as President of that Association. I appear here today representing such Association.

Our appearance here today is in response to the letter of March 5, 1975, addressed to me over the signature of the Honorable Henry M. Jackson, Chairman of the Committee on Interior and Insular Affairs, and the Honorable Warren G. Magnuson, Chairman of the Committee on Commerce, which letter contained certain instructions and guidelines with reference to the specific issues to be treated. We have attempted to pursue these instructions.

The Interstate Natural Gas Association of America is made up of the principal interstate gas transmission companies serving all of the lower 48

states, with the exception of Vermont, through an underground pipeline network now totaling approximately 225,000 miles. These companies handle 90 percent of the total interstate sales of natural gas and constitute the vital link between the wellhead at the gas well and the city gate of the gas distribution companies. The members of this organization are particularly sensitive to the declining natural gas supply, for the simple reason that their existence depends upon it. The interstate pipelines are fully regulated by the Federal Power Commission. They do not make any money out of the sale of gas. Their revenue consists of charges for the transportation of natural gas from the wellhead to the metropolitan areas and industrial centers of this Nation. The charges they receive for the transportation of such gas are fully regulated and determined by the FPC. Their ability to survive depends upon their success at buying or contracting for natural gas at the wellhead which they in turn transport and deliver to the other geographical areas of this Nation. Hence, a supply of natural gas is the lifeblood of the interstate gas pipeline industry.

It is generally accepted throughout all segments of the industry—the producer, the transmission company, and the distribution company—that a substantial portion of the supplies of natural gas located onshore have already been discovered and are presently being tapped. The remaining reserves onshore do not appear to be of sufficient capacity to substantially alter the course of the developing energy crisis. Of course, every cubic foot of gas helps and all exploratory efforts should be conducted onshore. It appears however, that the deposits of natural gas available for the solution of the energy shortfall will be found offshore in varied water depths. It is in that general area that the industry expects to find the additional supplies so vital to this Nation. Hence, any legislation concerning, affecting, or associated with offshore exploration and development is of primary and top priority interest to the interstate natural gas pipeline companies.

In keeping with your observations and instructions in your letter of March 5, 1975, I will attempt to focus our testimony on the specific issues raised by the pending bills as they relate to our own areas of interest, and as listed in your letter.

1. IMPROVED COORDINATION OF FEDERAL OCS PROGRAMS WITH THE STATES

There must be early action for mandatory or effective voluntary coordination between the Federal government and the several coastal states with relation to Federal OCS exploration and development programs. The need for early and expansive development of offshore energy supplies demands early determination of the course to be followed in resolving the conflicts between the Federal government and the several states. The primary determination must be made as to a time frame within which final decisions must be reached on all questions and conflicts which could be employed to retard or delay physical action in exploration and development. In both S.521 and S.426 there are provisions for notice to be given to the governor or governors of each state adjacent to proposed OCS leases or development plans. In both bills, the maximum time period for which delay can be requested in three years. However the request operates to postpone the sale or action with relation to a leasing and development plan until the Secretary of Interior within 30 days from the receipt of such request takes certain specific actions with relation thereto. The question that immediately occurs is, "What happens should the Secretary, for some reason or for no reason, fail to take any of the actions specified within the 30-day period? Would such inaction operate to provide a delay of the full three years?" If so, there should be a corrective amendment.

We must recognize that the areas of conflict will include matters of jurisdiction, matters of liability, matters of Federal assistance, matters of ecology and environmental guidelines, matters of taxes matters of revenue sharing, and a host of others which have probably not yet occurred to either the Federal government, the states, the municipal entities, or industries which will be associated with the exploration and the development of the Outer Continental Shelf. Many of these problems have been touched upon in a report prepared for the Governors' Offshore Revenue Sharing Committee by the Gulf South Research Institute of Baton Rouge, Louisiana. This report is included in the hearings that were conducted last year by the Subcommittee on Minerals, Materials and Fuels of the Interior and Insular Affairs Committee of the

United States Senate. This analysis pinpoints many of the problems which will not be easy to solve. Endless delays on any of them could seriously jeopardize the energy posture of this Nation within the next ten years. Hence, we would recommend that there be some definitive formula for requiring coordination as between the states and the Federal government toward the earliest possible action for the exploration and development of oil and gas on the Outer Continental Shelf.

2. INCREASING THE ROLE OF THE STATES IN THE DECISIONMAKING PROCESS

The development of a program, a plan, or a formula for making determinations on the many questions and problems referred to in the section next above should include provisions for participation by the states in the presentation of data, facts, statistics, and arguments related to exploration and development of an area or tract of the Outer Continental Shelf directly affecting the particular state. However, this is not to say that such participation should constitute or contribute to a means of retarding or delaying the speedy prosecution of plans for such exploration or development program. The property in question belongs to the Federal government which is charged with, and should be responsible for, the final determination of the issues involved. Hence we would feel that any and all provisions in S.426 and S.521 which could be interpreted to enable a state, coastal or otherwise, to directly or indirectly dictate or delay the final determination of the problem or problems at issue, would be wholly *inappropriate*.

It should also be pointed out that Section 210 of S.521 gives preference to an "adjacent" state relative to the rights and privileges applicable to offshore development.

Although this may appear on the surface to be equitable, I would repeat that the property involved, to wit, the Outer Continental Shelf, is Federal domain owned by all of the United States. Hence, such preference provisions could constitute discrimination that might appear unfair to the inland states and constitute the basis for controversies that could jeopardize the early exploration and development needed.

Section 210 of S.521 also creates another board or bureau with certain powers and procedural requirements in connection therewith that could also operate to further delay exploration and development. It is our position that there must come a time for decision in all of these matters; that the gravity of the energy crisis should dictate the avoidance of every possible delay; legislation enacted to cope with energy problems should be designed to remove rather than to create obstacles, difficulties and impediments.

3. METHODS OF SEPARATING OCS OIL AND GAS EXPLORATION ACTIVITIES FROM DECISIONS TO DEVELOP AND PRODUCE THE OIL AND GAS

Although there has been a tremendous advance in the methods and technologies developed through the years to determine the presence or nonpresence of fossil fuels without actual physical drilling, these developments are far from being exact. The fact is that the only way to determine whether or not there is a deposit of oil and/or gas in commercial quantities is to drill a well or perhaps several wells.

Since exploration must precede development, there is no reason why exploratory activities cannot be separated from development activities on a physical basis. The exploratory activities could be conducted without undue interference to the ordinary life patterns in the area being explored, and many of the problems that would arise in full development could be avoided during the exploratory period. However, I would vigorously contend against denying the free enterprise segment of the oil and gas industry the right to conduct appropriate exploratory activities and against attempts to substitute therefore a program by the Federal government. I think the history of the oil and gas industry in this Nation would conclusively support the proposition that there must be a direct association between exploratory and developmental activities. Exploration and development have always gone hand in hand. Certainly, information, statistics, geological information, etc. can be gathered by the Federal government to be carefully weighed with relation to the existence of deposits in a certain area. However, I would point out that this is being done at the present time. To commence a separate and different survey program by the

Federal government would, in my opinion, create an expensive overlapping effort that would not provide much additional information. The Federal government does not have the facilities or the expertise to engage in the actual physical exploratory effort. Private enterprise does have and has proven many times that they can accomplish the task if they are permitted the opportunity.

Section 19 (h) of S.521 provides for the Secretary to obtain any existing data about oil or gas resources in the area subject to the lease, from the lease holder. Provision is made for proprietary data or information so obtained to be confidential. From a legal standpoint, this may appear sufficient, but from a practical standpoint, everyone familiar with Washington knows that confidentiality with regard to information held by government agencies is next to impossible. Private property, to wit proprietary information, should not be taken from any citizen of the United States except in accordance with the laws already on the books with regard thereto.

4. ALTERNATE LEASING SYSTEMS OF OTHER METHODS OF ALLOWING PRIVATE INDUSTRY TO DEVELOP OCS OIL AND GAS

The leasing procedures of the Federal government with regard to oil and gas have been controversial for a number of years. This has been especially true with relation to offshore leasing. The leasing for offshore activities entails an economic problem because of the extremely high costs involved. Many have felt that Federal government leasing activities in offshore areas have resulted in a battle of the financial giants rather than an equitable program in which all of the people interested might be able to participate. This, of course, has to do with the cash bonus bidding system procedure that has long been employed by the Federal government. It is the position of INGAA that new systems should be explored that would encourage wider participation, a more expansive exploration and development program, and an earlier production availability of both oil and gas.

INGAA's position was expressed by Mr. Richard L. O'Shields, chief executive officer of the Panhandle Esatern Pipe Line Company, on behalf of INGAA at the Project Independence hearings on September 17, 1974, at Houston, Texas. INGAA's position was documented as follows: The cash bonus bidding system should be modified to reduce the high initial cash payment so as to permit the maximum amount of available dollars to be used in actual drilling for oil and gas offshore, yet insure the Federal Treasury of fair value for the leases sold. It was recommended that the payment of the bonus for the lease be permitted on an installment basis, with a ten percent payment due upon award of the lease and the balance payable in installments. It was also suggested that the present policy with respect to the acceptance of bids be modified to make the award of a standard 5,000-acre lease mandatory to any responsible bidder whose bid is in excess of one million dollars. The following is a documentation of the Federal leasing procedure recommended by INGAA:

a. In connection with competitive bidding for Federal leases, the bidder shall submit with its bid a certified check for 10 percent of the bonus offered for the lease. The Bureau of Land Management shall award the lease to that bidder offering the largest bonus. In the event that a bonus bid of \$1 million or more is submitted for a lease, the Bureau of Land Management cannot reject the bid on the ground of insufficiency.

b. The purchaser of each tract shall provide within 20 days to the Bureau of Land Management a bond in form satisfactory to assure purchaser's performance of his obligations, including payment of the balance of the bonus, under the purchase conditions outlined below.

c. At the end of each 10-month period from the date of award of the lease, a payment of an additional ten percent, less expenditures made on the lease during the preceding 12 months, will be paid. The amount of the payment made shall be credited against the balance of the bonus obligation. Such yearly payments will cease:

(1) On any lease on which commercial production has been established within five years from the date of the granting of the lease: The balance of the bonus shall be paid, commencing with the first date of commercial production in annual amounts equal to the greater of (a) 25 percent of the annual revenues, after payment of royalties, from the hydrocarbon reserves produced from the lease, or (b) an amount equal to 1/5 of the bonus balance as of the

date of the commercial production or the end of the fifth year until the balance is paid in full.

(2) On any lease on which commercial production has not been established within five years from the date of the awarding of the lease: The balance of the bonus shall be paid in five equal annual installments commencing on the fifth anniversary of the lease award.

(3) On any lease on which it is determined that the lease is not commercially productive and the lease is surrendered within five years from the date of the awarding of the lease: The bonus balance as of the date of the lease is surrendered shall be cancelled and no further payments required of the purchaser of the lease.

INGAA's recommendation as hereinbefore set out is not to say that there might not be other methods or systems that would accomplish the end result sought. We do feel that this proposal would more adequately serve the people. Should others be proposed that would better serve the need, we would welcome an opportunity to review them.

With relation to the proposed changes in Section 8 of the Outer Continental Shelf Lands Act we would call to your attention the fact that the proposed amendment of subsection (b) thereof, as proposed in both S.521 and S.426, makes no reference to the 12½ per centum royalty requirement now present in existing law. The absence of this provision raises a question as to the possibility for a method of payment by the lessee other than on a royalty basis. It is our feeling that the United States should reserve the royalty interest as such in all oil and gas leases of deposits owned by the Federal government.

5. IMPROVEMENTS IN THE PLANNING AND EXECUTION OF ENVIRONMENTAL BASELINE STUDIES, MONITORING STUDIES, AND PREPARATION OF ENVIRONMENTAL IMPACT STATEMENTS

There should be a continuing and active study with relation to improving the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact statements. The Federal government already has the machinery and the facilities to do this. Several agencies of the Federal government serve as the constant watchdog with relation to environmental and ecological problems offshore. In considering improvements in environmental protection for the Outer Continental Shelf, we believe it is imperative that the Congress review and amend the National Environmental Policy Act of 1969 (NEPA). While INGAA is completely in accord with the goals and objectives of NEPA, this Act, as interpreted by the courts, unfortunately has created what has been aptly described as a procedural nightmare. The preparation and filing of environmental impact statements and the requirements that every conceivable alternative to a proposed action be considered has been a major obstacle to the timely implementation of much-needed energy projects. Without going into a detailed discussion of the imperfections of NEPA, we would point out several areas where modification is definitely needed:

1. Impact Statements should be required only to consider in detail those alternatives to the proposed action which are realistic both in concept and achievement. Alternatives not reasonably available within the time frame during which the agency finds action is required by the national interest or not reasonably achievable with acceptable cost-benefit dimensions or not within the power of the agency or the applicant to achieve are not deemed realistic.

2. It should be made clear that a new environmental evaluation of alternatives is not required every time an agency acts on identical matters seriatim. For example, an Environmental Impact Statement is required by the Department of Interior when it proposes to lease tracts on the Outer Continental Shelf, but why must it prepare such a statement for each and every sale covering basically the same areas and using identical data. This is costly and time consuming and serves no useful purpose. Certainly, once the Department of Interior analyzes the environmental aspects of leasing tracts in the Outer Continental Shelf, it should not be necessary for the agency to be subject to the procedural burden of re-evaluating the same issues each time it acts on an increment to an overall plan.

3. NEPA should also be modified to remove the duplication and overlap that exists in the law as presently interpreted and the multi-agency involvement in

preparing impact statements. The "lead agency" concept should be required by law i.e., the principal agency involved in the proposed action should have the principal responsibility for the preparation and issuance of the impact statement.

Certainly, new and recurring problems will require new and innovative approaches. It is our position that primary attention should be focused on trying to streamline the baseline studies, the monitoring studies, and especially the preparation of environmental impact statements, to the end that a definitive time frame can be established within which appropriate information can be gathered, studies made, and proper requirements designed. There should be no suspension of exploratory or developmental activities in the OCS, for the simple reason that such studies and research can continue side by side with exploration and development, and be measurably aided thereby.

6. IMPROVEMENTS IN REGULATIONS AND ENFORCEMENT OF OCS OPERATING PRACTICES FOR SAFETY AND ENVIRONMENTAL PROTECTION

It is our understanding that the laws generally existing on the statute books are adequate to provide the regulation for enforcement of Outer Continental Shelf operating practices for safety and environmental protection. It is our further understanding that the department and agencies charged with these responsibilities have appropriate rulemaking powers and enforcement powers to provide proper policing of any activities on the Outer Continental Shelf.

In this connection, we should also consider the section of the bill entitled "Liability for Oil Spills," to wit, Section 23. Certainly, the liability without fault up to the sum of \$7 million would be a deterrent on any operator in the Outer Continental Shelf, especially, the smaller independents. The only way to avoid such liability would be to meet the burden of proof that the damage was caused by an act of war. In a great many instances, this would be an utter impossibility. Also the lessee must assume the burden of proving that the damage was caused by the negligence of the United States or other governmental agencies, or prove the negligence or intentional act by the person claiming the damage. In all of these instances, the requirements to escape liability are so burdensome that there is virtual liability without fault to the tune of \$7 million.

The proposal to create the Offshore Pollution Settlements Fund is a good one. It provides an equitable and fair method of dealing with some very difficult problems that could arise without anyone being at fault. It is a tremendous improvement over the proposals that came forward in the 93rd Congress simply by creating an absolute liability without fault. Those proposals would have seriously deterred leasing activities. This new approach, if properly administered, would answer many of the problems of the lessee.

7. THE NEED FOR AN APPROPRIATE FORM OF FEDERAL ASSISTANCE TO AFFECTED COASTAL STATES

There are several schools of thought with relation to the effect of offshore oil and gas activities on the adjacent coastal states. The states themselves have argued that the effect is highly detrimental and that they should be compensated by the Federal government by direct assistance payments, by a revenue sharing program, a combination of both, or by some other means that will remedy the damage caused, whether it be economic, environmental, or otherwise. Others argue with equal vigor that the effect of such offshore operations is highly beneficial to the adjacent coastal state and that the benefits owing into the coastal state far outweigh any detrimental effects. It is my understanding that the coastal states presently adjacent to offshore oil and gas activities have not been afforded any unusual rights, Federal grants, or other emoluments now being sought. Whether or not the effects of such development are detrimental or beneficial is an open question. For that reason, it is our position that the creation of a Coastal State Fund at this time would be premature. Certainly, the creation of a Coastal State Fund in this legislation presupposes that the effect upon the adjacent coastal states will be detrimental rather than beneficial, a fact that is yet to be determined. Under the circumstances, it would seem the most practicable approach is to suspend the creation

of a Coastal State Fund until some conclusion has been reached as to its need. In any event the exploration and development of the Outer Continental Shelf should not be delayed pending the resolution of such an argument. It would seem that this is an area in which a great deal more information and data are needed, preferably on an experience table which we do not now have.

Should it be determined finally that Federal assistance is justified and in order for the adjacent coastal states, a Coastal State Fund from the revenues of offshore activities would certainly seem to be appropriate.

CONCLUSION

In conclusion, I would stress as strongly as possible the urgency of the need for additional energy supplies in our country. I fully appreciate that under our form of government, in the ordinary trend of events, it is not possible to act with the speed that can be generated under governments having full, complete and absolute control of the citizenry. However, I have full and complete confidence in the patriotism of every American when the time comes for us to meet a challenge. In my opinion, we are today faced with a challenge that may require the exercise of extreme emergency powers as would be required should a state of war or other national disaster exist. The state of the modern world as it exists today demands that we as a Nation move with the speed of a crash program to become as nearly self-sufficient as possible in our energy needs.

Senator JOHNSTON. The next witness would be Mr. Charles Neumeyer for the Associated Gas Distributors.

It is nice to have you, Mr. Neumeyer. You have heard the comments about the need to telescope as much as we can.

STATEMENT OF CHARLES NEUMEYER, ASSOCIATED GAS DISTRIBUTORS

Mr. NEUMEYER. Yes, Mr. Chairman. I want to thank you for the opportunity to appear here and I will attempt to shorten my statement as much as possible.

My name is Charles L. Neumeyer. I am senior vice president of the Brooklyn Union Gas Co. and chairman of the Executive Committee of the Associated Gas Distributors (AGD), on whose behalf I am here today. Associated Gas Distributors is a group composed of the major east coast gas distribution companies, who provide gas service to approximately 11 million gas consumers in the eastern portion of the United States. We have a list of our members attached to the statement. These eastern gas utilities that make up the AGD membership are faced with ever increasing difficulties in obtaining gas supplies and are, therefore, very keenly interested in S. 521, S. 426 and the other bills which are under consideration to amend the Outer Continental Shelf Lands Act. Any changes in that legislation which would increase gas supplies to east coast consumers would be of inestimable value and help in providing adequate clean supplies of energy at reasonable costs to this region that has been seriously affected by relatively recent changes in the U.S. energy situation. I will skip over some of the detailed comments which we have in here with respect to the east coast situation because I am sure that you are familiar with the crisis which the east coast distributors are facing in terms of their gas supply. One comment I might make is that the major supplier to the east coast has been curtailing from it's

contract volumes in the order of 30 percent and is projecting for the next year that the increase to be over 40 percent and as we look down the line to 1980 and 1985, the deficiencies of gas supply to the east coast will be in the order of 35, 40 percent and mounting.

As I say, I will skip over some of the details and point out as a result of the crucial gas supply situation for the east coast and the adverse impacts that are associated with it, no group of consumers is more concerned with increasing gas supplies than those served by AGD companies. We strongly support the efforts of the Senate to modify the Outer Continental Shelf Lands Act in such a way as to improve the near-term supplies of natural gas and oil. Although AGD is most interested in the Atlantic offshore, since any gas or oil found there will find a natural market in the States in which AGD operates, we are convinced that improvements in the OCS Lands Act will also be of great benefit to the Nation as a whole. If oil and gas are found it could improve the Nation's balance of payments, enhance domestic security and provide desperately needed clean fuel supplies to those regions which are most adversely affected by fuel shortages.

Senator JOHNSTON. Mr. Neumeyer, let me stop you at this point. I read your statement and I will ask you a few questions if I may.

Mr. NEUMEYER. Yes.

Senator JOHNSTON. You state that the affected States should have a part in the decisionmaking process. I agree with that statement, but how would you propose that they be involved in the decision-making process? Would you give the details?

Mr. NEUMEYER. We believe the proposals spelled out in S. 521 whereby when any leasing plan is presented by Interior that it be made or presented to the Governors of the States and that they have the opportunity to ask for some consideration with respect to the plan. We believe that the proposal as set out in S. 521 is a procedure which could be followed which would give the States an opportunity to participate in the development of the OCS.

Senator JOHNSTON. Let us see 521; that is where we are involved. You would not give a veto?

Mr. NEUMEYER. No, sir.

Senator JOHNSTON. And another one of these bills, I think it is the Hollings bill, would provide for certain delays. Would you?

Mr. NEUMEYER. No, we are here, and one of the main purposes of our testimony here is to try to convince these Senators that we should not have any delay, that expedition is most important in the development of the OCS. And our position is that we believe that under the present rules and regulations and what have you, that the activity on the OCS can move ahead pending any of the changes that are spelled out in various bills and in particular S. 521.

Senator JOHNSTON. I am glad to see that AGD supports the concept of revenue sharing with the States. I think the sooner we get behind that, the sooner you are going to see more activity out there on the Atlantic OCS. I keep hearing these arguments time after time that everybody ought to welcome development on the OCS. Those

States that have it show the figures it costs them money. Those that do not have it say we do not want it. Please do not give it to us.

Mr. NEUMEYER. The concern that we have, Senator, is that the provisions for the revenue sharing be so vague as to lead to disputes or long-term negotiations which may impede the development of OCS. Our hope is that the revenue sharing would be spelled out specifically to the satisfaction of the Federal Government and the States so that it is as unambiguous as it can possibly be.

Senator JOHNSTON. I would invite your attention to S. 1269. It is a really inspired piece of legislation.

Mr. NEUMEYER. I would have to guess at the author of that legislation.

Senator JOHNSTON. Now, you state that you feel like you ought to get the Federal Government into drilling stratographic wells offshore?

Mr. NEUMEYER. Yes sir. We believe that that is the step that should be taken immediately while it is not as good as having exploratory wells drilled, it is a step in the right direction toward a further or better appreciation of the resources which may or may not be out there.

Senator JOHNSTON. There is a real difference of opinion on this committee, I think it is fair to say as to whether you ought to have drilling by the Federal Government. I fall on the part of the committee that feels that it would offer no advantage whatsoever, would delay matters, would be a tremendous cost to the Government and would be the activity of the Government that I can think of that at least be capable of doing successfully. The Office of Technology Assessment I believe concurs with that. They were asked to undertake a study for this committee and for the Commerce Committee to determine what would be the advantage of Federal involvement in exploration and they said none but great costs and I will urge you to consider that.

Mr. NEUMEYER. Mr. Chairman, may I make a comment on that because I do make a sharp distinction between stratographic drilling and exploratory drilling. I do not think that they are in the same area and I feel as strongly about it as you and I believe I did point out in the statement that we do not believe the Federal Government should participate in the exploratory drilling. However, the stratographic drilling does represent a gathering of data. As I say, just a step beyond the seismic work.

Senator JOHNSTON. There is a considerable step beyond the seismic work.

Mr. NEUMEYER. Oh, yes, it is.

Senator JOHNSTON. What is the difference between a stratographic well and an exploratory well?

Mr. NEUMEYER. A stratographic well's main purpose is just to determine—and I am not a geologist, I cannot use the correct terms—the pathology of the rocks down there as to whether or not they are capable of holding accumulations of hydrocarbons.

Senator JOHNSTON. Don't they pretty well know from the shoots out there?

Mr. NEUMEYER. No, sir. As a nongeologist I say no, sir. I understand that a proposal has been made to the Interior for a license for a certain amount of stratographic drilling off the Atlantic coast. And the geologists and those people who are informed have determined that so many stratographic wells would have to be drilled to give them the additional information they need to have a better guess as to what is down there. And as I say, whether this is done by the Secretary of the Interior or whether it is done by private parties, I think it should be done. Of course, the advantage of having it done by the Interior is that that information would then be made available to the public—so that everyone can assess the data and make their own determinations.

Senator JOHNSTON. I take it then you would do your stratographic drilling first, complete that, print the information, and then invite the bid?

Mr. NEUMEYER. Yes, sir.

Senator JOHNSTON. And that would speed things up, you think?

Mr. NEUMEYER. Yes sir. The stratographic drilling would not only speed things up, it would give a clearer indication than we now have as to the opportunities for hydrocarbon accumulations offshore.

Senator JOHNSTON. Let us deal with the issue of speed. Why would it be faster to use stratographic drilling first before you put out the bids, before you put out for bids?

Mr. NEUMEYER. I should not say it should speed things up. It would not slow things down.

Senator JOHNSTON. Would you explain that?

Mr. NEUMEYER. I think the stratographic drilling can go on right now, that a license can be granted and stratographic drilling can be accomplished. Between now and when the leases are offered for bidding. And here I am not capable of giving you a precise timeframe. This is not my area of expertise, but I would expect that even if it were not available for this particular lease sale or when the Atlantic OCS comes up for lease that this information could be obtained fairly quickly. As I understand for the Atlantic offshore, the proposal was for six stratographic wells to be drilled, two in each of the major, assumed to be potential areas—the south Georgia embankment, Baltimore Canyon, and George's Bank—and this information could be obtained by the drilling of six wells. This information would be available should be go ahead right now. Then the Interior and the parties who are interested in the offshore would have some additional information on which to make their guesses as to what is out there.

Senator JOHNSTON. How long would it take to drill a stratographic well?

Mr. NEUMEYER. I am sorry, I am not capable of giving you that information.

Senator JOHNSTON. Not the stratographic wells, how long would it take to put this out for lease?

Mr. NEUMEYER. To put it out for—

Senator JOHNSTON. For lease?

Mr. NEUMEYER. Are you saying put the stratographic wells?

Senator JOHNSTON. Now, you put the areas, Baltimore Canyon, what have you, out for lease?

Mr. NEUMEYER. I have no idea.

Senator JOHNSTON. Well have they not asked for nominations out there?

Mr. NEUMEYER. Yes, they have asked for nominations and I presume that as soon as they have received the nominations, they will set out an area for leasing. One of the things that I do not know is the progress which has been made in the evaluation of the Atlantic offshore by those parties who might be interested in the bidding. I would imagine that in anticipation of the Atlantic offshore leasing that certain groups have been formed and there is some activity going on.

Senator JOHNSTON. Let me interrupt you to say I am referred to the Office of Technology Assessment report and I said it showed no advantage. I am advised that is not correct. Their findings were that they were at a disadvantage of cost, disadvantage of efficiency, and disadvantages of delay. On the other hand there were advantages of knowledge of the resource, control of the rate of development, greater competition in bidding, and better assessment of returns to the treasury. So the results were not exactly unequivocal although they did say it would delay matters, and to me it is very clear that it would delay.

Mr. NEUMEYER. I have no question at all about that.

Senator JOHNSTON. If you waited for the first stratographic wells to be completed and I think we should have some further investigation as to that time because there is a difference of opinion as to how long the stratographic wells would take.

You state that a broader range of bidding and methods should be provided. Have you looked into the S. 521 as to its alternative method of drilling and leasing?

Mr. NEUMEYER. Yes, sir, we have.

Senator JOHNSTON. I mean of leasing and would that be consistent with the kind of broader range that you have in mind?

Mr. NEUMEYER. Yes, our feeling, though, is that perhaps it should be even broader. The AGA and the INGAA proposal which was mentioned here, which provides for installment payments of the cash bonus bid, is perhaps another method which might be considered. It is very difficult to spell out and limit the leasing method to certain specific ways it can be done. It would seem to us that the Secretary should have the flexibility, as new methods perhaps are developed or they get experience with some of these methods, to use the methods which he thinks will best accomplish the purpose that they are trying to accomplish at that particular point in time. This would get more revenues to the Treasury to improve our opportunities to get additional resources flowing. We think that the Secretary should have

maximum flexibility. We think also, however, and we feel rather strongly about this, that the method should be such that it does enable people like gas distributors to participate in the offshore activity. This is one of the reasons that, in our statement, we are opposed to setting up a straight cash bonus method. We think that this really shuts out people like gas distributors and, to some extent, gas pipelines, and we think that the distributors and those people who have an interest in the commodities, as gas distributors do, should have an opportunity to bid under some method other than the cash bonus method.

Senator JOHNSTON. Well we have had a lot of conversations, a good bit on it in this committee to the effect that to control more than one part of the production distribution or exploration process is wrong because it is anticompetitive. Do you think the distributors ought to be able to get into the drilling business, production business?

Mr. NEUMEYER. They ought to be able to participate in it, and I make that distinction because I do not think the distributors should be out on their own—that is, any distributor on his own, participating and having control or drilling rigs or what have you. But I think, and I have heard time and time again that one of the impediments to the development of our domestic resources is the lack of capital. We have heard this, and we think that the distributors should have the opportunity to supplement the activities of the production and of the business.

Senator JOHNSTON. Is that because they have a lot of excess capital, the distributors?

Mr. NEUMEYER. No, sir. We certainly do not have any excess capital. But the point we have been trying to make is that the consumer would eventually pay. And the proposal we have been attempting to put forth to the regulatory people—and I believe Louisiana has done it—is to allow a surcharge on the customers bills, and it is through the surcharge that the capital would be raised to enable the distribution company to participate in the exploration activity. Now the surcharge is a two-way street and we think that this kind of participation by the distribution companies, by the consumer, is an effective way for the consumers to participate. Not only in getting the gas, but also in sharing in the rewards, if there are any rewards forthcoming, in some successful activity. The provisions that we have been working on would be a two-way street. Consumers pay the money and their moneys are put into exploration activities, if their bidder is successful, and the benefit flows through and follows the street right back to the consumer. In this way the consumer is sharing in the benefits because he is putting up the risk.

Senator JOHNSTON. I agree for the need to get more capital into the exploration business.

Mr. Neumeyer, we appreciate your testimony. Thank you very much, for being here.

Mr. NEUMEYER. Thank you.

[The prepared statement of Mr. Neumeyer follows:]

TESTIMONY OF CHARLES L. NEUMEYER
CHAIRMAN OF EXECUTIVE COMMITTEE
ASSOCIATED GAS DISTRIBUTORS
BEFORE A JOINT SESSION OF THE
SENATE INTERIOR AND INSULAR AFFAIRS
AND SENATE COMMERCE COMMITTEES
APRIL 8, 1975

My name is Charles L. Neumeyer. I am Senior Vice President of The Brooklyn Union Gas Company and Chairman of the Executive Committee of the Associated Gas Distributors (AGD), on whose behalf I am here today. AGD is a group composed of the major East Coast gas distribution companies, who provide gas service to approximately 11 million gas consumers in the eastern portion of the United States. These eastern gas utilities that make up the AGD membership are faced with ever increasing difficulties in obtaining gas supplies and are, therefore, very keenly interested in S.521, S.426 and the other bills which are under consideration to amend the Outer Continental Shelf Lands Act. Any changes in that legislation which would increase gas supplies to East Coast consumers would be of inestimable help in providing adequate clean supplies of energy at reasonable costs to this region that has been seriously affected by relatively recent changes in the United States energy situation.

The requirements of the gas distributors on the Atlantic Seaboard are of a substantially different nature than those of

the country as a whole. Unlike other regions, industrial and power plant sales of gas -- markets that often can also be served by other fuels -- do not predominate. In 1973, the industrial and electric utility markets (for both firm and interruptible supplies) for the rest of the nation were about 60 percent of total sales while for the East Coast they were only 40 percent.

Curtailments of gas deliveries by the major pipelines serving AGD companies started as early as 1971 when Transco, the largest East Coast supplier, and Texas Eastern both announced cutbacks in deliveries below the contract amount. By the Spring of 1975, the Transco curtailment was up to 38 percent, Texas Eastern 20 percent and Columbia 30 percent. Projections for curtailments next winter are even more alarming with Transco estimating a 43 percent curtailment and Texas Eastern 27 percent.

I am submitting for the record an estimate prepared by AGD of the supply demand requirements for the eastern states based on the projections of the Future Requirements Committee (FRC) of Gas Industry Committee. In preparing this estimate of East Coast requirements, we have reduced the FRC requirements for the East Coast by one-half because gas shortages have already occurred and have affected East Coast consumers to a much greater extent than

those in other states. As the attached table shows, even at this greatly reduced growth rate, there will be a yearly deficit of 32.9 percent of gas for the East Coast consumers by 1980 unless new supplies can be found. In future years the deficit will be even larger -- 38.5 percent by 1985 and nearly 50 percent by 1990. On the basis of what has already happened, these estimates may prove to be very optimistic and the shortages could be even more severe than that projected.

The economic and other impacts of natural gas shortages on the region and on consumers within it manifests itself in many ways. First, if new gas supplies to meet these large deficits are not found, the East Coast consumers will be forced to pay an increasing price for the gas that is available. This will occur because the capital charges on the \$10 billion of investment in transmission equipment and storage and distribution facilities will be spread over a diminishing amount of marketed gas so that each cubic foot sold will pay a proportionally higher share of these fixed charges. Second, these consumers who are forced to switch will pay higher prices both for the new fuel they will use and for the new equipment they must purchase to use these other fuels. Third, the unavailability of gas will have a depressing effect on the gas consuming industries which will eventually be translated into a reduced tax base and to increased

unemployment in the region. If alternative fuels are not available, curtailed operations or even a complete shutdown could occur and the economic results could be severe. Even if alternatives are available, the higher costs involved and the higher average prices of fuels purchased by industry in the East compared to other regions could result in regional shifts both in the industrial base and in population. Finally, the shift toward other fuels that are not as clean as natural gas, particularly for use in the residential and small commercial markets, will increase the adverse environmental effects in a region in which the pollution problem is already more severe than for other regions of the country.

As a result of the crucial gas supply situation for the East Coast and the adverse impacts that are associated with it, no group of consumers is more concerned with increasing gas supplies than those served by AGD companies. We strongly support the efforts of the Senate to modify the Outer Continental Shelf Lands Act in such a way as to improve the near-term supplies of natural gas and oil. Although AGD is most interested in the Atlantic offshore, since any gas or oil found there will find a natural market in the states in which AGD operates, we are convinced that improvements in the OCS Lands Act will also be of great benefit to the nation as a whole. If oil and gas are found it could improve the nation's balance of payments, enhance domestic security and provide desperately

needed clean fuel supplies to those regions which are most adversely affected by fuel shortages.

Industry and government now have had 22 years of experience operating under the existing OCS legislation and this experience should be valuable in selecting the provisions of the new legislation. The Bills that you are considering today contain many features that the AGD companies believe will attain the dual objective of increasing domestic clean fuel supplies in an environmentally acceptable way and increasing the competition for federal OCS leases. As a result AGD endorses the goals of these Bills and urges that the Bill that is reported out contain the following provisions:

1. An opportunity for the states that would be affected by OCS developments to have a part in the decision making process. Input from interested states should be possible both in the selection of tracts for leasing and in finalizing plans for development.

2. Because of the need for the states adjacent to the OCS to participate in extensive planning activities in connection with OCS development and to provide capital intensive onshore facilities and the related infrastructure to support those facilities, AGD strongly supports the concept of revenue sharing with the states.

3. The legislation should provide the federal government and potential bidders as much resource information as possible about the tract which is being offered for sale. This additional resource information would permit the government to set a more realistic refusal price and would reduce the risks to the bidders since they would have a better understanding of the potential value of the tract being offered. The Bills under consideration have provisions to permit the Secretary to either conduct or contract for geophysical and other related resource assessment work. We would also suggest that the Secretary, as a condition for granting a permit for seismic work on the OCS, receive all seismic data that are gathered.

We urge that any new legislation provide the authority and funds for a strong government resource assessment capability, including drilling of stratigraphic wells offstructure. I should emphasize at this point the urgency of the need for better and more comprehensive publicly available data regarding the probable extent and location of OCS reserves. As the gas shortage becomes more and more acute, there is a growing need for those of us responsible for maintaining gas service to make arrangements for alternative supplies. The sooner we can learn more about the reserves likely to be available from frontier areas such as the

Atlantic Shelf, the better we will be able to plan for our long-term supply commitments, either in that area or in others. We therefore urge expedition in the "OCS Survey" authorized by S.521. We do not believe it is appropriate, however, to assign or require participation in exploratory, onstructure drilling to the federal government. We believe that private enterprise should be given the responsibility for exploratory drilling and that this approach would best serve the interest of early development and production of the resources.

4. A broader range of bidding or leasing methods should be provided. Under existing law the Secretary may only use a cash bonus bid with a fixed royalty in excess of 12-1/2 percent or a royalty bid with a fixed bonus. Except for a relatively few leases offered on an experimental basis in the October 1974 lease sale in the Gulf of Mexico which used royalty bidding, all leases have been offered using the bonus bidding system with a fixed royalty of 16-2/3 percent.

The experiment with royalty bidding, which does not require large "front end" expenditures, during the October 1974 lease sale resulted in bids being received from a number of companies who had not previously participated in OCS lease sales. In fact, the

successful bidders were largely companies other than the major oil companies who now hold most of the OCS leases.

Other leasing methods are also available that reduce or eliminate "front end" expenditures for the lease, and these would permit participation in the exploration and development by the largest number of interested parties. Not only would this increase competition in lease sales, but it would permit those who are responsible for providing essential utility gas services to consumers to be able to engage in lease exploration and development.

We believe it is particularly important that the leasing method be designed to enable gas companies-pipelines and distributors to participate in the leasing phase. As a specific method, we recommend that the Secretary of Interior be authorized and directed to offer undivided interests in leases for sale under different bidding methods. For example, it should be made possible to offer a 50 percent undivided interest in a given tract for lease to the highest bonus bidder and a 50 percent undivided interest in the same tract for lease on a net profit-sharing basis with a fixed cash bonus. This approach to the bidding would enable those without large capital resources to take part in the exploration effort and would preserve the competition and high government revenue yield inherent in the bonus system. We think there are unique advantages

in this not-previously-considered approach and that the Secretary should be given the option to employ it.

S.426 permits a much greater variety of leasing methods than S.521, including both methods currently in use, the methods provided in S.521 as well as a number of other leasing methods. AGD believes that giving the Secretary the widest choice of leasing methods would result in the most rapid development of the resources, increase competition and permit the most efficient resource recovery. These benefits would flow from the flexibility that the Secretary would then have to select the leasing method that meets the most pressing national goals, whether it be maximizing income to the Treasury or accelerated resource development.

5. The legislation should contain provisions that will assure that OCS development would not take place at the expense of the environment. AGD is in favor of enactment of strict environmental and safety regulations and the diligent enforcement of these regulations in OCS operations. Based on our understanding of OCS operations, both S.426 and S.521 should assure that the OCS development will take place with an absolute minimum risk to the environment.

6. The provisions of the new OCS Leasing Act should reflect the energy supply situation that is expected to exist in the future in the United States. Indigenous gas has been in short supply for about five years and there appears to be no way in which supplies of natural gas can be developed that would meet the future requirements for this clean convenient fuel, although the most promising areas to be explored are the frontier areas on the OCS. Consequently, the existence of the gap between supply and demand for gas and the potential for the OCS to provide some relief should be an important consideration in all decision making with regard to the OCS, with the policies being pursued that will serve to minimize the gas shortage. Emphasis should be placed on an accelerated leasing program for the OCS that will increase indigenous oil and gas resources as rapidly as possible. However, OCS gas production has almost no serious environmental implications and the OCS Act and the regulations for implementing it should be designed to reflect this important difference between oil and gas production.

We are providing for the record a number of other specific comments, points of needed clarification and recommendations of AGD with reference to the various sections of S.426 and S.521. We believe these suggestions will aid in achieving the Bills' objectives.

In closing, AGD wishes to applaud the efforts of the Senate Committees in preparing legislation which will increase domestic supplies of clean fuels, enhance competition of OCS leases, provide an improved resource assessment to the bidders and to the federal government and will assure that the OCS development takes place with minimum environmental risks. With the modifications we have suggested, we believe these important objectives can be attained.

FORECAST SUPPLY-DEMAND BALANCE FOR EASTERN STATES¹
Requirements, Share of Domestic Production and Possible
Supplemental Sources

1973, 1980, 1985 and 1990

(Volumes in Trillions of Cubic Feet at
1,000 Btu per Cubic Foot)

	<u>1973</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>
1. Requirements ²	2.87	3.13	3.43	3.80
2. Share of Domestic Production ³	2.86	2.10	2.11	1.97
3. Balance to Be Met by Supplemental Sources (line 1- line 2)	0.01	1.03	1.32	1.83
4. Percent of Balance to Be Met by Sup- plemental sources (line 3 ÷ line 1)	4	32.9%	38.5%	48.2%

¹ New England, the eastern portions of New York and Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Georgia and Alabama.

² Excluding field use.

³ Based on a declining share of domestic production available to the Eastern States. The Eastern States' proportion started declining in 1972 and the decline accelerated in 1973. We assume the last year's rate of decline will continue to 1980 (from 1973's 13.6 percent to 10.6 percent) and will stabilize thereafter.

⁴ Less than 0.05 percent.

Source: Project Independence and the Gas Distribution Industry,
Associated Gas Distributors, Washington, D.C. - July 1974.

ASSOCIATED GAS DISTRIBUTORS

Atlanta Gas Light Company
 Bay State Gas Company, The Berkshire Gas Company, Boston Gas Company, Bristol and Warren Gas Company, Cape Cod Gas Company, City of Holyoke, Massachusetts, Gas and Electric Department, City of Westfield Gas and Electric Light Department, Commonwealth Gas Company, Concord Natural Gas Corporation, The Connecticut Gas Company, Connecticut Natural Gas Corporation, Fall River Gas Company, Fitchburg Gas and Electric Light Company, Gas Service, Inc., The Hartford Electric Light Company, Haverhill Gas Company, Lawrence Gas Company, Lowell Gas Company, Manchester Gas Company, New Bedford Gas and Edison Light Company, North
 Attleboro Gas Company, Northern Utilities, Inc., The Pequot Gas Company, Providence Gas Company, South County Gas Company, Southern Connecticut Gas Company, Tiverton Gas Company and Valley Gas Company (jointly)
 The Brooklyn Union Gas Company
 Central Hudson Gas and Electric Corporation
 Consolidated Edison Company of New York, Inc.
 Elizabethtown Gas Company
 Long Island Lighting Company
 New Jersey Natural Gas Company
 New York State Electric & Gas Corporation
 North Carolina Natural Gas Corporation
 Philadelphia Electric Company
 Philadelphia Gas Works
 Piedmont Natural Gas Company, Inc.
 Public Service Company of North Carolina, Inc.
 Public Service Electric and Gas Company
 Rochester Gas and Electric Corporation
 UGI Corporation
 Washington Gas Light Company

APPENDIX TO STATEMENT OF
CHARLES NEUMEYER
ON BEHALF OF THE
ASSOCIATED GAS DISTRIBUTORS

The following is a section by section analysis of the principle portions of S.426 and S.521 setting forth the AGD views and comments thereto.

Overall OCS Leasing Program

The S.521 proposal at Section 18 (page 6) and the S.426 Section 18 (page 15), direct that the Outer Continental Shelf Lands Act be amended to provide for the preparation of an "Outer Continental Shelf Leasing Program." AGD supports this concept of establishing a 10 year leasing program in which an overall plan for OCS leasing is established taking into consideration the overall energy needs, an assessment of the natural resources underlying the OCS, the environmental and social impact of the recovery of the natural resources on the coastal states and an evaluation of the resources so as to insure a fair return for public resources.

The establishment of a 10 year leasing plan, however, should in no way delay the orderly progression of presently scheduled lease sales in the Gulf of Mexico and the frontier areas such as the Atlantic offshore area. The existing procedures for OCS operations provide.

adequate safeguards for the environment and thus any delay in the overall development of the OCS will only tend to worsen the already critical natural gas supply program. We therefore recommend that a provision be added to Section 18 of S.521 to make clear that nothing there is intended to delay the leasing of tracts presently scheduled to be sold.

Federal OCS Oil and Gas Survey Program

Section 19 of S.521 authorizes and directs the Secretary of Interior to conduct a "survey program" to provide information on the probable location and extent of OCS oil and gas reserves. This is a crucial provision in the bill; from the standpoint of the east coast gas industry, it is essential that we be in a position to assess the reserve potential of the Atlantic Shelf within reasonable limits, as soon as possible. We therefore support this provision and urge that it be strengthened (a) by inserting the words and directed after "authorized" in Section 19(b), line 16 of page 11, S.521 and (b) by inserting the following sentence at the conclusion of Section 19(d), line 18, page 12 of S.521: In preparing this plan, the Secretary shall give highest priority to survey and mapping of areas having the least amount of exploration and development history.

These provisions would serve to mandate the government's direct involvement in any offstructure stratigraphic drilling not undertaken by private industry and would place appropriate emphasis on the gathering of information in areas where relatively little resource data are now in the public domain.

Authority of Coastal States

Both proposals (S.521 §210, page 40, S.426 §20, page 27) grant specific authority to the Governors of the "adjacent" end states to delay the leasing of acreage bordering their respective states. The bills would provide, in general, that any leasing proposal would be submitted to the Governors of the Coastal States and that they would have the right, within certain limitations, to delay the holding of the sale. Each bill includes language which requires prompt action on any request for withholding lease sales and thus appear to protect against undue delays. S.521 seems preferable to S.426 because it contains the right of appeal to the Major Coastal Resources Appeals Board by the Governor of a state that is aggrieved by any action of the Secretary. This appeal procedure is additional assurance of full consideration of the states'

environmental concerns. We suggest the adoption of S.521 with the following amendment taken from S.426: The Secretary shall be required to submit the leasing plan to the "governors of the affected coastal states and adjacent coastal states."

Clarification of Scope of Development Plan

Section 18(b)(2) of the S.521 proposal should be expanded to provide for the consideration in the overall OCS "leasing program" of, in addition to the factors set forth, the ultimate consumption of the reserves. The term ultimate consumption would be added at page 6, line 24 of S.521.

Amendments in Lease Term

S.521 (§203, page 35) provides for an allowance of a primary lease term up to 10 years. This expansion of the primary lease term from 5 to 10 years is opposed by AGD. AGD recommends a provision be added requiring that should the Secretary deem it appropriate to provide for a 10-year primary lease term, public hearings should be held in connection with this matter.

Shut-in Well Reports

Both S.521 and S.426 at Sections 302 respectively, provide for a review of shut-in or flare-in wells. This

provision should be amended so as to require a report on a semi-annual basis and that there be public disclosure of any extensions granted beyond the primary lease term.

Coastal State Fund

Section 26(d) provides no ceiling on this fund after the fiscal year 1977. Given the compensatory goals of this fund, it would seem appropriate to continue the fund with some reasonable ceiling on it in subsequent years. Section 26(e) authorizes an appropriation of \$100 million but does not make clear whether this amount is in addition to the \$200 million mentioned in Section 26(d).

Boundary Disputes

The U.S. Supreme Court has decided the U.S. v. Maine et al. case in connection with the jurisdiction of the United States on the Outer Continental Shelf. AGD is aware of the fact that there may be various boundary disputes among the Coastal States and would request that the legislative history of this Act reflect the Congressional intent and that the individual boundary disputes among the states in no way delay the development of the OCS area. AGD would suggest that the escrow arrangements adopted in the State of Louisiana, v. United States dispute be utilized pending a final resolution of any boundary disputes.

Bidding Systems Study

§303 of S.426 and §28 of S.521 direct the Secretary of Interior to undertake a study of possible amendments to the existing bidding system that would (1) increase the number of competitors for offshore leases and increase the supply to independents. We believe greater emphasis is needed on the desirability of having a leasing system in which gas companies can participate. AGD therefore recommends that item (3) in Section 28 be expanded to read: measures to ease entry of new competitors including companies engaged primarily in the natural gas business. Item (4) of this section should likewise be expanded to read: measures to increase supply to independent refiners, distributors and natural gas utilities.

Revisions to Leasing Methods

S.426 at §202 and S.521 at §203 relate to proposed alternatives to the present fixed royalty and bonus bid approach. AGD recommends that Section 202 of S.426 be adopted in lieu of Section 203 of S.521 as it would authorize the Secretary to utilize a broader range of bidding alternatives to the present fixed cash bonus system, including such methods as net profit sharing and royalty bidding. We also recommend that some specific criteria

be included in the legislation to guide the Secretary's choice of bidding methods. In AGD's judgment, there should be a provision which precludes exclusive reliance on the cash bonus system of bidding. Such a provision would free up capital needed in the exploration and development effort and would ease the entry of gas companies in the exploration activity, thus enhancing competition. The specific provision we recommend would be inserted after the word "bidders" in Section 202(a) of S.426 (line 21, page 8) and would read as follows: In selecting the bidding method or methods for a given lease sale, the Secretary shall choose that method or methods most consistent with (a) the efficient and early production of the nation's resources and (b) a fair return to the U.S. Treasury and, in no event, shall offer more than 50 percent of the leases on the cash bonus, fixed royalty method.

Senator JOHNSTON. Our next witness will be Mr. Charles Marciante, president of the New Jersey chapter of the AFL-CIO. We are very glad to have, Mr. Marciante and look forward to your testimony.

STATEMENT OF CHARLES MARCIANTE, PRESIDENT, NEW JERSEY STATE AFL-CIO

Mr. MARCIANTE. I appear here as a representative of organized labor to sort of point out some of the difficulties we have in New Jersey and that being that 90 percent of the oil that we get into our State comes to us by ship. Approximately 50 percent of that supply comes to us from the Middle East. During the oil embargo last year our State was subjected to a cutback, more so probably than any other State in the United States. And with that cutback we had a loss of plant operation and with plant operation of course the commensurate loss of jobs.

We have in New Jersey, at the present time, 11 percent unemployment. Part of that unemployment figure is due immediately to the shortage of natural gas that we do not have in our State. Polls have been taken with regard to the feeling of the citizens of New Jersey. It has been found that many, the majority of these people are interested in and want offshore drilling. One of our great problems is that we feel there is a real lack of interest on the part of the people here in Washington. We have a great concern with regard to having an immediate supply of energy available to us. We felt so strongly about this that we were told that there would not be a decision on *United States v. Maine* until June of this year. And we, our executive board at our general council meeting adopted a resolution which is affixed to the statement that you have in your hand. And that resolution called for an immediate decision by the U.S. Supreme Court on the expedition of the *United States v. Maine*. Now that resolution was adopted on May 12 and sent off immediately from our meeting and on the 15th the Court made a decision. We would like to believe that that was because of our resolution, but we happen to know that the President of the United States supposedly talked to the Supreme Court and asked that they make an early disposition of the matter.

You gentlemen more than any of the more than 200 million other Americans have the opportunity to seize the initiative away from the pressure we are being subjected to by the Middle East Sheiks. You can do that by passing legislation that will bring home the billions of dollars that we are now exporting for high cost foreign oil, bring jobs to workers in New Jersey and other coastal States and bring more secure oil and natural gas to millions of American homes and factories.

We are particularly concerned with bill S. 826 which is titled "Coastal Zone Management Act Amendments." Though there are delay, detours, and most of the other bills as well, S. 826 as I read it says that the exploratory and production drilling of offshore should be prohibited until a coastal zone and management program has been approved which should be as far away as mid-1977. That is 2 years from now, yes: and I must reemphasize that fact that we have a great concern in our State for a supply of oil and natural gas.

In our gas supply alone in New Jersey they have subjected to a cutback because of the inability of Transco to get the supply into our State. We were fortunately "saved" and I put saved in quotes because our power companies were able to bail out, I might say, the gas companies by providing to them liquid nitro gas at a price of nearly \$5 per 1,000 cubic feet as opposed to the 52 cents they were paying for the gas from Transco.

Senator JOHNSTON. \$5?

Mr. MARCIANTE. Nearly \$5 for 1,000 cubic feet.

This has the tendency to greatly jeopardize the competitiveness of the industries in our State, and that is why we feel the urgency of providing us with the opportunity of the exploration of our coasts to save these particular industries and the some 15,000 to 20,000 immediate jobs connected with the gas industry.

Senator JOHNSTON. Glass really cannot use any alternative fuel if I understand it for most of the manufacturing process. It is pretty well got to be natural gas?

Mr. MARCIANTE. Yes; it is immediately, but they do have engines that are being developed that can be used, that can be fired by electricity.

Senator JOHNSTON. But when the glass comes out and you got to keep it hot, that flame has got to be gas, does it not?

Mr. MARCIANTE. In some stages, but they have found by using electricity they can also keep it at a flow point for putting into different forms. But it is prohibitive and it would place them at a distinct competitive disadvantage and they would have to really close the operation.

The one thing that sort of disturbs us is the fact that they are paying \$12 a barrel and our good friendly neighbors to the south in Venezuela and other areas where we get our oil are charging us now some \$11.42 a barrel while the standard American price is still \$5.50 or \$6 a barrel. The thing that is most disturbing is that the cost that we pay of \$12 a barrel and using 6 million barrels of oil a day adds up to \$72 million a day in cost and if we go between now and 1982 when these rigs will hopefully be installed and fully operatable off-shore, that comes to some 2,500 days, and that translates into a figure of \$180 billion on the cost that we will pay in a one-way flow of money to the Middle East. And that kind of money from this country to those bandits in my opinion is outrageous when we have right off our shoreline these huge pools of crude oil and natural gas.

The United States Geological Survey estimates that there is more oil and natural gas still to be found off the coast than has been produced in the last 100 years or more. Specifically, I understand from figures I read there is as much as 130 billion barrels of oil and 790 feet of natural gas waiting to be discovered and produced from the Nation's Outer Continental Shelf.

New Jersey is the most industrialized States in the Nation and we are proud of that, but the declining production of oil and natural gas from existing fields in the United States is a cause of exceptional alarm in our State, whose vast industrial base depends on secure and adequate supplies of oil and gas. New Jersey has, unfortunately, the highest most persistent unemployment rate in the nation, 11 percent.

We are distressed by that. Any shortages or curtailments in natural gas and oil supplies can only make the unemployment rate grow worse.

Senator JOHNSTON. Wait a minute. You skipped over that part of your statement that I thought was particularly good. I was sort of waiting for you to read it. It is there on page 4.

Mr. MARCIANTE. I will go over it. What section is that?

Senator JOHNSTON. Well, the middle paragraph and the last paragraph on page 4 I thought were very well done.

Mr. MARCIANTE. In my judgment there is something weird about proposals to put the Government into the business of oil and natural gas just to find out whether any oil or gas that is found is needed.

Senator JOHNSTON. Yes.

Mr. MARCIANTE. Yes, I like that one too.

Senator JOHNSTON. Your first paragraph on page 5 is very good too.

Mr. MARCIANTE. I like that one also. Do you want me to read it?

Senator JOHNSTON. Yes, read it.

Mr. MARCIANTE. When was the tried and true concept repealed—that the function of Government is to govern and the function of private business and labor is to produce? When did it become a first principle that someone with no experience in exploring for oil and natural gas is getting able to do that job than an industry—through its skilled workers—with more than 100 years of experience.

Senator JOHNSTON. That is very good, Mr. Marciante.

I have read your entire statement and I must say I found it to be outstanding and it is a message I think that needs to be told.

We talk about energy independence in this country, but the fact of the matter is that we are not getting energy independent we are getting dependent.

Mr. MARCIANTE. Right.

Senator JOHNSTON. We are about a million barrels a day further in the hole than we were when the October War started. A million barrels a day with all of this time to adjust and to find additional sources and take steps to get energy independent. We are doing precisely the opposite, and much of the reason that you have detailed so well is because we talk and we delay and we study and we say well let us go out and get the Government and the drilling business to tell us whether we need the oil. We know we need the oil and we need to get on to the process of drilling, by environmentally sound methods to be sure. But delay and environmental soundness are not necessarily the same thing and usually work counterproductively with one another.

I hope you will continue to tell your story, Mr. Marciante because I think as I said, it needs telling. We need to get on with this business of finding energy in a much more rapid way and in ways that we know how to do it and that we can do without damage to the environment.

I appreciate very much your testimony, Mr. Marciante. Your full statement with all the good quotes will go into the record and I hope will be read there as well as appreciated.

Mr. MARCIANTE. Thank you for the opportunity, sir.

Senator JOHNSTON. Thank you so much.

[The prepared statement of Mr. Marciante follows:]

STATEMENT
of
NEW JERSEY STATE AFL-CIO
before
JOINT COMMERCE & INTERIOR INSULAR AFFAIRS COMMITTEE
WASHINGTON, D.C.
APRIL 8, 1975

My name is Charles Marciante, President of the New Jersey State AFL-CIO. I appear here today as a representative of organized labor in the State of New Jersey. But I believe I can also express the views of the unvoiced--and often unheeded -- feelings of many other New Jersey residents outside the labor movement. Increasingly, people in New Jersey are beginning to see the question of offshore drilling more as a pocketbook issue and less as a political issue.

For example, a recent poll by the Eagleton Institute of Rutgers University found that 67% of New Jersey respondents favored offshore oil drilling as one way of increasing domestic energy sources, with 60% favoring drilling off the New Jersey coast. More recently, the voters of Ventnor -- a community near the resort area of Atlantic City -- voted 3 to 2 in favor of offshore drilling, in a non-binding referendum.

These public polls in support of offshore drilling should be a clear message to each of us in this room -- a message from the man in the street, the woman at the supermarket check-out counter, and the worker behind the lathe. The message, as I read

it, is concern about economic recovery, employment and a decent way of life -- all of which can only be achieved through sufficient, secure and reasonably priced energy supplies.

People in New Jersey are also becoming more frustrated with the "Washington waffle" -- the tendency down here to hesitate to make the hard decision, to dilly, dally and delay. Above all, people in New Jersey can count -- both the dwindling dollars in their wallets and the months of inaction by government in solving the nation's energy problem. We have attached to this statement a copy of the resolution our Executive Board and General Council recently adopted which indicates their concern over this matter.

They know it's almost 48 months -- four long years -- since the U.S. Senate resolved to develop a national fuels and energy policy. We do not yet have that policy.

They know it's been 18 months since the Arab cartel imposed its embargo on oil to the United States. We are now as heavily dependent on foreign oil as we were before the embargo was imposed. The only thing that's changed is that foreign oil -- which cost less than U.S. produced oil before the embargo -- now costs more than twice as much as most of the oil produced in this country.

You gentlemen -- more than any of the more than 200 million other Americans -- have the opportunity to seize the initiative away from the Middle East sheiks. You can do that by passing legislation that will bring home the billions of dollars we are now exporting for high-cost foreign oil, bring jobs to workers in New Jersey and other coastal states, and bring more secure oil

and natural gas to millions of American homes and factories.

You can do that simply by deleting the delaying mechanisms in the various bills introduced for consideration at these hearings.

I am particularly concerned with bill number S. 826 -- which is titled, "Coastal Zone Management Act Amendments" -- though there are delay detours in most of the other bills as well. S.826, as I read it, says that exploratory and production drilling offshore should be prohibited until a coastal zone management program has been approved, which should be as far away as mid-1977. Gentlemen, that's more than two years from now, and would be nearly five years after passage of the Coastal Zone Management Act itself.

Between now and then, we will be sending billions of additional dollars on a one-way trip to the Middle East. And that's only to take care of the cost to this country of the red tape employed in S. 826 -- and other bills before you -- to tie up offshore drilling into legislative and regulatory knots. Quite frankly, we cannot afford that luxury.

I am no expert on offshore exploration and production. But I do know that it takes anywhere from three to ten years to bring in a new offshore oil or natural gas field to the point where it's producing fully, even after the exploratory work has, hopefully, been successful. Let's take an average of five years as the time it would take to bring in this new oil or natural gas. That would then take us to mid-1982 -- more than seven years from now.

You should recognize that every day we delay producing oil from our own offshore areas in the Atlantic means we need to import some six million barrels of oil from foreign sources -- at an average cost of about \$12 a barrel. If my arithmetic is correct -- and I think it is -- that adds up to \$72 million a day. For the 2500 days between now and mid-1982, even if our oil requirements do not increase by one barrel daily -- a highly unlikely and undesirable hypothesis if we are to turn around our economy -- we will have spent \$180 billion on foreign oil at current prices. \$180 billion! That's about one-half of the federal government's total budget for this year!

These are staggering sums of money for oil we need just to keep the machines turning in this recessionary period. How strange it is, then, that another of the bills you are considering -- S. 426 -- proposes that the federal government take over control of offshore oil and gas exploration in the Atlantic Ocean to determine, among other things, whether the oil that may be out in the Atlantic is actually needed.

At \$72 million a day in costs for foreign oil, and \$180 billion over a seven-year period, I can tell you that offshore oil is needed today!

In my judgment, there is something weird about proposals to put the government into the business of exploring for oil and natural gas just to find out whether any oil or gas that's found is needed. It's like a worker saying he wants a certain job -- he's never done before -- just so he can find out if the product he'll be making is really needed.

When was the tried and true concept repealed -- that the function of government is to govern and the function of private business and labor is to produce? When did it become a first principle that someone with no experience in exploring for oil and natural gas is better able to do that job than an industry -- through its skilled workers -- with more than 100 years of experience?

Returning to reality, the U.S. Geological Survey estimates that there is more oil and natural gas still to be found off our coasts than has been produced in the United States in the last 100 years or more. Specifically, I understand from figures I've read that there may be as much as 130 billion barrels of oil and 790 trillion cubic feet of natural gas waiting to be discovered and produced from the nation's Outer Continental Shelf. A substantial part of that vast amount is thought to lie beneath the ocean floor 30-40-50 miles beyond the shoreline of the East Coast.

It's time we citizens and residents of the East Coast declared our own energy independence, and put an end to both our heavy dependence on foreign oil and our substantial reliance on oil and gas produced from the Louisiana and Texas offshore areas.

New Jersey is the most industrialized state in the nation. We're proud of that. But the declining production of oil and natural gas from existing fields in the U.S is a cause of exceptional alarm in our state, whose vast industrial base depends on secure and adequate supplies of oil and gas.

New Jersey has, unfortunately, the highest most persistent unemployment rate in the nation (11%). We're distressed by that. Any shortages or curtailments in natural gas and oil supplies can only make the unemployment rate grow worse.

Thousands upon thousands of New Jersey workers and their families should not be made to worry and fret about their next payday while endless congressional debate and delay develop on the oil and natural gas offshore of the mid-Atlantic states. For that oil and gas could assure New Jersey workers of the power to keep the factories, plants and construction sites operating, and to get other New Jersey residents off the unemployment lines through the ancillary industries and businesses that will come into being with the development and assurance of offshore petroleum activities.

During the last Arab oil embargo this nation suffered a \$20 billion tax loss revenue thru the idling of industry and construction. With the slow down was a commensurate loss of jobs and income. Please don't subject us to a repeat thru delay of getting the oil and natural gas from the ocean shelf to our refineries ashore.

In summary, the New Jersey AFL-CIO endorses and urges the prompt and orderly development of the billions of barrels of oil and trillions of cubic feet of natural gas that are thought to lie offshore in the Atlantic Ocean. We favor a program that calls upon the federal government to share with states the

billions of dollars of revenue that would come from leasing offshore Atlantic areas and producing oil and gas from those areas. And we endorse a program to establish one overall fund to pay for any damages that may result should an accidental oil spill occur during offshore development.

Beyond that, the New Jersey AFL-CIO advocates that we put an end to amendments to laws that are already on the books -- including the Coastal Zone Management Act of 1972 -- that will work for the benefit of the states and their residents, if these laws are allowed to work. We need not play the "which came first, the chicken or the egg" game as regards development of coastal zone management plans and development of the much-needed offshore oil and gas supplies. We need to move forward simultaneously and swiftly to initiate and implement both goals -- good sound management of the coastal zones; secure, sizable, supplies of oil and gas from the Atlantic Outer Continental Shelf.

You must begin to listen to the pulse of the workers and their wives -- as exemplified in the polls I mentioned at the beginning of my statement. You must not let that pulse beat be drowned out any longer by the negative shouting of the offshore drilling naysayers and doomsdayers. Too much is at stake -- the economic and diplomatic security of this nation, and the jobs and well-being of countless numbers of American workers.

Thank you, Mr. Chairman.

Respectfully submitted,

Charles H. Marcantel

NEW JERSEY STATE AFL-CIO

MARCH 1975 - EXECUTIVE BOARD MEETING

UNITED STATES v. MAINE

WHEREAS, our Nation is in the midst of an energy crisis of unparalleled proportions threatening the economic health and welfare of every citizen, and

WHEREAS, the energy crisis is a prime determinant in the grim spectre of unemployment and inflation which presently pervades our land, and

WHEREAS, recent events have conclusively demonstrated this Country's vulnerability to economic disaster occasioned by an increasing dependence upon foreign energy sources, and

WHEREAS, the Congress and the President of the United States have committed the Nation to the necessary goal of energy self-sufficiency by 1985, and

WHEREAS, off-shore exploration and drilling for energy sources is a vital and necessary component in the struggle to attain the goal of energy self-sufficiency, and

WHEREAS, the goal of energy self-sufficiency is threatened by a dispute which has arisen between the several Atlantic Coastal States and the United States regarding the paramount right to natural resources in the seabed of the Atlantic outer continental shelf, which dispute is presently pending before the United States Supreme Court in the case of United States v. Maine, Docket No. 35 Orig.

NOW, THEREFORE, be it RESOLVED that the Executive Board of the New Jersey State AFL-CIO assembled this 12th day of March, 1975 does hereby call upon Chief Justice Burger and the Associate Justices of the Supreme Court to render an early, expeditious and final determination of the issues presented in the United States v. Maine.

Senator JOHNSTON. That is all of the testimony for this morning, except I understand Mr. Skelton is here. If he would like to testify, would you like to go ahead? We will go ahead and take your testimony before lunch.

Mr. Daniel Skelton, the Society of Exploration Geophysicists.

STATEMENT OF DANIEL SKELTON, PRESIDENT, SOCIETY OF EXPLORATION GEOPHYSICISTS

Mr. SKELTON. I will highlight my statement also. You have my entire statement there also, but I will highlight it.

I am J. Dan Skelton, president of the Society of Exploration Geophysicists, and I am speaking for them. The Society of Exploration Geophysicists, or SEG, is a professional and scientific organization of 9,000 geophysicists from 100 countries. Two-thirds of our members reside in the United States. We have 24 affiliated sections, 20 of these are in this country. I think it is most important to note for this hearing our members are probably this country's main source and resource of manpower and technology which is needed for offshore exploration. Twenty percent of our members are private geophysical contractors, 20 percent with mining and engineering companies, and 20 percent hold academic and governmental positions.

I think it is interesting to note that nearly all of the geophysical data gathered on the U.S. OCS is collected by the geophysical contractors, while nearly all the management of the company and interpretation of the data is by oil company geophysicists.

Now the SEG strongly endorses the objectives of the three main bills being discussed in these hearings—S. 426, S. 521, and S. 740. The purpose of these are to increase the production of oil and natural gas in order to assure material prosperity and national security.

We are not going to testify on the areas outside the—rather outside of our technical expertise. We are a technical organization and do not feel we can speak on coastal State and Federal regulations, safety regulations, outside of geophysical exploration.

I should say that geophysics is clean. It does not hurt the environment at all. There are two matters in the bills, 426, 521, and 740, which concern our profession. The first is an exploration by the Government and the second is the confidentiality of proprietary geophysical data. Let me speak specifically to Government exploration.

Present laws provide good incentives for private industry commitment to a highly efficient and effective OCS exploration. For example, since the first emergence of our current energy crisis in 1970, the United States offshore geophysical exploration has been increased four-fold. This illustrates the inherent effectiveness of our competitive free enterprise system and the incentives that the present regulations are giving us to find massive amounts of oil and gas in the offshore.

However, exploration in the future frontier by some Federal Government agencies has proposed in all three of those bills would seriously affect our profession. Most geophysical data interpretation is done by oil company geophysicists as I mentioned. One claim that worries our profession, it would appear that exploration by the Government would require transferring back numbers of geophysicists from oil company employment to the Government payroll.

Senator JOHNSTON. Let me stop you right there if I may, Mr. Skelton. I have read your statement in full and it will go in the record in full.

You say that it will require a vast number of your professionals to go into the Government employ. Do you have an estimate of what kind of wages you pay or what kind of salaries you get?

Mr. SKELTON. I imagine we pay more than the Government does.

Senator JOHNSTON. Some of your top analysts, geophysicists for the OCS?

Mr. SKELTON. This is very hard to say and I guess we do not keep salaries in our society's record and I think you can look in your journal and see that the starting salary for a starting graduate geophysicist is \$12,000 or \$15,000 and they go up to \$30, \$40, \$50,000 for management positions.

Senator JOHNSTON. Well, the kind of people who give the technical data on which to base the decisions to drill or not to drill or further drill or what have you, what kind of wages are we talking about for those people?

Mr. SKELTON. Again, it is a personal guess.

Senator JOHNSTON. Right.

Mr. SKELTON. I would say from \$25,000 to \$30,000 is what an experienced, quite experienced, interpreter might make. Does that answer your question?

Senator JOHNSTON. Yes.

Mr. SKELTON. I may be low or high. I am not speaking for my society because we are not in the wage business.

Senator JOHNSTON. Now, you say the Government should not get into the business of exploring out there. Now I have heard the argument made that it takes about a year from the time that you invite nominations to the time where you have your lease sale. That is about the right time, is it not?

Mr. SKELTON. That is what it has been historically I think, I am not sure, they are scientific and technical.

Senator JOHNSTON. You think it could be sped up a bit?

Mr. SKELTON. I think it could be speeded up terrifically. I think the time we call for nominations the contractors have made geophysical surveys and are all ready to make the nominations. They must have an idea of what they are interested in and have made interpretations to concentrate, after the nominations, on to more detailed exploration of those areas. It might come up.

Senator JOHNSTON. Have you heard the proposals to drill stratographic wells from the Atlantic OCA, two, I think, in each of the major areas. How long would this take to do?

Mr. SKELTON. This would probably take—it would depend on the area. One thing I would caution against is too much drilling without prior geophysics, because geophysics gives you an idea of where the synclines are and some idea of the mythology and the pressuring and the subsurface. So blind drilling can be dangerous without the proper geophysics ahead of it.

Senator JOHNSTON. In other words, you may hit high pressures?

Mr. SKELTON. You could have a blowout and the more knowledge you have prior to the drilling, you do it more safely and do it more effectively.

Senator JOHNSTON. Is it your testimony that that is a significant and real danger to have stratographic drilling just sort of done right away?

Mr. SKELTON. I think I would say so. I think the time—I do not know, that would depend upon the areas. Some places drill fast and some drill slow. This is somewhere out of my expertise. I am not a driller. Deep wells go from 6 months to 2 or 3 years to drill them.

Senator JOHNSTON. I have heard said you can drill the stratographic wells in a couple of months?

Mr. SKELTON. In good sand shale drilling you can. If it is not too deep maybe a 10,000-foot well probably can be done in 2 months.

Senator JOHNSTON. Well the stratographic out there in the Atlantic that is thought to be producing. Do you know how deep that is?

Mr. SKELTON. I cannot comment on that, I am not familiar with that side. And my formal business I am a data processor, not an interpreter, I am sorry. It is quite varied, I am sure from the North to the South.

Senator JOHNSTON. Would the stratographic wells be useful information? Of how much use would they be?

Mr. SKELTON. They are always of some use as it has been said earlier. You have to put the drilling there to find out exactly what is there. Unfortunately, us geophysicists cannot tell you exactly.

I would remind you that one 3-inch hole, two 3-inch samples will not give you much information. I think this is illustrated by the fact that we do have 16 of those wells in the offshore Louisiana and we are still finding major fields that we did not know were there. So I think two luckily placed holes could show oil shale in Louisiana and we might write it off. We might just drill in the wrong places. You have to work in between and it takes a lot of drilling, lots of geophysics. And it takes several cycles and several ideas to go at it.

Senator JOHNSTON. What do you say for the argument for those who say we do not want to put the Government in exploration, we do not want to put the Government in production. All we want to do is, during this period of time where you have delay anyway, to go out there and just put a couple of holes in the key areas. It would not

cost too much money, and it would not delay matters at all. But it will give us some useful information. It would not either condemn an area or prove it up. But it will be useful information. What would you have to say to that argument?

Mr. SKELTON. Well, I cannot deny it would give some information. I think it goes against our whole approach as the first step toward government exploration and I think that is one thing we are strongly opposed to. I think there have been group strat holes drilled by industry for this very purpose and therefore, they must be productive to some extent. But they are still far from the total answer. I think as I made a point in my statement having the USGS drilling a few strat holes either in the structure or in the synclines in between it is not going to evaluate an area as you would with the company diverse approach with the people going out with many ideas testing their concepts of the variations in bidding shows the variability of the drilling offshore. It is not simple, it is not simple layers where you can drill here and be sure everything is the same thing everywhere around it. As I am sure you are aware, you can drill close to a soft dome hundreds of times and not come up with the well because it is so subtly located in the ground. In my statement I also make the point that in the Alberta basin—which is a prolific basin—33 holes were drilled before we had the first oil there. Strat holes will give you the information, but they will not tell you what is in the bank there.

Senator JOHNSTON. All right. You are concerned about public disclosure of propriety and geophysical data?

Mr. SKELTON. Right.

Senator JOHNSTON. Your objections seem to be that this is property and you force someone to give up his property?

Mr. SKELTON. I am not a lawyer but it seems like it is property and your ideas and your concepts are in that interpreted data, right?

Senator JOHNSTON. Right.

Mr. SKELTON. Much as patent is a person's property, it is an idea it is a concept.

Senator JOHNSTON. All right, is it sort of that objection on principle that furnishes the basis of your objection or is it a practical reason?

Mr. SKELTON. That plus economic factors, Senator. Geophysical contractors will not go out and gather data to be sold to industry or industry will not go out and get data for their own determination if they know it is going to be disclosed publicly before it is going to be used for the ends and means it was recorded.

Senator JOHNSTON. Suppose it just requires them to disclose the information on an area they have a lease.

Mr. SKELTON. I think they already have to in the present regulations. What concerns us is a public disclosure of it.

Senator JOHNSTON. What is wrong with it?

Mr. SKELTON. Pardon me, maybe I misunderstand you.

Senator JOHNSTON. On the area as soon as they get a lease they have to disclose it publicly. What is wrong with that?

Mr. SKELTON. Well, you would be forcing, if that lease contained the structure perfectly and wholly so that then they had to look into the future development, very often the information on that lease very dramatically affects what is going to be happening on many of these leases and the adjacent leases nearby.

Senator JOHNSTON. Right, but the reason not to require it as you said was because private enterprise would not pay for it but if they had the interest in developing their own lease and you know they are going to do it anyway, why not require the public disclosure of it since the guy who might get the adjacent lease might bid more for it once he is in possession of the information. Do you follow what I am saying?

Mr. SKELTON. I am not quite sure that I do.

Senator JOHNSTON. We started off with a proposition that you should not require disclosure because people would not go to the expense of getting this information paying for these opinions if it had to be disclosed publicly. But I say suppose you required them to disclose it publicly only where they had a lease and you say well, the data might be useful information to the adjacent lease.

Mr. SKELTON. Right. You have to look at the whole framework.

Senator JOHNSTON. It would be useful to the adjacent leasee? But you would also have the interest of the initial leasee in developing that information so you would not be discouraging him from developing the data. You would simply make it useful data to the adjacent leasee's, is that right?

Mr. SKELTON. I do not think that is right and this is data just like the data in the adjacent lease. If the company gathers that data and has those ideas and interprets that data, it seems like that is his property and as soon as the data on the lease—

Senator JOHNSTON. But if you can over that hurdle on principle.

Mr. SKELTON. I have a hard time with it.

Senator JOHNSTON. I am with Mr. Marciante about the need to develop these things as fast as we can, if we can, off some of these principles.

Mr. SKELTON. The fact we disclosed data to the USGS does insure the development of the USGS and Interior development is in possession of basic data.

Senator JOHNSTON. Suppose you lease the entire structure statement. Would that take care of your objection?

Mr. SKELTON. I think that would go a long way of taking care of it, yes, because then you have it locked in and the data is still as of much economic value to the people who gathered it. On the first lease, on to the second lease and I am trying to preserve their investment. Many times we will make case history disclosures in our technical journals when we have got the field explored and drilled. At certain times it becomes no longer proprietary. We want to keep the proprietary data, confidential.

Senator JOHNSTON. Mr. Skelton, we appreciate your testimony very much. Thank you.

[The prepared statement of Mr. Skelton follows:]



SOCIETY OF EXPLORATION *Geophysicists*

STATEMENT OF

J. DAN SKELTON
PRESIDENT
SOCIETY OF EXPLORATION GEOPHYSICISTS

FOR

HEARINGS BEFORE THE
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
AND THE
COMMITTEE ON COMMERCE
UNITED STATES SENATE

ON

LEGISLATION DEALING WITH
OUTER CONTINENTAL SHELF
OIL AND GAS DEVELOPMENT

Washington, D.C.
April 8, 1975

Statement of J. Dan Skelton

April 8, 1975

Mr. Chairman and Honorable Members of the Senate Committees on Interior and Insular Affairs and Commerce. I appreciate the opportunity to appear before you to discuss the important issues involved in these hearings.

I am J. Dan Skelton, President of the Society of Exploration Geophysicists. The Society of Exploration Geophysicists, or SEG, is a professional and scientific organization of 9,000 geophysicists from 100 countries. Two-thirds of our members reside in the United States. We have 24 affiliated sections, 20 of these are in this country.

Members of the SEG carry out, worldwide, \$1 billion of geophysical exploration annually. Forty percent of this effort is in the United States. Two-thirds of our work in this country concerns the highly important offshore areas. Our members are this country's main manpower and technology resource so vital in our search for new energy sources.

Our Society is the primary international professional organization of geophysicists. Geophysical exploration involves the examination and measurement of the earth's structure and composition in the search for minerals and energy. In carrying out this work, the full scope of physical sciences is involved, and our members have technical expertise ranging from geology to physics, mathematics, and most branches of engineering. Forty percent of our membership are associated with petroleum companies, 20 percent with private geophysical contractors, 20 percent with mining and engineering companies, and 20 percent hold academic and governmental positions.

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Nearly all of the geophysical data gathered on the U.S. OCS is collected by the geophysical contractors, while nearly all the management of the surveys and interpretation of the data is by oil company geophysicists.

Let me begin by saying that the SEG strongly endorses the objectives of the three main bills being discussed in these hearings--S-426, S-521, and S-740. Section 102 of S-521 summarizes these goals:

"The purposes of this act are to increase the production of oil and natural gas in order to assure material prosperity and national security, reduce dependence on unreliable foreign sources, and assist in maintaining a favorable balance of payments;"

We agree with these fine objectives.

Because of our rather specialized technical expertise, it would not be appropriate for the SEG to comment on many facets of the bills under consideration such as environmental problems, Coastal States/Federal relations, safety regulations, leasing economics, etc. However, since geophysical methods are the primary exploration tools for the offshore, it is appropriate that we comment on portions of the proposed bills touching on geophysical exploration.

A study of S-426, S-521, and S-740 reveals two matters of concern to our profession. The first is exploration by the government, and the second is the confidentiality of proprietary geophysical data.

GOVERNMENT EXPLORATION

Current laws and regulations provide for competitive private industry exploration for oil and gas in the OCS. This private enterprise approach has served our country well and massive petroleum reserves have been found in those regions we have been allowed to explore. Present laws provide good incentives for private industry commitment to a highly efficient and effective OCS exploration. For example, since the first emergence of our current energy crisis in 1970, United States offshore geophysical exploration has increased fourfold. Last year private industry collected an all-time record of 550,000 miles of geophysical data. Two-thirds was in offshore areas. Furthermore, petroleum companies and geophysical contractors have conducted some 80,000 miles of exploration off the U.S. East Coast and some 75,000 miles in the Gulf of Alaska preparing for future OCS sales. Such statistics attest to the effectiveness of current incentives for OCS exploration. They illustrate the inherent effectiveness of our competitive free-enterprise system.

On the other hand, S-426, S-521, and S-740 all propose the exploration of future frontier OCS areas by some arm of the Federal Government. Such action would seriously affect the geophysical profession. As indicated above, most geophysical data interpretation is done by oil company geophysicists, even though most data collection is by contractors. It would appear that exploration by the government would require transferring vast numbers of geophysicists from oil company employment to the government payroll. This is neither desirable nor practical.

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More importantly, we do not believe the assignment of OCS exploration to a single government agency or even a single private company will achieve the objectives of expeditious and complete exploration of the Outer Continental Shelf. No single group, company, or government unit has all the technology and the diversity of ideas required to effectively detect the hidden oil and gas in the OCS. The variable, subtle, and complex nature of petroleum occurrence requires a multiple-idea approach. Diverse technology and strategy is necessary to comprehensively explore a new area. Under the present system many companies and many contractors approach the exploration of a particular area, each in a different manner. A more effective and thorough petroleum search inherently results.

The multi-company, diverse idea approach to exploration is graphically evidenced by the wide variance in past bidding in OCS lease sales. Different companies have different ideas, and therefore, evaluate their bids differently.

The approach of using the USGS, as suggested in S-426 and S-521, to conduct a brief period of geophysical exploration followed by a limited number of test wells on large features will not effectively evaluate a frontier area. This is evident from the continuing discovery of major new petroleum reserves in the mature Gulf of Mexico, even though hundreds of thousands of miles of geophysical survey have been made and over 16,000 exploratory wells have been drilled.

OCS exploration by a single government agency will, of necessity, be dedicated to a narrow course of action limited by narrow concepts and technical approaches. A single government agency exploration program will find reserves more slowly and less

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completely than will a multi-company, diverse approach. The time and cost necessary to duplicate the many large exploration teams of experienced geophysicists and geologists now effectively working in private industry will limit any government effort. Certainly geophysical exploration activity and technology can expand more readily from this base in private industry.

Government actions are inherently slow and inflexible. The diversity of ideas and methods of coping with the uncertainty and with the unexpected needed in exploration are not compatible with government regulations and inflexible planning or frequent audits and detailed accountability. A government agency environment is just not conducive to a fast-changing, uncertain business such as petroleum exploration. This is demonstrated by the fact that 133 dry holes were drilled in the Alberta Basin prior to discovery of the Leduc field. It is difficult to visualize a federal bureau being able to have this type of required persistency in face of the inevitable close scrutiny of Congress. Locating wildcat wells is just too much of a gamble.

We can look at the Soviet Union to see the ultimate results of exclusive government exploration. Statistics show that United States geophysical crews can gather data eight times more efficiently than can USSR crews. It takes the Soviets eight times more manpower to survey a mile of line as it does a free-world crew. Furthermore, as a result of our free enterprise technical atmosphere, free-world geophysicists have developed virtually all the new exploration technology used by the free world and by the government-controlled Soviets.

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Certainly geophysical exploration activity and technology will expand more readily in a private industry environment.

The second area of concern to our Society is:

PUBLIC DISCLOSURE OF PROPRIETARY GEOPHYSICAL DATA

The confidentiality of proprietary geophysical data is the only protection for the extensive capital investment made by private industry to acquire such data. In order to encourage industry to make geophysical exploration commitments, the proprietary nature of such data must be protected by stringent, concise regulations. Otherwise, private sector data acquisition will not be conducted if subject to possible publication or distribution. The consequence of this will be a very marked slowdown of vitally needed geophysical data collection by industry contractors and petroleum companies.

Both S-426 and S-521 would require private companies to furnish the government with copies of all geophysical data taken in the OCS. Section 11 of S-426 reads:

"...require the permittee to furnish the Secretary with copies of all data (including geological, geophysical, and geochemical data, well logs, and drill core analyses) obtained during such exploration."

No assurance is given that proprietary data will be kept confidential. The exploring company actually owns its proprietary data as it would a piece of real property. Firm guarantees are needed to prevent its loss by public disclosure.

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Section 19 (h) of S-521 states that lease holders:

"...shall provide the Secretary with any existing data (excluding interpretation of such data) about the oil or gas resources in the area subject to the lease. The Secretary shall maintain the confidentiality of all proprietary data or information until such time as he deems that public availability of such proprietary data or information would not damage the competitive position of the lessee."

This statement has two troublesome points. First, it is extremely difficult to distinguish "interpreted data" from other data collected. Virtually all data, except for the raw data originally recorded, has some degree of "interpretation" in it. Second, proprietary data submitted to the government may be publicly disclosed in a unilateral action by the Secretary of the Interior. The real owner of the data evidently has no say-so in the decision to release.

On the other hand, some statements in the bills clearly respect the confidentiality of industry's private data. For example in S-426, Section 19 (d) the statement is made:

"...the Secretary shall maintain the confidentiality of all proprietary data or information purchased from commercial sources while not under contract with the United States Government for such a period of time as is agreed to by the parties."

Section 18 (i) of S-521 has an almost identical statement regarding confidentiality of government purchased commercial data. Fortunately, these statements respect the basic ownership of purchased data from private commercial sources. We would hope that in any bills passed, similar sanctity of proprietary data confidentiality would be clearly guaranteed for all other data which we may be required to submit to the Government under the proposed bills.

CONCLUSIONS

The implementation of the sections of the bills under consideration which authorize government exploration in the OCS and which do not clearly protect the confidentiality of proprietary data will:

1. Seriously delay the development of petroleum reserves in the OCS.
2. Reduce the amount of oil and gas ultimately found in frontier OCS areas.
3. Remove incentives for continuation of a strong U.S.A. geophysical industry with the attendant retarding of technical advancements in geophysical exploration that have been provided by our profession.

The SEG, therefore, respectfully urges the modification of the bills under consideration to eliminate government exploration and proprietary data disclosure. Instead, strong incentives for private sector exploration should be provided, thereby facilitating an efficient, timely exploration of our nation's offshore petroleum reserves.

Thank you again for allowing me to participate in these hearings. The Society of Exploration Geophysicists is willing and ready to assist your Committees and their staffs in areas of our technical expertise.

Senator JOHNSTON. The committee will commence at 2 p.m. and we will hear, at that time, from Mr. Murphy from Murphy Oil Corporation. We will recess until 2 p.m.

[Whereupon a recess was taken, to reconvene at 2 p.m.]

AFTERNOON SESSION

Senator HASKELL [presiding]. The hearing on the Outer Continental Shelf Lands Act Amendments, and related Coastal Zone Management Acts Amendment will reconvene.

The first witness is Mr. Charles Murphy, Chairman of the Board, Murphy Oil Corporation, and Member of the Board of the American Petroleum Institute, testifying on behalf of API.

Mr. Murphy.

STATEMENT OF CHARLES H. MURPHY, CHAIRMAN OF THE BOARD, MURPHY OIL CORP., AND MEMBER OF THE BOARD, AMERICAN PETROLEUM INSTITUTE, ON BEHALF OF AMERICAN PETROLEUM INSTITUTE

Mr. MURPHY. Thank you, Mr. Chairman. I am pleased to be here today, Mr. Chairman. I am representing the American Petroleum Institute, which, as you know, is a trade association encompassing everyone from small operators to the very largest firms.

Now, we acknowledge the questions in your letter from your Chairman, and we will be dealing with them in the course of this testimony, but for your convenience, we have attached some more specific responses, just to shorten your proceedings.

We realize that you have already heard a great deal of testimony and that you have been carrying on these hearings for a great while and perhaps I can serve your purpose best today by offering an overview from my perspective and that of the American Petroleum Institute.

It might, however, be a good idea to set forth what obviously is a mutual objective of the Congress and the petroleum industry and the public, and that is to reduce our dependence on foreign oil, and we share the concern that comes through loud and clear in the stated purpose of these bills, that we have got to get on with the job of locating the resources on the Continental Shelf, and we have got to do it, of course, while protecting the priceless environment.

And we certainly acknowledge that the coastal States, who will largely be the beneficiaries of industrial development here, should be heard from.

Yet we need to be very keenly aware, Mr. Chairman, that with these objectives, the public interest is best going to be served if we shorten the time required to do the job, and without making, without adopting a haste-makes-waste approach at all. That is the way we are going to serve the public interest.

Now, certainly all of this is unarguable. The real question is what is the best way to get there from here. We need to look very carefully to the effects that the bills before you are going to have on attaining this overall objective. So, we would like to consider with you three broad areas.

The delay mechanisms that are built into this legislation, and the calls for an active Federal role, in exploration of the OCS, and, lastly, revenue sharing.

Now, it is of vital importance that this Joint Committee under the potential consequences of the delay mechanisms that we think are inherent in the legislation as it stands now, it is going to have an effect on consumers, taxpayers, and workers in a word to the country at large.

Now, what is the price of that delay? For a number of years, this country has consumed more oil and gas than we can find. But this has not always been the case. Until 1967, the oil component of our energy mix was made up, as it were, in three streams.

First, a broad stream from the materially developed interior of the lower 48 States. Next, a smaller stream of imports, and third, a growing rivulet from our Outer Continental Shelf.

Now, the first of these not only was the largest, but it stemmed from a resource base sufficiently developed to provide a backup capacity, should either the import stream be throttled back, or should the growing rivulet from our OCS be subjected to delays for any reason. This was the optimum posture.

But strictures of both kinds did occur, and they occurred almost concurrently.

We had a 6-day war in 1967, which closed the Suez Canal and the 1969 moratorium on Santa Barbara, for reasons thought sufficient at the time. I am not arguing whether the delay should have occurred, but the fact is that they did occur.

The North Slope was held up by the controversy over the pipeline in the early 1970's. A couple of spectacular spills in the Gulf, which did no permanent damage, did cause the Department of Interior to defer to the public outcry, and a moratorium was put in effect.

And last of all, the Yom Kippur War and the subsequent Arab oil embargo.

Today backup capacity is gone. Now, consider in retrospect, if you will, what might have happened when the Arabs imposed the embargo, had the Alaska field been developed at that time and had the pipeline been in service, would the OPEC cartel been as successful as they were in raising their price?

Now, I do not pretend to know the precise answer. No one does. But I firmly believe that we could better have resisted it, the price increase, and forestalled at least part of it.

You see, this is a 45-million-barrel-a-day free world market, and 1 million or 2 million barrels a day at the margin can have a profound effect on the market, and that 1 or 2 million barrels a day from Alaska was not available.

I mention this to emphasize the delay simply is not without its costs. It does have a price, and this Nation is paying it right now. You can be sure that the OPEC cartel is carefully watching our actions.

My company and many others are engaged with negotiations with OPEC nations right now, and we can plainly discern that they are very carefully observing the actions that our own Government is

taking in all of these matters, and any move in the Congress or on the part of the administration to hold back the development of our resources, does nothing but strengthen the bargaining power of the OPEC cartel.

So we are under observation here at this moment.

Now, as I said earlier, our backup capacity on the lower 48 is gone. And, as a matter of fact, our production is declining at about one-half of a million barrels per day per year. Now, this could, if production declined further, simply compound the problem.

Let me interject here a thought that might be helpful to you in your deliberations. We at the present time are getting about 17 percent of all of the oil and natural gas from wells in the Gulf of Mexico, 17 percent.

Now, let us look at what that production means to the consumer and worker just right here on the gulf coast. Now, members of the committee are from all over the country, but temporarily, you are residents of Washington, almost prisoners, here. So you see, the east coast, and let us think only about it.

Now, we cannot account for every single barrel. No one can in this vast and complicated supply system that we have in the country. But on the average, out of every 6 barrels of gasoline—or gallons of gasoline—let us think as a consumer, and 1 out of 3 cubic feet of natural gas that are burned at a housewife's stove, comes from offshore Louisiana and Texas.

Now my point is simply this. Much of the area already leased in the Gulf of Mexico has been explored, has been developed, and it is already in production. Now, we are carrying on a continuing effort in the gulf to find more oil, but production in many of those tracts is already declining and we think that probably the largest and most obvious fields in the Gulf of Mexico, certainly out to the 400- or 500-foot water depth, have already been found, and we simply cannot see where the new oil is going to come from, except from the frontier areas of the Outer Continental Shelf and from Alaska.

We simply cannot see it. Perhaps we are blind, but we do not know any place else within our Nation where we are likely to find oil and gas in quantities that our economy requires.

So let us return, if we may, to this question of delays that could result from the legislation that is before your committee, and let us examine what it might mean in the terms of cost to our country.

First, granting the States, themselves, the power to delay OCS development. There are several proposals in your legislation here that would grant the coastal States, the governors, the power to delay for up to 3 years exploration of their coasts.

Now, this is subject to stipulated review procedures, to be sure, but I submit, gentlemen, that to grant a State or any lesser political jurisdiction this power, the power to delay the orderly development process, is inconsistent with the interests of the Nation as a whole, however reasonable their position may seem from a purely parochial point of view.

We are thinking of the national interest here, and I might add that the granting of such a power was not even considered in connection with the 17 percent of the domestic production now coming from off-

shore Louisiana and Texas. And isn't it a bit inconsistent to suggest that a different set of rules be applied now?

What would happen, for example, if Texas and Louisiana were to request that further production be delayed in order to assess the full impact to their coastal areas? What posture would we be in right here on the eastern seaboard today with that position suddenly taken by Governor Edwards of Louisiana and Governor Briscoe of Texas?

Now, let us look at the potential effects of the 3-year delay in terms of the economic impact it would have on the balance of payments.

For discussion's sake, we might assume that the incremental production of 100,000 barrels a day is delayed for a year because of each State's objections. Now, this translates into, it almost follows, by definition into a 100,000 barrels a day of imported oil.

Now, if we also assume that the cost of OPEC oil holds firm for 3 years, by a simple multiplication, it tells us that the impact of this delay would amount to over \$1.3 billion of additional funds flowing out.

Now, this means a transfer—a massive transfer of wealth from our society to theirs. Now, I do not imply that the OPEC price is going to stay the same. They do not know themselves. This is a cartel. They are not immune to the forces that traditionally destroy cartels. Admittedly, they are governments and they are more likely to be resistant to these centrifugal forces that destroy cartels but they are not immune and they know it. The important thing is that we simply have to be able to make our own decisions in this country and the consequences of the delay is just as I have spelled it out here in simplistic terms. I admit it is an oversimplification. Nevertheless, the loss of those funds would be in addition to those spent on increased dependence on imports because of increased demand over current projects and this sort of thing. Of course this would pull down our proven reserves at a faster rate.

Now we recognize that the Governor's power to delay OCS development could be procedurally limited under the legislation, and it appears to be reasonable on its face. The Secretary of the Interior and the National Coastal Resources Appeals Board, after a specified period of deliberation, have the power to overrule the Governor completely, or to shorten his period, or they might agree with him. And on the face of that it would appear reasonable and it would seem the BLM would be allowed to go ahead. But the practical politics of the thing very likely would be that if a Governor is faced with a highly organized and well orchestrated campaign by a minority group in a coastal State, it would be very difficult for the Secretary and the coastal zone management fully to resist that pressure because as a practical matter we have seen that kind of pressure in Santa Barbara and we saw it in Louisiana and in Mississippi after the two spills in 1970 so we think that those provisions, reasonable enough on their face, do have seeds of extremely serious delay written between every line. And then there are the delays that are proposed until environmental protection is perfected.

Now, I submit, gentlemen, that the record abundantly demonstrates that environmental protection can be assured and it can be accomplished while orderly development is proceeding. Now, here is a seven column article from the Washington Post of a few weeks ago. I will find it in a minute. It quotes a Mr. Nick Fornaro who is the head of the AFL-CIO in the State of Maryland. He is a Baltimore steelworker.

He said :

Anything that is going to produce work I am for it. What good are all these seagulls on the Eastern shore if people don't have jobs?

Well, I think anybody in this room, as we are rising toward 9 percent unemployment, if really forced to make the hard decision between gulls and jobs, would take the jobs. But we do have to make that choice. We can have the gulls, and the jobs. Our experience in the Gulf of Mexico and in the North Sea, clearly demonstrates that offshore activity is needed compatible with the wildlife itself and it is compatible with commercial and sport fisheries.

Now, over 15,000 wells have been drilled in the Gulf of Mexico. There have been major spills there. But not one of these, and for that matter not even a highly publicized spill in Santa Barbara, has given any evidence of permanent ecological damage. Now for fishing, a look at the National Marine Fisheries service records is revealing in this case and, of course these are Government statistics, it shows that the commercial catch in the gulf in both tonnage and value has risen is then markedly over the past 20 years. Now we do not make any claim that we are responsible for the increase. Rather that it was unaffected one way or the other. There is evidence that the sport fishing has actually benefited from the offshore platforms because a biological cycle begins to take place there.

Now some of the environmentalists and ecologists say, "Well all right, but the gulf is a warm water sea and the east coast is a cold water sea." So the American Petroleum Institute, under a committee that I have the honor to chair is taking the national leaders in the environmental movement at the end of May to the North Sea to demonstrate to them and let them see with their own eyes in a deep cold water sea that the oil activity is just as compatible with wildlife and commercial fishing as in the Gulf of Mexico. The big objection there is not to the activity. They are simply having their own argument that would remind you gentlemen of the suits that the Governors have filed against the Federal Government. Scotland is now saying, "we want the oil development, but we think it is Scotland's, we do not think it belongs to the United Kingdom." As a matter of fact the Scottish Nationalist Party elected about 10 additional members to the Parliament in the last election. This is State's rights all over again.

So, I would like then to point out that all of these operations in the OCS from preliminary seismic surface on through exploration drilling, development drilling and into production and movement of the oil from the platforms into shore are continually monitored now by

various Federal authorities and we are submitting to these regulations cheerfully. We are cooperating in every respect and we greatly doubt whether any more power is needed there because we have never seen any lack of authority on the part of several responsible Government agencies and certainly no hesitation on their part to evoke their authority. In fact, advanced technology that we Americans have developed, is responsible for the development around the world. This is American technology and it is American technology that is pretty well carrying on development all over the world now.

So there simply is no reasonable justification for delaying exploration and development of our OCS frontier areas on the grounds that more time is needed to perfect their knowledge. Industry has proved its ability to develop these resources and to make further advances in technology simultaneously. I am speaking of such things as sea floor well completions and that sort of thing. And the theoretical base line studies and the resource development can be conducted simultaneously in our offshore areas.

So we suggest to you that it is in the best interest to the consumer, the taxpayer, the worker, if the Congress, in its wisdom, build on these accomplishments rather than putting yet another delaying blanket on OCS exploration. And then the third possible delay, and this is a most serious one in our view, is the proposal that strategic energy reserves be established. I am truly dismayed by this one by the moratorium on leasing by the requirement we block out strategic reserves.

Now possibly our experience with the naval petroleum reserves would be instructive at this point. One of them, in Wyoming, is a small one that the Navy produced, as a practical matter, from day to day. Another, Elk Hills, is sizable but the Navy could not or at least did not make any important use of it in World War II, the Korean conflict or the Southeast Asian war. Nor was it used during the 1973-74 Arab embargo a year or so ago. NPR-4 on the north slope was and remains today simply an exciting exploration idea.

Now, my point is this: while they are called naval reserves, they have been utterly useless to the Navy or to anyone else during 50 years of war and peace. So can we expect that naming a prime area of the OCS a "strategic reserve," with or without exploring it, and blocking it off maps would make it so?

The ability to make practical use of these resources depends on thorough exploration. And it will take many years. Now those who advocate this type of strategic reserve fail to recognize the long lead time necessary between exploration and full production from the oil that is found. Nor do they understand the need for those resources to be continually flowing into the economy of the country. The only useful strategic reserve is oil that is produced and placed in storage which I will try to develop in a minute.

All of the major consuming nations of the Free World, except the United States, have petroleum emergency storage programs. Their experience, as well as most private and public studies clearly demonstrate that storage of produced oil, not shut-in reserves of unexplored

structures, is the only logical and practical approach. This varies from country to country. Sweden has one of the most sophisticated, but its storage of the oil itself is either in caverns or in assembly of petroleum depots that gives us the practical effect.

Lastly, there are delays built in here through citizens suits. It is understandable and desirable that any person who is directly affected by OCS activities have proper recourse if they sustain any damage. But they have that recourse now. However, to throw the door open to some self-appointed advocate of the public interest is to guarantee nondevelopment, not to speak of the administrative, judicial and economic costs that will be paid for by the taxpaying consumer. And I for one believe that the public should be represented not by self-appointed persons, but by duly constituted public authority. Now if we may, let us turn to the oil compensation effect.

Mr. HASKELL. Do you think it would be possible, Mr. Murphy, we have three more witnesses after you, to hit the highlights and submit your full statement for the record?

Mr. MURPHY. Surely. As far as the compensation fund, I will simply say, Senator, that it is needed. We believe that this would be a single, super fund. We have done a good deal of work on it and I am prepared to submit for the study of your staff the API recommendations.

Mr. HASKELL. Fine, delighted to have them.

Mr. MURPHY. Then, the thing that concerns us most greatly here, I suppose it is the direct government exploration and I will merely say here that quite apart from the totalitarian states, Brazil has an outright government monopoly. There are mixed economies in other countries such as Italy and France. Canada has a smaller government participation. I am personally familiar with all of those. My company is a partner with some of those government companies. No objective observer can say that any of those can approach what we are already doing in this country. I would simply ask the question, why should we change a winning system?

So I might simply move on to a conclusion here and this really deals with whether we advance more rapidly by a government program. Now, Professor Schumpeter, who was a sound conservative economist, felt nevertheless the move toward socialism was absolutely irresistible. Now, even if he was right about that, I am not going to sulk in my tent, I will try to work under any kind of system that we have. But, even if I were philosophically persuaded that there should be an acceleration of government activity in the petroleum industry, as a practical matter, I would say that the need for development on the OCS is so great that it should not be done during the 1970s insofar as OCS development is concerned. So I can simply close with that note and I would be pleased of course to engage in any sort of discussion that the committee might feel appropriate.

Senator HASKELL. I thank you very much, Mr. Murphy.

I really just have one question that goes with government exploration. Would you feel it would be inappropriate, for instance for the government to do seismic work on what they consider nongeological

structures in order to determine what the value or the bidding value might be? Where do you draw the line? Right now as you know in public lands the government does certain work. Do you draw the line before seismic work and just surface geology?

Mr. MURPHY. I think, Senator, you draw the line after seismic work. Frankly, I do not think it is necessary for the government to do even seismic work itself because you have 40 or 50 companies out there doing it now, but I believe that the retired Secretary of the Interior testified to you fairly recently that the USGS has more and better geophysical data than does any single oil company. And he testified, if I read it correctly, that they had gained this through a combination of purchasing what is called speculative data that the geophysical companies have, and then hiring crews to go out. So, I think you draw the line where it is right now.

Senator HASKELL. I just wanted to get your position on that, Mr. Murphy.

Senator STONE [presiding]. Mr. Murphy, if these bills do not pass, what can the industry forecast in the absence of these bills which you have testified you would delay the OCS exploration and development in the way of production for the next 5 years or so?

Mr. MURPHY. Senator, we can not make a forecast.

Senator STONE. Well how about a percentage forecast of without the bills and with the bills?

Mr. MURPHY. Well the problem is that neither we nor anyone else except God Almighty who put it there, if he did, knows how much oil is there. The compelling thing is that we desperately need to find out.

Senator STONE. My point is and what I am trying to elicit from you as an expert is that if the bills are on the books what would the production be on the order of, you pick a percentage, and if the bills are not on the books, what would the oil production be in percent compared to each other? In other words, the two situations, one with these bills, one without them. What would the circumstances be in terms of your building produced rapidly?

Mr. MURPHY. We certainly would not be able to proceed as rapidly if this legislation passed.

Senator STONE. How much less rapidly? Let us take it away from production and put it in terms of time?

Mr. MURPHY. I can see 5 years delay here.

Senator STONE. You think that you would be set back 5 full years?

Mr. MURPHY. I can see as much as 5 years delay. I can conjure up a scenario that can build in as much as 5 years delay and having let us say 500,000 barrels a day production from either the eastern shelf or the Gulf of Alaska. This is, the scenario of some public outcry such as we had at Santa Barbara.

Senator STONE. Mr. Murphy, you realize that what promotes some of these bills is the desire to speed up production?

Mr. MURPHY. I am aware of that.

Senator STONE. And in fact what I have heard since I have been here only a little while is that some of these authors and those par-

icipating in these bills do want "business as usual." They want more, they want faster. What different things can we do apart from these bills that would make, that would assist and foster faster production as opposed to just leaving the ground rules as they now are? What could we do that would make it faster?

Mr. MURPHY. You could enact legislation regulating the Secretary to lease the land faster. Frankly, I think that the 10-million-acre-per-year schedule is too fast. But you could require that this thing be speeded up by shortening nomination procedures.

Senator STONE. How could we shorten the nomination procedures and still maintain safety to the taxpayer of proper revenues and bids? What specifics could we do in shortening?

Mr. MURPHY. Well I do not remember the exact time period now, but most companies go out in advance and I think that we usually are ready. My memory of the various sales is we have been ready, as a rule, 90 days before the sale takes place. Everybody gets nervous and they go out and do a little more shooting just because the time is there. It is almost like Parkinson's Law for it to occupy all the

Senator STONE. You think we could shorten the procedure 2 or 3 months?

Mr. MURPHY. I think you could. I would like to consult some of my own exploration executives on that, but I think you could. And certainly the time required for the environmental impact study could be shortened. As I understand it now, a separate impact study and statement has to be made for each sale, and there is a great deal of duplication in this regard, Senator.

Senator STONE. What about the idea of leasing the entire structural traps instead of 5,000-acre tracts?

Mr. MURPHY. I think that would be constructive.

Senator STONE. Do you think that would produce more faster?

Mr. MURPHY. I think it would make for faster orderly development if you put up an entire structure as a parcel rather than following the present practice of 5,000-acre blocks regardless of the fact that three or four of them might be required to cover this.

Senator STONE. In looking at these provisions for repayment of oil spill damage, do you think that the funds both coastal and otherwise are sufficient in their amounts to take care of those foreseeable damages?

Mr. MURPHY. I will ask you to help me now. I believe there is a \$100 million fund.

Senator STONE. That is one now.

Mr. MURPHY. That should be sufficient. But again our big problem here is that we have had such a proliferation of funds, the States have them, and we have done a good deal of work on a recommendation for the superfund. And we would like to submit that for your consideration.

Senator STONE. And that could be put into whatever the committee product is that comes out of all of these hearings.

Mr. MURPHY. Yes, sir.

Senator STONE. Do you submit that with the appropriate amount of financing that should be sufficient to take care of the concerns of the coastal States and that instead of delays the repayment of possible or foreseeable spills would take care of that damage?

Mr. MURPHY. Senator, I think it would, because it is my conscientious belief that no permanent damage from any oil spill has occurred.

Senator STONE. Even in Santa Barbara?

Mr. MURPHY. Even in Santa Barbara. I was just there. I have a daughter who is living in Santa Barbara. I was just there and I walked down the beach myself and there is simply no discernable evidence now of that oil spill. So the damage was limited to what we all saw on our TV screens at the time of the spill.

Senator STONE. Right.

Mr. MURPHY. So certainly the amount of money you are discussing would be more than adequate to cover that sort of thing.

Senator STONE. So what you are suggesting then is that with a financial repayment capability we do not need delays as well?

Mr. MURPHY. Absolutely.

Senator STONE. On either the National or the State level?

Mr. MURPHY. That is correct, Senator.

Senator STONE. Now, one of the other concerns that I have heard expressed by those who have some of these bills in, is as to the ascertainability of whether the taxpayer is getting a fair shake ultimately from the payments, whether advanced payments or payments as they go. And that has to do as much with the seismic and geologic information which is proprietary to a greater extent at this point and not disclosed, as it does to the dollars itself. It is a suspicion there is something there that we do not know. I would not be surprised if that suspicion was not fostered in the early days of *Rock Canyon* and the rest by drilling outside of the dispense line and outward into the other guy's land. I heard that here.

What about that? What can we do about that—worry?

Mr. MURPHY. Senator, my company is very active in offshore bidding and our observation is that we consistently overbid. We get too excited with these prospects. There is something about the impulse of an auction to go really further than you can really justify. And we have got a good discovery record offshore but the fields that we have sufficiently developed, we now realize we paid too much for them.

Senator STONE. Well if you did, would you think that it would assist your image and reputation and that of the industry with the press and with the taxpayer if a more complete disclosure of that situation would be routinely made? I am not only convinced that sunshine is good for government. I happen to think it is good for industry, and I happen to think that the "hit the oil industry mystique" which we are all faced with right now is as much caused by this secrecy. I will give you an example.

I met with one of the government officials in Florida over the weekend, and he told me, had it on authority, that the oil companies

had discovered oil off of Panama City and I asked some oil people and they absolutely said no, and here is what a government official is saying, that they really had. That is the kind of thing.

Mr. MURPHY. I know it. You know the old story: "Every farmer that had a dry hole drilled on his land said oh I know they found it."

Senator STONE. They capped it; they were waiting for me to cave in.

Mr. MURPHY. What you do about that kind of psychology, I do not know.

Senator STONE. Here we are on the OCS with seismic and other proprietary information. Is there not some way that that can be more fully disclosed without damaging each company's position so that the suspicion which breeds on lack of disclosure can be allayed? Because it is the suspicion that creates the kind of beurocracy that would slow down the development, I think.

Mr. MURPHY. The release of the seismic data would not allay the suspicion that you so rightly detect. The well data would be required to allay the suspicion. We fortunately did not bid the \$200 million. We only bid \$16 million on that dry tract but I think if we were in the posture of the operators we would have there, now answered the very questions you have posed, we would release the well data on it.

Senator STONE. I am personally looking for ways to speed up, in a safe way, the offshore development of oil because I feel like we cannot talk the language of relative independence and pass bills which create dependence. We cannot do that. Nevertheless, there are some genuine emotions of distrust.

Mr. MURPHY. There is no question about it.

Senator STONE. And the only way to proceed to accomplish the one goal in my view is to try to allay these suspicions of distrust as we go. And I would ask not only you, Mr. Murphy, but the API to provide this committee and specifically me with whatever amendments or draft proposals, either the cancellation or these bills or in lieu of the bills or in amendment of the bills, which at one and the same time would assist you in speeding up the development and allay these suspicions that keep cropping up like fog.

Mr. MURPHY. We will go to work on that this afternoon Senator.

Senator STONE. You answered a previous question about bidding by entire tracts and opposed to the individual tracts, and that you felt that might assist. Would that not also assist in more full disclosure of better data if we proceeded that way?

Mr. MURPHY. It probably would. If we had the whole of the structure I am sure we would do more work faster than if we just had a fragment of it.

Senator STONE. I appreciate your testimony, Mr. Murphy. Thank you very much.

Mr. MURPHY. It has been a pleasure, sir.

[The prepared statement of Mr. Murphy, report from American Petroleum Institute and articles mentioned by Mr. Murphy follow:]

Statement of

CHARLES H. MURPHY

before the

Joint Hearings of the

UNITED STATES SENATE COMMITTEES ON

INTERIOR AND INSULAR AFFAIRS AND COMMERCE

in behalf of

THE AMERICAN PETROLEUM INSTITUTE

Washington, D.C.

April 8, 1975

Mr. Chairman, I am Charles Murphy of Murphy Oil Corporation, El Dorado, Arkansas. I am pleased to be here today on behalf of the American Petroleum Institute, a trade association representing all segments of the petroleum industry -- from small operators to the largest firms.

We acknowledge the questions in your letter, and we'll be dealing with them in the course of this testimony. But, for your convenience, we have attached some more specific responses in the accompanying supplement to this statement.

You have already heard a great deal of testimony concerning the several bills before you. Therefore, I believe I can serve best here today by offering an overview from my perspective. You gentlemen, I know, are experienced in weighing views of witnesses based on where they stand and speak from.

My own views are offered to you from my standpoint of a citizen, the head of a medium-size oil company, and as a member of a trade association representing many oil companies.

It might be well, however, to first set forth what I feel is our mutual objective, that is, to reduce our dependence as a nation, on foreign oil. We also share a mutual concern that our Outer Continental Shelf petroleum resources should be located and developed with all deliberate speed, and with the care required to protect our priceless environment.

And, certainly, we recognize that the public and the states -- as the beneficiaries of such development -- should be heard from. Yet, while we need to be keenly aware of these mutual objectives, I suggest that the public interest would best be served by shortening the time required to identify actual reserves, as distinguished from potential resources, to develop those reserves, and to make them available to the economy of this nation.

I believe that there would be general agreement on these objectives. The question is: What's the best way to get there from here?

We need to examine carefully the effect that the bills before you could have on attaining our overall objective. And we need to examine how these bills might affect the interests of America's consumers, workers and taxpayers.

Let's look at these bills within three broad areas:

1. Delay mechanisms built into the proposals;
2. Calls for Federal exploration of the OCS; and
3. Revenue sharing.

First, the delay mechanisms.

DELAY MECHANISMS

It is important for this Committee to understand the potential consequences of the delay mechanisms incorporated in these bills, in terms of our energy supply, and its effect on consumers, taxpayers and workers -- in a word, the nation as a whole. What is the price of delay? Let's examine that question.

For a number of years, this country has consumed more oil and gas than it has been finding. But this has not always been the case. Until 1967, the oil component of our energy mix was delivered, as it were, first, in a large stream from the interior of the lower-48 states; second, in a smaller stream from abroad; and, third, in a growing rivulet from our Outer Continental Shelf.

Not only was the first of these the largest, it also stemmed from a resource base sufficiently developed to provide backup capacity, should either the import stream be curtailed by the actions of other countries, or the development of our frontier resources be delayed by impediments of our own government. This was the optimum posture.

Unfortunately, strictures of both kinds did, in fact, occur:

- In 1967, the Six Day War closed the Suez Canal;
- In 1969, a moratorium was placed on drilling and production in the Santa Barbara Channel, following the oil spill there -- a moratorium still in effect;
- From early 1970 through mid-November 1973, development of Alaska's North Slope was suspended because of the postponement of the trans-Alaska pipeline -- and oil, which could have been flowing to U.S. consumers during the Arab embargo, is still underground at Prudhoe Bay;

- In the early 1970's, a number of scheduled lease sales were postponed, following two offshore accidents, although neither accident more than temporarily affected the environment; and
- The Yom Kippur War -- and the subsequent Arab oil embargo of Winter 1973-74 -- seriously affected the availability of fuel in the United States.

These events -- plus the discouraging effects that price controls and added tax burdens have had on the incentive to find new oil and natural gas deposits -- have combined to erode our spare productive capacity. Today, that backup capacity is gone.

Effects of delay

Consider in retrospect, for example, what the result would have been had we had one million barrels per day of Alaskan oil flowing to the lower-48 states, when the Arab embargo was imposed. Would the OPEC cartel then have been as successful as they were in raising prices? I don't pretend to know the precise answer, but I firmly believe we could have resisted -- and forestalled -- at least some of the price increase.

I mention this to emphasize that delay is not without cost. It has a price, and this nation is now paying it. You can be sure the OPEC cartel is carefully watching our actions for evidence of further delay, which will permit them to continue collecting their present price.

As I stated earlier, our backup productive capacity is gone. We find that production from the maturely developed lower-48, on-shore portion of our resource base is actually declining at a rate of about one-half million barrels per day per year. Delays in turning around the decline in domestic production -- which could be the consequence of a number of bills before you -- threaten to retard recovery from the recession, as energy shortages cause some factories to close, and others to curtail production.

This has already occurred in the case of natural gas. It could occur in other fuels, if delays further widen the breach between domestic supply and demand. Imports may not be available to fill the gap.

Let me interject here one thought that might be helpful to you in your deliberations. We are currently getting about 17 per cent of all the oil and natural gas produced in this country from wells in the Gulf of Mexico. Seventeen per cent.

Now, let's look at what that production means in terms of the consumer and worker on the East Coast, for example. And I'm talking about averages. Obviously, no one can account for each barrel of oil or cubic foot of natural gas in the vast delivery mix of our national supply system. But, on the average, one out of every six gallons of gasoline, and one out of every three cubic feet of natural gas, consumed on the East Coast today, originated in a well offshore Louisiana or Texas.

My point is this, gentlemen. Much of the area already

leased in the Gulf of Mexico has been explored, developed and placed in production. And, despite continuing efforts to find new petroleum deposits there, production in many of the tracts has matured, and is declining. And I ask: Where -- aside from increased imports -- will the oil and gas come from, if we don't get on with the job of exploring the frontier areas of the OCS and Alaska?

Types of delay

But, let's return to the matter of delays which could result from this legislation. And let's examine what they could mean and how much they could cost this nation.

First, granting the states the power to delay OCS development. Several of the proposals would grant to the Governors of the adjacent coastal states the power to delay -- for up to three years -- exploration and drilling off their coasts, subject to various stipulated review procedures. I submit, gentlemen, that to grant a state or lesser political jurisdiction this power to delay the orderly process of OCS lease sales is inconsistent with the interests of the nation as a whole.

Permit me to make an analogy. The Supreme Court -- three weeks ago -- affirmed Federal ownership of the Outer Continental Shelf of the Atlantic, beyond the three-mile limit established by the Congress. A similar ruling had already decided the extent of state ownership many years ago for those coastal

states where oil and gas are now being produced. We can liken the Federal government to "Farmer Brown," who has a large farm and an exceptionally large family. Now, Mr. Brown operates that farm for the benefit of all his family, including a daughter or two who have moved to town. Would it be logical -- or right -- for him to grant to one member of his family the right to hold up the development of the cattle and crops that all the others need to sustain themselves?

I think you'll agree that it would be an inequitable distribution of power. Yet, in the family of states, granting one Governor -- who is subject to varying political pressures -- the right to delay substantially offshore development could, just as surely, deprive the other states of their right to energy-sustaining offshore oil and gas. And the American consumer, taxpayer and worker would have to bear the consequences of such a misguided policy.

I might add that the granting of such a power was not even considered with respect to the 17 per cent of domestic production now coming from offshore areas -- mainly from the Gulf of Mexico. Doesn't it seem inconsistent to suggest that a different set of rules should be applied now?

What would happen, for example, if Texas and Louisiana were to request that further production be delayed to assess the full impact of offshore operations on those states? What posture would the Eastern states be placed in, if such actions were taken?

Next, let's look at the potential effects of a three-year delay in terms of the economic impact it could have on the balance

of payments problem. Obviously, such a delay would cause a postponement of the development of offshore petroleum resources which, otherwise, might sooner arrest our present production decline.

For discussion's sake, let's assume that an incremental production of one hundred thousand barrels per day per year is postponed because of a state's objection. This translates into an increased one hundred thousand barrels per day of imported oil needed to meet domestic demand. If we also assume (and there is no guarantee that the present cost of foreign oil will either rise or fall significantly) that the cost of OPEC oil holds firm for three years, simple multiplication tells us that the impact of one such delay could amount to over one point three billion dollars of additional funds flowing overseas...not to mention the loss of jobs which would have been created by the development of domestic reserves.

To be sure, this example is an oversimplification. Nevertheless, the loss of such funds would be in addition to those spent on increased dependence on imports because of increased demand over current projections, or because of a more rapid decline than has been projected for domestic production.

I recognize that a Governor's power to delay OCS development would be procedurally limited under this legislation. The Secretary of the Interior and the National Coastal Resources Appeals Board, after a specified period of deliberation, would have the power to overrule the Governor and authorize the

government to proceed with the lease sale. Nevertheless, faced with a highly organized and well-orchestrated campaign by a minority of coastal state residents against OCS development, the Secretary and/or the Board would be under severe political pressure to yield to local demands and delay development. To the extent that this occurs, the rest of the nation will be deprived of needed energy supplies. In addition, this procedure would provide one more focal point for additional litigation.

Second, delays proposed until environmental protection is perfected. I submit that the record amply demonstrates that environmental protection can be assured -- and accomplished -- while orderly development is proceeding.

Gentlemen, I display to you a seven-column article from the Washington Post on the subject of drilling off the East Coast. The story quotes Nick Fornaro, a Baltimore steel worker, who heads the Maryland AFL-CIO. He said: "Anything that's going to produce work, I'm for it. What good are all the seagulls on the Eastern Shore if people don't have jobs?"

Fortunately, we don't have to choose!

Experience in the Gulf of Mexico and the North Sea clearly demonstrates that we can have both the jobs and the gulls. And, I might add, we can also have the fish -- which has been a matter of great concern to Atlantic coastal states. Let me, briefly, cite the record in the Gulf of Mexico concerning operations there, and their effect on the environment.

Over 15,000 wells have been drilled in the Gulf. While several major spills have occurred during operations there, not one of these -- and, for that matter, not even the much-publicized spill at Santa Barbara -- has evidenced permanent ecological damage.

As for fishing, a look at the National Marine Fisheries Service records is revealing. It shows that the commercial catch in the Gulf -- both in tonnage and value -- has risen markedly over the past two decades. We make no claim that the commercial fish catch has improved because of the presence of petroleum operations, rather that it was simply unaffected one way or the other. There is strong evidence, however, to indicate that sport fishing has greatly improved in the area around the drilling and production platforms in the Gulf.

I might point out that all operations in the OCS -- from preliminary seismic surveys through exploration, development, production and transportation -- are continually monitored by the Federal government under directives, regulations, standards and guidelines already established and enforced. These are now implemented and complied with by all oil companies operating there.

In fact, the advanced technology developed, tested and used by American oil companies is recognized throughout the world. It is American technology, manpower, expertise and equipment that, for the most part, is exploring and developing the petroleum resources of the North Sea, Africa and Southeast Asia. And it was

American enterprise -- not a government corporation -- which located the largest petroleum field in the Western Hemisphere, under the tundra of northern Alaska. And it has been American enterprise which has developed the oil and gas fields off Louisiana and Texas.

There is no justification for delaying exploration and development of our OCS frontier areas on the grounds that more time is needed to perfect technology. Industry has proven its ability to develop our resources and our technology simultaneously. Theoretical environmental baseline studies and resource development are being conducted at the same time in our offshore areas. And I suggest it would be in the best interest of the consumer, the taxpayer and the worker, if the Congress -- in its wisdom -- would build on these accomplishments, rather than put another delaying blanket on OCS exploration.

Third, delays inherent in establishing "strategic energy reserves." We are dismayed at provisions in some of the bills, which call for delays -- such as moratoriums on leasing, or the withdrawal of prime areas into so-called "strategic energy reserves." In this respect, our experience with the Naval Petroleum Reserves (NPR's) is illuminating.

One of them, in Wyoming, is so small that the Navy has simply produced it from day to day. Another -- Elk Hills -- is sizable, but the Navy couldn't (or, at least, didn't) make any important use of it in World War II, the Korean conflict or the

Southeast Asia War. Nor was it used during the 1973-74 Arab oil embargo. NPR-4, on the North Slope, was -- and remains -- simply an exciting exploration idea.

The point is this: While they are called naval reserves, they have been utterly useless to the Navy -- or to anyone else -- during 50 years of war and peace. Can we expect that naming a prime area of the OCS a "strategic reserve," with or without exploring it, and blocking it off maps, would make it so?

The ability to make practical use of these resources depends on thorough exploration. And it will take many years. Those who advocate the creation of this type of strategic reserves fail to recognize the long lead time necessary between exploration and full production. Nor do they understand the need for these resources to be made available to the consumer, the worker and the taxpayer as soon as possible.

All of the major consuming nations of the Free World, except the United States, have a petroleum emergency storage program. Their experience, as well as most private and public studies, clearly demonstrates that storage of produced oil -- not shut-in reserves of unexplored structures -- is the only logical and practical approach.

Fourth, delays built in the proposals through citizen suits provisions. Another provision of these bills would significantly deter timely development of OCS resources by allowing any person to file a citizen's suit -- whether or not that person is directly involved with the OCS. It is understandable and desirable that persons directly affected by OCS activities have proper recourse, if they sustain real damage. They have such recourse now.

However, to throw the door open to any and all self-

appointed guardians of the public interest is to guarantee non-development -- not to speak of administrative, judicial and economic costs, which will be paid for by the taxpaying consumer. I, for one, believe the public should be represented, not by self-appointed persons, but by public authority, granted by and responsible to the people.

Oil spill compensation fund

In the matter of oil spills from offshore operations, the American Petroleum Institute strongly supports the establishment of a single, domestic oil spill compensation fund covering all oil spills from any source. Once again, however, the legislative proposals before you reflect some confusion with respect to OCS-related activities. I do not intend to be critical. Senator Metcalf observed to me three weeks ago that one of the purposes of first-draft legislation is to smoke out defects and inconsistencies.

However, the proposals take no account of the many other funds relating to oil spills that are being contemplated -- or are being established -- principally by coastal states. It can be readily seen that the total amount the industry and, ultimately, the consumer will have to pay for this overlapping protection will be large indeed.

API believes that a single fund -- a superfund, if you will -- should be established to provide for a coordinated plan

of protection among the various states and the Federal government for all sources of oil spills. Such a proposal would be better accomplished through separate legislation, and does not require amending the OCS Lands Act of 1953. For the record, I will file with the Committee a paper which details the API position on this fund.

FEDERAL EXPLORATION

The second major component of the array of proposals before you concerns the creation and implementation of a Federal exploratory effort. Such a step, if adopted, would compound the detrimental effect of the built-in mechanisms.

There are countries which produce, refine and market oil as a state monopoly. Quite apart from the outright totalitarian states, Brazil and Mexico do it that way. Others, notably Italy and France, have a mixture of government and private enterprise, with government dominating. Still others, Canada for example, have had for some years both -- with government playing a minor role.

I am familiar with all of these. And I believe that any objective observer will certify that none of these systems employed by other countries can approach, much less rival, the American way. Where else, even after the recent price increases, is the consumer price or the social cost so low?

No need to change

Why, then, must we change?

The U.S. petroleum industry -- as currently structured -- is responsible for the discovery, development and production of most of the Free World's petroleum reserves. And it's not a closed shop.

No franchise is required to enter the oil business. No permit is required to leave the industry. New entrants appear regularly. Drilling funds proliferated over the 1960's, and are still going strong. Independent firms at either extremity of the business are constantly integrating forward or backward, as the case may be.

Drilling contractors see opportunities to become producers, and they do. And to quit the game all you have to do is to get discouraged and sell out, or go broke. That, too, is happening every day.

This dynamic process, even under costly new regulations, still has one thing going for it: Our U.S. petroleum system offers the nation the best alternative to increased dependence on foreign oil.

So I am compelled to ask again: Why is it deemed necessary that the Federal government preempt the task? What facts suggest the Federal government can do a better job? Does the Federal government have better trained personnel, or greater expertise in exploration for oil and natural gas? Does the government have a

better record in protecting the environment? And can it do the job at a lower cost to the taxpayer and consumer?

The simple answer to all these questions is a resounding NO!

The "dip-stick" syndrome

Proponents of a Federal exploration program succumb to a "dip-stick" syndrome. They seem to think that -- like checking the oil in their car's crankcase -- one only has to drill one hole to find oil or gas. It then magically appears at the service station or at the burner-tip of the home range.

Indeed, there seems to be an idea in the minds of some that the government could simply hire a drilling contractor, and say to him: "There's a five hundred thousand acre tract out there off the coast. Go out there, drill a hole or two, and tell us how much oil and gas there is in the Atlantic Ocean."

Well, gentlemen, as one who's been in the drilling business all my adult life, I can assure you that isn't the way it works in the very real world of exploratory drilling. If it were, there wouldn't be any need for this hearing today.

In real life, many months are spent in time-consuming surveys and geophysical studies before any drilling is done. And many more months are spent agonizing over the data before the company determines if a potential exists, which tract of those offered presents the "best" potential, whether its limited funds and resources should be risked in exploring that tract, and where

on that tract the drill bit should be placed.

And you can be sure that the drill bit -- and only the bit -- can determine whether or not the "educated guess" was, indeed, correct.

But, in any case, Mr. Chairman and gentlemen of the Committee, the "dip stick" theory, while perhaps easy to visualize, is an illusion. Neither government nor industry can determine the amount of oil available in a large area -- and we're talking about hundreds of millions of OCS acres -- with a few, scattered wells.

I didn't coin the phrase (but I wish I had): "Oil is found in the minds of men." The drill only confirms the correctness of the mind's idea. The more "ideas," the greater the chance for discovery.

Let's look at some facts.

During the period 1969 through 1973, nearly 26,000 wildcat wells were drilled onshore and offshore in the U.S., in search for new oil and natural gas fields. Of these, only one in 50 found as much as a million barrels of oil or six billion cubic feet of natural gas -- that is, a commercially significant find.

Drilling substantial numbers of wildcat wells would not

make the Federal government any more knowledgeable about the resource potential of the OCS. They could only reveal the potential of the immediate area of the drill bit, in those particular horizons penetrated.

Witness the fact that -- after 25 years of exploring the near-shore central Gulf of Mexico -- oil companies are still searching there, and finding a new field now and then. And, if a Federal agency were the sole operator, who is to say that it would adequately explore even one prospect, when it would be required constantly -- and necessarily -- to justify its expenditures to the OMB, and to submit to oversight by an understandably critical Congress?

The oil companies -- motivated by the profit factor, and I'll be the first to admit it -- have shown the persistence and the vision to drill that "one more hole." I'm sure there were some members on their boards of directors who opposed it, but -- fortunately -- they were outvoted. Occasionally, that "one more hole" was the lucky one. And it's that dream that keeps an oil company -- large or small -- in the drilling business. As I said, sometimes -- just sometimes -- it pays.

For instance, it is part of the folklore that one giant salt dome in the Gulf of Mexico -- Bay Marchand -- was drilled

12 times before a discovery was made. Another, Grand Isle Block 16, was explored for over 10 years, before it was known to be a commercial success. Still another, Eugene Island Block 126, was dropped by one company after extensive drilling, only to be picked up by another company and proved to be a major accumulation.

I can't help but wonder whether a government exploratory effort would have ventured to drill that "one more hole" at Prudhoe Bay, and found the nearly 10 billion barrels of crude oil and 26 trillion cubic feet of natural gas.

There are three other points regarding a government exploratory effort I'd like to examine. One, the separation of exploration from development. Two, the question of confidentiality of data. And, three, the need for preserving competitive balance in the industry.

Separation of exploration from development

Exploration and development are, in reality, a single integrated effort, in both physical and economic terms. Drilling one successful hole in a petroleum deposit does not -- and cannot -- provide you with information needed to determine either how much oil and natural gas may be there, or the size and boundaries of the field. For example, every time a company

listed on a stock exchange makes a discovery, it's required under SEC rules to announce it as a "material fact." Then it invariably feels compelled to add the shopworn phrase: "Further drilling will be required to determine the commercial significance of the find."

At some point in the overlap between exploration and development, there will have been sufficient exploration to confirm that a commercial discovery had, in fact, been made. At that time, the operator makes his plans for further drilling -- both exploratory and development -- and orders and installs the permanent facilities to conduct future operations. Under existing procedures, plans for these activities are submitted to the USGS.

As I indicated earlier, a number of sizable reservoirs -- onshore and offshore -- have been discovered after one company had given up trying after a number of dry holes, only to have a competitor strike oil or gas on the same tract. Had the exploration ended with the dry-hole experience -- as might well be likely under a government exploration effort -- consumers would have been denied availability of these later-discovered reservoirs, perhaps forever.

An exploring company could not justify spending of the capital needed for drilling, if investors knew the company had

no claim to the oil and gas discovered. And, of course, the monies received from pre-exploration bonus bids would sharply decline, if a guarantee to the right to develop any petroleum discovered were not inherent in the lease sale contract.

Confidentiality of information

On the matter of confidentiality of information, Mr. Chairman, it seems to me that a great deal of misinformation has been generated. One senses a belief that the government doesn't get the data it needs; and that public release of data would help the exploration effort. Neither is true.

Permit me to quote the former Secretary of Interior, Mr. Morton. He testified just recently before this Committee that: "Through purchase of data on the open market and receipt of data from leases, the U.S. Geological Survey has built up an inventory of geophysical information that equals or surpasses that of any firm or group of firms bidding for OCS leases."

While we are not privy to USGS information, we accept the Secretary's word. And we are led to ask: What, then, is the need for legislation allowing the release of company-gathered data, when the government, by its own admission, has been able to gather a greater inventory of information on the OCS than has any competitor within the industry?

Would the public benefit from premature release of company data? I think not, and here's why.

Based on past experience in OCS leasing, the public has benefited directly from the highly competitive bidding at offshore lease sales. Here are some striking numbers which reinforce that statement:

From September 1972 through May 1974, the aggregate high bids at OCS lease sales were eight point nine billion dollars. The aggregate runner-up bids were five billion dollars. The three point nine billion dollars left on the table is equivalent to more than 40 per cent of the total profits during 1973 of the 25 largest oil companies -- nine and a half billion dollars.

Last year, alone, companies paid bonuses and first-year rentals to the Federal government of more than five billion dollars. And, from 1954 through last year, companies paid a total, in bonuses and first-year rentals, in excess of fourteen billion dollars -- just for the right to look for oil and gas.

No guarantee for the exploring companies. No risk to the government and taxpayers. Fourteen billion dollars in revenues, so that the oil companies can gamble that "one more hole" will strike commercially significant quantities of crude oil or natural gas!

If we were to substitute a government effort for that of private enterprise, would a Federal agency -- indeed, should a Federal agency -- take similar risks with taxpayers' money? Our form of government, responsible through a legislature to its people, is just not organized to apply multiple working hypotheses

to locate oil and gas in subtly expressed geologic situations. Industry -- with many different companies, and many different, experienced teams to gather and analyze data -- is equipped for such ventures.

To turn this effort over to the Federal government would be the same as asking one company (with plenty of money and no experience) to do the job. And we can be sure that the job would go haltingly. Once more, the consumer, the worker and the taxpayer would become the fall-guys. You'd think the recent fiasco of law and regulations which led to the catalytic muffler systems on 1975 autos would have sufficiently demonstrated the price the consumer must pay for Cloud Nine edicts from the ivory tower. The Federal government has proved a failure at designing automobiles, running railroads and delivering the mail. Why should we assume it would be a success at exploring for oil and natural gas?

Competitive balance

On the third point, that of preserving the present competitive balance in the industry, it should be remembered that, while there are seven or eight giant firms in our business, there are also thousands more medium and smaller size companies -- of which my own is one -- ranging down in size to the individual proprietor. We like to think that much of the real, competitive balance in our business is supplied by these medium and smaller size companies.

What would be the effect of the government entering this business as a super-competitor? Would you agree with me that this effect could well be to weaken the non-government sector of the business as a whole?

Assuming this to be true, which of us will suffer the most? The answer is obvious: Those who have the least amount of economic staying power. Put in the words of an old Slavic proverb, "When the fat grow lean, the lean are dead."

Government intervention in this business, then -- which has the effect of weakening all competitors -- will drive the smaller ones from the business first, resulting in a greater concentration of the business in the hands of a few large companies. We really don't believe that such is the intent of the Congress. Nor do we think it would be in the best interests of the nation. Yet it is a plausible result.

REVENUE SHARING

A matter that is in some of the pending legislation -- and one that has frequently been cited at recent hearings on OCS development -- concerns sharing with the states any revenues generated from leasing and developing the petroleum potential of Federal OCS lands.

The American Petroleum Institute has been on record for two years in favor of establishing an equitable sharing of such revenues with appropriate levels of state and local government.

Exactly how those revenues might be allocated, however, is not our province to say.

We hope, as we have said, that the Federal government will see the wisdom of implementing a rational revenue sharing program.

CONCLUSION

Let me close with this personal note, if I may.

If Professor Schumpeter was right when he said -- in his monumental work, "Capitalism, Socialism and Democracy" -- that capitalism will eventually give way to socialism, I am one free enterpriser who will not sulk in his tent. I will cheerfully do my level best, no matter what the system. But the wherewithal to do the job today -- right now -- is in the private sector. I believe that I can conscientiously say, even were I philosophically persuaded that the government should accelerate its intrusion into private business, it should not, as a purely practical matter, do so on the Outer Continental Shelf in the 1970's.

Mr. Chairman, I'm not a government official with the resources of the United States Treasury behind me. I am a businessman. More specifically, I am a businessman engaged in that distinct creation of the free enterprise system -- the petroleum business.

In the course of my day-to-day life, I serve consumers who need secure and adequate natural gas and oil supplies. I deal with taxpayers, who must bear any increased costs of government ventures. And, along the way, I've collected millions of their

dollars every year, as an "excise tax collector" for Federal, state and foreign governments. I've labored with workers who desperately need the fuel that will keep the mills of America rolling, and their own employment intact. And I've employed thousands of workers in my own company.

I can tell you this, gentlemen. The consumers, the workers, the taxpayers of this nation are sincerely worried -- about fuel supplies, sky-rocketing government expenditures, and their weekly paychecks. Any legislation that does not work toward solution of these problems...or which delays their solution... fails America in this difficult time.

That concludes my statement, Mr. Chairman.

I'll be happy to answer any questions you may have on my testimony and the proposals before you.

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SUPPLEMENTAL STATEMENT TO THE CHARLES H. MURPHY TESTIMONY BEFORE
THE JOINT HEARINGS OF THE U.S. SENATE INTERIOR AND INSULAR
AFFAIRS AND COMMERCE COMMITTEES, WASHINGTON D.C., APRIL 8, 1975

Although a number of the questions asked in the Senate Committees' letter of March 11, 1975, concerning these hearings have been covered in the original statement, the American Petroleum Institute submits the following additional comments on the specific questions asked by Senators Jackson and Magnuson.

We ask that the Committees bear in mind our general statement that we feel existing legislation has the flexibility to accommodate any updating that may be necessary in regulations governing the leasing and monitoring of offshore operations, and the protection of both offshore and onshore environments. The Institute strongly believes that unnecessary delays -- both deliberate and inherent in some of the proposals -- are unwarranted and in conflict with the energy and economic interests of the American people. We urge that government encourage the private sector to move expeditiously -- with its proven technology -- toward the development of the nation's offshore petroleum, in keeping with the provisions of the Mining and Minerals Policy Act of 1970. That Act clearly states that: "It is in the national interest to foster and encourage private enterprise in the orderly and economic development of domestic mineral resources."

1. Improved coordination of Federal OCS programs with the states.

There is undoubtedly a need to improve coordination of Federal OCS programs with the states, recognizing that the interests of all the states must be accommodated. It is the belief of the Institute that parochial views must give way to national interests, and that duplication of efforts by states and the Federal government is costly, time-consuming and, in many cases, counterproductive. Time is the one element we do not have in abundance.

An example of such duplication can be seen in the oil spill contingency funds required by several states, and the adoption of a Federal indemnity requirement to cover the costs of cleaning up spilled oil. The industry believes that one "superfund" should be established to finance cleanup and to compensate injured parties for any actual damage suffered as a direct result of petroleum operations. Such a fund would eliminate the need for establishing state-by-state agencies, and implementing regulations, reducing costs to the consumer and the taxpayer.

2. Increasing the role of the states in the decision-making process.

State input into the decision-making process is a vital function. It should not, however, be available as a means for delaying decision-making. And, while the need for such input is

recognized, the decision-making process should be so timed as to minimize delay and expedite the orderly development of the OCS resources in keeping with national energy needs and industry capability to explore for and develop the OCS petroleum potential.

There is a need for each state to designate one agency to deal with all matters pertaining to OCS developments, both on-shore and offshore. Such agencies could provide ample representation on and planning input at both the regional and Federal levels.

3. Methods of separating OCS oil and gas exploration activities from decisions to develop and produce oil and gas.

Exploration and development are, in reality, a single integrated effort, in both physical and economic terms. Drilling one successful hole in a petroleum deposit does not -- and cannot -- provide information needed to determine either how much oil and gas may be there, or the size and boundaries of the field.

At some point in the overlap between exploration and development, there will have been sufficient exploration to confirm that a commercial discovery had been made. At that time, the operator makes his plans for further drilling -- both exploratory and development -- and orders and installs the permanent facilities to conduct future operations. Under existing procedures, plans for these activities are submitted to the USGS.

A number of sizable reservoirs have been discovered after one company had given up trying after a number of dry holes, only to have a competitor strike oil or gas on the same tract. Had the exploration ended with the dry-hole experience -- as might well be likely under a government exploration effort -- consumers would have been denied availability of these later-discovered reservoirs, perhaps forever.

An exploring company could not justify spending of the capital needed for drilling, if investors knew the company had no claim to the oil and gas discovered. Monies received from pre-exploration bonus bids would sharply decline, if a guarantee to the right to develop any petroleum discovered were not inherent in the lease sale contract.

4. Alternative leasing systems or other methods of allowing private industry to develop OCS oil and gas.

Because of varying views among members of the Institute, API does not wish to comment on specific leasing methods, or to suggest that one method may be better than another.

In general, however, it would appear that any leasing arrangement should strive to ensure a maximization of the exploration effort, and the expeditious recovery of any oil and natural gas discovered. In so doing, such an arrangement should

recognize that, while the public should garner its fair share of revenues from the OCS, the industry must be allowed a reasonable return that will generate future capital for investment in exploration and development, as well as the ability to attract other capital from the financial markets and permit a reasonable return to stockholders.

Moreover, it is essential that all conditions regarding the entire lease sale be fully set forth prior to the sale, so that there will be no question concerning later development and production, should petroleum be discovered, either large or small quantities.

5. Improvements in the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact statements.

The petroleum industry recognizes the need to improve environmental studies, and to reduce the risks of damage from its operations on land and offshore. To this end, the American Petroleum Institute and the individual oil companies have funded -- and are funding -- numerous studies on the fate of oil in the environment.¹ (Baseline studies in the marine environment cannot be made on a short-term basis, because of the magnitude of the oceans, and the many variables which change with time.) And industry has an ongoing program of research and development of many phases of petroleum technology.

It has been clearly demonstrated that offshore operations can continue while further studies are conducted, and new technology is applied as conditions warrant. And, indeed, the safety and environmental aspects of offshore operations are presently covered by stringent laws and regulations, and monitored by agencies of the Federal government.

We stress, therefore, that there is no need to delay offshore exploration, development and production operations in frontier areas until there is a foolproof state of the art. Nothing dealing with human endeavor can ever be foolproof. To wait for such unachievable perfection would be tantamount to permanently precluding any further development of our offshore resources, and jeopardizing the economic structure of this nation.

¹ Attached are: "Statement of Edward W. Mertens, API Committee on the Fate and Effects of Oil on the Environment before the U.S. Department of the Interior Bureau of Land Management Hearing on February 6-8, 1975," and "Environmental Research Sponsored by the API, Annual Report, January 1975."

6. Improvements in regulation and enforcement of OCS operating practices for safety and environmental protection.

The petroleum industry has complied -- and will continue to comply -- with all regulations and enforcement of offshore operations. The current OCS Lands Act and the National Environmental Protection Act have the flexibility necessary to bring about desired safety and environmental ends, without the need for additional legislation or oversight.

Indeed, increasing regulation -- for regulation's sake, and without proven need -- could seriously hamper the development of our offshore resources. The implication of greater regulation suggests that it could be counterproductive, rather than beneficial, in providing the energy the nation and its workers need to ensure recovery from the present economic situation.

7. The need for an appropriate form of federal assistance to affected coastal states.

The American Petroleum Institute has been on record for more than two years in favor of the adoption and implementation of a revenue sharing formula that would give to the appropriate levels of government of the several states some part of the revenues generated from resource development in the Federal OCS.

STATEMENT OF
EDWARD W. MERTENS, CHAIRMAN
AMERICAN PETROLEUM INSTITUTE COMMITTEE ON
IMPACT AND EFFECTS OF OIL IN THE ENVIRONMENT
BEFORE
THE U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT HEARING
ON
PROPOSED INCREASE IN ACREAGE TO BE OFFERED
FOR OIL AND GAS LEASING
ON THE OUTER CONTINENTAL SHELF
FEBRUARY 6-8, 1975
BEVERLY HILLS, CALIFORNIA

Mr. Chairman:

My name is Edward Mertens. I am a chemist employed by Chevron Research Company, a research subsidiary of the Standard Oil Company of California. During my career, which extends back to the close of World War II, I have held a number of scientific and research management assignments concerned with research work on the heavier fractions of crude oil and the many products derived from these fractions.

Ten years ago my work began to involve the environmental and health aspects of these products. For the past six years, I have devoted full time to work on environmental problems. As the primary duty of my current assignment, I am Chairman of the American Petroleum Institute's Committee on Fate and Effects of Oil in the Environment, a privilege and a pleasure that I have enjoyed since the inception of this committee more than four years ago. In November 1973 at a similar hearing held by the Bureau of Land Management in New Orleans, I presented testimony that described in detail the scope and objectives of our Committee's research and how we operate as a committee. I am submitting a copy of this testimony for the record of this hearing.

Critics of the petroleum industry have maintained that once marine organisms are exposed to an oil spill, these organisms will become contaminated and once contaminated, they will retain more or less permanently the oil fractions they have taken up. Further, the critics contend

that once these oil fractions are accumulated by a marine organism, the oil fractions become more and more concentrated as they move up the food chain. These oil fractions may contain trace amounts--only a very few parts per million at most--of compounds identified as polynuclear aromatic hydrocarbons. Some of these are regarded as potential carcinogens. Thus, the critics contend that ultimately this fraction poses a threat to human health when an organism contaminated in this manner becomes part of a person's diet.

This hypothetical syndrome has been articulated best by Blumer.^{1,2} Following a spill of No. 2 fuel oil near West Palmouth, Massachusetts, in September 1969, Blumer analyzed oysters, scallops, and other marine organisms and found that they had taken up oil fractions. He kept three oysters in flowing sea water in his laboratory. He analyzed one oyster after it had been kept in this manner for 72 days, the other two after 180 days. According to his analyses, none of these three oysters had depurated; that is, purged themselves; of any of the oil they contained prior to the beginning of the experiment. He concludes, "Thus, once contaminated, shellfish cannot cleanse themselves of oil pollution."¹

Our Committee has sponsored extensive research on this problem at several universities and independent research institutions. Based on their results and those of other investigators, we are in complete agreement that when marine life is exposed to oil, it will take up oil and become

contaminated. However, in my extensive review of the literature, I have not found a single reference to any other investigator who confirms Blumer's findings that once contaminated, marine organisms retain all of the oil they have accumulated.

On the contrary, a vast amount of evidence has been reported in the last year or two that, without exception, leads to the opposite conclusion. This evidence constituted the major part of my testimony presented at the hearing held by the Bureau of Land Management in September at Corpus Christi. A copy of this testimony is being submitted for the record of this hearing also. However, this question and its implications are so important that I must summarize these results briefly today.

Battelle-Northwest Laboratories, in work sponsored by API, found that oysters quickly purged themselves of oil when placed in oil-free sea water.³ Their work involved the analyses of a few hundred oysters exposed to several different oils. R. D. Anderson of Texas A & M University, whose research was also sponsored by API, confirmed these results in his work involving well over a thousand oysters.⁴ In work where shrimp, clams, and oysters were exposed to No. 2 fuel oil under field conditions and then placed in the laboratory in oil-free sea water, Cox of Texas A & M University also found rapid depuration.⁵ His work involved a minimum of several dozen organisms. J. W. Anderson, also of Texas A & M University and funded by API,

provided further corroboration in his study of several different oils on such diverse marine organisms as clams,⁶ brown shrimp,⁷ sheepshead minnows,⁷ brine shrimp,⁸ and killifish.⁹ His work involved several hundred marine organism individuals.

Similarly, other investigators report that marine organisms depurate oil quickly once their exposure to oil has terminated. Within three weeks after being exposed to an oil spill, mussels no longer contained detectable amounts of oil in their tissues, according to Lee and Benson at Scripps Institution of Oceanography near San Diego.¹⁰ Lee and coworkers¹¹ found substantial depuration had occurred within two weeks after mussel specimens had been exposed to radioactive-tagged hydrocarbons. In still other work, Lee and coworkers exposed sculpin, sand dabs, and mudsuckers to radioactive-tagged naphthalene and radioactive-tagged 3,4-benz-a-pyrene, a polynuclear aromatic hydrocarbon. These compounds were metabolized by the fish in their livers, and the metabolized products were excreted in their urine.¹² According to Corner and his associates in England, naphthalene is quickly metabolized and excreted by spider crabs.¹³

Teal and Stegeman observed that oil-contaminated oysters depurated about 90% of the hydrocarbons within two weeks after being placed in flowing sea water.¹⁴ They observed some persistent oil contamination contributed by their equipment. This observation probably explains why the depuration they obtained was not as complete as reported

by others, who found that in most cases the contamination had either returned to, or closely approximated, the original background level.

Altogether, these researchers have exposed thousands of individual marine organisms of several different kinds to several crude oils and petroleum products. These exposures have been conducted under both laboratory and field conditions. Moreover, these experiments have taken place in several different laboratories around our country and England. Without exception, their results overwhelmingly refute the findings and conclusions obtained by Blumer from his single experiment involving a total of only three oysters.¹

These results which I have just summarized strongly refute the previously mentioned hypothesis which has been adopted widely by the critics of our industry. It is now well established that once an oil spill episode has passed, organisms cleanse themselves quickly of essentially all the oil contamination they may have incurred. Indeed, this conclusion is shared by the Energy Policy Project of the Ford Foundation,¹⁵ the National Academy of Sciences,¹⁶ and the Marine Technology Society.¹⁷ Since marine organisms subjected to an oil spill do not retain oil permanently, we feel that it is highly unlikely that such contamination becomes concentrated by transfer from one trophic level to the next through the food chain. Thus, the possibility of transfer of potential carcinogens by this mechanism so that they

become a threat to human health becomes extremely remote or, more likely, non-existent.

These latter conclusions are supported by research conducted both in the laboratory and in the field.

The question of magnification of hydrocarbon concentrations occurring from transfer up the food chain was investigated by Cox⁵ and J. W. Anderson.⁶ Neither investigator found any evidence of magnification. Their observations agree with those of Straughan, who found no evidence in her recently completed two-year study of the marine community exposed to the natural oil seep near Santa Barbara.¹⁸ Burns and Teal found no relation between the hydrocarbon content of an organism and its position in the food chain in their study of the Sargasso Sea community.¹⁹ Thus, neither laboratory work nor field studies support the contention of the industry's critics that the concentration of oil increases as it progresses through the food chain.

API research concerning the potential carcinogenic aspects has failed so far to show that any oil fraction has caused cancer in marine organisms.^{3,18} This part of our program is discussed more extensively in my testimony presented in Corpus Christi last September.²⁰ Nevertheless, we are continuing to fund work on this complex and critically important problem.

Exposure at sub-lethal concentrations of oil has shown no effect on growth rate of marine organisms. This conclusion was reached by R. D. Anderson⁴ and Cox⁵ in their

research on oysters and shrimp, respectively. Their conclusions agree with those obtained by Mackin and Hopkins²¹ who found no difference in the growth rate between oysters growing in an area subjected to oil contamination and that of control oysters in an uncontaminated area. Nor did Straughan, in her work supported by API, find that the natural oil seep near Santa Barbara affected the growth rate of marine organisms living in the area.¹⁸ More recently, these results are confirmed by Battelle-Northwest studies at Lake Maracaibo, Venezuela, where *lisa*, a fish native to that area, were exposed for 11 weeks to Tia Juana Medium crude oil.²² No effect on growth rate was observed. Since growth rate integrates many life processes and physiological factors, we are encouraged by those results. Part of our research program is directed towards studying more extensively the potential effects of exposure to sub-lethal concentrations.

A concern is often expressed that during drilling operations in offshore areas, the discharge of spent drilling muds may be toxic to marine life. Drilling muds are complex mixtures containing many different components. The toxicity of these components varies widely when tested individually. However, fortunately the most toxic components are used only sparingly in the formulation of the drilling muds. Their low concentrations in the muds are reflected in the high concentrations of mud in the receiving waters that are needed to produce a toxic effect.

This conclusion is illustrated by the work reported by Logan, Sprague, and Hicks of the University of Guelph in Ontario, Canada²³ and summarized by Falk and Lawrence.²⁴ Logan and coworkers determined by laboratory methods the LC50 (the lethal concentration of drilling mud in water needed to kill half of their test organisms) after an exposure of 96 hours. Their test organisms were lake chub and rainbow trout. The LC50's for a 96-hour exposure period ranged from 0.83% to 12.0%. Thus, dilution of only 8- to about 120-fold, depending on the drilling mud being used, would be needed to render the mud non-toxic even for a 96-hour exposure period. The currents that normally exist around a platform would achieve this degree of dilution within a few feet of the point of discharge and within an elapsed time of only a few minutes. Thus, the effect of discharging drilling muds upon the health of a marine ecosystem can be considered negligible.

It is widely believed by the public that whenever an oil spill of any reasonably large magnitude occurs, the aftermath is a major devastation of marine life. Further, the public is conditioned to believe that this devastation will persist for an extended period of time.

A comprehensive survey of more than a hundred major spills that occurred throughout the world over a 12-year period (1960-1971) was made by Ottway.²⁵ An analysis of the data from this survey revealed that birds represented the type of marine life most often significantly affected. In over 75% of the spills less than 50 birds were involved.

For other forms of marine life where damage could be described as extensive, the incidence was even less.²⁶ These levels are probably low because some of the spills may not have been adequately reported. Nevertheless, only a small number of spills, most notably the West Falmouth and the Tampico Maru spills, resulted in significant damage lasting a year or more. The latter spill, incidentally, occurred near Baja California in Mexico in 1957. Comparable damage resulted from the Torrey Canyon spill, but it is generally acknowledged that this damage resulted primarily from the use of improperly formulated dispersants applied in an improper manner rather than from the effect of the oil itself. All three of these spills occurred near shore.

On the other hand, spills from offshore platforms have been relatively rare. Of the 18,000 wells drilled in our continental waters over the past 25 years, only one spill even reached the beach in a quantity that required extensive cleanup. Its effect on marine life was slight and temporary.²⁷ Only two other significant platform spills have occurred.^{28,29} Coincidentally, both of these were in the Gulf of Mexico in 1970. One of these was studied extensively to assess its environmental impact. Its damage to marine life was inconsequential.²⁸ By all standards, this record of the offshore industry is impressive.

The factors that are responsible for the wide variations in the environmental effects of oil spills are identified and discussed in detail by Straughan.³⁰ The

factors she identifies as determining the extent of biological damage are:

1. The type of oil spilled.
2. The dose of oil.
3. The physiography of the area.
4. Weather conditions.
5. The type of local biota.
6. The season.
7. Previous exposure of the area to oil.
8. Exposure to other pollutants.
9. The treatment of the spill.

However, McAuliffe observes that three conditions are especially critical; and for a spill to have significant environmental damage, all three conditions must exist simultaneously.³¹ These conditions are:

1. The volume of oil spilled must be large with respect to the body of water being impacted.
2. The oil should be a refined oil, such as a No. 2 fuel oil.
3. Storms or heavy surf must cause the spilled oil to be churned into the bottom sediments.

Indeed, all three conditions did exist in the case of the two spills, the West Falmouth and the Tampico Maru spills, in which significant damage attributed to the oil itself persisted beyond a year or two. In each case, the oil spill involved a No. 2 fuel oil, which was confined in a small area of shallow water for several days. Storms and/or

heavy surf caused the oil to be churned into the bottom sediment.

In contrast, offshore platforms are almost without exception located in unconfined areas and in reasonably deep waters. Thus, the first condition outlined by McAuliffe can rarely be met. Moreover, a platform produces crude oil, which is substantially less toxic than most refined oils. Thus, the absence of at least two factors minimize the risk to the marine ecosystem.

Moreover, it must be remembered that since platforms are usually located well offshore, substantial changes in the character of the crude oil once it is spilled will occur before it reached the nearshore zone, which is the most biologically vulnerable area. Once oil is spilled, there is time for the lighter oil fractions to evaporate. Within a matter of hours, components of crude oil as heavy as gasoline have escaped into the atmosphere.³² These fractions are generally acknowledged as the most toxic fractions. This conclusion is confirmed by work conducted by Battelle-Northwest at Lake Maracaibo, Venezuela. They demonstrated that after only two hours weathering, the toxicity of the oil to shrimp had dropped substantially.²² This drop correlated closely with an attendant drop in concentration of light aromatics in the water column.

There is time also for many of the components of the crude oil to be dispersed or, for some components, to be dissolved in the water column. Subsequent dilution rapidly

reduces their concentration to far below toxic levels. Further, their presence in the water column is often short-lived because many components partition readily from the water into the atmosphere.³³ And finally, if a spill should threaten a nearshore zone or shoreline, there is time for cleanup equipment to be placed in operation to combat the spill effectively.

All sectors of our nation badly need the oil that will be obtained from additional offshore production. Our industry needs this oil to operate its refineries. However, far more importantly, the consumer needs the products and energy this oil will provide. Without question, our nation desperately needs this oil for its self-sufficiency and economic independence. In view of the excellent record of the offshore industry, our Committee is convinced that additional offshore production is the alternative that can provide the energy we need with the least environmental risk.

1-23-75

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INTRODUCTION

A continuing concern of the petroleum industry is the protection and improvement of the environment. For this reason, the American Petroleum Institute sponsors -- in whole or in part -- a substantial number of scientific research projects in the environmental area. Additionally, the petroleum companies in the United States independently sponsor such research.

In 1975, API budgeted \$2.3 million for its environmental research program. API has sponsored such research programs for a number of years, with some funding going to projects sponsored directly by API through its Environmental Affairs unit and some going to research and activities of the Air Pollution Research Advisory Committee (APRAC) of the Coordinating Research Council (CRC). The APRAC program -- now in its eighth year -- concentrates on the study of automotive air pollution. The program is supported jointly by API and the Motor Vehicles Manufacturers Association (MVMA).

This report summarizes completed API research and completed APRAC research, as well as on-going API projects.

Extra copies of this report are available from Publication Services, American Petroleum Institute, 1801 K Street, NW, Washington, DC 20006.

Additional information on any of the research projects described in this report can be obtained from the Committee on Environmental Affairs, at the same address.

APRAC projects, both completed and on-going, are reported in the APRAC Annual Status Report (January 1975), which can be obtained from the Coordinating Research Council, 30 Rockefeller Plaza, New York, NY 10020.

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COMPLETED PROJECTS
SPONSORED DIRECTLY BY THE
AMERICAN PETROLEUM INSTITUTE

OIL SPILLS (OS)

TITLE: Performance Testing of Prototype Systems and Devices to Remove and Separate Spilled Oil (OS-5A)

OBJECTIVE: To design, construct, and demonstrate performance in the open sea of two new types of oil skimmers and an open-center (voraxial) oil-water separator.

CONTRACTOR: Reynolds Submarine Services Corporation

RESULTS: The final report has been completed and approved; completion of a documentary film of the sea tests is pending.

TITLE: Performance Testing of Prototype Systems and Devices to Remove and Separate Spilled Oil (OS-5B)

OBJECTIVE: To design, construct, and demonstrate the performance of an open-sea Dynamic Inclined Plane (DIP) oil skimmer.

CONTRACTOR: JBF Scientific Corporation

RESULTS: Construction of the skimmer was completed, certification by the USCG obtained, and successful test demonstrations performed in the Boston Harbor area.

A draft final report is undergoing review, and a documentary film of the construction of the skimmer (DIP-4001) and its shakedown, harbor, and sea trials is in preparation

TITLE: Performance Testing of Prototype Systems and Devices to Remove and Separate Spilled Oil (OS-5C)

OBJECTIVE: Phase I: To design, fabricate, and test scale models of an articulated, wave-conforming oil-skimming vessel for operation in the open sea; and to prepare a preliminary design and cost estimate of a prototype vessel.

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CONTRACTOR: Shell Pipeline Research & Development Laboratory

RESULTS: Phase I of this project was initiated in mid-1973. The fabrication and testing of the scale model has been completed and reviewed with the task force.

Phase II, which consists of a full-size prototype design meeting naval architectural specifications and including detailed drawings, is complete.

TITLE: Shoreline Protection and Restoration (OS-17C)

OBJECTIVE: To conduct a feasibility study of methods for protecting shorelines from oil spills

CONTRACTOR: TRACOR, Inc.

RESULTS: This project covered a nine-month study on the use of polymeric films to protect shorelines endangered by spilled oil. Phase I involved the selection of candidate systems from which 13 resins were chosen for further study. In Phase II, film characteristics of the candidate systems were analyzed, and two were selected for simulated beach tests. The actual tests in Phase III demonstrated that resins should be considered for further development as a viable procedure for protecting beaches.

A final report is expected to be released shortly.

TITLE: Sorbent Recovery System (OS-18)

OBJECTIVE: Phase I -- to demonstrate the feasibility of harvesting oil-soaked sorbents by using a modified commercial weed-harvesting device.

Phase II -- to design an effective system for harvesting oil-soaked absorbents in sheltered waters.

CONTRACTOR: Ocean Design and Engineering Corporation

RESULTS: An effective method for harvesting oil-soaked sorbents in sheltered waters has been illustrated through detailed construction drawings that will be reduced, assembled, and bound for API Publication No. 4235.

TITLE: Clinical Studies of Toxicity of Oil in Water (OS-20C)

OBJECTIVE: To determine the effects of oil on physiologic parameters; how aquatic animals become contaminated with oil which is in solution, absorbed on particles (sediment), or in the food chain (ingestion of contaminated organisms); the extent and rate of accumulation of oil and the sites of contamination; the retention and turnover of animal tissue containing oil; and the sequential accumulation of oil in larger species via the food chain. Test organisms include oysters, clams, marine worms, shrimp, and fish species.

CONTRACTOR: Texas A&M University (Dr. J.W. Anderson)

RESULTS: A draft summary report has been prepared. All significant objectives of the project have been attained, including determination of:

- Comparative toxicities of four oils to a variety of organisms;
- Rates of exchange of hydrocarbons between the organisms;
- Levels of hydrocarbon necessary to elicit an abnormal physiological response;
- Specific hydrocarbons in tissue of exposed-test species and their rate of depuration in oil-free water.

Further field studies that relate to this completed OS-20C project are underway under Project OS-20P.

TITLE: Survey of Sublethal Effects on Biota of Natural Chronic Exposure to Oil (OS-20D)

OBJECTIVE: To determine, at locations subject to long term oil seepage (Specifically, Coal Oil Point), whether the incidence of growth irregularities and abnormalities in marine biota is different from control areas.

CONTRACTOR: University of Southern California, Allan Hancock Foundation (Dr. Dale Straughan)

RESULTS: During this two-year project beginning in March 1972, six cruises were conducted at three-month intervals to sample the benthic organisms at oiled and unoiled locations. Abalone populations at these sites were sampled at two-month intervals, weather permitting. Intertidal areas were sampled at bi-monthly intervals for the first six months of the second year. Additional samplings of abalone,

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mussels, and lobsters were conducted to permit more extensive observations of these edible species.

An important observation based on the benthic work to date is that while the total extractable hydrocarbon level in benthic sediments in the Coal Oil Point area can be very high (up to 60,000 milligrams per liter), the amount of dissolved hydrocarbons in the water is remarkably low (0.4 to 0.5 milligram per liter have been recorded in water samples at "control" sites.)

Tissue analyses have been conducted on abalone, lobster, and mussels. While evaluation of these analyses is not complete, certain trends are emerging:

- (1) Presence of oil in tissues at Coal Oil Point is not uniform; i.e., while some animals contain petroleum hydrocarbons, others of the same species do not.
- (2) Petroleum hydrocarbons recorded to date in abalone and lobster are predominantly in the viscera and gonads, and not in the muscle tissue -- the edible portion of the animal.

Experimental work on the project was completed in the spring of 1974. The findings are being reported in a number of scientific papers which are in preparation. A draft final report is being prepared.

TITLE: Natural Biodegradation of Oil in Aqueous Environments 203-75

OBJECTIVE: To determine the rate and mechanisms of degradation and ultimate fate of oil in the marine environment through the activity of micro-organisms naturally present in the environment; identify oil biodegradation products by generic types; and determine the percentage of oil components that evidence little or no attack by micro-organisms.

CONTRACTOR: University of Maryland (Professor R. Colwell), with a sub-contract to Gulf Research for analytical support

RESULTS: All microbiological work on this project has been completed, and all samples have been submitted to Gulf Research for chemical analysis. The final report should be completed by March 1, 1975.

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Preliminary results indicate that alkanes and aromatics are more readily oxidized than asphaltenes and resins. Microbial oxidations in shake flasks were generally completed within four weeks.

Oxidation rate curves for various classes of compounds in the four reference oils are being plotted and correlated with microbial inoculum from polluted and non-polluted areas.

TITLE: Oyster Field Studies (OS-20J)

OBJECTIVE: To determine effects of oil upon oysters under conditions of natural exposure occurring in the Gulf of Mexico, by observations with regard to lethal effects, if present; sublethal effects, such as impaired growth, development, and alteration of selected physiological parameters; carcinogenesis, mutagenesis and teratogenesis; and uptake, metabolism, and turnover of oil fractions in oyster tissues.

CONTRACTOR: Texas A&M University (Dr. J.W. Anderson)

RESULTS: Oysters were collected from West Bay (Galveston) and placed at Morgans Point and Trinity Bay locations for oil pick-up. Background levels of the collected oysters were high, yet depuration of this initial oil contamination after exposure in an oil-free location was demonstrated, as well as oil-pick-up at the oil exposure site at Morgans Point. More extensive field studies will be conducted under OS-20P, using an offshore platform for both exposure and depuration. Project OS-20J has been terminated.

TITLE: Reference Test Oil Repository 208-75

OBJECTIVE: To provide a source of standard reference test oils for biological studies.

CONTRACTOR: Texas A&M University (Professor J.W. Anderson)

RESULTS: Four reference oils have been used extensively in API-sponsored programs; Kuwait crude, a South Louisiana crude, a No. 2 fuel oil (38 per cent aromatic), and a Venezuelan Bunker "C." They have been designated API-Reference Oils I, II, III, and IV, respectively. A number of barrels of each are now in storage from which samples may be obtained at a nominal cost by applying to Dr. J.W. Anderson at Texas A&M. Analytical information on these oils (obtained from Exxon Research and Engineering Company) is also provided with the reference oils.

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TITLE: Beneficial Stimulation of Bacterial Activity in Ground Waters Containing Petroleum Products (OS-21.2)

OBJECTIVE: To determine methods of promoting bacterial decomposition of petroleum components in groundwaters.

CONTRACTOR: Sun Ventures, Inc.

RESULTS: OS-21.2 has shown that introduction of air and fertilizer into groundwater was of value in stimulating and promoting the desired bacterial activity on gasoline in a field experiment. Of approximately 80,000 gallons of gasoline which reached the groundwater table, about 40,000 was recovered by pumping numerous shallow wells. Addition of nitrogen and phosphorus salts in conjunction with air diffuser pumps to stimulate a bacterial decomposition of the remaining gasoline resulted in significant disposal of up to 250 gallons of gasoline per day. A report of this project will also include reference to subsurface water contamination by gasoline in other areas.

STATIONARY SOURCES (SS)

TITLE: Investigation of the Effect of Combustion Parameters on Emissions from Residential and Commercial Heating Equipment SS-5 (Phase III)

OBJECTIVE: To develop reliable emission factors for residential and commercial heating equipment.

CONTRACTOR: Battelle Memorial Institute, Columbus Laboratory

NOTE: This project has been jointly supported by the U.S. Environmental Protection Agency and API.

The Phase III report will be published by the National Technical Information Service.

TITLE: Odor Evaluation (SS-6)

OBJECTIVE: To develop a case history of refinery odor problems and their solutions of the attempt to quantify and identify refinery odors.

CONTRACTOR: Midwest Research Institute

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RESULTS: Interviews were conducted with representatives of twelve refineries covering twenty-nine odor sources and nine odor control techniques.

A total of 402 odor samples for SO₂, NH₄, and hydrocarbons were collected from five refineries. Analysis of the samples will be included in the final report, which is expected by early 1975.

BASIC RESEARCH (BR)

TITLE: Environmental Expenditures of Petroleum Industry 601-75

OBJECTIVE: To determine the annual environmental expenditures of the petroleum industry.

CONTRACTOR: Data tabulation by Haskins & Sells

RESULTS: The final report of the 1973 survey was distributed by API in early November. A similar study is planned for 1974 expenditures.

WATER QUALITY (W)

TITLE: Effluent Guidelines for Petroleum Industry (W-7)

OBJECTIVE: To assist in the development of equitable effluent guidelines.

CONTRACTOR: Crossley, Inc. -- Tabulation; Brown & Root -- Analysis

RESULTS: This project is now complete. The Brown & Root report, Analysis of the 1972 API-EPA Raw Waste Load Survey Data, has been distributed as API Publication No. 4200. Computer analysis of the data facilitated the development of a new math model approach for establishing effluent flow rates and COD and BOD raw waste loads from a simple calculation of the "process complexity" of individual refineries. The math model approach is being refined and expanded in the W-13 project.

A companion report, Variability of Refinery Wastewater Effluent, was issued in August 1974 (Interim Report No. CEA-7). Further study on this subject is planned.

COMPLETED PROJECTS SPONSORED
THROUGH THE
AIR POLLUTION RESEARCH ADVISORY COMMITTEE
OF THE
COORDINATING RESEARCH COUNCIL

ENGINEERING (CAPE)

TITLE: Improved Instrumentation for Determination of Exhaust Gas Nitrogen Oxides and Oxygenate Content (CRC Project CAPE-11-68)

OBJECTIVE: To develop improved instrumentation for continuous measurement of exhaust gases for nitrogen oxides and oxygenate content on a concentration mass and reactivity basis.

CONTRACTOR: Bureau of Mines

RESULTS: The Bureau of Mines has measured levels of carbonyl and non-carbonyl oxygenates in exhaust from three current model automobiles equipped with emission control devices. Three fuels of varying characteristics were used in cars equipped with an oxidation catalyst and exhaust gas recirculation, a lean thermal reactor and exhaust gas recirculation, and an oxidation and reduction catalyst without exhaust gas recirculation.

In general, the aldehyde levels were found to be higher than the other oxygenates that were measured. The aldehyde levels for the vehicle equipped with the oxidation-catalyst were slightly less than levels found with the oxidation-reduction catalyst, and both were much lower than the aldehyde level of emissions from the lean thermal reactor. Little or no effect on oxygenate emissions was attributable either to fuel composition or to ambient temperature. A final report is scheduled for publication early in 1975.

ATMOSPHERIC (CAPA)

TITLE: Factors Affecting Reactions in Environmental Chambers (CRC Project CAPA-1-69)

OBJECTIVE: To study how various design and operational variables affect the reactions which occur in environmental chambers.

CONTRACTOR: Lockheed Missiles and Space Company, Inc.

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RESULTS: An experimental study was conducted on the effects of various environmental (smog) chamber designs and operational variables on the photochemical reactions of hydrocarbons and NO_x . The effects of materials, spectra, surface to volume ratio (S/V), and cleaning techniques on the photochemical reactions observed in an environmental chamber are included in the research. A unique chamber and lighting system was used, permitting independent variation in chamber materials and in light conditions.

The time to NO_2 maximum occurred fastest in a chamber of stainless steel, followed in order by aluminum, Pyrex, and Teflon. Maximum ozone concentration increases in this order: stainless steel, Pyrex, aluminum, Teflon.

Using a spectrum cutting out energy below 340 nm wavelength strikingly lowers reaction rates compared to the full spectrum. The presence of this large spectral effect was not anticipated and cannot be easily explained. S/V was also found to affect the reactions measurably. Using the two cleaning techniques indicated little difference in drawing off the chamber gases in a high-vacuum space chamber or in purging the chamber with pure air.

A final report will be available early in 1975.

MEDICAL (CAPM)

TITLE: Effects of Carbon Monoxide on Human Behavior (CRC Project CAPM-3-68)

OBJECTIVE: To increase knowledge of the effects of exposures to air pollutants, with special emphasis on impairment of behavior not preceded by symptoms.

CONTRACTOR: Medical College of Wisconsin

RESULTS: The synergistic effect of CO and two commonly prescribed drugs, phenacetin and Benadryl, were evaluated. No synergistic effects were observed in the study. Three additional observations were made: (1) the occurrence of CO induced headaches at COHb saturations of 14 per cent; (2) the possible effect of CO exposure on EEG activity at this level; and (3) the finding that phenactin, as an analgesic, did not lessen the headaches induced by the CO exposure.

The effects of CO and ethyl alcohol on behavioral test performance were assessed at 24-hour exposure as compared to a 5 1/2-hour exposure to identical concentrations of CO.

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A dose level of 1.6ml-100 proof alcohol/kg body weight and a COHb blood level of approximately 14 per cent were chosen.

The data obtained from tests of coordination, arithmetic, inspection, manual dexterity, time estimation, and vigilance did not provide evidence to substantiate that a 24-hour exposure to low levels of CO has deleterious effects on behavior and that alcohol would potentiate such effects.

The spontaneous electroencephalogram (EEG) and the visual evoked cortical electrical activity (visual evoked response, VER) were studied in young adult males to ascertain the effects of exposure to carbon monoxide (CO). The EEG was generally resistant to change during 8 hours of exposure of 50 to 500 parts per million (ppm) CO, and 24 hours of exposure at the lower CO concentrations (maximum carboxyhemoglobin saturations of 10 and 22 percent). During the 8-hour exposures, the VER was generally resistant to change until COHb levels of 22 per cent were achieved, while with 24 hours of exposure changes were evident even at the lowest concentrations (COHb = 4-10 per cent). This change, an increase in VER wave amplitude, suggests that these exposures induced central nervous system depression. Finally, during three hours of exposure (10 per cent COHb), the absence of a general CO effect was still evident when exposure was combined with phenacetin ingestion, Benadryl ingestion, or cessation of chronic cigarette smoking.

A final report on this project will be published shortly.

TITLE: Effects of Low Levels of Nitrogen Oxides upon Humans (CRC Project CAPM-10-71)

OBJECTIVE: To obtain information required to assess the effects of low levels of NO_x upon humans.

CONTRACTORS: Research Triangle Institute

RESULTS: The final report, which summarizes nitrogen dioxide data collected from September 1972 to December 1973, has been published. In addition, the comparability of nine methods for monitoring NO₂ in ambient air, using data obtained during the period July 1972 through April 30, 1973, have been documented. The nine methods include six 24-hour bubbler methods, two continuous Saltzman methods, and the chemiluminescent method.

Seasonal and diurnal variations in NO₂ concentration were more prominent at sites located near the point source (TNT plant), as opposed to sites removed from the influence of the point source. Nitrogen dioxide concentrations

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observed at sites removed from the point source show characteristic diurnal patterns that can be related to morning and evening traffic patterns. Mean NO₂ concentrations measured in the Chattanooga area have decreased significantly since the original 1968-1969 Chattanooga Study. During the period September 1972 to December 1973, the ambient air quality standard of 100 ug/m³ was not exceeded nor closely approached at any of the seven sites. The collection of aerometric and health data is continuing with support from EPA.

TITLE: Effects of Low Levels of Oxidant upon Humans (CRC Project CAPM-11-71)

OBJECTIVE: To obtain information required to assess the effects of low levels of oxidants upon humans.

CONTRACTOR: Copley International Corporation

RESULTS: In March 1973, Copley International Corporation began a second year of participation in a coordinated series of epidemiologic studies conducted in the Los Angeles Basin. CIC measured selected health characteristics of persons residing in three communities of the Los Angeles Basin. The communities reflected an exposure gradient for ambient oxidant air pollution. Health indicators which were investigated include frequency of acute respiratory illness, ventilatory performance of school children, frequency and severity of asthma attacks in a panel of patients, and pollutant burden of trace metals. A report has been published. The collection of aerometric and health data is continuing with support from EPA.

TITLE: Influence of Carbon Monoxide Levels upon Incidence of Motor Vehicle Accidents (CRC Project CAPM-12-69)

OBJECTIVE: To determine if a relationship exists between the carbon monoxide exposure of motor vehicle operators and the incidence of motor vehicle accidents.

CONTRACTOR: Stanford Research Institute

RESULTS: Stanford Research Institute performed a literature search to determine the state of knowledge of the degree to which atmospheric carbon monoxide occurring in the heavy traffic of urban roadways is a contributing factor to vehicle accidents. Attempts to relate high levels of atmospheric CO or blood COHb to accidents have

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suggested that driver fatalities do have higher levels of COHb (independent of the fact that they also have higher alcohol levels) than do drivers not involved in an accident. The contribution of smoking rather than absorption of atmospheric CO has, however, not been determined.

Stanford Research Institute's literature review and planning study are available in a final report.

TITLE: Eye Irritation and Lachrymation (CRC Project CAPM-17-71)

OBJECTIVE: To measure eye irritation threshold response times, using the atmosphere as the exposure medium during the smog season and to define the mechanism of the lachrymation process, with special emphasis on injuries induced by gaseous and particulate air pollutants.

CONTRACTOR: Copley International Corporation

RESULTS: Copley International Corporation conducted a critical literature review of eye irritation and lachrymation in relation to air pollution.

Literature was obtained through an abstract search performed by the Environmental Protection Agency, Air Pollution Technical Information Center; a search of journals in local libraries; and contact with individuals who conducted eye irritation studies in the past. Sixty-three such individuals were contacted, and 42 (67 per cent) responded.

Information from all sources was critically reviewed and summarized in a published report. Gaps in the present knowledge were identified, and appropriate research was recommended.

NEW AND CONTINUING API PROJECTS

ENGINE FUELS (EF)

TITLE: Gasoline Composition and Photochemical Smog (EF-8)

OBJECTIVE: To determine the effect of gasoline composition on automotive exhaust composition and on the development of photochemical smog. Photochemical smog manifestations of principal interest are: eye irritation, aerosol formation (visibility reduction), oxidation formation, and NO conversion.

CONTRACTOR: Battelle, Columbus Laboratories

RESULTS: The experimental work on this project has been completed. Emphasis is presently on data analysis.

The results of this study indicate that fuel composition has no significant effect on eye irritation or oxidation formation. Visibility reduction was observed under certain conditions. In other experiments involving synthetic exhaust mixtures, no change in aerosol formation was observed as the aromatic concentration increased.

TITLE: Los Angeles Aerometric Analysis 401-75

OBJECTIVE: To determine the trends in atmospheric pollutants and correlate these trends with estimates of the inventory of each pollutant, as well as their environmental effects; and to evaluate the efficacy of control regulations and the effect of proposed control measures on the atmosphere.

CONTRACTOR: University of Wisconsin

RESULTS: Data on seven pollutants (hydrocarbon, carbon monoxide, sulfur dioxide, nitric oxide, nitrogen dioxide, particulate, and oxidant) taken over a seventeen year period have been analyzed for trends and diurnal variability to determine the relationships between pollutants and stations.

The effect of traffic and meteorological variables on the final pollutant loading and the effect of week-end-versus-weekday traffic on the concentration of the various pollutants are being investigated.

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Several reports on this study have been prepared and are available from the University of Wisconsin. Papers have also been presented at the Air Pollution Control Association meetings.

To date, the data have indicated that oxidant and CO showed a marked reduction in concentration in the Central, Southern, and Western parts of the Los Angeles Basin. On the other hand, reductions to the North and East have been very small.

TITLE: Vehicle Refueling Evaporative Emissions Control 402-75

OBJECTIVE: To determine the feasibility and cost-effectiveness of possible methods for controlling evaporative emissions during vehicle refueling at the service station; to determine the status of development of various commercially available control systems; and to develop and validate in the field a standardized test procedure, including development of a performance standard for design of a nozzle/fillpipe interface.

CONTRACTORS: Refinery Management Services Co.; Olson Laboratories, Inc.; Scott Research Laboratories, Inc.; Stanford Research Institute

RESULTS: A Phase I study of the cost-effectiveness of various methods of control was completed by Refinery Management Services. Phase II included an experimental study of control on the vehicle by Olson Laboratories, using activated carbon and a study under the direction of Scott Research of the direct displacement system in service stations. Interim reports have been issued on both studies.

Phase III, an evaluation of the status of development and performance of various commercially available control systems and of related control hardware, has been completed by the contractor, Olson Laboratories. An interim report has been released.

Phase IV involves the development of a standardized test procedure which can be universally used to evaluate control systems of all types, an attempt to develop a performance standard which may be used by both automotive manufacturers and nozzle manufacturers for design of mutually compatible fillpipe and tight-fit nozzles. The nozzle/fillpipe performance standard is targeted for completion by the end of 1974. The test procedure is targeted for the first quarter of 1975. And, the temperature survey will be completed in one year. SRI is assisting with Phase IV.

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TITLE: Fuel Economy of Emission Controlled Cars (EF-17)

OBJECTIVE: To assess the fuel economy of passenger cars in the United States, with emphasis on the effect of emission control modifications.

CONTRACTOR: Runzheimer & Co.

RESULTS: All available data on up to 150,000 fleet vehicles will be analyzed, with completion expected early in 1975.

TITLE: Alcohols as Fuels -- a Technical Evaluation (EF-18)

OBJECTIVE: To complete an evaluation of ethyl and methyl alcohols as potential sources of fuel.

CONTRACTOR: Dr. William F. Biller

RESULTS: All pertinent literature is being reviewed and a comprehensive survey of private, unpublished researches has been completed.

A first draft of the automotive applications section has been completed and is being reviewed by the task force. First drafts of the remaining sections are in preparation.

OIL SPILLS (OS)

TITLE: Oiled Waterfowl Rehabilitation 302-75

OBJECTIVE: To perform research, consulting, and informational functions relating to the cleaning and rehabilitation of oiled birds.

CONTRACTOR: Wildlife Rehabilitation Center, Framingham, Massachusetts (Phillip B. Stanton)

RESULTS: A manual is currently being prepared on the cleaning program outlined at an Oiled Bird Workshop held in May at the Patuxent Wildlife Research Center. Additional work includes continuous studies on seabird nutrition and establishment of bird rehabilitation centers at various zoos.

TITLE: Hormone and Electrolyte Therapy for Oiled Waterfowl 303-75

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OBJECTIVE: To investigate the effects of ingested crude oil and petroleum products on marine birds.

RESULTS: Progress has been made toward elucidation of the effects of crude oil on the mucosal transfer rate in ducklings. The Alaska North Slope oil results have been verified, and an examination is underway of the effects of the various distillation fractions derived from this oil. With regard to long-term effects of ingested oil, mature salt-water adapted birds are more resistant than young birds are to Kuwait and Santa Barbara crudes and to No. 2 fuel oil.

TITLE: 1975 Conference on Prevention and Control of Oil Pollution 304-75

OBJECTIVE: To hold a fourth conference on the prevention and control of oil pollution.

CONTRACTORS: Courtesy Associates -- Conference Management
Trade Association Inc. -- Exhibits Management

RESULTS: The 1975 Conference is jointly sponsored by the U.S. Coast Guard, the U.S. Environmental Protection Agency, and the API. It will be held at the Hyatt Regency Hotel in San Francisco, March 25-27, 1975.

During the three concurrent sessions of the Conference, there will be an exhibition of oil prevention and control equipment and materials and a film festival. Approximately one hundred manuscripts have been accepted for presentation or inclusion in the Conference proceedings, which will be published by API.

TITLE: Shoreline Protection and Restoration 305-75

OBJECTIVE: To conduct a feasibility study on biological methods for protecting and restoring shorelines from contamination.

CONTRACTOR: Exxon Research and Engineering Company

RESULTS: Experimental evidence indicates that extracellular products of certain microorganisms in various physical forms and several natural plant polysaccharides are effective in preventing the wetting of surfaces of dry rocks of various compositions and porosities by several different types of oils.

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The results of a series of laboratory and field tests also provide information concerning the required dosage levels of the protecting agents, the methods necessary for application, the effects of temperature, the duration of the protection offered, and the overall efficiency of the micro-biological and natural product systems.

A supplementary 6-month study to determine the feasibility of using these microbiological products to protect and/or restore salt marsh grass from oil spills and oil contamination has been completed, and a repeat is in preparation.

TITLE: Shoreline Protection and Restoration 305-75

OBJECTIVE: To conduct a feasibility study on the applicability and effectiveness of chemical surfactant substances for the protection of shorelines which might be in danger of becoming fouled by oil floating on water and for cleaning and restoration of shorelines that have been fouled by oil.

CONTRACTOR: Shell Pipeline Research & Development Laboratory

RESULTS: No reports relating to applicable inorganic chemicals have been completed. One candidate organic chemical has been reported. Selection of candidate chemicals for restoration is nearing completion, with two classes of compounds selected (silicates and borates). Material acquisition and design of test facilities are also nearing completion. The contractor has consulted with Exxon regarding OS-17A and has procured oil samples and rocks identical to those used in the OS-17A tests.

The program will consist of a literature review and laboratory tests for the selection of chemical substances to accomplish the objective of the project.

TITLE: Fate of Oils in a Water Environment (OS-20F)

OBJECTIVE: To make a comprehensive determination of what happens to oil spilled in a water environment; to develop mass balance relationships among the various physical, chemical, and micro-biological factors which define the partition, distribution, and transport of oil and its degradation products into the atmosphere, water column, sediments, and biota.

CONTRACTOR: USC, Dept. of Geological Sciences (Dr. R.L. Kolpack)

RESULTS: Publication of the Phase I final report, comprising an evaluation of the literature and an annotated bibliography is expected in early 1975.

The contractor has submitted a status report covering development of a mathematical simulation model of the fate of an oil spill. The project has been extended for another 15 months in order to complete the mathematical model by the end of 1975. Included in next year's work will be the improvement of model efficiency and structure, systematic development of algorithms, testing of model vs. documented results of three major oil spills, and application of the model to revise priorities for future research.

TITLE: West Falmouth Follow-Up Studies (OS-20L)

OBJECTIVE: To determine the state of recovery of the entire West Falmouth area effected by the 1969 spill.

CONTRACTOR: Dr. Alan Michael, Marine Biological Laboratory, Woods Hole, Massachusetts

RESULTS: Sampling of numerous stations, including control sites unaffected by the 1969 oil spill, have been analyzed for hydrocarbon content and statistics compiled on the number and types of species found.

The benthic fauna of the area have substantially recovered, although the number of species in the Wild Harbor marsh is lower than at a control marsh including certain species usually found in stress situations. It is not known whether lower densities at the control are due to the oil or natural differences in the productivity of the two marshes. In the period from March to September 1973, offshore stations have fewer species but similar densities to control stations. The offshore area is closer to total recovery than either the marsh or boat basin. Some stations are completely purged of oil, according to chemical analysis by Battelle.

TITLE: Chemical Analysis in House 204-75

OBJECTIVE: To analyze occasional samples for which the industry has special facilities and to check analytical results obtained by our contractors.

CONTRACTOR: Member Company Laboratories

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RESULTS: A complete characterization by mass spectrometric analysis of the four reference oils being used in the laboratory biological studies sponsored by API was the principal effort under this project in the past year. This work was done by Exxon Research and Engineering Company.

TITLE: Field Study of Effects of Oil on Marine Animals 206-75

OBJECTIVE: To apply the extensive data and technology gained in laboratory models to the reality of the natural marine environment; study various marine organisms in different levels of oil and effluent contamination from petroleum operations in Gulf of Mexico and bay waters, with respect to a number of parameters -- mortality, growth (inhibition and/or enhancement), altered physiology, carcinogenesis, reproduction, food-web effects, etc. The findings are to be related to appropriate measurements of hydrocarbons in the environment and animal tissues, utilizing newly developed analytical test procedures.

CONTRACTOR: Texas A&M University (Dr. J.W. Anderson)

RESULTS: Efforts are being made to locate a field laboratory on an offshore platform for such studies as depuration, effects of oil on benthic communities, effects of oil on sensory mechanisms of various organisms, effects of oil on zooplankton, and absorption and retention of oil in bottom sediments.

Extensive sampling of bottom sediment and benthos have established hydrocarbon concentration and composition in Trinity Bay near a separator platform. Arrangements have been made to use the flowing sea water system at Sea Arama (Galveston) to pursue the above studies. A field test site, utilizing the flowing water from the fire main system of an offshore platform, is also being readied. Finally, the accumulation and toxicity of a #2 Fuel Oil on the manthis shrimp (Squilla) was determined by Laboratory bioassay.

TITLE: Biodegradation of Oil in Soil (OS-21.3, OS-21.4)

OBJECTIVE: To develop methods for speeding up biodegradation of crude oils and crankcase oils; and to determine possible detrimental effects of oil disposal by the land spreading process.

CONTRACTORS: Sun Ventures, Inc.

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RESULTS: This investigation involves field tests of techniques for working various oils at different concentrations into a range of soils under varying climatic conditions; proper aeration, chemicals, and moisture for accelerating the rate of microbial decomposition of oil in soil; rates of different oil types; types and amounts of refractory oil components that are not readily biodegraded and toxic leachates, including metals.

The scope of this project now includes waste lube oils, with particular reference to determining the possible detrimental effects of this disposal process, specifically regarding volatiles and leachates. Preparation of soil plots and application of oil (100 bbls/acre) and fertilizers were completed in January 1974. After eight months the following decomposition was noted: heavy Arabian crude, 39 per cent; service station waste crankcase oils, 57 per cent; diesel truck waste crankcase oils, 49 per cent; Gulf Coast crude mix, 49 per cent; No. 6 fuel oil, 39 per cent; No. 2 fuel oil, 70 per cent; No. 2 fuel oil, 70 per cent. No lead has been detected in soil plot water runoff or drainage.

TITLE: Oil Spill Cleanup Training School (OS-24)

OBJECTIVES: To provide a comprehensive training course for cleaning up oil spills under a variety of conditions.

CONTRACTOR: Texas A&M University

RESULTS: The Texas A&M team is collecting visual aids for use during the course and has contacted numerous equipment manufacturers to obtain demonstration materials. The school should be in operation by April 1975 and will be held in Galveston, Texas.

TITLE: Prevention of Oil Spills 306-75

OBJECTIVES: To develop a motivational program for the prevention of oil spills; to develop a training aid for the prevention of oil spills in barge loading and unloading operations.

CONTRACTORS: Educational Systems and Designs, Inc.;
National Photographic Laboratories

NOTE: The contractor will be expected to develop a training aid to promote individual initiative in preventing spills.

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The Division of Refining Committee on Training will sponsor development of the barge loading/unloading prevention training aid. The OS-25 Task Force is providing content specialists, who are the source of technical input for training aid.

TITLE: Analytical Methods for Polynuclear Aromatics 207-75

OBJECTIVE: To develop and demonstrate analytical methods for determination of polynuclear aromatics (PNA's) in test oils for biological projects and in marine animal tissues.

CONTRACTOR: Exxon Research and Engineering Company

RESULTS: The gas chromatographic-ultraviolet technique of the Exxon Research and Engineering Laboratories is being examined for determination of polynuclear aromatics at low levels in oils and in marine animal tissues. This technique could provide information on concentrations of several five-ring polynuclear aromatics. Simultaneous determination of three- and four-ring aromatics may assist in ascertaining the significance of the results and in reducing the cost of exploratory analyses, provided that some ratio may be found to exist among the concentrations of higher aromatics.

TITLE: Biological Effects of Pelagic Oil 209-75

OBJECTIVE: To determine whether pelagic oil (tar balls) affects the health and population of intertidal marine organisms.

CONTRACTORS: Bermuda Biological Station (Drs. C.D. Gebelein and N.E. Maynard)

RESULTS: Equipment has been obtained, field sites selected, and monthly collection of intertidal organisms from these sites initiated.

Parameters being examined include:

- For macroinvertebrates: species composition; abundance and diversity; zonation and motile behavior; size frequency; larval settling; and hydro-carbon analyses of tissues.
- For macro- and microalgae: species composition; abundance and diversity;

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zonation; hydrocarbon analyses of the macroalgae; and algal biomass.

- Preliminary analyses of tar globules and weathering effects thereon.

STATIONARY SOURCES (SS) AND SULFUR (S)

TITLE: Flue Gas Recirculation and Delayed Combustion Study (SS-4)

OBJECTIVE: To develop air pollutant emission control systems for oil- and gas-fired boilers by application of external flue gas recirculation and/or staged addition of combustion air.

CONTRACTOR: Ultra Systems, Inc. and Foster Wheeler Corporation

RESULTS: EPA and API are jointly sponsoring a three-year project to determine the optimum conditions for operating oil- and gas-fired boilers to minimize the NO_x content of the flue gas.

Phase I included construction of the pilot furnace and testing to assure that all mechanical and analytical features were operable. A report on Phase I has been issued.

Phase II consists of a field test of a commercial boiler to determine the application of flue gas recirculation and staged combustion as determined by a pilot unit.

TITLE: Community Noise 703-75

OBJECTIVE: To obtain industry information on community noise and provide up-to-date information to the industry on state and local regulations.

CONTRACTOR: In-House

NOTE: A questionnaire soliciting data from the industry on community noise regulations is currently being prepared.

TITLE: Sulfur Dioxide in Stack Gases 701-75

OBJECTIVE: To review all available processes for the removal of sulfur dioxide from stack gases and monitor new developments in this area.

CONTRACTOR: Battelle Columbus Laboratories

RESULTS: Battelle Columbus has visited numerous utility installations in the U.S. and has distributed reports to the sponsoring organizations and individual companies.

The task force has visited two plants which demonstrate the industrial applications of sulfur dioxide removal technology: Purasiv-S process (Union Carbide); Application: SO₂ removal on a sludge acid plant stack gas; Citrate process (Arthur G. McKee & Company, Pfizer, Inc., & Peabody Engineered Systems); Application: Coal-fired industrial boiler flue gas.

OTHER STUDIES

TITLE: Water Re-Use Study (CREC-1)

RESPONSIBILITY: Committee on Refinery Environmental Control

OBJECTIVE: To determine the feasibility and cost of achieving a refinery water re-use system that would result in a zero discharge of pollutants in accordance with the national goal in Federal Water Pollution Control Act Amendments of 1972.

CONTRACTOR: Cyrus Wm. Rice Division, NUS Corporation

NOTE: Current studies include pilot evaluations of existing methods and various water processing schemes. Wet coil concentrating cooling towers and brine concentrations are being evaluated. The work to date has focused on the water re-use concepts for grass-root refineries. Study of the economics of retrofit to existing refineries is planned for 1975.

TITLE: Sour-Water Stripper Evaluation (CREC-2)

RESPONSIBILITY: Committee on Refinery Environmental Control

OBJECTIVE: To develop detailed design and operating data on one or more sour-water strippers currently operating in a satisfactory manner, including a comparison of trays versus packing.

CONTRACTOR: Bechtel

RESULTS: This project is one part of a three-part joint effort. Corrosion studies are being

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directed by the Committee on Refinery Equipment, and the development of basic vapor-liquid equilibrium data is under the direction of the Subcommittee on Technical Data. A survey of refinery experience with sour-water strippers was published by CREC in August 1973.

The work sponsored by the subcommittee on technical data is being conducted by Brigham Young University, under the direction of Grant Wilson; corrosion studies are being conducted by Battelle. All three projects are scheduled to continue into 1975.

TITLE: High-Rate Filtration (CRC-3)

RESPONSIBILITY: Committee on Refinery Environmental Control, the Division of Refining

OBJECTIVE: To establish a demonstration project for continuous pilot testing of high-rate filtration on actual refinery effluent, as well as application to intermediate refinery waste water streams.

CONTRACTOR: Eimco Envirotech

NOTE: State and Federal regulations will require more extensive treatment of refinery waste waters in the future. It will be necessary to remove suspended contaminants and trace quantities of other pollutants from the treated effluent in many cases, and there is evidence that high-rate filtration may be very effective in achieving those objectives.

TITLE: Economic Impact on the Petroleum Industry of Environmental Regulations 602-75

OBJECTIVES: To survey the impact of promulgated and proposed environmental regulations on the industry

CONTRACTOR: Battelle, Columbus Laboratories

NOTE: A questionnaire to be used for gathering of necessary data is currently under development.

TITLE: Bioassay of Refinery Effluents 501-75

OBJECTIVE: To develop methodology for evaluating the biological effects of refinery effluents on aquatic organisms.

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CONTRACTOR: Virginia Polytechnical Institute and State University

RESULTS: A number of macroinvertebrates and fish have been surveyed, through static bioassays, to determine their usefulness in subsequent research. The relative sensitivity of test animals was determined, using various concentrations, or multiples, of the arbitrary reference mixture prescribed by the task force. This synthetic refinery effluent was used to insure control of test variables and to simplify logistics problems.

The list of candidate organisms was reduced to five with good potential applicability, plus four possible alternates. Tests were also run to determine the sensitivity of selected animals, using different bioassay methods such as static with and without renewal, and with and without circulation; the reproductibility of data collection; and the possibility of behavior as a quick bioassay tool.

The preferred methodology was finalized, and a workshop was conducted to acquaint representatives of the member companies with the proceedings using macroinvertebrates. At this workshop, a series of laboratory sessions were conducted to train personnel.

Each of the individuals participating in the workshop was requested to conduct a review of tests on refinery effluents during November and December. These data will be used to verify the application of the test procedure in actual field operation.

The field test data will be incorporated in the final report on the first phase of this study, scheduled to be completed by March 1975.

WATER QUALITY (W)

TITLE: System Model for Defining Petroleum Refining Effluent Parameters (W-13)

OBJECTIVE: To develop a model based on industry data which will provide an index of reasonably achievable effluent discharges for individual facilities with due consideration for the various factors applicable to each refinery.

CONTRACTOR: Brown & Root

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RESULTS: A preliminary report of the experimental model is presently being reviewed to define better the application of the model in determining the various guideline parameters of refinery effluents.

The final draft report will be submitted in early-1975.

TITLE: Toxic Pollutant Effluent Standards (W-14)

OBJECTIVE: To develop data which may be useful in the development of toxic pollutant effluent standards.

CONTRACTOR: Task Force In-House Activity

RESULTS: An industry survey indicates that cadmium and mercury are not present in any significant amounts. Further industry survey of toxic substances in effluents during 1975 is under consideration.

TITLE: Effluent Guidelines for Non-Process Operations 506-75

OBJECTIVE: To develop recommendations for effluent guidelines for petroleum activities not covered by other specific guidelines.

CONTRACTOR: To be selected

RESULTS: The major emphasis of this study is on the development of effluent standards for marketing operations. The task force has completed reviews of National Pollution Discharge Elimination System permits published by New York and New Jersey, and submitted comments.

An industry survey of 45 terminals has been completed and an interim report (CEA-19) has been released. The results of this survey have been reviewed by EPA representatives.

A survey of 150 terminals has been initiated, and some thirty samples of effluents will be obtained from each location. Oil and grease analyses will be determined on each of these samples. The study is scheduled to be completed by May 1975.

SOLID WASTE (SW)

TITLE: Solid Waste Surveys (SW-1)

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OBJECTIVE: To cooperate with a solid waste study conducted by EPA, conduct an API in-house study of solid-waste handling practices in petroleum industry.

CONTRACTOR: To be selected.

RESULTS: Sixteen refineries have been visited and samples collected. The task force interfaced with EPA and its contractor, Jacobs Engineering, on a questionnaire describing each solid waste stream and method of disposal. The in-house survey will be made early in 1975.

APPENDICES

- A. MEMBERSHIP OF API COMMITTEES RESPONSIBLE FOR ENVIRONMENTAL RESEARCH
- B. RECENT API PUBLICATIONS

A. MEMBERSHIP OF API COMMITTEES
RESPONSIBLE FOR ENVIRONMENTAL RESEARCH

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C. E. Golay	P. M. Wolkonsky, M.D.
W. J. Grant	W. M. Zarrella

NOTE: Space does not permit inclusion in this listing of the names of all of the subordinate task force and panel members, some 300 in number, without whose dedicated service, at considerable cost to their companies, the programs described in this report would be impossible.

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J. H. Huguet	

B. RECENT API PUBLICATIONS

- 4202 Program for Upgrading the NO₂ Instrumentation Employed in the 1972 Chattanooga NO₂ Exposure Study. Research Triangle Institute. 1973. CAPM-10. \$3.00.
- 4203 A Study of Mandatory Engine Maintenance for Reducing Vehicle Exhaust Emissions. Volume I, Executive Summary. TRW/Scott Research Laboratories. July 1973. CAPE-13. \$3.00.
- 4204 A Study of Mandatory Engine Maintenance for Reducing Vehicle Exhaust Emissions. Volume II, Mandatory Inspection/Maintenance Systems Study TRW/Scott Research Laboratories. July 1973. CAPE-13. \$3.00.
- 4205 Improved Instrumentation for Determination of Exhaust Gas Oxygenate. Scientific Research Instrumentation Corporation. September 1972. CAPE-11. \$3.00.
- 4206 Environmental Research Sponsored by the American Petroleum Institute. Annual Report. January 1974. Free.
- 4207 Survey of Eye Irritation and Lachrymation in Relation to Air Pollution. Copley International Corporation. April 1974. CAPM-17-71. \$3.00.
- 4208 Package Boiler Flame Modifications for Reducing Nitric Oxide Emissions. Phase II of III. Ultrasystems, Inc. June 1974. SS-4. \$5.50
- 4211 Bacterial Activity in Ground Waters Containing Petroleum Products. Battelle Columbus Laboratories. November 1973. OS-21.1. \$5.00.
- 4212 Fate of Oil in a Water Environment. Part I: A Review and Evaluation of the Literature. University of Southern California, Department of Geological Sciences. OS-20F.
- 4213 Fate of Oil in a Water Environment. Part II: Bibliography. University of Southern California, Department of Geological Sciences. OS-20F.

- 4214 The Use of Panelists as Substitutes for Taxi-cab Drivers in Carbon Monoxide Exposure. Columbia University School of Public Health. July 1973. CAPM-8. \$3.00.
- 4215 Determination of the Formation Mechanisms and Composition of Photochemical Aerosols. First Annual Summary Report. Calspan Corporation: August 31, 1973. CAPA-8. \$3.00.
- 4217 Foundation of Modeling NO_x and Smoke Formation in Diesel Flames. Final Report for Phase I. Ultrasystems, Inc. January 1974. CAPE-20 \$3.00.
- 4218 Oxygenates in Automotive Exhausts. Effect of an Oxidation Catalyst. U.S. Bureau of Mines. 1973. CAPE-1168. \$3.00.
- 4220 Hydrocarbons in Polluted Air. University of California, Riverside. June 1973. CAPA-5-68. \$3.00.
- 4221 Used Lubricating Oil. Its Recovery, Reuse, and Disposal. April 1974. Free.
- 4233 Environmental Expenditures of the U.S. Petroleum Industry, 1966-1973. BR-10.
- 4234 An Investigation of Three Synthetic Gas Turbine Lubricants for Oil Aeration and Foaming Tendencies. June 1974. CRC Report No. 468. \$3.00.
- 4235 A Sorbent Harvesting Device for Use in Sheltered Waters - Design and Detailed Specifications. Ocean Design Engineering Coporation. November 1974.
- 4236 Atmospheric Photochemical Smog Measurements Over San Francisco Bay. Stanford Research Institute. August 1973. CAPA-12. \$3.00.
- 4237 Program for Upgrading the NO₂ Instrumentation Employed in the 1972-1973 Chattanooga NO₂ Exposure Study. Research Triangle Institute. August 1974. CAPA-10. \$3.00.
- 4238 Study of Ultrasonic Vortex Effect and Tracer Gas Method on Measurement of Automotive Mass Emissions. Olson Laboratories, Inc. 1974. CAPE-22. \$3.00.

- 4239 Microbiological Aircraft Fuel Tank Contamination:
A Bibliography. July 1974. CRC Report No. 469.
\$3.00.
- 4240 Evaluation of Fuel Test Methods for Predicting
the Performance of Filter/Separators and Clay
Filters. J-ne 1974. CRC Report No. 470. \$3.00.
- 4241 Polynuclear Aromatic Content of Heavy Duty
Diesel Engine Exhaust Gases. First Annual Report.
Gulf Research & Development Company.
1974. CAPE-24. \$3.00.

WASHINGTON POST - March 11, 1975

Offshore Oil Battle

Urban-Rural Confrontation Builds Along East Coast

By Lawrence Feinberg

Washington Post Staff Writer

A classic confrontation between the countryside and the cities, the beaches and industries, is rising in Maryland, Virginia, and all along the East Coast as the federal government pushes ahead with plans for drilling for oil and natural gas offshore in the Atlantic Ocean.

Since there has been no drilling yet, no one knows for certain whether significant amounts of oil and gas even exist beneath the Atlantic, although geologists studying the rock formations underwater, believe they do.

The two sides of the controversy, however, already are sharply drawn.

"Down in my neck of the woods some of the people want to take their muskets and howitzers down to the beach and stop them from drilling," declared state Sen. E. Homer White, a Democrat who represents Maryland's lower Eastern Shore, including all of the state's ocean beaches.

"I know that's crazy," White continued. "But they have a right to keep their way of life, and they want protection."

From the cities, the issue looks different to many people.

"We must do what benefits the most people the best," said Seymour Mannheim, chief accountant of the D.C. Public Service Commission. "If we don't get oil and gas from offshore, the alternative is higher and higher costs for gas and oil and electricity, and we place down the road the possibility that there isn't any at all."

Mannheimer added: "You just can't sacrifice the jobs and the heat of the city for the interests of a few people who say it will despoil their land—and with the technology we have now, I don't think anything will be despoiled."

Despite the emotion that surrounds the issue, there is

little firm knowledge about it.

Indeed, the lack of knowledge may well add to the controversy. Those whose beaches may be marred by oil, and whose farmland may be replaced by industry, use their worst fears as the basis for appeals to delay exploring for oil or not to go at all.

On the other hand, those whose homes and businesses face fuel shortages and soaring fuel bills may exaggerate the benefits that a new nearby oil field may bring.

"Whatever I say about offshore oil is conjecture on my part," Maryland's Secretary of Natural Resources James B. Coulter said in a recent interview.

"Just about everything about this problem is conjecture," he added, "clear down to whether there is any oil and gas down there."

The offshore area closest to Washington where geologists believe there may be oil is called the Baltimore Canyon trough—a stretch of ocean bottom about 50 to 100 miles off the Atlantic Coast that runs from New Jersey south to Cape Hatteras, N.C.

The bottom itself slopes gradually from about 200 to 600 feet underwater, as part of the outer continental shelf. But data obtained by geologists using echoes and seismic waves, indicates that the hard bedrock underseas the ocean floor down the trough, and that this is filled with softer sediments, such as limestone and sandstone, that may contain oil and gas.

There are similar unexplored areas of the Atlantic Ocean floor off New England, Florida and Georgia.

In the Gulf of Mexico and the Pacific Ocean, similar geological formations have been explored and have been producing oil and gas to

for more than 25 years. Indeed, last year, offshore fields accounted for about 17 per cent of domestic U.S. oil production and about 10 per cent of the country's natural gas. Both proportions have risen steadily in recent years as production from older oil fields onshore has declined.

Beyond the three-mile limit, oil and gas production has been controlled by the federal government under the Outer Continental Shelf Lands Act of 1953. Since then the Interior Department has leased about 11 million acres to companies making the highest bids at auctions where the high bidders win the right both to explore for oil and gas on specific tracts and to produce it.

The companies' payments to the government over the years have totaled \$14.8 billion.

In early 1974, after the Arab oil embargo and the quadrupling of prices by the oil producers' cartel, then President Nixon announced that offshore leasing would be speeded up drastically in an effort to reduce U.S. dependence on oil imports. This foreign oil costing about \$11 a barrel compared to \$2 a barrel in 1973—now accounts for about 35 per cent of all oil used in the U.S.

Nixon set a target of leasing 10 million acres offshore in 1975—including tracts off the Atlantic and Alaska coasts as well as in the Gulf of Mexico and the Pacific.

Despite wide criticism in Congress and the coastal states that the program is moving too quickly, or that the government should explore for oil itself, the Ford administration has stuck to that goal, although Interior Secretary Rogers C. B. Mott has indicated recently that the target date probably cannot be reached.

What all this means to Maryland and Virginia or any other specific state is uncertain.

Under the Interior Department's original plan, parts of the Baltimore Canyon trough were supposed to be the first offshore areas

put up for bidding. But the first phase of this process, in which oil companies were asked where they would like to drill, was stopped abruptly last month.

The department agreed to withdraw this "call for nominations" after protests from several states that it had broken a promise not to go ahead until after the Supreme Court decides a case which the Atlantic states, including Maryland and Virginia, are claiming ownership of offshore oil rights.

Lawyers on both sides say privately that the federal government will probably win the case, but the court decision may not come out until June.

What will happen then is also uncertain because the impact of offshore drilling on any state depends on precisely where and when and how much oil and gas are found.

According to the U.S. Geological Survey, which oversees drilling operations, it probably will take two to three years of exploration—with many dry holes along the way—to find sizable amounts of oil and gas.

It then probably will take three to five years more to bring the wells into full production.

Thus, even if widespread leasing takes place within the next 12 months it is unlikely that large-scale production will begin off the East Coast until 1980 to 1985.

If sizable amounts of oil and gas are found off Virginia and Maryland, there are at least three general sorts of impact the discoveries might have.

The first is the physical effect the substances themselves might have on fishing, beaches, air quality, and possibly on the bays and farmland across which the oil and gas might travel in pipelines or tankers. This has been the main concern

of environmental groups and resort-area businessmen.

A second sort of impact concerns the onshore development that might occur, at first to build and assemble the giant steel drilling rigs, then to keep them supplied, and eventually to refine and

WASHINGTON POST - March 11, 1975

distrusted what they propose. Council on Environmental Quality.

The possibility of rapid development has evoked fear among farmers and small-town residents on the Eastern Shore and in other rural areas along the East Coast that they will be swamped by new workers and industries.

On the other hand, it prompted hope in some prosperous rural areas, such as Somerset County, Md., and Cape Charles, Va., on the Eastern shore, that they will get additional jobs and economic development.

In existing port and industrial centers, such as Baltimore and Norfolk, there are hopes that an offshore oil field will bring more business and industry.

A third sort of impact stems from the energy that the gas and oil will provide. Aside from its effect on foreign policy and the balance of payments, an offshore field might be of particular help to industries along the East Coast.

In Baltimore, for example many plants which regularly used natural from the Southwest have had their supplies cutback this year because of shortages. They have since switched to less efficient, dirtier substitutes.

On the other hand, some environmental groups fear that new supplies of fuel will lead to more wastefulness, delay conservation measures, and postpone needed change in what they see as America's extravagant way of life.

The possibility of oil-covered beaches is worrisome to many citizens and who fear it often point to the large blow-out of an offshore oil rig in the Santa Barbara channel off California in 1969.

Overall, however, the Geological Survey said it believes the safety record of offshore oil rigs has been good. From the 12,000 oil-producing wells that have been drilled off the U.S., the Survey said there have been only 12 major oil spills.

Since the Santa Barbara spill, by far the largest and most infamous in the U.S., government safety standards have become much more stringent, inspections more frequent and the number of even small accidents has dropped, according to

If there were a spill from offshore drilling, the danger of it reaching the Virginia coast would be minimal, according to a report last year by the Council on Environmental Quality, because of the direction of winds and currents. However, the danger of oil reaching shore where the drilling rigs are fabricated and where the oil is refined. Once the oil is refined, it takes the greatest danger to Long Island.

However, by far the most oil has been spilled by oil tankers, the agency reported, either while sailing or unloading.

Since Virginia has only one small refinery (near Yorktown) and Maryland has none, large tankers now carry gasoline and fuel oil to Baltimore and Pine Point in St. Mary's County in southern Maryland and also sail up the James River to near Richmond.

When spilled, these refined products cause more damage to fish and beaches than the crude oil that would come from offshore wells because they are more toxic than crude and much slower to break up.

Henry Coulter, assistant director of the Geological Survey, said that finding oil offshore in the Atlantic probably would reduce tanker traffic in the Chesapeake Bay and lessen the danger from oil spills there. It might also reduce tanker traffic in the Atlantic, he said, and make Ocean City's beaches less vulnerable to oil damage than they are now.

Coulter added that, unlike Santa Barbara, oil rigs in the Atlantic would be so far offshore that no one on shore could see them — even from the tallest condominiums.

But arguments like this have had little impact on Ocean City's Mayor Harry W. Kelley.

"We don't want anything that might change the image we have here," Kelley said, "and we don't want any oil wells. If you have oil, you've got to have accidents, and there's just no risk that it's worth our while to take on. Look, we've put millions into recreation and relaxation here, and we want to

Keep it. At Kelley's urging, the City Council has passed an ordinance barring from Ocean City all refineries, pipelines, storage tanks and anything else that might handle offshore oil and gas. The direct economic impact of offshore wells depends, more than anything else, on where the drilling rigs are fabricated and where the oil is refined. Once the wells are in place, it takes very few men to operate them.

According to the American Petroleum Institute, the oil industry trade association, the most likely places for building the big rigs and assembling materials for them are ports that have industrial areas already. In Maryland, this would be Baltimore, where Bethlehem Steel already has made 21 offshore drilling rigs for the Gulf of Mexico. In Virginia it would be the Norfolk-Hampton Roads area.

One other place that may be bidding for the business is Cape Charles, a small oil railroad town on Virginia's Eastern Shore, where Brown & Root, of Houston, a giant construction firm, has bought 2,000 acres for assembling oil rigs. "Anything that's going to produce work, I'm for it," said Nick Fornaro, a Baltimore steelworker who heads up the Maryland State AFL-CIO. What good are all the seagulls on the Eastern Shore, if people don't have oil refineries generally

There already are more than 750 miles of big 36-inch pipeline that crosses Maryland and Virginia carrying refined oil products from Texas and Louisiana. They have been in place for over 10 years with no major leaks or incident according to Maryland Energy Policy Office.

In any event, what happens offshore is generally governed by local zoning laws, and localities do have the power to prevent the development they don't want.

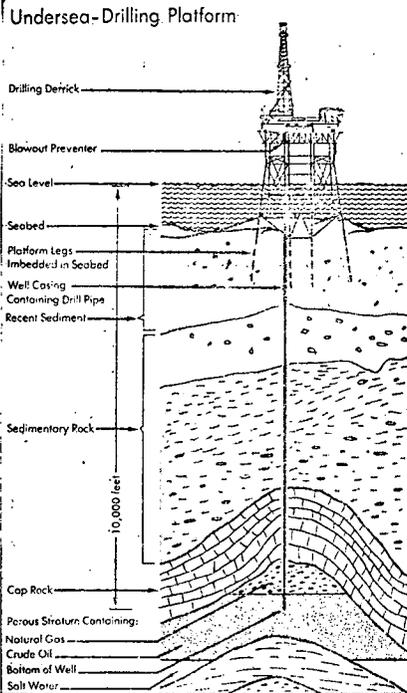
are unwanted although recent changes would be substantial. Apparently, these Va., have given their approval for them in order to gain the jobs and tax revenues they create.

In Cape Charles, the cently city governments of Baltimore and Portsmouth, Va., have given their approval for them in order to gain the jobs and tax revenues they create.

Whether new refineries would be needed once the oil is flowing and where they might be built are matters of considerable dispute.

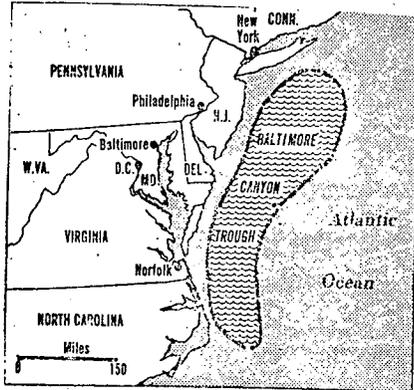
The Council on Environmental Quality report says that heavy offshore production probably would lead to more refineries and that the pressure would be great to locate them in rural areas where land is cheap. The im-

WASHINGTON POST - March 11, 1975



By Ken Burgess—The Washington Post

Drawing shows anatomy of offshore drilling operation.



—The Washington Post

Geologists believe the Baltimore Canyon trough has characteristics that mean it may harbor oil and gas.

JANUARY 22, 1975

NATIONAL OIL SPILL COMPENSATION FUNDINTRODUCTION:

THE OBJECTIVE OF THIS PAPER IS TO DEMONSTRATE THAT THE U.S. NEEDS A SINGLE LARGE DOMESTIC OIL SPILL COMPENSATION FUND -- ONE THAT WILL ADEQUATELY COMPENSATE DAMAGES FROM OIL SPILLS AND PREEMPT THE UNNECESSARY PROLIFERATION OF SUCH FUNDS BY THE FEDERAL AND STATE GOVERNMENTS.

THE TOPICS DISCUSSED ARE:

1. LIABILITY LAWS FOR OIL SPILLS,
2. COMPENSATION FUNDS,
3. FUNCTIONING OF A FUND,
4. METHODS OF BUILDING A FUND, AND
5. LEGISLATIVE IMPLEMENTATION.

LIABILITY FOR OIL SPILLS

CHART 1 IS A TABULATION OF THE STATUS OF OIL SPILL LIABILITY LAWS IN THE U.S. AT THIS TIME. THE EXTENT OF LIABILITY IS SHOWN AT THE TOP AND THE CATEGORIES OF LIABILITY ALONG THE LEFT SIDE.

THE CATEGORIES OF OIL SPILL LIABILITIES ARE:

1. POLLUTION CLEANUP,
2. NATURAL RESOURCES INJURIES (INCLUDING FISH, WILDLIFE, PLANT AND ANIMAL LIFE, ETC.), AND
3. THIRD PARTY CLAIMS.

THE EXTENT OF THE LIABILITY IS MEASURED BY THE UPPER LIMITS IN TERMS OF MONEY AND THE DEFENSES ALLOWED THE DEFENDANT. THE WORST CASE IS UNLIMITED, NO-FAULT LIABILITY BECAUSE A VESSEL OR FACILITY OWNER OR OPERATOR IS LIABLE FOR ACTS OVER WHICH HE HAS NO CONTROL, AND THIS UNLIMITED RISK IS UNINSURABLE.

THE STATES HAVE PASSED A VARIETY OF ENVIRONMENTAL LAWS, SOME ONEROUS TO THE POINT OF EXCLUDING SOME SHIPOWNERS BY VIRTUE OF UNAVAILABILITY OF INSURANCE. EIGHT STATES HAVE UNLIMITED, NO-FAULT LIABILITY FOR INJURIES TO NATURAL RESOURCES, FOUR FOR CLEANUP, AND THREE FOR THIRD PARTY DAMAGES. UNTIL RECENTLY, FLORIDA IMPOSED UNLIMITED, NO-FAULT LIABILITY IN ALL THREE AREAS. ON JULY 1, 1974 THE FLORIDA LAW WAS MODIFIED AND THE FORMER UNLIMITED, NO-FAULT PROVISIONS REMOVED. INSTEAD, FLORIDA HAS BECOME FAULT-LIMITED IN THE CLEANUP CATEGORY (NOT SHOWN HERE) BUT KEEPS UNLIMITED, FAULT LIABILITY FOR RESOURCES INJURIES AND THIRD PARTY DAMAGES. IRONICALLY, WHILE FLORIDA FOUND IT NECESSARY TO MODIFY ITS LAW TO ACCEPT THE FEDERAL WATER POLLUTION CONTROL ACT LIABILITY LIMITS AND PROVIDE FOR DEFENSES THAT ALLOW SHIPOWNERS TO PURCHASE INSURANCE, SEVERAL STATES HAVE FOLLOWED HER ORIGINAL LEAD AND ARE PROPOSING LEGISLATION PATTERNED AFTER THE EARLIER FLORIDA LAW.

AS YOU CAN SEE FROM THE CHART, MORE STATES HAVE PASSED LAWS IN THE AREA OF RESOURCES INJURIES RESULTING FROM WATER POLLUTION THAN IN THE AREAS OF EITHER CLEANUP OR THIRD PARTY DAMAGES. NINETEEN STATES HAVE RESOURCES INJURIES LAWS. THE IMPORTANT FEATURES OF THESE LAWS COME UNDER THE HEADINGS OF: WHAT RESOURCES ARE COVERED, TYPE AND LIMITS OF LIABILITY, HOW THE AMOUNT OF AWARD IS DETERMINED, TO WHOM THE MONEY IS PAID, AND HOW IT MAY BE SPENT. IN SUMMARY, 18 OF THE 19 STATES IMPOSE UNLIMITED LIABILITY (SPLIT ABOUT EVENLY BETWEEN FAULT AND NO-FAULT) FOR INJURIES TO FISH, WILDLIFE, AQUATIC PLANT AND ANIMAL LIFE AND OTHER NATURAL RESOURCES. THE AMOUNT OF AWARD IS TO BE FINALIZED BY A COURT OF LAW, PAID TO THE STATE, AND USED TO RECTIFY SPECIFIC INJURIES CAUSED BY THE POLLUTION INCIDENT. A STATE AGENCY CLOSE TO THE PROBLEM USUALLY SETS AN AMOUNT REQUIRED TO RESTORE THE RESOURCE TO ITS PRIOR CONDITION, BUT

FINAL DECISION IS MADE IN COURT.

CHART 2 IS A MAP WHICH SHOWS THE LOCATIONS OF THE STATES THAT HAVE SELECTED RESOURCES LIABILITY LAWS. YOU CAN SEE THEY ARE MOST OF THE COASTAL STATES AND THOSE STATES IN WHICH MOST INLAND WATERWAYS OPERATIONS ARE LOCATED.

COMPENSATION

THE FIRST COLUMN OF CHART 3 SUMMARIZES THE STATUS OF EXISTING COMPENSATION FUNDS. IT STARTS OFF WITH TWO ACRONYMS THAT REQUIRE SOME EXPLAINING. TOVALOP IS SHORT FOR TANKER OWNERS VOLUNTARY AGREEMENT CONCERNING LIABILITY FOR OIL POLLUTION. CRISTAL STANDS FOR A CONTRACT REGARDING AN INTERIM SUPPLEMENT TO TANKER LIABILITY FOR OIL POLLUTION.

THE SHIPOWNER MEMBERS OF TOVALOP ASSUME LIABILITY OF 100 DOLLARS PER GROSS REGISTERED TON OF THEIR VESSEL OR 10 MILLION DOLLARS, WHICHEVER IS LESSER, FOR GOVERNMENT CLEANUP BUT NOT FOR THIRD PARTY LIABILITY. THEY ARE REQUIRED TO PROVIDE INSURANCE COVERAGE OF THAT LIABILITY UP TO THE LIMITING VALUE.

CRISTAL WAS FORMED BY OIL COMPANIES TO EXTEND COVERAGE UP TO 30 MILLION DOLLARS FOR CLEANUP AND THIRD PARTY DAMAGES, STARTING WHERE TOVALOP AND EXISTING LAW LEAVE OFF. CRISTAL WAS STARTED WITH A 5 MILLION DOLLAR INITIAL ASSESSMENT, AND PROVISIONS EXIST FOR ADDITIONAL ASSESSMENTS WHEN NEEDED. ASSESSMENTS ARE MADE IN PROPORTION TO A MEMBER'S CRUDE AND FUEL OIL VOLUMES TRANSPORTED BY SEA. (NO CLAIMS WERE MADE ON CRISTAL IN THE FIRST TWO AND ONE-HALF YEARS OF ITS EXISTENCE.)

THE FEDERAL WATER POLLUTION CONTROL ACT, WHICH LIMITS THE LIABILITY OF SHIPOWNERS TO 100 DOLLARS PER GROSS REGISTERED TON, OR 14 MILLION DOLLARS, WHICHEVER IS LESSER, AND 8 MILLION DOLLARS FOR FACILITIES, FOR CLEANUP COSTS, ALSO PROVIDES FOR A NATIONAL CONTINGENCY FUND, WHICH IS 35 MILLION DOLLARS PROVIDED BY THE U.S. TREASURY FOR USE OF THE COAST GUARD OR EPA IN CLEANING UP SPILLS.

THESE AGENCIES ALWAYS HAVE THE OPTION OF PERFORMING CLEANUP AND BILLING THE OFFENDER TO RECOVER THEIR COSTS OR PERMITTING THE OFFENDER TO UNDERTAKE CLEANUP TO THE SATISFACTION OF THE AGENCIES, THUS AVOIDING HAVING THE EXPEND MONIES FROM THE NATIONAL CONTINGENCY FUND. THE FUND IS ALSO AVAILABLE FOR USE IN CASES WHERE THE SPILLER IS UNKNOWN OR UNABLE TO PAY.

THE TRANS-ALASKA PIPELINE FUND CAME ABOUT THROUGH AN ELEVENTH HOUR AMENDMENT TO THE PIPELINE RIGHT-OF-WAY BILL THAT WOULD PERMIT CONSTRUCTION OF THE ALASKAN PIPELINE. IT IS TO BE FUNDED TO 100 MILLION DOLLARS BY A 5¢/BBL. TAX ON ALL OIL PASSED THROUGH THE VALDEZ TERMINAL. IT WILL COMPENSATE FOR CLEANUP, RESOURCES INJURIES, AND THIRD PARTY CLAIMS UP TO 100 MILLION DOLLARS PER SPILL, BUT IS EXCLUSIVELY FOR PROTECTION AGAINST SPILLS FROM THE MARINE LEG OF THE SYSTEM.

RECENTLY THE DEEPWATER PORT ACT WAS PASSED. IT CONTAINS A 100 MILLION DOLLAR OIL SPILL COMPENSATION FUND TO BE BUILT BY A 2¢/BBL. TAX ON OIL HANDLED BY ANY DEEPWATER TERMINAL. VESSEL LIABILITY FOR OIL SPILLS AT DEEPWATER PORTS WAS SET AT 20 MILLION DOLLARS FOR CLEANUP AND CLAIMS. THIS FUND COMES INTO PLAY ONLY AFTER LIABILITY LIMIT IS EXCEEDED.

THE VARIOUS STATE LIABILITY LAWS WERE OUTLINED ABOVE. THE STATES LISTED HERE ARE THOSE THAT HAVE LEGISLATED COMPENSATION FUNDS. FLORIDA RECENTLY INCREASED ITS FUND FROM 5 MILLION DOLLARS TO A FULLY FUNDED 35 MILLION DOLLARS TO BE BUILT FROM FEES, PENALTIES, OTHER CHARGES, AND A 2¢/BBL. TAX ON TRANSFERS OF POLLUTANTS (INCLUDING TRANSFERS FROM OFFSHORE PRODUCTION PIPELINES). THE LAW PROVIDES THAT THE GOVERNOR AND CABINET CAN INCREASE THE TAX TO A MAXIMUM OF 10¢/BBL. IN THE EVENT A SPILL OCCURS THAT COSTS MORE THAN 35 MILLION DOLLARS; AND THE TAX CAN BE COLLECTED UNTIL IT PAYS OFF WHATEVER THE TOTAL DAMAGES AMOUNT TO.

MAINE HAS A 4 MILLION DOLLAR FUND BUILT BY A 1/2¢/BBL. TAX ON OIL TRANSFERS. MARYLAND HAS A 1/2 MILLION DOLLAR FUND AND NORTH CAROLINA 5 MILLION DOLLARS. BOTH WASHINGTON AND OREGON HAVE PROVISIONS FOR FUNDS TO BE BUILT FROM FINES, FEES, AND OTHER CHARGES, BUT NO LIMIT IS SET ON EITHER FUND.

THE SECOND COLUMN IS A LIST OF PROPOSED COMPENSATION FUNDS. AT THE INTERNATIONAL LEVEL, WE HAVE THE CIVIL LIABILITY CONVENTION. IT REQUIRES SHIPOWNERS TO PROVIDE INSURANCE TO COVER THEIR LIABILITY PROPOSED IN THE CONVENTION OF 160 DOLLARS PER GROSS REGISTERED TON, OR 16 MILLION DOLLARS, WHICHEVER IS LESSER. THE CLC COVERAGE CAN BE USED TO PAY CLEANUP COSTS AND THE THIRD PARTY LEGAL LIABILITY FOR SPILLS OF ONLY PERSISTENT OIL FROM A SHIP. IT IS INTENDED TO SUPERSEDE THE TOVALOP AGREEMENT. THE INTERNATIONAL COMPENSATION FUND IS 36 MILLION DOLLARS BUILT THROUGH ASSESSMENTS ON RECEIVERS OF IMPORTED OIL. IT IS FOR CLEANUP AND THIRD PARTY CLAIMS AND AGAIN ONLY FOR SPILLS OF PERSISTENT OILS FROM SHIPS. IT WILL REPLACE THE CRISTAL AGREEMENT.

THESE TWO CONVENTIONS HAVE NOT BEEN RATIFIED. THE LEGISLATION TO IMPLEMENT THESE TWO CONVENTIONS INCLUDES A 100 MILLION DOLLAR DOMESTIC SUPPLEMENTARY COMPENSATION FUND FOR INCREASED PROTECTION FROM PERSISTENT OIL SPILLS FROM TANKERS IN U.S. WATERS. SOME SENATORS REPORTEDLY FEEL STRONGLY THAT IN ORDER FOR THEM TO FULLY SUPPORT THE RATIFICATION OF THESE CONVENTIONS, THIS 100 MILLION DOLLAR FUND SHOULD BE ADDED. THEY CONSIDER 100 MILLION DOLLARS TO BE ACCEPTABLE TO THE PUBLIC AND DO NOT CONSIDER THE INTERNATIONAL CONVENTIONS TO PROVIDE ENOUGH COVERAGE.

THE PROPOSED ENERGY SUPPLY ACT OF 1974 WHICH WOULD AMEND THE OUTER CONTINENTAL SHELF LANDS ACT OF 1954 IS EXPECTED TO BE REINTRODUCED THIS

YEAR. IT PROPOSES A 100 MILLION DOLLAR FUND TO BE FINANCED BY A 5¢/BBL. TAX ON ALL PRODUCTION FROM THE OCS.

THE STATES LISTED IN THE PROPOSED COLUMN ARE THOSE ACTIVELY PURSUING NEW OR LARGER FUNDS. A STATE SENATOR JUST PREFILED A BILL CALLING FOR A 50 MILLION DOLLAR COASTAL PROTECTION FUND FOR TEXAS.

WE CAN EXPECT THE FUTURE TO BRING MORE PROPOSALS. ONE U.S. SENATOR HAS SUGGESTED THREE 100 MILLION DOLLAR FUNDS, ONE EACH FOR THE ATLANTIC AND PACIFIC COASTS, AND ONE FOR THE GULF OF MEXICO. INDUSTRY PUBLIC AFFAIRS FIELD MANAGERS WHO MONITOR THE REGIONAL PLANNING COMMISSIONS SAY IT'S ONLY A MATTER OF TIME BEFORE PROPOSALS FOR COMPENSATION FUNDS ISSUE FROM THOSE BODIES. THE CALIFORNIA COASTAL ZONE COMMISSION, FOR INSTANCE, IS REPORTEDLY CONSIDERING A 100 MILLION DOLLAR FUND FOR THAT STATE.

ONE OF THE REASONS FUNDS CONTINUE TO BE LEGISLATED IS THAT CURRENT FUNDS ARE EITHER SMALL OR LIMITED IN SCOPE. FIGURE 4 ILLUSTRATES THIS GRAPHICALLY.

FOR DISCUSSION PURPOSES, LET US SAY THAT ONE FUND FROM WHICH A MAXIMUM OF 100 MILLION DOLLARS COULD BE COLLECTED AS A RESULT OF A SINGLE SPILL IS ENOUGH TO BOTH PROVIDE ADEQUATE COMPENSATION AND MEET WITH APPROVAL OF LEGISLATORS AND THE INTERESTED PUBLIC. AND BASED UPON THE CONSIDERATIONS DISCUSSED ABOVE, A FUND SHOULD PROVIDE COMPENSATION FOR CLEANUP, THIRD PARTY CLAIMS, AND NATURAL RESOURCES INJURIES. IT SHOULD COVER SPILLS OF BOTH PERSISTENT AND NON-PERSISTENT OILS IN BOTH INLAND AND COASTAL WATERS, INCLUDING THE CONTIGUOUS ZONE. IT SHOULD ALSO COVER FACILITIES ON THE OCS UNDER THE JURISDICTION OF THE U.S. THESE LARGE CUBES REPRESENT OUTLINES OF SUCH A FUND.

WITHIN THE LEFT CUBE IS DRAWN THE APPROXIMATE COVERAGE THAT WOULD

BE PROVIDED BY THE CIVIL LIABILITY AND FUND CONVENTIONS IF RATIFIED. THE RIGHT CUBE REPRESENTS THE TOVALOP-REQUIRED INSURANCE AND THE CRISTAL COVERAGE. YOU WILL NOTICE THAT THEY PROVIDE COMPENSATION COVERAGE FOR CLEANUP AND THIRD PARTY DAMAGES FROM SPILLS OF PERSISTENT OILS FROM SEAGOING VESSELS ONLY. THEY DO NOT COVER NON-PERSISTENT OILS, INLAND BARGES, PLATFORMS, REFINERIES, TERMINALS, OR NATURAL RESOURCES INJURIES. NEITHER ARE THEY OF THE SIZE SAID TO BE ACCEPTABLE TO LEGISLATORS AND THE PUBLIC.

IT WAS NOTED ABOVE THAT THE PROPOSED IMPLEMENTING LEGISLATION FOR THE IMCO CONVENTIONS INCLUDES A 100 MILLION DOLLAR DOMESTIC SUPPLEMENTARY FUND. AS PROPOSED, THIS NEW FUND WOULD COVER ONLY THIRD PARTY CLAIMS FOR SPILLS OF PERSISTENT OILS FROM SHIPS. IN OTHER WORDS, LOOKING AT THE CUBES AGAIN, IT WOULD SIMPLY EXTEND THE THIRD-PARTY COVERAGE OF PERSISTENT OIL SPILLS FROM OCEAN VESSELS TO THE 100 MILLION DOLLAR LEVEL, LEAVING MOST OF THE LARGE CUBE EMPTY.

THE INADEQUACY, FROM A POLITICAL STANDPOINT, OF THE CURRENT COMPENSATION PROVISIONS IS MORE EVIDENT WHEN YOU CONSIDER THAT THE 100 DOLLARS PER GROSS REGISTERED TON LIMITATION WILL PROVIDE ONLY ABOUT 1.7 MILLION DOLLARS FOR THE LARGEST SHIPS THAT CAN TRADE IN FLORIDA. CRISTAL INCREASES THIS TO 30 MILLION DOLLARS. CONTRAST THAT WITH THE FACTS THAT CONGRESS HAS REQUIRED 100 MILLION DOLLARS EACH FOR ALASKAN OIL SHIPMENTS AND DEEPWATER PORTS, FLORIDA IS BUILDING A 35 MILLION DOLLAR FUND WHICH CAN BE EXPANDED TO PAY FOR ANY SIZE SPILL, AND TEXAS IS CONSIDERING A 50 MILLION DOLLAR FUND. IT IS EVIDENT THAT LEGISLATORS INTEND TO PROVIDE THE MISSING COVERAGE ON A PATCHWORK BASIS.

THE NATIONAL CONTINGENCY FUND IS SHOWN IN CHART 5. AS YOU CAN SEE, IT COVERS CLEANUP ONLY, BUT WILL COVER ANY OIL IN ANY U.S. WATERS.

THE OUTER CUBE IN EACH OF THESE DRAWINGS REPRESENTS THE INDUSTRY PROPOSAL. IT WILL PROVIDE ADEQUATE COMPENSATION FOR ALL THREE CATEGORIES OF LIABILITIES. IT WILL COMPENSATE FOR SPILLS IN ANY U.S. WATERS. IT WILL COVER BOTH PERSISTENT AND NON-PERSISTENT OILS JUST AS THE FWPCA AND THE 1973 IMCO MARINE POLLUTION CONVENTION DO. IN ADDITION TO COVERING SPILLS FROM SHIPS AND BARGES, IT WOULD PROVIDE COVERAGE FOR SPILLS FROM TERMINALS, PIPELINES, REFINERIES, DRILLING RIGS, PRODUCTION PLATFORMS, AND DEEPWATER PORTS.

FUNCTIONING OF THE FUND

CHART 6 IS INTENDED TO DEMONSTRATE ONE WAY A FUND COULD FUNCTION. LISTED AT THE TOP ARE THE TYPES OF LIABILITIES THAT WOULD BE COMPENSATED BY THE FUND. NEXT ARE THE CLAIMANTS. NOTE THAT FEDERAL AND STATE GOVERNMENTS ARE ELIGIBLE TO MAKE CLAIMS UNDER CLEANUP, NATURAL RESOURCES, OR THIRD PARTY. HOWEVER, INDIVIDUALS OR CORPORATIONS CLAIMS ARE ALWAYS THIRD PARTY CLAIMS. NEXT ARE THE SETTLEMENT OPTIONS EACH CLAIMANT WOULD HAVE. IT IS PROPOSED TO PROMOTE AND CONTINUE THE PRACTICE OF HAVING THE SPILLER CLEAN UP AND RESTORE THE AREA AND THEN SETTLE ALL CLAIMS OUT OF COURT IF POSSIBLE. THIS PROCEDURE HAS BEEN USED SATISFACTORILY IN MANY SPILL SITUATIONS. IF OUT OF COURT SETTLEMENT IS IMPOSSIBLE, THE INJURED PARTY CAN TAKE HIS CLAIM TO A SPECIAL COURT HEARING.

THE FIGURE IS DIVIDED BY WHAT HAS COME TO BE CALLED THE "FRONT LINE". IT IS INTENDED TO INDICATE AGAINST WHOM THE LEGAL CLAIM IS FIRST MADE. CLAIMS SHOULD GO AGAINST THE SPILLER'S FINANCIAL RESOURCES (INCLUDING THE INSURANCE REQUIRED BY TOVALOP, AND ANY OTHER COMPENSATION FUNDS TO WHICH HE MAY HAVE ACCESS) UNTIL EITHER THE CLAIM IS

SATISFIED, THE SPILLER'S FINANCIAL RESOURCES ARE EXHAUSTED, OR THE LIMITS OF HIS LIABILITY HAVE BEEN REACHED. IF THE CLAIM IS NOT SATISFIED BY THE SPILLER THROUGH TOVALOP-REQUIRED INSURANCE, CRISTAL, OR THE IMCO FUNDS FOR EITHER OF THESE REASONS, THE LIABILITY WOULD PASS THROUGH TO THE NATIONAL CONTINGENCY FUND FOR CLEANUP AND THE PROPOSED NATIONAL OIL SPILL COMPENSATION FUND FOR THIRD PARTY DAMAGES, NATURAL RESOURCES INJURIES, AND CLEANUP ABOVE 35 MILLION DOLLARS -- THE NATIONAL CONTINGENCY FUND LIMIT.

TOTAL PAYMENTS FROM APPLICABLE FUNDS FOR ANY ONE SPILL WOULD BE LIMITED TO 100 MILLION DOLLARS.

FUNDING METHOD

THERE ARE AVAILABLE MANY METHODS BY WHICH THE MONIES FOR THE FUND COULD BE ACQUIRED. THESE HAVE BEEN INVESTIGATED WITH THE IDEA THAT THE METHOD CHOSEN SHOULD BE AS NEARLY EQUITABLE AS POSSIBLE. IT IS DESIRABLE ALSO THAT THE BOOKKEEPING TASK BE SIMPLE IN ORDER THAT NO NEW BUREAUCRACY BE CREATED. THE COLLECTION OF MONIES COULD BE THROUGH A TAX OR ASSESSMENT ON CERTAIN CATEGORIES OF OIL. THE MAJOR CATEGORIES ARE DOMESTIC INSHORE PRODUCTION, DOMESTIC OFFSHORE PRODUCTION, IMPORTS, AND DOMESTIC WATERBORNE SHIPMENTS, INCLUDING EXPORTS.

TO BE EQUITABLE, THE TAX OR ASSESSMENT SHOULD APPLY TO POTENTIAL SPILL SOURCES IN PROPORTION TO THE OIL'S EXPOSURE TO WATER. IN VIEW OF THIS, IT IS CONSIDERED INEQUITABLE TO TAX DOMESTIC INSHORE PRODUCTION WHICH MAY NEVER BE TRANSPORTED BY WATER, THOUGH THE FUND WOULD COVER A SPILL FROM THAT SOURCE IF IT POLLUTED U.S. NAVIGABLE WATERS.

CONVERSELY, IT IS THOUGHT THAT ANY SYSTEM OF TAXATION WHICH OMITTED THE DOMESTIC OIL SHIPPING INDUSTRY WOULD BE INEQUITABLE BECAUSE OF ITS INTRICATE INVOLVEMENT WITH THE NATION'S NAVIGABLE WATERS.

WHICH OF THE REMAINING CATEGORIES ARE INCLUDED IN THE BASE, AND THE TAX OR ASSESSMENT RATE USED, WOULD DEPEND UPON THE LEVEL TO WHICH THE FUND SHOULD BE BACKED BY CASH AND THE SPEED WITH WHICH THE FUND SHOULD BE BUILT.

THE OILS THAT COULD LOGICALLY BE INCLUDED IN THE BASE, USING THE DUAL CRITERIA OF EQUITY AND SIMPLICITY, ARE IMPORTS, DOMESTIC OFFSHORE PRODUCTION BROUGHT ASHORE IN VESSELS OR PIPELINES, AND DOMESTIC WATERBORNE MOVEMENTS, INCLUDING EXPORTS. IF IT IS CONCLUDED THAT THE FUND SHOULD BE FULLY FUNDED TO 100 MILLION DOLLARS, CHART 7 INDICATES THAT A TAX OF 1¢/BBL. ON ALL THREE OF THE ABOVE CATEGORIES WILL BUILD THAT SUM IN 1.4 YEARS. A 1¢/BBL. TAX ON IMPORTS AND OFFSHORE PRODUCTION WILL BUILD 100 MILLION DOLLARS IN 2.8 YEARS; AND ON IMPORTS ALONE IT WOULD TAKE ONLY 3.5 YEARS.

THE PROS AND CONS OF THE VARIOUS FUNDING METHODS BOIL DOWN TO TWO THINGS:

- o THE METHOD CHOSEN SHOULD BE EQUITABLE AND SHOULD GET THE BIG VOLUMES WITH MINIMUM NEW BOOKKEEPING.
- o THE FUND SHOULD BE BACKED BY CASH AND/OR GUARANTEES TO THE LEVEL NECESSARY TO ACCOMPLISH THE OBJECTIVES OF ADEQUATE COMPENSATION AND PREEMPTION OF OTHER FUNDS.

THE COST EFFECTIVENESS OF A SINGLE BROAD FUND ARE READILY EVIDENT WHEN COMPARING THE ABOVE DATA WITH THE ALASKA PIPELINE FUND AT 5¢/BBL. THE FLORIDA LAW AT 2¢/BBL., WITH PROVISIONS TO INCREASE TO 10¢, IF NEEDED, THE DEEPWATER PORT FUND WITH 2¢/BBL., THE OCS BILL AT 5¢/BBL., OTHER EXISTING FUNDS, AND OTHER FUND PROPOSALS TO COME.

LEGISLATIVE IMPLEMENTATION

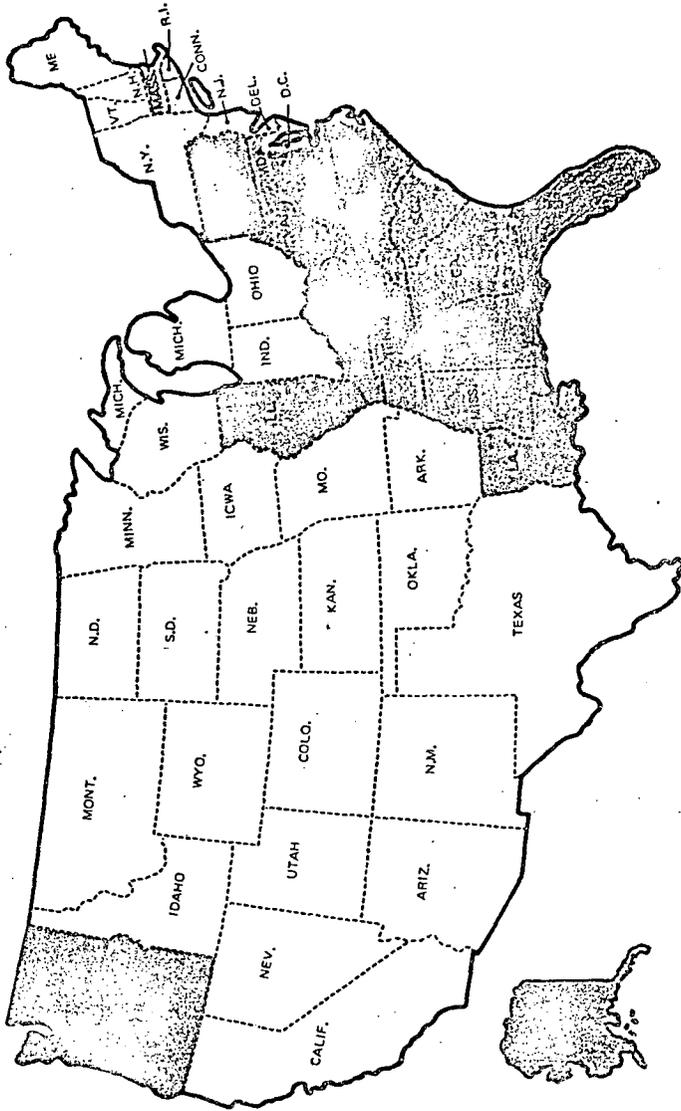
DURING THE YEAR THAT INDUSTRY HAS BEEN EVOLVING THIS PROPOSAL, WE HAVE BECOME AWARE THAT THE CEQ IS WORKING ALONG SIMILAR LINES. THERE ARE SOME DIFFERENCES IN THE DETAILS OF THE TWO EFFORTS, BUT THE CONCEPTS AND OBJECTIVES ARE IN HARMONY. WE HAVE MET WITH CEQ STAFF ON TWO OCCASIONS. FIRST TO INTRODUCE THE INDUSTRY PROPOSAL, AND THEN TO AIR DIFFERENCES BETWEEN THE TWO PROPOSALS.

WITH PASSAGE OF THE DEEPWATER PORT ACT, THE ATTORNEY GENERAL IS REQUIRED TO CONDUCT A STUDY OF OIL SPILL LIABILITY IN THE UNITED STATES. WE THINK IT IS IMPORTANT FOR THE CONCEPTS OF LIABILITY AND COMPENSATION TO BE CONSIDERED SEPARATELY. WE ARE ANXIOUS TO WORK WITH THE JUSTICE DEPARTMENT OR THE CONGRESS TO MODIFY OIL SPILL LIABILITY LAWS, IF NEEDED, BUT OUR CURRENT PROPOSAL DEALS ONLY WITH PROVIDING COMPLETE AND AMPLE COMPENSATION.

LIABILITIES FOR OIL POLLUTION UNDER CURRENT STATE LAWS

	Unlimited No Fault	Limited No Fault	Unlimited Fault
POLLUTION CLEANUP	Maine Massachusetts Oregon Washington	Alaska Missouri New Jersey	Alabama California Connecticut Georgia Maryland Mississippi Michigan
NATURAL RESOURCES INJURIES	Alaska Kentucky Massachusetts Oregon Tennessee Virginia Washington West Virginia	Pennsylvania	Alabama Connecticut Florida Georgia Illinois Louisiana Maryland Mississippi North Carolina South Carolina
THIRD-PARTY CLAIMS	Maine Oregon Washington		FLORIDA

Notes: The state laws have various defenses and exceptions and some require evidence of financial responsibility.



COMPENSATION FUND STATUS

Existing Proposed
International Civil Liability
 Convention
 International
 Compensation Fund

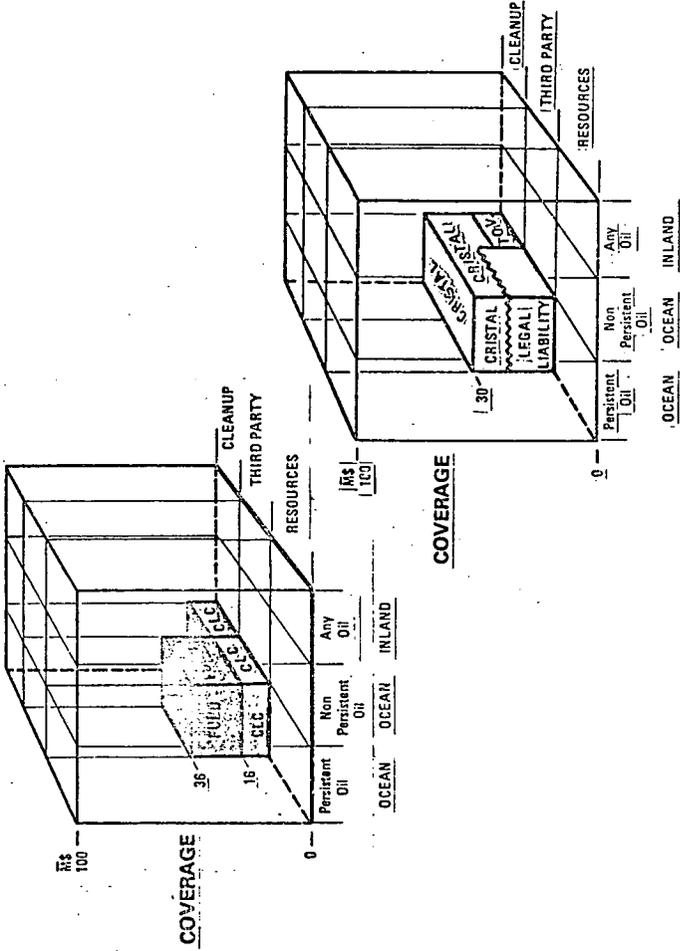
TOVALOP
CRISTAL

National U.S. Fund
National Con- Energy Supply Act
tingency Fund (OCS)

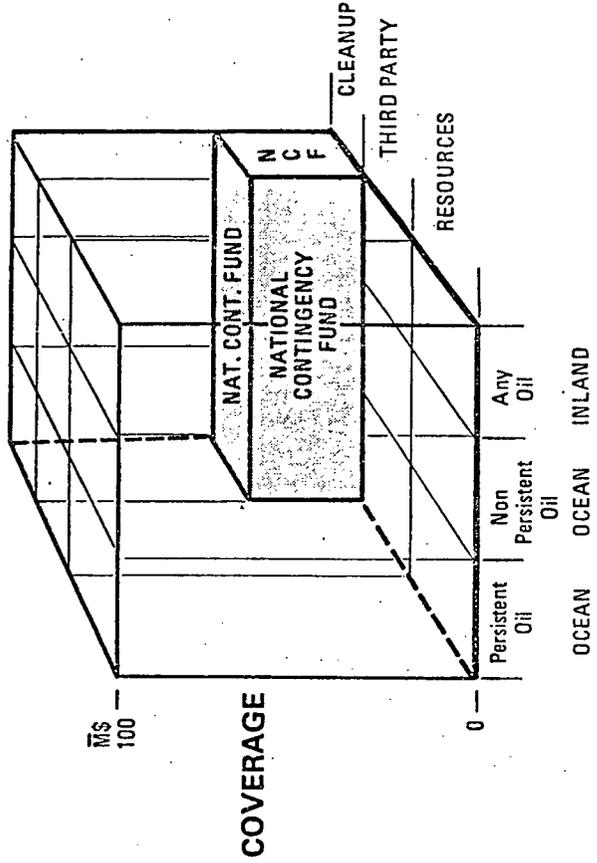
Trans-Alaska
Pipeline Fund
Deepwater Port Fund

States Delaware
Florida Massachusetts
Maine Mississippi
Maryland Washington
North Carolina Texas
Oregon
Washington

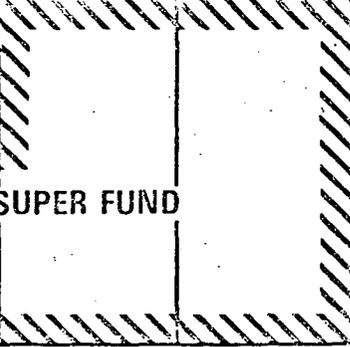
OIL SPILL COMPENSATION FUNDS



OIL SPILL COMPENSATION FUNDS



LIABILITY & COMPENSATION DIAGRAM

TYPE LIABILITY	PUBLIC CLEANUP COSTS	NATURAL RESOURCES INJURIES	THIRD PARTY DAMAGES	
CLAIMANT	FEDERAL OR STATE GOVERNMENT	FEDERAL OR STATE GOVERNMENT	FED., STATE OR LOCAL GOV'T.	INDIV. OR CORP. PERSON
SETTLEMENT OPTIONS	OUT OF COURT SETTLEMENT WITH SPILLER			
	COURT SETTLEMENT			
"FRONT LINE"	SPILLER'S CAPABILITY/LIABILITY (INCLUDES CRISTAL AND TOVALOP)			
COMPENSATION	NATIONAL CONTINGENCY FUND			
				

COMPENSATION FUND ACCUMULATION

<u>Tax Base</u>	<u>Years to Accumulate \$100M @ 1¢/Bbl. Tax</u>
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Domestic Waterborne Movements	1.4
Waterborne Imports Offshore Production	2.8
Waterborne Imports	3.5

Senator STONE. The next witness will be Mr. Richard Palmer, senior vice president for worldwide exploration, Texaco Oil Corp. Mr. Palmer.

**STATEMENT OF RICHARD PALMER, SENIOR VICE PRESIDENT FOR
WORLDWIDE EXPLORATION, TEXACO OIL CORP.**

Mr. PALMER. My name is Richard B. Palmer, and I am a senior vice president of Texaco in charge of worldwide exploration and Western Hemisphere production. I appreciate this opportunity to appear before your joint committee and discuss the proposed Outer Continental Shelf leasing legislation which you have under consideration.

As some of you may know, Texaco had its beginning with the successful drilling nearly 75 years ago of a Texas wildcat well. Since that time, our company has devoted the largest single portion of its total expenditures and efforts to exploration and production activities. Last year, for example, Texaco and its subsidiaries drilled 1,890 wells throughout the world. We conducted exploration work in 45 countries, and had oil and gas production in 18 countries spread from Australia to the North Sea.

It is from such a background of experience that we offer our comments on this proposed legislation.

I assure you that Texaco shares your desire to move the United States toward less dependent on foreign sources of oil and gas. We, like you, are dedicated to finding the most effective solution to our country's energy problems.

However, as we read them and apply their provisions to the practical aspects of exploring for and producing oil and natural gas, we very frankly fail to see how they would contribute positively to the search for new energy reserves. In fact, in some respects, we believe their impact would be counterproductive to this objective.

Let me, if I may, direct my remarks to four principal areas: First, the creation of a Federal exploration program; second, changes in the bidding procedures; third, separation of exploration from production; and fourth, an oil pollution fund.

In our opinion, this is most definitely a move in the wrong direction and would do serious and lasting damage to the country's energy program.

Petroleum exploration and production in the United States today is a complex, highly technical, and vigorously competitive undertaking. An objective analysis of the total energy picture leads to the inescapable conclusion that these functions should be left in the hands of those most experienced and trained in this area—which in our opinion means that U.S. petroleum industry.

The most telling argument against Federal exploration is the nature of exploration itself. Today, each company explores where it feels the rewards will be greatest, in a manner it feels will yield the best return on its investment. But, like people, companies differ. Each goes its own way testing its own ideas, and no one company is always right or always wrong.

Senator STONE. I know it is unusual to interrupt, but I would like to ask you a question right at that point.

What if the Government oil exploration agency were to be required to operate not in the areas where the private oil companies wish to explore and develop but in only in such frontier areas as there were so risky and so remote and so frontier that the oil industry would not be prepared to explore the area and what if there was no exclusivity involved in the exploration situation so the Government agency, if there were one, would not be ousting private exploration at the same time. Would that be somewhat more acceptable?

Mr. PALMER. I do not think so, Senator, on the premise that under those circumstances you are forcing the Federal oil and gas company to explore in areas which even the experts have decided are not favorable. You are in effect dooming them to failure.

Senator STONE. Now suppose they were not required to operate in that type of frontier area but neither were they given the exclusive right to explore. Would that be of any assistance?

Mr. PALMER. In my personal opinion, no. I find that the concept of a Federal oil and gas company, if you like, in competition with the private sector resolves itself into an unfair competition. Government is setting up an oil and gas company.

Senator STONE. I am not talking about production, I am talking about exploration.

Mr. PALMER. But even in that stage of the fuel exploration production center, such a Federal corporation cannot be allowed to fail. Now what this resolves itself into is a set of rules fixed by Government, inevitable to assure the success of the venture.

Senator STONE. How?

Mr. PALMER. Because you cannot afford to let it fail.

Senator STONE. I do not know. We seem to be doing pretty well in Southeast Asia.

Mr. PALMER. I beg your pardon?

Senator STONE. I think we are doing well in the failure business elsewhere. We might be very good at it.

Mr. PALMER. I am not an expert in foreign policy, sir.

Senator STONE. What I am suggesting is that the feeling that everything that we can possible do to find recoverable oil cannot be done if we do not also try some ourselves. This is a very strong feeling in the Senate as I have heard it. On the other hand, it makes no sense to me, in the name of speeding up exploration and development, to grant exclusivity to anyone. Certainly to an agency that is not yet in existence.

Would your feeling that this would be counterproductive be the same that instead of doing the exploration itself it would be required to contract out the exploration to private industry? In effect to subsidize exploration through the private industry?

Mr. PALMER. I do not see where the incentive for the private sector will lie if in fact they are going to be regarded simply as contractor companies.

Senator STONE. Well the incentive would be there; there would be no risk, your cost plus deal.

Mr. PALMER. We are accustomed to risk in our business, sir.

Senator STONE. I understand. But suppose there are some areas where through the great expense of checking the deep waters or currents, the North Sea type approach in the extreme. That you

would not be prepared to take such risk, yet there would be the Government using taxpayers money prepared to take such risk. Would that be of assistance? And there certainly are less favorable areas rather than more favorable structures offshore.

Mr. PALMER. But it is hard to give you a categorical no answer to such a proposition. I think that the record of our industry is such that it is willing to undertake the risk if the rewards are great enough. We have ventured into the frontier of every corner of this, literally. We have evolved technology that has lead us through the difficult areas and permitted us the ability to explore first and then produce in the most rigorous of natural situations and certainly the most rigorous political encounters.

Senator STONE. The point I am trying to make is not that you have not done this job and not that we do not want it done further. The question is can we have that and more because we are starved for more and is it not the case that drilling contractors do not have quite the same incentive as do the majors when it comes to this type of risky situation. They do not share in the profit if they hit big. Yet the Government agency contracting with them might be able to put some of them out there and low and behold there might be oil and gas out there to be bid out to the majors or the independents. Is that not a possibility?

Mr. PALMER. I do not see where the incentive is materially encouraged if we are already as an industry willing to step out and take the risk that we recognize. It seems to me that the only bar to our increased activity is the brake the Government regulations put on us. I would suggest if you turn us loose as in fact we were turned loose in 1974, the results in terms of an upswinging activity were simply dramatic. This has happened time and time again when Government-handled regulations were eased.

Senator STONE. Go ahead with your statement.

Mr. PALMER. I was discussing the multiple approach to the problems of exploration. Is it realistic to suppose that an inexperienced company, with one approach, could possibly match, much less outperform, the present system?

A favorite justification for proposing a governmental exploration program seems to be the thought that the U.S. Geological Survey is not involved in exploration and must rely on information given to it by the oil industry. Secretary Morton's testimony before your hearing on March 14 rather effectively destroyed this myth. He indicated, and I second his statement, that the USGS already has more hard information going into a lease sale than any single bidder.

A second argument given for a Federal OCS exploration agency is the need to locate and establish the value of OCS oil and gas resources before leasing. Worthy as such an objective might be, I fear that the magnitude of the task has escaped those supporting such a proposal. Reliable resource estimates do not come easily. As has been noted before, the ultimate resource potential of offshore Louisiana cannot yet be given, even after 20 years of intense exploration and drilling. How then, can we seriously ask the USGS to make such a determination for all Outer Continental Shelf lands? Even more to the point, how can the country's energy users be asked to wait until this task is completed before Outer Continental Shelf leasing and development is resumed?

The need to publish scientific maps of tracts being offered for lease has also been advanced as a justification for Federal exploration. Again, the practicalities of exploration simply do not support such a contention. No one planning to invest millions of dollars in an offshore program would rely on published public maps. I assure you Texaco would not. We would make such investment decisions on the basis of our own data and our own interpretations. I suspect most other knowledgeable operations would feel the same. The cost of pre-drilling exploratory information is a very small fraction of the ultimate offshore cost and is certainly a sound investment indeed.

Is it really in the public interest to burden the Federal Government with this critically important major undertaking when it must be recognized that the Government has neither the experience, the expertise, nor the procedures to effectively conduct such operations?

In our opinion, this is no time to substitute an untried experiment in Government bureaucracy at additional taxpayer expense for a system that has proven its effectiveness in locating tremendous new sources of oil and gas. These bills suggest changing the cash bonus bidding. Texaco believes that the present system is the most fair and equitable method of granting lease rights. It is the plan with the most integrity built into it. Lease offerings are held openly and in public, and the winning bid is based on an objective standard and is immediately obvious to everyone.

Senator STONE. Can I interrupt one brief one.

What about the shortening of the nomination time?

Mr. PALMER. We would favor it.

Senator STONE. Do you think we could knock 30 or 60 days off and not hurt the bidding?

Mr. PALMER. We would suspect with the background and experience in environmental investigations, in environmental impact investigations, you could know 6 months off the time.

Senator STONE. Six months?

Mr. PALMER. Yes sir, After all, much of the work that is being done that is causing the delay is redundant to work already done.

However, in our opinion, a serious flaw has developed in the system in recent years, in that it has become a vehicle by which excessive cash resources are transferred to the General Fund, and are thereby lost to the search for oil and gas. Since 1970, this cash drain has amounted to over \$11½ billion. If all or part of future bonuses could be returned to exploration, it would be an extremely significant boost in our efforts to achieve an expanded energy base.

Texaco, therefore, proposes that the present bonus bidding system be modified so that a part, say 50 percent of the successful bonus bid cash payment, be set aside by the Government as a work refund account. Each company would have a separate account, funded by its successful bidding, against which its subsequent exploratory work would qualify for a refund from the Government. Failure by a company to perform exploratory work during the primary term of the lease equal in cost to the unamortized portion of that bonus bid would result in the Government retaining the remaining portion. The most desirable utilization of the work refund would be for drilling wildcats and conducting investigation on the Outer Continental Shelf.

A second approach would be to allow work refunds against OCS bonus payments to be applied in onshore Federal areas, as well as offshore. This is also very much in the public interest. An argument can even be made that the public would be served by allowing work credits anywhere onshore, in that the results of all domestic exploration go into the supply base from which the public is served. In a larger view of the energy crisis, it would seem appropriate to permit credit for projects directed toward effective and economical alternative energy recovery techniques. Such work credits would insure a strong and continuing commitment to this vital area against the day when oil and gas resources may no longer be available to supply the bulk of the Nation's energy needs.

Cost is an aspect of offshore operations that cannot be ignored. This is no place for limited funds, or limited expertise. An excellent case in point is the British experience with the North Sea. The United Kingdom Government awarded a series of North Sea licenses to operators who were qualified by the Government and who offered an acceptable work program. United Kingdom companies with limited experience and financial backing were created to apply for licenses, and were awarded a significant share of the tracts. Now, ever after a number of potentially significant discoveries, many of these North Sea operations do not have the funds, nor can they find the outside financing, to drill the additional wells needed for reserve delineation, conduct followup development drilling or pay for production facilities. These companies are failing in spite of success. How these problems in the North Sea will ultimately be resolved of course is not certain, but there is an object lesson here. It is not a operation of size of the operator, but a matter of finances. Awarding leases to operators or groups with limited funds does not increase offshore competition. Only those with experience and financial backing for the entire exploration-to-production cycle, and the willingness to risk it, have the staying power to be viable offshore operators.

The legislation also contains suggestions that exploration of the OCS should be carried out separately from production of discovered areas of the OCS to be evaluated before development to assure Government against being ripped off.

In our opinion, this procedure not only would result in further delays in the development of additional energy resources our country so urgently needs now, but it also would destroy much of the incentive which companies have today to bid and invest large sums for exploration and production.

The right to produce any oil or gas found in the only inducement a company has to explore, bid for acreage, and drill wildcats anywhere. Changing this keystone provision of the leasing program strikes at the entire exploration procedure, with no compensating advantages that we can determine.

The need for a post-discovery environmental study, cited as one justification for separating exploration from production, does not really seem compelling. The pre-leasing environmental impact studies required by existing law should certainly reveal any hazard great enough to prohibit production. Any restrictions caused by environmental or other considerations can easily be made public prior to lease sales.

My full statement also contains comments on our proposal to create an oil pollution fund. We would suggest that if a pollution fund is to be established, it should be financed by those who are creating the risk. That is those who are actually engaged in drilling. Alternatively, a fair and reasonable liability limit should be established and each bidder should demonstrate his ability to meet this permit before.

Gentlemen, I thank you for this opportunity to review with you some of Texaco's thoughts on this most important legislation. I urge you not to act hastily and perhaps create unnecessary delays and unworkable restrictions that would be counterproductive to the objectives we all share. The goals of Congress, the people and the oil industry to reduce our country's dependence on foreign production, can be best achieved by recognizing our common purpose and working together in the critical years ahead. Thank you, sir.

Senator JOHNSTON [presiding]. Mr. Palmer, I share your feeling that the government should not get in the exploration business. What would be your response to those who say they ought to go out and drill six stratographic wells in the Atlantic? First they should drill six, two in each of the most promising areas, that can be done quickly during the time you are waiting for, during this nomination procedure time, and that it can be done at relatively small expense and provide you a useful information base. What is your response to that?

Mr. PALMER. Well my response, Senator, is that the industry has taken on this chore on their own off the coast of Texas. It did not require government funding. The industry is obviously willing to take these chances when given the opportunity.

Senator JOHNSTON. How long do you think it would take to dig these stratographic wells?

Mr. PALMER. I would guess in terms of, we are dealing with an unknown drilling situation, I would think that a fair guess to fully evaluate the east coast offshore section, I would suspect perhaps 90 days per well.

Senator JOHNSTON. 90 days from now? If I said go out to Texas and put a stratographic hole in the Baltimore Canyon, 90 days from now you would have that completed?

Mr. PALMER. That presumes I can find a rig capable of providing that operation within 90 days, and I can not guarantee you that in this point of time.

Senator JOHNSTON. But basically 90 days would be a good estimate of time?

Mr. PALMER. Generally 90 days would be a good estimate for one hole.

Senator JOHNSTON. Would that provide you useful information?

Mr. PALMER. It would give us an insight closer into the area of presumed prospectiveness, yes. There is exploration off the eastern seaboard, off of North America as you are well aware. Our Canadian neighbors have investigated part of their North Shore area, not too far from the shore of Maine and New Brunswick.

Senator JOHNSTON. Why then not by having the government do this themselves or contract out for six stratographic holes?

Mr. PALMER. Well, I think—

Senator JOHNSTON. Other than the principle of the thing?

Mr. PALMER. That is really where it gets hung up. I see no reason for government to involve itself in a practice which is aimed at an

existing industry when industry in fact is quite able and willing to assist itself.

Senator JOHNSTON. Really the real problem, is it not, is that it is not going to achieve that much. It does not do that much harm, but it is the nose under the tent really?

Mr. PALMER. That is frankly my fear.

Senator JOHNSTON. If you are talking about six stratigraphic holes, in that area?

Mr. PALMER. Yes, that is correct.

Senator JOHNSTON. Now we have had some conversation about separating exploration from the development decision that you first explore then you make your decision as to whether to develop. And you said the phrase I wrote down here is "hazard sufficient to prohibit production". I think that is the phrase you used. What would be the possible hazards sufficient to prohibit the production if you find some oil and gas out there?

Mr. PALMER. I think as far as the variety of hazard I had in mind of course refers to the structured offshore basin which is the Santa Barbara channel.

Senator JOHNSTON. Is there any other basin like that that you know of in the world?

Mr. PALMER. I think that perhaps part of the Western Aleutian Trench may have similar problems. It is an act of seismic zone, not dissimilar than the Santa Barbara channel. There are certainly none off the Gulf coast.

Senator JOHNSTON. Well do you feel you fairly well know the areas that might have that kind of likely situation prior to drilling?

Mr. PALMER. Yes sir, I think that is known to the US GS as well.

Senator JOHNSTON. What you are saying then is that in the entire Gulf Coast and the entire Atlantic Coast that you know of possible hazards that could be encountered sufficient to prohibit production?

Mr. PALMER. That is correct.

Senator JOHNSTON. Would the name deemed true with the Gulf of Alaska?

Mr. PALMER. Well the Gulf of Alaska is not dissimilar with the offshore of southern California. It is adjacent to an active seismic belt. It is an area of course in which the industry has worked quite successfully with the single exception of the Santa Barbara blowout. That was not a situation which was, I think, a mechanical failure in the face of quite a large number of prior penetrations without such difficulty. What I am driving at, of course, is that the industry has been successful in exploring and developing oil and gas resources and in active seismic zones. It is a matter simply of design and judicious placement of the structures.

Senator JOHNSTON. Well, I would appreciate hearing from you and from Texaco as to how we might structure a bill that would define what the areas are, what the geographic areas are and how we determine them, where you can separate this decision as to exploration and production, and what the definitions might be.

Mr. PALMER. OK.

Senator JOHNSTON. As to how we proceed to do it, because if there are possible Santa Barbaras, then we need to know that in advance.

But if we do not it seems to me want to separate the decisions and maybe get caught with law suits and more impact statements and more delay in areas like the Gulf of Mexico. But I think in the other areas we ought to have that procedure.

The question of bidding you say that net profit bidding would tend to make speculative bids and that way you might not expect the development. Could you not concur that by bidding first by determining what amount of money would be needed to put up the drilling program and requiring say a bond?

Mr. PALMER. Well I think that my problem with net profits bidding or in royalty bidding is that it is an open invitation to redo the deal on a unilateral basis. It is an attempt to justify less than the prescribed performance, and I do not think that is fair or equitable to those operators not equally given the opportunity to do the same thing. In other words, once awarded a situation which simply does not add up in the context of a net profit arrangement, any modification of the original award which is almost inevitable to come about, resolves itself in an inequity to those not successful in bidding. The groundrules have changed. The same thing with the royalty forgiveness. In my mind this encourages the speculative element in the business to get in there, very much like we see in other areas of the world. Without the ability or even the desire to perform excepting in the face of a bonanza.

Senator JOHNSTON. Do you not have a royalty forgiveness in effect in your proposal here? Only a royalty forgiveness which would be suitable only to big companies who could afford to take the big risk on bigger more risky deals?

Mr. PALMER. I do not think so, Senator. What we are proposing here is a system attracting large sums of money back into the business of exploration. It is our real concern that much of the industry's financial structure is being put into nonproductive, productive from the standpoint of the ongoing program, arrangement under bonus bidding. We have avoided this as you notice.

Senator JOHNSTON. I have got a 5 minute bell. I better go vote. I will be back.

[A short recess was taken]

Senator STONE [presiding]. The quick voters will reconvene this hearing.

Mr. Palmer, have you concluded your presentation?

Mr. PALMER. Yes sir, I have.

Senator STONE. You heard my questions to Mr. Murphy about the provisions that he would suggest that would speed up the production and development on the Outer Continental Shelf. Do you have any different or other suggestion than he discussed?

Mr. PALMER. Not really, Senator. I think I expressed our feeling when I suggested to you that you give us the running room to perform, we will perform. And that our records certainly in 1974 given the incentives to perform clearly demonstrates the capability of the industry to move.

Senator STONE. Thank you very much, Mr. Palmer.

Mr. PALMER. Thank you sir.

[The prepared statement of Mr. Palmer follows:]

STATEMENT OF
RICHARD B. PALMER
SENIOR VICE PRESIDENT
TEXACO INC.

BEFORE THE
SENATE INTERIOR AND INSULAR AFFAIRS COMMITTEE
SENATE COMMERCE COMMITTEE
NATIONAL OCEAN POLICY STUDY
NATIONAL FUELS AND ENERGY POLICY STUDY

APRIL 8, 1975

My name is Richard B. Palmer, and I am a Senior Vice President of Texaco in charge of World-wide Exploration and Western Hemisphere Production. I appreciate this opportunity to appear before your joint Committees and discuss the proposed Outer Continental Shelf Leasing legislation which you have under consideration.

As some of you may know, Texaco had its beginning with the successful drilling nearly 75 years ago of a Texas wildcat well. Since that time, our Company has devoted the largest single portion of its total expenditures and efforts to exploration and production activities. Last year, for example, Texaco and its subsidiaries drilled 1,890 wells throughout the world. We conducted exploration work in 45 countries, and had oil and gas production in 18 countries spread from Australia to the North Sea.

It is from such a background of experience that we offer our comments on this proposed legislation.

I assure you that Texaco shares your desire to move the U.S. towards less dependence on foreign sources of oil and gas. We, like you, are dedicated to finding the most effective solution to our country's energy problems.

I am sure that is the intent of the authors and sponsors of the bills that are being considered here today.

However, as we read them and apply their provisions to the practical aspects of exploring for and producing oil and natural gas, we very frankly fail to see how they would contribute positively to the search for new energy reserves. In fact, in some respects, we believe their impact would be counterproductive to this objective. Many of the proposals seem to have the flavor of simply change for change's sake -- and I do not believe either the Congress or the oil industry endorses that philosophy in today's critical period.

Other witnesses before these hearings have commented -- or I am sure will comment -- on almost every aspect of this proposed legislation. Let me, if I may, direct my remarks to four principal areas: (1) the creation of a federal exploration program; (2) changes in the bidding procedures; (3) separation of exploration from production; and (4) an oil pollution fund.

FEDERAL EXPLORATION PROGRAM

S.426 and S.521 include provisions to establish a federal program to conduct exploration work in OCS waters.

In our opinion, this is most definitely a move in the wrong direction and would do serious and lasting damage to the country's energy program.

Petroleum exploration and production in the U.S. today is a complex, highly technical and vigorously competitive

undertaking. An objective analysis of the total energy picture leads to the inescapable conclusion that these functions should be left in the hands of those most experienced and trained in this area -- which in our opinion means the U.S. petroleum industry.

Over the above the Government's near-perfect record of failure when it has ventured into private industry, the most telling argument against Federal exploration is the nature of exploration itself. Today, each company explores where it feels the rewards will be greatest, in a manner it feels will yield the best return on its investment. But, like people, companies differ. Each goes its own way testing its own ideas, and no one company is always right or always wrong. Industry's outstanding success has been built on this composite -- this multiple approach to the same problems. Is it realistic to suppose that an inexperienced company, with one approach, could possibly match, much less out-perform, the present system?

A favorite justification for proposing a governmental exploration program seems to be the thought that the U.S. Geological Survey is not involved in exploration and must rely on information given to it by the oil industry. Secretary Morton's testimony before your hearing on March 14 rather effectively destroyed this myth. He indicated, and I second his statement, that the U.S. G.S. already has more hard information going into

a lease sale than any single bidder.

A second argument given for a Federal OCS exploration agency is the need to locate and establish the value of OCS oil and gas resources before leasing. Worthy as such an objective might be, I fear that the magnitude of the task has escaped those supporting such a proposal. Reliable resource estimates do not come easily. As has been noted before, the ultimate resource potential of offshore Louisiana cannot yet be given, even after 20 years of intense exploration and drilling. How then, can we seriously ask the U.S. G.S. to make such a determination for all OCS lands? Even more to the point, how can the country's energy users be asked to wait until this task is completed before OCS leasing and development is resumed?

The need to publish scientific maps of tracts being offered for lease has also been advanced as a justification for Federal exploration. Again, the practicalities of exploration simply do not support such a contention. No one planning to invest millions of dollars in an offshore program would rely on published public maps. I assure you Texaco would not. We would make such investment decisions on the basis of our own data and our own interpretations. I suspect most other knowledgeable operators would feel the same. The cost of pre-drilling exploratory information is a very small fraction of the ultimate offshore cost

and is a sound investment indeed.

Gentlemen, is it really in the public interest to burden the Federal Government with this critically important major undertaking when it must be recognized that the government has neither the experience, the expertise nor the procedures to effectively conduct such operations?

In our opinion, this is no time to substitute an untried experiment in government bureaucracy at additional taxpayer expense for a system that has proven its effectiveness in locating tremendous new sources of oil and gas.

BIDDING PROCEDURES

Let me turn now to the suggestions in these bills to change the cash bonus bidding.

One of the largest sources of federal income from oil and gas activities is the cash bonus bidding for offshore leases. Texaco believes that the present system is the most fair and equitable method of granting lease rights. It is the plan with the most integrity built into it. Lease offerings are held openly and in public, and the winning bid is based on an objective standard and is immediately obvious to everyone. However, in our opinion, a serious flaw has developed in the system in recent years, in that it has become a vehicle by which excessive cash resources are transferred to the General Fund, and are thereby

lost to the search for oil and gas. Since 1970, this cash drain has amounted to over 11-1/2 billion dollars. If all or part of future bonuses could be returned to exploration, it would be an extremely significant boost in our efforts to achieve an expanded energy base. The energy consumer ultimately must bear the cost of exploration and development, including the amount paid in bonus bidding. An arrangement is needed to reduce that component of cost which otherwise would simply be drained into general government funds and make no contribution to the development of new energy supplies.

Texaco, therefore, proposes that the present bonus bidding system be modified so that a part, say 50%, of the successful bonus bid cash payment be set aside by the Government as a Work Refund Account. Each company would have a separate account, funded by its successful bidding, against which its subsequent exploratory work would qualify for a refund from the Government. Failure by a company to perform all the required exploratory work during the primary term of the lease would result in the Government retaining the remaining portion. Specifications as to how and where the work must be performed to be eligible for a refund could follow any number of directions, but in fairness, should be restricted to high-risk ventures. The percentage of the bonus to be deposited in the Work Refund Account

could either be permanently fixed, or could vary from area to area, or from sale to sale, according to the need to stimulate exploration, the likelihood of success in the area, anticipated costs of drilling, and other operations due to adverse weather, water conditions, water depth, distance to shore, etc. The most desirable utilization of the work refund would be for drilling wildcats and conducting exploration on the OCS itself. This would unquestionably generate a higher level of effort and aid in a visible way the search for a broader OCS resource base for the U.S.

A second approach would be to allow work refunds against OCS bonus payments to be applied in onshore Federal areas, as well as offshore. This is also very much in the public interest. An argument can even be made that the public would be served by allowing work credits anywhere onshore, in that the results of all domestic exploration go into the supply base from which the public is served. In a larger view of the energy crisis, it would seem appropriate to permit credit for projects directed toward effective and economical alternative energy recovery techniques. Such work credits would insure a strong and continuing commitment to this vital area against the day when oil and gas resources may no longer be available to supply the bulk of the nation's energy needs.

As to royalty or net profits bidding, there are many sound arguments advanced to indicate that these are not in the public interest. Either of these plans encourages participation by unqualified bidders as there is no significant front end bonus, and they both encourage arbitrary bidding for speculative purposes. No one profits from this. Secretary Morton confirmed on March 14 that irresponsible royalty bidding did occur, and pointed out that oil would have to sell at \$30-40 per barrel to allow a profit at the level of royalty bids submitted. Royalty or net profits bidding also has a significantly adverse effect on offshore economics so that any operator needs a larger reserve base to justify going into production. This also leads to early abandonment of wells. The inability of an operator to realize a profit due to an excessive royalty or net profits burden only delays production. To agree to reduce the royalty or net profits bid by the operator is patently unfair to the other bidders and destroys the integrity of the entire lease sale system.

In passing, I would like to note that Texaco feels the Department of Interior has been receiving more than fair value for the leases it has awarded in the past few years. Fair market value is established by the bids received at a lease sale, which in turn are based on the pre-drilling evaluation of recoverable

reserves and the likely economic return. The current trend in industry is apparently to bid as high as reason allows, consistent with economic estimates. Unfortunately reserves found, rarely, if ever, match those anticipated. As you well know, only one of 50 wildcats finds an accumulation that can be produced at a profit. Obviously, enough profit must be guaranteed by these few discoveries to cover the costs of the many failures.

The opinion has been expressed that fair market value is not realized unless a large number of bids are received on each tract. The significant statistic is not bids per tract, but the number of different companies or joint ventures that participate in a sale. This is true because each bidder expresses a separate and independent opinion as to the value of each tract offered. Those tracts with no potential value to a bidder simply receive no bids.

Cost is an aspect of offshore operations that cannot be ignored. This is no place for limited funds, or limited expertise. An excellent case in point is the British experience with the North Sea. The U.K. Government awarded a series of North Sea licenses to operators who were qualified by the government and who offered an acceptable work program. Companies with limited experience and financial backing were created to apply for licenses, and were awarded a significant share of the tracts. Now, even after a number of potentially significant discoveries, many of these North Sea operators do not have the funds, nor can they find the outside

financing, to drill the additional wells needed for reserve delineation, conduct follow-up development drilling or pay for production facilities. These companies are failing in spite of success. How these problems in the North Sea will ultimately be resolved is not certain, but there is an object lesson here. It is not a question of size of the operator, but a matter of finances. Awarding leases to operators or groups with limited funds does not increase offshore competition. Only those with experience and financial backing for the entire exploration-to-production cycle, and the willingness to risk it, have the staying power to be viable offshore operators.

SEPARATION OF EXPLORATION FROM PRODUCTION

The legislation which you are considering also contains suggestions that exploration of the OCS should be carried out separately from production of discovered reserves. This would somehow allow the potentially productive areas of the OCS to be evaluated before development to assure Government against being "ripped off."

In our opinion, this procedure not only would result in further delays in the development of additional energy resources our country so urgently needs now, but it also would destroy much of the incentive which companies have today to bid and invest large sums for exploration and production.

The right to produce any oil or gas found is the only inducement a company has to explore, bid for acreage, and drill wildcats anywhere. Changing this keystone provision of the leasing program strikes at the entire exploration procedure, with no compensating advantages that we can determine.

The American Petroleum Institute treated this problem in a letter to the Council on Environmental Quality in November, 1973. A short quotation from that letter will sum up what makes such a proposal impractical from an operating standpoint:

"Any company or group of companies entering a bid on an OCS tract necessarily will also have first evaluated the financial impacts of its actions both as to the amount of bonus to be offered and the probable costs of the subsequent exploration and development program that would result from the award of a lease to it. Substantial banking arrangements are often involved. Much of the bid money is borrowed and financing would be difficult, if not impossible to obtain, if exploration and production were separated.

"If the initial award to the successful bidder were to allow exploratory rights only, there would be little incentive to make the large initial

investment. This is because upon completion of the exploratory effort, the owner of the lease would have no vested contract rights and would face the possibility that the development rights might be awarded to others. Not only would this approach result in the destruction of any incentive to invest in offshore activity, it simply would be economically impossible for any company or group of companies to embark on such a perilous and unrewarding venture. Therefore, under the separation approach, money and manpower simply would not flow from the private sector into OCS activities."

The need for a post-discovery environmental study, cited as one justification for separating exploration from production, does not really seem compelling. The pre-leasing environmental impact studies required by existing law should certainly reveal any hazard great enough to prohibit production. Any restrictions caused by environmental or other considerations can easily be made public prior to lease sales.

The need for coastal zone planning is certainly a proper consideration in OCS leasing procedures, but this factor need not lead to separate exploration and producing leases either. The present system certainly provides ample time for developing coastal zone plans while the operator is awaiting delivery of drilling and

production platforms, and while the field is being developed prior to the actual start of production.

OIL POLLUTION FUNDS

A provision common to S. 521 and S. 426 is the Offshore Oil Pollution Settlement Fund. This fund would be created to spread the financial liability for damages resulting from discharge of oil among the holders of OCS leases.

We agree that adequate provision needs to be made for handling any environmental accident which might occur, and this must be the responsibility of those doing the work. When you analyze these proposals, however, you will see that the liability is shifted to offshore producers, not leasees, in that the fund would be supported by a fee imposed on each barrel of oil produced. Translating this to the reality of today's offshore scene means that operators with present oil production offshore Louisiana will bear the entire financial burden until production is established elsewhere in the 'frontier' areas. Considering the lead time between exploration and production, it is apparent that the Louisiana producers would carry this burden for a long time. We call your attention to this discriminatory and unjust penalty which would be levied on those corporations that moved offshore early and established production as it now exists.

We would suggest that if a pollution fund is to be established, it should be financed by those creating the risk, that is, those engaged in drilling. Alternatively, a fair and reasonable liability limit should be established, and each bidder should demonstrate his ability to meet this limit before he receives a permit to operate on the OCS.

Gentlemen, I thank you for this opportunity to review with you some of Texaco's thoughts on this most important legislation. I urge you not to act hastily and perhaps create unnecessary delays and unworkable restrictions that would be counterproductive to the objectives we all share.

Texaco has long supported the rights and interests of all elements of our society impacted by offshore operations, and can understand the concern felt by those coastal states unfamiliar with exploration and production beyond their shores. We firmly believe, however, that coastal zone management planning and exploration drilling can be conducted concurrently. The goals of Congress, the people and the oil industry to reduce our country's dependence on foreign production, can be best achieved by recognizing our common purpose and working together in the critical years ahead.

Senator STONE. The next witness will be Mr. J. O. Carter, Vice President for exploration, Gulf Oil Corp. Mr. Carter.

**STATEMENT OF J. O. CARTER, VICE PRESIDENT OF EXPLORATION,
GULF OIL CORP.**

Mr. CARTER. Good afternoon. My name is J. O. Carter and I am Vice President of Gulf Oil Company, United States. In that capacity, my responsibilities are for Gulf's exploration in the United States both onshore and offshore. I have listened to some of the testimony this afternoon, and judging by the reaction of the members that were here on the panel, with your permission I will dispense with reading my prepared statement.

Senator STONE. Without objection, if you have any prepared text it will be included in the record.

Mr. CARTER. Yes, you have both my oral testimony and my written testimony too.

Senator STONE. It will be in the record.

Mr. CARTER. The written testimony goes into the bills before this panel. I believe there are about eight or nine points that we raised, upon which we comment. The oral testimony is a summary of that and what I might say here for just a few minutes would be a summary of the oral testimony.

Essentially, Gulf's views of these bills parallel the views of the members of the industry who have come before this panel. We are concerned primarily with two things. One, the question of whether all of these resources in the so-called frontier areas actually exist. In our opinion they exist only in the minds of men and have not been brought to the surface yet. Our second concern is the element of time in which these resources can be evaluated and hopefully turned into production.

Now with the bills themselves; we are concerned with the intent of these bills to cross-function. That is to say, to add, in addition to its function as an administrative body the role of operations also. This is to participate in the actual exploration and probably the production of oil and natural gas. And in this respect, for example, Senate bill S. 521 directs the Secretary of the Interior to conduct a survey of the Outer Continental Shelf oil and gas resources to provide a basis for developing and revising a lease program. Senate bills 426 and 740, and to some extent S. 521, authorized the Secretary to also drill exploratory wells. S. 426 authorizes Congress along with all of its other activities in running the Government to have to pause, from time to time, to make operating decisions, approving lease and development plans.

The second point of concern to us is the matter of time, and in that respect, Senate bills 81, 426, 470, and 521, would suspend OCS leasing from 18 months to 3 years. Three of the bills would allow the State governors to request postponement for up to 3 years. S. 521 and S. 426 provide the avenues for civil action by any person having an interest which is adversely affected.

Now the words delay, sue, postpone and set aside reoccur more than once.

Finally, punitive aspects of the bills cannot go unnoticed. For example, S. 426 addresses itself to automatic termination of existing permits and leases which raises constitutional questions. And Senate bills 426 and 521 apply onerous liability on leasees for oil spills.

Now, objectively, these comments would appear to suggest that none of these bills represent the best efforts of the authors. This is not true. We do believe these bills contain the seed of an energy policy, but I fear they will fail to meet the test of time in their present form. They do not recognize that the mechanism is at hand in the industry to do the job of evaluating our energy resources. They do not permit the Government to perform its historic role of administration but inject the Government into the role of operations; and they do not recognize the time factor necessary to develop these resources, and I will say it again, if these resources exist at all.

So, with those rather brief comments, I will make myself available to any questions that you might have that pertain to any of these bills.

Senator STONE. I believe as Mr. Murphy does, if these bills or most of them pass, it will delay the development and production by years instead of weeks or months.

Mr. CARTER. Yes, sir, I think that is a distinct possibility and the reason I say that is from my experience; of course exploration is a very complex business. It takes a highly technical staff to evaluate and select the place to drill the wells, all of which would take time if the Government injected itself into that end of the business. The Government has agencies at its command, the USGS, the BLM, and so on which retain personnel with great expertise in this area, but since we are dealing with such a tremendous geographical area in these frontier areas, I fear that they would not be able to give it the time and the study that it requires. The 50 or 100 companies that exist today can do it at this very time.

Senator STONE. What is your view on the leasing of entire structures as opposed to the individual tracts?

Mr. CARTER. Well, I am happy to see some discussion on that, because I think it was about a year ago that Gulf did suggest that this might be of some help in accelerating offshore development. At that time, and since then in testimony before various panels, we have advocated large lease blocks in the frontier areas.

Senator STONE. What about the shortening of the nomination period?

Mr. CARTER. This of course would help. I think that the problems that we have are mostly procedural.

Senator STONE. What other procedural problems do you think in present processes can be either eliminated or changed to speed the process up?

Mr. CARTER. Well, judging from the sales of the past 2 years and the procedures that have been followed, we have managed to go through the process and have the sales.

Senator STONE. What would you change if you could?

Mr. CARTER. I do not know anything really needs to be changed except perhaps try to do it in a shorter time period and of course perhaps have more sales.

Senator STONE. What about the concerns of coastal States? Would their objections cause more delay even than these law changes?

Mr. CARTER. Yes sir. I think some of these bills direct their attention to this situation and there is no question in my mind that the coastal States have the right to raise questions about the acceleration of offshore leasing and the environmental impact that it would have on them. I believe to some extent that this could be overcome by simply understanding that oil exploration takes a period of time from the grant of the lease, and certainly the period from the grant of the lease to production. It covers several years. I think that is ample time for the States to make their environmental studies. So that it should not be necessary to go through that process before any leases are granted. I do not see that that would help in any way at all because if no oil is discovered, then all of that work would have been wasted. As a matter of fact, from some of these bills I get the impression they are chipping away at the problems—that we are really building something that does not even exist yet. And that our first concern is to find out if there are any resources.

Senator STONE. Do these bills break this process down in finding out whether the resources are there?

Mr. CARTER. I might add that there was another in fact, I think one of these bills does touch on the idea of possibly enlarging the blocks that might be offered in a frontier area, larger tracts. One of the bills I believe it is 740 also, touches on the idea that some of the bonuses or revenues that are derived from Federal oil and gas leases, be reserved for exploration and production either in the form of loans or in some manner. I think this perhaps is a move in the right direction. It is something that I think was mentioned here just now. This is an idea that was first put forth by Mr. Halbounty some years ago, maybe 2 years ago, when he advocated that some system should be worked out where the bonuses that were paid for these leases be returned to exploration and production.

Senator STONE. Senator Hollings.

Senator HOLLINGS. Mr. Carter, the legislation, I take it you oppose, is that right?

Mr. CARTER. Well, Senator, I do not just out and out oppose it. As we said before you came in the room, I think there are some seeds here that have some merit. They certainly do.

Senator HOLLINGS. Would you elaborate on those seeds of merit for us please?

Mr. CARTER. Well one of concerns in these bills, first of all is that they address themselves mainly to oil and gas exploration and production. In some instances they do touch on the development of alternate forms of energy.

S. 740, for example, I had the opportunity to read the report of the National Ocean Policy Study Group and I was concerned in that report that a statement was made that it may be necessary to develop alternate forms of energy. In my opinion, I think it is essential. I think that study should be given to the problem of alternative forms of energy simultaneously with the development of our oil and gas resources. We are working in a time frame that is just disturbing.

I see this country as being very vulnerable and in jeopardy for its oil and gas resources, energy resources as a whole over the next 25 or 30 years. And understanding that the process is slow and laborious in determining policy, I think beginning now they should certainly address themselves to it and I assume that is what you are trying to do.

Senator HOLLINGS. On the offshore exploratory drilling, S. 426 and Senator Jackson's bill, are there any seeds of merit in any of those bills?

Mr. CARTER. Well the question was raised here a minute ago about the government possibly going offshore and drilling some so-called stratigraphic tests, and the point was made that a couple of tests of this nature were drilled recently by 30 or 35 companies which participated and paid for it. It was done with the blessing of the USGS and all the sites were approved by the USGS. The information gained by those wells was very helpful to the industry in preparing themselves for the recent offshore sale. I would advocate that work of this type continue and some wells have been proposed in the Atlantic seaboard and the Gulf of Alaska, for example.

Senator HOLLINGS. Isn't this generally a partnership arrangement, as you say, that worked well, why could it not work with respect to exploratory drilling of the wells? Bill 426 does not contemplate that the government start a drilling program of its own, but with conjunction of industry doing it like in the space program. The USGS could have the drillers that I imagine you would contract. Gulf Oil has independent drillers?

Mr. CARTER. Yes, we do.

Senator HOLLINGS. What is wrong with the government contracting also with independent drillers to do some exploratory work and find out what it shows from that exploratory drilling and then have a bid. Where is there a delay along that line and what is wrong? I am trying to find out your objection.

Let me fix it on S. 426. In the government exploratory drilling proposal in the bill that we worked up with numerous Senators on both sides of the aisle and both ends of the political spectrum, we are trying to find a solution to this problem, really trying not to delay but expedite. We think that and you are trying to tell us we are wrong. In what end are we wrong?

Mr. CARTER. I am not saying that you are wrong. It is perfectly possible for the Government. They can hire contractors and geophysical personnel to conduct the surveys.

Senator HOLLINGS. You just finished describing one of the situations where they all worked together. Is that not what we contemplate?

Mr. CARTER. You contemplate the government funding these projects where the projects I referred to were funded by industry.

Senator HOLLINGS. Is there any other difference other than the funding aspects?

Mr. CARTER. These bills were designed primarily for the determination of reserve character. They were drilled off structures. They were not drilled on structure. And that was one of the requirements for the approval by the USGS. It was most helpful to industry.

Senator HOLLINGS. Are there any other differences other than the funding part now and the restrictions on structure that you described there?

Mr. CARTER. There were no other conditions put on the drilling of the wells and they were drilled forthwith, and as I say, a couple more are planned.

Senator HOLLINGS. Under those, why cannot that same procedure, approach, be applied to exploratory drilling so that we all know what we are drilling upon?

Mr. CARTER. What you are saying; instead of drilling off-structure you are drilling on top of a structure to see if there is any oil and gas there?

Senator HOLLINGS. That is right.

Mr. CARTER. I have given thought to that and I have been concerned, Senator, because no provision has been made to, say, guarantee that industry would have the opportunity to lease following the discovery of any oil or gas.

Senator HOLLINGS. Your apprehension is that there would be no guarantee so that industry would have a chance to lease it?

Mr. CARTER. That is right, that is part of it.

Senator HOLLINGS. Well I imagine when there would be a government policy, Secretary Morton and whoever the other secretary is in charge of this particular drilling program, it would be in the better interest of the government. I do not think we are drilling or exploring or trying to determine what is there in order to submit it to the industry itself to bid upon and bring in the guaranteed business for industry. The shortage for business, the shortages of fuel and energy and oil, and from certain surveys made by the National Science Foundation there is quite a shortfall from what has heretofore been projected. So under that particular factual situation, maybe it is in the best interest that the government hold up and not expedite selling all it has. It ought to have a conservation program even on the leasing. I would not want to put in the measure and I do not think the Congress would vote it, that once it is drilled and the find was made you have to have a guarantee. I think that would be the practice, however. We are not drilling just to get information. We are trying to find out what is there, and at one point in time there should be some leasing in circumstances that are favorable to the government and favorable to industry. It has to be favorable to the industry to get a competitive bid system.

Mr. CARTER. There is another aspect to the thing and that is the question who is best equipped with technology organization and skill to carry on the operation like this. I am not talking about drilling one well. I am talking about a program that would cover thousands of wells and ultimately cost billions of dollars.

Senator HOLLINGS. Would Gulf Oil have it in-house or would you contract for this?

Mr. CARTER. I do not think the public has adequate evidence that the government can operate as efficiently as industry.

Senator HOLLINGS. You are going off on that. But I would have to generally agree with you. I do not advocate that the government get in anything between you and me.

Mr. CARTER. I might say that my testimony here reflects the fact that to remain as a company means that we are efficient for we could not exist in the world of competition if we were not. And that is why I say that in the last analysis, I believe that industry is better equipped.

Senator HOLLINGS. When I asked about the in-house capability you said we did not have, I do not believe that you have it either. You contract with independents?

Mr. CARTER. When I say in-house capability you do have in-house capability.

Senator HOLLINGS. We got quite a bit of it in the geological survey.

Mr. CARTER. Yes you do have some fine people.

Senator HOLLINGS. Some of the best in the industry, public or private that is. Well we hired from private industry.

Mr. CARTER. But, I wonder if you have enough?

Senator HOLLINGS. Well do you have enough? How many do you have and how many do we have?

Mr. CARTER. We are selective and you have to look at the whole thing.

Senator HOLLINGS. You do not have enough. That is why you get together with all of these others. There is very little bidding not done on a joint bidding basis. Economically, expertisewise the thing that we are both discussing now in this question even the largest and the best has to get together with Exxon, Shell, Texaco. You folks go into joint ventures because you do not have either conjunctively the financing or risk that is involved in there, or the expertise in all this other that is going into it. You almost are organized like a government. Are you not?

Mr. CARTER. No, sir. That is not true. No, sir. We do go together because we do share the financial risk.

Senator HOLLINGS. It is very, very expensive?

Mr. CARTER. But we do not share our expertise.

Senator HOLLINGS. How much expertise do you have?

Mr. CARTER. We have 305 employees.

Senator HOLLINGS. So we could hire 305, and we would be just in as good shape as Gulf Oil?

Mr. CARTER. Sir?

Senator HOLLINGS. We could hire 305 employees and we would be in as good shape as Gulf Oil?

Mr. CARTER. No, sir, because there is a difference. A Government exploration program would of course entail covering all the frontier areas, right?

Senator HOLLINGS. Right.

Mr. CARTER. This is one of the problems that we have, Senator, with the discussion that goes around, about the evaluation that is put on the blocks by the government. There is one distinction there. The government must evaluate every block that goes up for sale. In the case of one coming up here in May, there are some 630 blocks and every one of those has been evaluated by the government in order to determine what it thinks should be a fair bid. We as a member of industry, as one company, we look at the 629 blocks, I think it is, and we may only pick 15 or 20 of them that we zero in on because

we think they might have good prospects. But the government still has to look at every one of them because every one of them may have a bid. But if we looked at every block in the sale of 6 or 700 blocks as closely as we look at the 12 or 15 blocks, we ultimately bid on, we would not have enough people. With 300 men now there is a difference.

Senator HOLLINGS. Suppose you had the exploratory drilling prior to the exploratory bid?

Mr. CARTER. It would be of help. It would not answer all of the questions. You are covering just a tremendous area.

Senator HOLLINGS. You think that if Gulf Oil had 10 million acres and it was going to sell the 10 million acres to Exxon, would you sell the 10 million acres without knowing what you have under the 10 million acres?

Mr. CARTER. I do not believe we would.

Senator HOLLINGS. You would want to know what you have and determine what you have?

Mr. CARTER. Frankly, I do not know how many employees there are in the USGS that devote time to this.

Senator HOLLINGS. That is right. Gulf Oil would not want to sell 10 acres or 10 million acres in the competitive free enterprize world in which you live unless you find out what you are selling first?

Mr. CARTER. We would have to have some idea.

Senator HOLLINGS. Why can not the government get an idea in bug hiatus? We are trying to employ everybody. We are putting up billions of dollars for public service employment to get people off the street and get them in here. It is not only people, I am not talking about this just facetiously. I do not see why we can not inject or interpose in the government the practices the same good practices you would interpose if you were Secretary of the Interior. You are an official of one of the finest oil companies in the country. You do it one way and say you have to know what you are doing. If I made you Secretary of the Interior tomorrow you would say, "Do not get involved, let them find out," and only they will ever know and the public will never know. Now that is a heck of a policy, is it not?

Mr. CARTER. I think Senator, you painted a rather bleak picture.

Senator HOLLINGS. I paint the truth. Is that not what we have been doing?

Mr. CARTER. No, sir. I do not think so.

Senator HOLLINGS. What has been the case?

Mr. CARTER. I think the case has been that industry has done a very good job.

Senator HOLLINGS. They are doing and they continue doing a good job. It is not a question of good or bad job, it is a question of whether the government is getting a return and we have not had any surveys that show that.

Mr. CARTER. Return in what respect, Senator?

Senator HOLLINGS. Return in active oil drilling, bringing it in and everything else of that kind. We are completely at the mercy—

Mr. CARTER. The question answered earlier today, there is some concern that the public is not being, let us say, paid for these public lands. How much should they be paid?

Senator HOLLINGS. We do not know.

Mr. CARTER. I do not know either. I think it is what the market will bring.

Senator HOLLINGS. Then the market too is another question. When you get a market as big as 10 million acres on a crash basis we are shown again, from the ocean policy study, you get only one or two participating. Take the bidders from 1973 to 1974. Whereas in 1973 we had over two-thirds of the bidders participating in three or more of the bids; but two-thirds of the tracts in 1974 had two or less bidders. And the Department of the Interior said two or less was not competitive. That is their finding.

Mr. CARTER. Here we have two forces at work. Heretofore the Federal Government put up, let us say it was on the order of 500-600,000 acres at the sale. Now they (the sales) are getting larger and the price is coming down per acre.

Senator HOLLINGS. I read that in the record. I agree, price has to come down.

Mr. CARTER. Now, many claims are made that based on the number of bids per tract, competition is decreasing. But I would maintain that if the price was coming down, there is a bigger opportunity for more companies to come in and this in itself creates competition. So who is right? When putting up more acres, the price goes down. That is true, but you also bring it within the realm of possibility for smaller companies to buy and participate and this increases competition. So you see, I have problems tying the conclusions of the NOPS study to the idea of whether the situation is competitive or anti-competitive.

Senator HOLLINGS. Well the complications in the study show that competition actually lessened.

Mr. CARTER. I think they used the idea of the number of bids per tract has decreased and there is only one winner for these leases, the high bidder.

Senator HOLLINGS. And they are in a risky business and I am just trying to eliminate some of the risk so we will all know.

Mr. CARTER. Yes.

Senator HOLLINGS. Would that not be good?

Mr. CARTER. That would be wonderful.

Senator HOLLINGS. Suppose you were the Secretary of the Interior. Would you not like to see that done? You could whip these oil boys into shape and in no time flat. You could say; "the honeymoon is over, we are going to work for our interest and the people's interest", and the cards will be on the table and all the risk is going up and you could find exactly what you are bidding for. It would be the market price and we could all know what it is that would be a good program.

Mr. CARTER. I am not here to ask. I am here to answer questions. The one thing that goes through my mind where does the Federal Government draw the line on it's exploratory work. Now there is plenty of evidence in the record that shows quite often it takes more than one well to test a structure.

Senator HOLLINGS. Oh yes.

Mr. CARTER. On the structure.

Senator HOLLINGS. Right.

Mr. CARTER. In this NOPS study great weight was put on the fact that on the average it takes so many wells per tract before the lease is dropped by the company. It fails to take into account the fact that there may be other companies with different ideas who may come in and take the lease back again. Now the government comes in and I am sure if it drilled wells it would probably drill first of all on the most obvious structures. This is not unusual. I think even a company would do this. It would drill the most obvious first. The government might not find any oil or gas on it. It has happened before. It happened to us. It happens to us all the time. We drill what we think is the right place. In this case you drill where the government thinks is the right place and they with their expertise, the well turns out to be dry.

Senator HOLLINGS. But dry on one find.

Mr. CARTER. That is the average, but that is not what I am referring to. I am talking about the number of wells an average of one on each of these tracts. There is a difference. Then the government gets discouraged and they have succeeded in damaging the prospect. They say we do not want this anymore. We drilled one well. Let us lease it to industry. The structure has been damaged so the price would not be as high as if no well was drilled on it at all. No, I think this is a consideration in terms of what is best for the public interest in terms of revenue. In other words, where do you stop? Are you going to go and drill and drill. There is plenty of evidence that 10 and 12 dry holes have been drilled on a structure before anything is found, by as many as 10 different companies, each with different ideas. Now the government might have an idea that there will be oil or gas under this structure, drills one well, then moves on somewhere else. Then industry comes along and maybe they have another idea and they lease from you. They can not give you as much money as if no well was drilled at all.

Senator HOLLINGS. It is your contention that if the government were to find out what it has, it would damage the government?

Mr. CARTER. Would damage the public in the long run.

Senator HOLLINGS. Damage the government in the long run, because you like to take the risk and you do not want to see the government take the risk?

Mr. CARTER. We are prepared to take the risk. Industry is made up of 500 oil companies, each with its own staff and its own ideas about a given province. So it is the constant mulling about among the members of industry that finds the oil and gas. Not just simply one company. Let us say that the government is going out there and drill. It does not do the job. It takes more than that.

Senator HOLLINGS. Well I know there is a basic apprehension about the government going into business, Mr. Carter. I am trying my best to head it off on the pass. You need to get some rationality in the governmental programs which everyone can understand. You first admit that Gulf would not sell to Texaco or Exxon an acreage or tract unless it knew what it was selling. I want the government to find it out. I might find out there is a dry well. Someone might have a different idea. But how do I explain that logically to my con-

stituency here in America. You come up and they say, "that crowd in Washington is in the hands of the Philistines. We might as well nationalize the oil companies and do it ourselves." That would be the worst thing that would happen. I do not want to get the government in marketing, or the various proposals that the government do the bidding with the Arab nations. I do not think it would work out. I am trying to keep the government out of this. If we try on a marginal basis, learning what we have and eliminate that feature of risk. You emphasize in your formal statement not to impose a practice that you yourself would recommend; if you were running the private company, owning the acreage yourself, and say not to do it. I do not understand.

Mr. CARTER. One thing that would be helpful, I am not advocating a sale of 10 million acres, I would have a problem seeing industry lease 10 million acres a year.

Senator HOLLINGS. How much do you think they could lease in the next year?

Mr. CARTER. I would say, actually lease 1½ to 2 million acres in a year.

Senator HOLLINGS. That is what the American Petroleum Institute said, 1.3 million, 1½ million.

Mr. CARTER. That is something we could take on and I think it could be justified.

Senator HOLLINGS. But Texaco was on TV last night. Texaco said they want to hurry up with the government's stepped up program of leasing. They endorse that. They are putting it on TV ads. So you are trying to polarize an aim. And would go around with you if you had a logical factor. You tell me yourself you are running the government, you want to know what you are selling.

Mr. CARTER. That is right.

Senator HOLLINGS. That is all we are trying to do is find out what we are selling.

Mr. CARTER. It highlights the complexity of the thing by leasing somewhat more than had been leased in the past. The price will come down and this in itself will eliminate what seems to be one of the problems, and that is the so-called companies joining together into groups. The only reason they did it is because they knew the competition, meaning the cost that was entailed, would be so high no one company could handle it.

Senator HOLLINGS. That is right. This would eliminate just that.

Mr. CARTER. More acreage leased, the price comes down, and we are more apt to handle it on our own, and it would eliminate the problem.

Senator HOLLINGS. That is actual size of acreage we are talking about, the actual oil being there. Many companies would drill and bring it in and that is America's problem. That is what the Texaco advertisement said. We are trying to bring it to you, Mr. and Mrs. America. Senator Johnston and I could form an oil company if we hire a few geologists. We have good credit, we could get a rig and start right in. You would not have to be mammoth. You would not have to take all the risks and have all the geologists, and everything

else. Some of the dry holes would bring the price down and the finds would bring it up. We are not trying to guarantee the taxpayers the maximum return. The fair return, the realistic thing.

Mr. CARTER. You want a fair return and you also want evaluation of your lease.

Senator HOLLINGS. Exactly, and the evaluation of acreage would come through a program that you and I would introduce.

Mr. CARTER. And I maintain, that the evaluation of the acres made available would be taken care of because it will be cheaper and allow more companies to come in, and there will be——

Senator HOLLINGS. And we got a shortage of rigs?

Mr. CARTER. Yes sir, this is why the 10 million acres a year is probably hopeless.

Senator HOLLINGS. I heard testimony before in these hearings earlier that the acreage leased in 1973 and 1974, that it would be years before they can find additional rigs to go into additional acreage even if it was leased this afternoon.

Mr. CARTER. That is quite likely.

Senator HOLLINGS. Thank you lots.

Senator JOHNSTON. Mr. Carter, you were asked whether Gulf was organized like the government. There are some important differences, are there not?

Mr. CARTER. Yes sir.

Senator JOHNSTON. You do not have civil service?

Mr. CARTER. No.

Senator JOHNSTON. Your board of directors is paid more than \$42,500, are they not? You see what you get for \$42,500.

Mr. CARTER. No, I think as a matter of fact, our directors do not even get that much. They get their expenses for attending a meeting.

Senator JOHNSTON. Mr. Carter, you said Gulf would not sell 10 million acres unless they knew what they had. Gulf farms acreage all the time?

Mr. CARTER. Yes sir.

Senator JOHNSTON. Before you do the test runs?

Mr. CARTER. Not always, sometimes. Sometimes we farm the acreage without drilling the well.

Senator JOHNSTON. You farm?

Mr. CARTER. Let us say it is 50-50. Sometimes we drill a well and we farm it out. sometimes we do not. I do not know the proportion.

Senator JOHNSTON. When you say, the question was asked to you if you could sell the 10 million acres and you wanted to know what was there, how many wells would it take you and how many dollars do you think it would take to find out what is on 10 million acres?

Mr. CARTER. Well let me think about that just a second. I am going to say it may take as many as a thousand wells, one well for every 10,000 acres. Even that is a rather thin density, light density and those 1,000 wells may cost \$800,000 to \$1 million apiece depending on where they are. You are looking at a lot of money and you are looking at a lot of drilling and a lot of time.

Senator JOHNSTON. The Department of Interior said that the exploratory program on the OCS may cost up to \$10 billion. Would you say that is——

Mr. CARTER. I would certainly start with that figure.

Senator JOHNSTON. At \$1 million apiece and a thousand wells, that is exactly \$10 billion?

Mr. CARTER. That is the drilling, not to mention all the geophysical work that would have to be done in order to locate the wells. Geophysical work costs on the order of \$300 to \$500 a mile.

Senator JOHNSTON. You say a thousand wells and maybe \$800,000 to \$7 million apiece, about \$10 billion which is about what Interior said. And still you would not be able definitively to condemn or to prove up on your structures out there, would you?

Mr. CARTER. With a thousand wells?

Senator JOHNSTON. The Gulf of Alaska, George's Bank, Baltimore Canyon?

Mr. CARTER. It would go a long way. It would go a long way.

Senator JOHNSTON. Toward proving it out and condemning?

Mr. CARTER. Yes.

Senator JOHNSTON. And how much time would that take?

Mr. CARTER. Taking them one at a time?

Senator JOHNSTON. No, you could do more than one at a time.

Mr. CARTER. Well, it depends on the number of rigs. If you want to put a hundred rigs on it, ten wells per rig all working simultaneously, the job could be done in 3 years.

Senator JOHNSTON. That leads to my next question. We had testimony here that the offshore industry can grow at only about a rate of 20 percent per year. That is about the capacity of it's shipyards, et cetera, to build equipment. Is that a reasonable choice?

Mr. CARTER. I am not really qualified to say that is in regard to building rigs. I read the testimony in that regard and I am sure it is accurate. I would have no reason to argue with it.

Senator JOHNSTON. That seems to be in accordance with your experience?

Mr. CARTER. Yes.

Senator JOHNSTON. There is a shortage right now?

Mr. CARTER. Of certain types of rigs.

Senator JOHNSTON. In other words, you would be able to say if the Government leased 10 million acres, you just do not have the rigs and the capacity to go explore that all at once. You would have to wait for the rigs to be built, would you not?

Mr. CARTER. To do it all at once on the same probe.

Senator JOHNSTON. Do it in 3 years as you suggest?

Mr. CARTER. Three years, very definitely.

Senator JOHNSTON. For example, the Gulf of Alaska, you have very few rigs (for that area)?

Mr. CARTER. They could not even handle it.

Senator JOHNSTON. You would have to wait for them to be built?

Mr. CARTER. They are being built, as a matter of fact.

Senator JOHNSTON. If there has been, in effect, a shortage of rigs in the sense that if we're going to try to develop all of this on a quick basis, explore it all on a fairly quick basis, there are just not enough rigs to go around?

Mr. CARTER. I would say that would be a good general conclusion.

Senator JOHNSTON. And you got increasing competition, for rigs, from the North Sea and Indonesia, and we used to have from South Vietnam. But, the conclusion then is this: That if the Government got in the exploratory business they do not have their rigs. Now would they not just be taking those rigs from private enterprise?

Mr. CARTER. That is the only place they are available, yes, from private industry, yes.

Senator JOHNSTON. Now, we have heard Senator Hollings say that there is evidence that we have not got enough, the Government has not got enough return from OCS development and exploration. My experience, or the facts I have been given, are that—in effect than—the Gulf of Mexico, where some 90 percent or some 95 percent of the exploration and development has taken place, has not been particularly profitable for private oil companies. Is that not correct?

Mr. CARTER. That is correct.

Senator JOHNSTON. What is Gulf's experience out there?

Mr. CARTER. We were almost; this is on a dollar-for-dollar basis, cash basis, cash in and cash out. We were almost even after almost 20 years of experience in the offshore, when the moratorium ceased and the sale was held in September of 1972. Since that time we have gone back in the hole, on a dollar basis, probably to the tune of half a billion dollars.

Senator JOHNSTON. You are hopeful of making some returns from out there?

Mr. CARTER. From what we have now, yes.

Senator JOHNSTON. From that, as of right now you are half a billion dollars in the hole and as of September of 1972 you were about even with the board for about 20 years of drilling activity?

Mr. CARTER. Yes sir, that is correct.

Senator JOHNSTON. When you started in the Gulf of Mexico you started in the most shallow and the easiest to find geologically out there, right?

Mr. CARTER. That is correct.

Senator JOHNSTON. Is that experience not reasonably typical in the Gulf with Exxon and with Texaco and the other companies?

Mr. CARTER. It is reasonable in any exploration area, even a frontier area. You begin with the known and project into the unknown. Offshore Louisiana was merely an extension of onshore activity of years ago.

Senator JOHNSTON. But what I am talking about is your returns. The Gulf of Mexico has not been a bonanza for anybody?

Mr. CARTER. No, it has not.

Senator JOHNSTON. You are hoping to come out on it?

Mr. CARTER. We think we will come out with what we have now. We are willing to roll that money over as long as there are prospects there to be drilled.

Senator JOHNSTON. Mr. Carter, one final question. We had testimony before this committee from people who actually knew the exploration out there, and one point that they made, I thought particularly appropriate, is when you are exploring you need to change

decisions and make decisions quickly involving multithousands of dollars; to move location or whatever and do that quickly, and you cannot wait to put out bids and that sort of thing. Is that true in your experience with Gulf?

Mr. CARTER. Yes sir. It happened just recently where we drilled a well in the offshore and before they got out of the conductor pipe the bottom gave way. After an expenditure of \$500,000, we had to move the rig over 150 feet and start over again and this decision was made at the local level. Now our organization is such that our district offices have the authority to make these decisions up to a certain monetary amount, and it is easy to pick up the telephone and call into headquarters. When we have this problem, we have no choice. We can move over and start again. That is the way you do it.

Senator JOHNSTON. When you start out with a program of exploration or lease, do you follow the program right through or is it frequently changed and modified as you go along?

Mr. CARTER. Our exploration program?

Senator JOHNSTON. Yes.

Mr. CARTER. Frequently it is changed. It is the sort of a business where you have to stay flexible. Because of geological change, you might have to change accordingly. You may want to change the depth or to stop where you are.

Senator JOHNSTON. You may want to drill more holes or less holes?

Mr. CARTER. That is right, definitely.

Senator JOHNSTON. And it is frequently done, is it not?

Mr. CARTER. It is a part of the business and it is always there, the possibility of having to make decisions like that.

Senator JOHNSTON. Would it be difficult for the Government to have that kind of flexibility?

Mr. CARTER. If it were organized on a similar basis, it should be able to perform similarly. I think it is just a matter of organization, whether you can do it or not.

Senator STONE. Any further questions? Senator Hollings?

Senator HOLLINGS. Mr. Carter, just as you leave, are there any amendments to the Outer Continental Land Act that you can suggest, I would appreciate it. We have got problems. Rather than take a negative attitude or approach, by proposing these amendments the industry can help us and say something that makes sense. We have something that could meet the needs and be of benefit to the public interest. We would feel better; if you would do this rather than for you to make this assault across the front where you tell us to reject all amendments, all suggestions and everything else; and say that, "We like it the way it is." And then offer many pages of testimony about all the risks and everything. It must not be so risky, or costly, or difficult, or so impossible. As the Senator from Louisiana pointed out, the financial rate is right (at the top). Successfully you all have got plenty of reserves and everything is working fine. So I mean on balance, it is on both sides, and it is gainfully employed. We have gotten from our experience that we learn from all of the people. We know the government can get into it, it found petroleum reserve

number four. It was working on petroleum reserve number five, which was in Saudi Arabia. A lot of people do not realize this. That is where it was in the Roosevelt era.

Mr. CARTER. I did not know that.

Senator HOLLINGS. That is where petroleum reserve number five was planned for, Saudi Arabia. So it is risky. We have got to band together. When you get as large as the government, you do not want the government. You want your government, not our government.

Mr. CARTER. Let me say this. I think I understand your problem and I could not agree with you more. When you asked for our thoughts on the amendments or even new bills, it does seem like we always come in here and say we do not like it and whatever you do we do not like it.

Senator HOLLINGS. That is right.

Mr. CARTER. I think it typifies when there is something wrong with the process. We do not act. We only react. You people write the laws, or write the bills, and then ask us for an opinion, and of course we react. There is no system, viable system to my knowledge, that permits a lot of this work to be done with industry input to help you in a manner in which I think you are asking. I may be mistaken, but I think I see your point.

Senator HOLLINGS. Anyway, you could help us and we would appreciate it.

Mr. CARTER. We come here and testify for a few minutes, and all we can say is, "We do not like what you have done." In a way it is like saying, "Go back and do it over again." But that is no input from us.

Senator HOLLINGS. We do not want to overreact like we have done in some fields; like we have done with air and water and pollution control systems and required the impossible. We have got to find more energy and we need the help from industry, and we think we got pretty good help from some of the studies we made and we find business making a profit. And let us keep going, but, come here and tell us something you know. Thank you sir.

Senator JOHNSTON. Mr. Carter I want to echo that sentiment, and I think you have gotten the drift of some of the problems we want to solve. We want to invite you to be continually involved if you can. Go back to your drawing boards and tell us now we might first get more capital out there on the Outer Continental Shelf through some new bidding procedure. S. 3221, which was passed last year, provided for the alternative means of bidding. We got some discussion on that today. You might give us further suggestions on that. You might give us further suggestions that would assure the public that we are not selling something we ought to know more about. In other words, information gathering that would be consistent with your ideas about it. We would appreciate that. I think the concept is not bow out by fact. We are talking about prospects into the future, not what is going in fact. So if you could give us that information we would appreciate it.

Senator STONE. Thank you very much.

[The prepared statement of Mr. Carter follows:]

STATEMENT OF
J. O. CARTER
VICE PRESIDENT OF EXPLORATION
GULF OIL COMPANY - U. S.

BEFORE THE
JOINT SENATE COMMITTEES
ON INTERIOR AND INSULAR AFFAIRS
AND
THE COMMERCE COMMITTEE

WASHINGTON, D. C.

APRIL 8, 1975

MR. CHAIRMAN AND COMMITTEE MEMBERS, BY NAME IS J. O. CARTER AND I AM A VICE PRESIDENT OF GULF OIL COMPANY - U.S. IN THIS CAPACITY I HAVE THE RESPONSIBILITY FOR GULF'S EXPLORATION, BOTH ONSHORE AND THE OFFSHORE AREAS OF THE UNITED STATES.

NINE BILLS ARE BEING CONSIDERED BY YOUR COMMITTEES RELATING TO PETROLEUM EXPLORATION AND DEVELOPMENT ON THE OUTER CONTINENTAL SHELF. THE SIGNIFICANCE YOU HAVE PLACED ON THE SUBJECTS COVERED BY THESE BILLS CLEARLY ESTABLISHES THAT THE POLITICAL AND BUSINESS IMPLICATIONS OF A LONG RANGE NATIONAL ENERGY POLICY ARE GOING TO BE PROFOUND. THE FACT THAT MEMBERS OF THE INDUSTRY AND TRADE ASSOCIATIONS COME IN NUMBERS BEFORE YOU TO TESTIFY AS TO THE ADEQUACY OF THESE SUBJECTS IS PROOF ENOUGH THAT THEY CONSIDER THEM OF THE UTMOST IMPORTANCE. THAT THIS COUNTRY IS NOW CONFRONTED WITH ECONOMIC AND ENERGY PROBLEMS OF EXTRAORDINARY PROPORTIONS, MAKES CLEAR THAT CONTROL OF OUR OWN POLITICAL AND ECONOMIC DESTINY IS IN JEOPARDY. EXTERNAL PRESSURES WILL CEASE ONLY IF WE MOVE IN THE RIGHT DIRECTION. I SUBMIT THAT WE HAVE A COMMON INTEREST WITH YOU TO ACHIEVE A SOLUTION WITHIN THE FRAMEWORK OF A LAW HAVING A HISTORICAL BASE IN THE AREA OF PUBLIC INTEREST AND IN THE PRESERVATION OF TRADITIONAL ECONOMIC CONCEPTS.

THE OVER-RIDING AND THE MOST CRUCIAL CONCLUSION TO MAKE IS TO DO WHAT IS RIGHT FOR ALL. THE OVER-RIDING AND MOST CRUCIAL CONDITION TO MEET IS TO IMPLEMENT THE POLICIES FORMULATED WITHIN A VERY NARROW TIME-FRAME.

AS A SCIENTIST, AS AN ADMINISTRATOR, AND AS A MEMBER OF THE BUSINESS COMMUNITY, I WOULD BE REMISS IF I DID NOT REFLECT ON WHAT I BELIEVE TO BE TWO FUNDAMENTAL ISSUES THAT PROMPTED THE BILLS UNDER CONSIDERATION. FIRST IS THE EXTENT OF THE ENERGY RESOURCES

OF THE UNITED STATES, AND SECOND, HOW BEST TO BRING THEM TO THE ENJOYMENT AND PROSPERITY OF THE NATION.

ON THE FIRST POINT, I SUGGEST THAT THE CHALLENGE OF EXPLORING FOR OIL AND GAS IS TECHNOLOGICALLY MORE COMPLEX THAN THE BILLS WOULD IMPLY. I HAVE SEEN REPORTS, SCIENTIFIC PAPERS AND ARTICLES METICULOUSLY COUNTING THE NUMBER OF BARRELS OF OIL AND CUBIC FEET OF NATURAL GAS RESOURCES TO BE FOUND IN THE COUNTRY, PRINCIPALLY OFFSHORE. OSTENSIBLY, THE BILLS SEEM TO SAY THAT ALL ONE NEEDS TO DO IS SIMPLY DRAW OFF WHAT THE NATION NEEDS, WHEN IT NEEDS IT, IN A PLANNED AND ORDERLY MANNER.

BUT JUST WHERE IS ALL OF THAT OIL AND NATURAL GAS? THE MOST COMPETENT AUTHORS OF THESE REPORTS SAY THEY ARE IN THE FRONTIER AREAS - OFFSHORE ATLANTIC SEABOARD, CALIFORNIA AND ALASKA, WHEN IN FACT AT THIS TIME THEY ARE ONLY IN OUR MINDS.

AS AN EXAMPLE, TAKE THE MAFLA FRONTIER AREA - THE OFFSHORE OF MISSISSIPPI, ALABAMA AND FLORIDA IN THE EASTERN GULF OF MEXICO. PRIOR TO THE DECEMBER 20, 1973 LEASE SALE, THE INTERIOR DEPARTMENT HAD ESTIMATED RECOVERABLE RESERVES OF ABOUT 2 BILLION BARRELS OF OIL AND 2 TRILLION CUBIC FEET OF GAS. DURING THE FIVE YEAR PERIOD PRECEDING THE SALE, INDUSTRY HAD SPENT IN EXCESS OF AN ESTIMATED \$60 MILLION FOR GEOLOGICAL AND GEOPHYSICAL EXPLORATION IN THE AREA. CASH TOTALING \$1.4 BILLION WAS PAID IN THE FORM OF BONUSES BY INDUSTRY TO THE GOVERNMENT FOR TRACTS IN THIS "FRONTIER AREA". SUBSEQUENTLY, INDUSTRY HAS SPENT APPROXIMATELY \$20 MILLION IN WILDCATTING ON WHAT THE SCIENTIFIC COMMUNITY WILL AGREE ARE THE MOST ATTRACTIVE PROSPECTS. RESULTS TO DATE? NOT ONE BARREL OF NEW OIL OR ONE CUBIC FOOT OF GAS HAS BEEN DISCOVERED. I WOULD INVITE MEMBERS OF THIS COMMITTEE TO READ THE ARTICLE ENTITLED, "HOPES WANE FOR BIG NEW RESERVES IN EASTERN

GULF," APPEARING ON PAGE 21 OF THE MARCH 10, 1975 OIL AND GAS JOURNAL. THE POINT I MAKE IS THAT NO ONE CAN DETERMINE WITH ANY DEGREE OF ACCURACY IF OIL WILL BE FOUND UNTIL WELLS ARE DRILLED. AND HERE THE QUESTION IS RAISED "WHO IS BEST EQUIPPED WITH TECHNOLOGY, ORGANIZATION AND HISTORICAL SKILL NOT ONLY TO EXPLORE BUT TO PROFESSIONALLY DEVELOP ANY RESOURCES THAT MIGHT BE FOUND? THE GOVERNMENT OR INDUSTRY?" THE PHYSICAL ACT OF DRILLING CAN BE DONE BY EITHER. THE GOVERNMENT ON THE ONE HAND CAN HIRE THE GEOPHYSICAL PERSONNEL TO LOCATE THE DRILL SITE, THE RIG TO DRILL THE WELL, AND THE NECESSARY ENGINEERS AND SCIENTIFIC PERSONNEL TO SUPERVISE THE OPERATION. SOME OF THE BILLS BEFORE THIS PANEL WOULD AUTHORIZE SUCH AN UNDERTAKING. INDUSTRY ON THE OTHER HAND ALREADY HAS THE TECHNOLOGY, THE ORGANIZATION AND THE HISTORICAL SKILL WELDED INTO A CAPABILITY BEYOND REPROACH. BUT WE ARE NOT TALKING ABOUT ONE WELL. WE ARE TALKING ABOUT A MAJOR PROGRAM OF EXPLORATION COVERING THOUSANDS OF MILES OF TERRITORY, SPANNING YEARS OF TIME AND CONSUMING PERHAPS BILLIONS OF DOLLARS. THE SINGULAR DIFFERENCE BETWEEN WHETHER THE GOVERNMENT OR INDUSTRY SHOULD PLAY THE ROLE OF EXPLORER AND/OR DEVELOPER, ON THIS ORDER OF MAGNITUDE, IS THE MATTER OF EFFICIENCY WHICH TRANSLATES INTO THE ULTIMATE COST TO THE PUBLIC. THE PUBLIC DOES NOT HAVE ADEQUATE DOCUMENTATION THAT THE GOVERNMENT CAN OPERATE AS EFFICIENTLY AS INDUSTRY AND YOU SHOULD SERIOUSLY CONSIDER THIS POINT FOR ITS ULTIMATE RAMIFICATIONS IN THE EVENT OF FAILURE.

YOU MAY ASK WHAT IS INDUSTRY'S DOCUMENTATION THAT IT HAS DEMONSTRATED EFFICIENCY? I WOULD ANSWER BY SAYING THAT COMPETITION PROMOTES EFFICIENCY WITHIN ANY COMPANY AT ANY LEVEL IN ANY INDUSTRY. EFFICIENCY IS PARAMOUNT TO A COMPANY'S SURVIVAL. IN SHORT THE FACT THAT A COMPANY VIABLY EXISTS IS DOCUMENTATION OF ITS EFFICIENCY.

CAN GOVERNMENT AND INDUSTRY OPERATE IN BUSINESS SIDE BY SIDE, THE ONE PROVIDING A STANDARD FOR THE OTHER? I SUBMIT THEY SHOULD NOT, BECAUSE IT WOULD CROSS FUNCTIONS. THE GOVERNMENT ROLE IS TO SET POLICY AND GUIDELINES WITHIN WHICH INDUSTRY CAN EFFICIENTLY CONDUCT THE BUSINESS.

TO ILLUSTRATE, LET ME GIVE YOU WHAT I THINK ARE THE MOST IMPORTANT ITEMS IN THE VARIOUS BILLS BEFORE YOU PERTAINING TO THIS DESIRE TO CROSS FUNCTIONS:

1. S. 521 DIRECTS THE SECRETARY OF THE INTERIOR TO CONDUCT A SURVEY OF THE OUTER CONTINENTAL SHELF OIL AND GAS RESOURCES TO PROVIDE A BASIS FOR DEVELOPING AND REVISING A LEASE PROGRAM.
2. S. 426, S. 740 AND TO SOME EXTENT S. 521 AUTHORIZE THE SECRETARY TO ALSO DRILL EXPLORATORY WELLS.
3. S. 426 AUTHORIZES CONGRESS WITH ALL ITS OTHER ACTIVITIES IN RUNNING THE COUNTRY TO HAVE TO PAUSE FROM TIME TO TIME TO MAKE OPERATING DECISIONS, APPROVING LEASE AND DEVELOPMENT PLANS.

THE SECOND ISSUE PROMPTING THESE BILLS AND OTHERS LIKE THEM, IS HOW TO BRING THE RESOURCES TO THE ENJOYMENT AND PROSPERITY OF THE NATION.

HERE IS WHERE THAT CRUCIAL CONDITION OF WORKING WITHIN A VERY NARROW TIME-FRAME COMES INTO PLAY. THINGS SEEM TO BE GOING WELL AGAIN A YEAR AFTER THE ARAB EMBARGO. PETROLEUM SURPLUSES HAVE EXISTED IN RECENT MONTHS, BUT LET'S NOT FORGET THAT SOME 40% OF IT IS BEING SUPPLIED FROM FOREIGN SOURCES. EVEN THOUGH INFLATION IS STILL WITH US, A RECESSION IS UPON US, AND EIGHT MILLION PEOPLE ARE OUT OF WORK - SOMEHOW, EVEN WITH THESE CONTRADICTIONARY ECONOMIC

CONDITIONS, WE SEEM TO ASSUME THAT THE PRICES ARE GOING TO COME DOWN AND IF THEY DON'T WE WILL FORCE THEM DOWN SO THAT WHEN THAT HAPPENS WE CAN ALL BREATHE A SIGH OF RELIEF THAT THE CRISIS IS PAST. I CAN ONLY SAY TO YOU FROM MY POSITION IN THE INDUSTRY THAT THE CRISIS IS NOT THE PRICE BUT THE QUANTITY OF THE RESOURCE. TO THOSE WHO SAY THERE IS PLENTY OF TIME TO PLAN THE ORDERLY DEVELOPMENT AND PRODUCTION OF OUR DOMESTIC ENERGY RESOURCES - I WILL REPLY "TIME WHICH WE DO NOT HAVE AND RESOURCES THAT DO NOT YET EXIST."

I SUBMIT THAT WE WILL NOT HAVE SEEN THE END OF THE ENERGY CRISIS BUT ONLY OF ITS BEGINNING.

PERTAINING TO TIME WHICH WE DO NOT HAVE:

1. SENATE BILLS 81, 426, 470 AND 521 WOULD SUSPEND OCS LEASING FROM 18 MONTHS TO THREE YEARS.
2. THREE OF THE BILLS WOULD ALLOW THE STATE GOVERNORS TO REQUEST POSTPONEMENT FOR UP TO THREE YEARS.
3. S. 521 AND S. 426 PROVIDE AVENUES FOR CIVIL ACTION BY ANY PERSON HAVING AN INTEREST WHICH IS ADVERSELY AFFECTED.

THROUGHOUT, THE WORDS DELAY, SUE, POSTPONE AND SET ASIDE RECUR MORE THAN ONCE.

FINALLY, THE PUNITIVE ASPECTS OF THE BILLS CANNOT GO UNNOTICED. FOR EXAMPLE:

1. S. 426 ADDRESSES ITSELF TO AUTOMATIC TERMINATION OF EXISTING PERMITS AND LEASES WHICH RAISES CONSTITUTIONAL QUESTIONS.

2. S. 426 AND S. 521 APPLY ONEROUS LIABILITY ON LESSEES
FOR OIL SPILLS.

VIEWED OBJECTIVELY, MY COMMENTS WILL APPEAR TO SUGGEST THAT NONE OF THESE BILLS REPRESENT THE BEST EFFORTS OF THE AUTHORS. THAT WOULD BE A NARROW PURVIEW AND AN UNJUST CONCLUSION. THEY DO CONTAIN THE SEED OF AN ENERGY POLICY BUT I FEAR THEY WILL FAIL TO MEET THE TEST OF TIME IN THEIR PRESENT FORM. THEY DO NOT RECOGNIZE THAT THE MECHANISM IS AT HAND IN THE INDUSTRY TO DO THE JOB OF EVALUATING OUR ENERGY RESOURCES; THEY DO NOT PERMIT THE GOVERNMENT TO PERFORM ITS HISTORIC ROLE OF ADMINISTRATION BUT THEY INJECT THE GOVERNMENT INTO THE ROLE OF OPERATIONS; AND THEY DO NOT RECOGNIZE THE TIME FACTOR NECESSARY TO DEVELOP THESE RESOURCES, AND I WILL SAY IT AGAIN, IF THEY EXIST AT ALL.

NOT ALL BUSINESS DECISIONS ARE GOOD ONES. WHEN A PROJECT GOES SOUR IT CAN BE STOPPED, SOMETIMES AT A GREAT LOSS BUT RARELY IS IT SO LARGE THAT IT WOULD HAVE NATIONAL IMPACT AS WOULD BE THE CASE IF GOVERNMENT WERE DIRECTLY INVOLVED. YOU AND YOUR DISTINGUISHED COLLEAGUES ARE IN PUBLIC OFFICE. MATTERS OF NATIONAL POLICY ARE YOUR "BUSINESS". SINCE POLICY AFFECTS THE WHOLE NATION, WHAT YOU DO MUST BE AS CLOSE TO RIGHT AS POSSIBLE. YOU CANNOT PASS A BILL INTO LAW AND IF IT DOESN'T WORK MERELY PASS ANOTHER BILL INTO LAW THAT WILL REVERSE ITS EFFECTS. I DON'T ENVY YOUR POSITION BUT I WOULD BE REMISS IF I DID NOT SPEAK OUT WITH EVERY WORD OF CAUTION AT MY COMMAND TO BE CAREFUL WITH ENERGY AND WITH THOSE WHO ARE ENGAGED IN SUPPLYING IT. YOUR GREATEST CAPACITY AS STATESMEN IS CALLED UPON.

AT THIS POINT I WOULD LIKE TO OFFER SUGGESTIONS WHICH MAY ASSIST YOU IN YOUR ULTIMATE DECISIONS. TIME DOES NOT PERMIT GOING

INTO THEM IN DETAIL BUT I WILL REFER YOU TO OUR WRITTEN STATEMENT WHICH SUPPLEMENTS MY TESTIMONY AND IS HEREWITH SUBMITTED FOR THE RECORD.

I HAVE SAID THAT EVEN THE BEST SCIENTIST CANNOT PREDICT THE CERTAIN OCCURRENCE OF OIL AND NATURAL GAS RESOURCES. BUT IN TERMS OF ENERGY POLICY AND WHAT I DO KNOW AND HAVE SEEN OF THIS COUNTRY'S ENERGY SOURCES, WHAT YOU DO IN THIS INSTANCE MAY VERY WELL BE IRREVERSIBLE. TIME IS RUNNING AND THIS IS OUR LAST CHANCE.

WRITTEN SUBMISSION

OF

GULF OIL COMPANY - U. S.

ON LEGISLATION DEALING WITH

THE OUTER CONTINENTAL SHELF

BEFORE THE

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

AND THE

COMMITTEE ON COMMERCE

WASHINGTON, D. C.

APRIL 8, 1975

There is currently a real awareness of the significance of the Outer Continental Shelf, which is the most promising source of increased domestic supply of oil and gas, and of the importance of the proposals that are the subjects of the joint hearings before the Committee on Interior and Insular Affairs and the Committee on Commerce of the United States Senate.

The U.S. and other western industrialized nations are faced with the reality of their dependence on external energy supplies. The American public is well informed now of the inherent danger of this situation, particularly in the near future. By the mid-1980's the free world's production of oil will have peaked and sufficient supplies may not be available at any price. This is a disastrous course from which there might be no recovery. The Arab Embargo was a rude awakening, for it clearly showed that we must move forward with the development of our domestic resources. During that short-lived embargo our Gross National Product declined by some \$20 billion, adding measurably to the rate of inflation felt by all Americans, and leaving some 500,000 people without jobs.

Presently we depend upon foreign sources for 35-40% of our petroleum needs and indications are this reliance may only increase. At the current rate at which we import petroleum, over \$24 billion annually is being paid to foreign suppliers, resulting in a deficit trade balance. It is projected that this trend will continue at these levels for the next three to five years. However, we must act now if we are to reverse it in the future. For every million barrels a day of additional

oil produced in the U.S., imports are reduced proportionately, which means \$4 billion annually can be kept at home. This money would flow into our own channels of commerce, going for raw materials, construction, wages and taxes, and would provide a powerful and needed stimulus for the economy.

This country is confronted with a staggering rate of inflation which is combined with recession and energy problems of extraordinary proportions. It therefore is clear that we cannot long continue to rely heavily on energy controlled by foreign suppliers. The frontier areas of the Outer Continental Shelf have the greatest potential of undiscovered reserves of oil and gas. The public well-being demands that these sources be explored. If reserves are discovered, they should be developed as rapidly as possible. At the same time new forms of energy must be developed for the longer term. We cannot afford the luxury of delay any longer. It should be recognized that even after an OCS lease is issued there is a time lag up to seven years from the time an exploratory well is drilled until oil can be produced commercially.

Historians will some day point to a number of factors that have led to the deterioration of our domestic energy supplies, and contributed greatly to the problems we are faced with today. Some of these began years ago but need mention to show how delays and certain governmental actions had a causal relation to the present situation.

In 1954 the U.S. Supreme Court upheld the authority of the Federal Power Commission to regulate the price of natural gas .

at the wellhead. That ruling kept the price of gas at about 1/5 the BTU cost of oil, and thereby encouraged industrial and residential consumers of energy to use this fuel at an unrealistically controlled price. Conversely, the artificially low prices discourage the search for new reserves. This contributed to the lack of supplies of crude oil and coal.

In 1969 we saw the reduction of percentage depletion which removed about 1/2 billion dollars a year from exploration financing. At that time development of the Santa Barbara Channel was halted due to the oil spill. Also in 1969 huge oil deposits on Alaska's North Slope were discovered but could not be developed due to protest against building a pipeline from the oil fields to the ports in southern Alaska. During that same year a legislatively imposed moratorium was continued on the leasing of Federal offshore acreage for exploration of oil and gas. The record shows that from May 1968 through September 1972 there was only one general lease sale of promising geological areas in the U.S.

Had both the Alaska and Santa Barbara oil reserves been developed beginning in 1969, our dependence on foreign oil would have been cut by 2½ million barrels a day by 1974, thus saving in the range of \$10 billion a year in trade balance. It has been estimated by some that reduction in the depletion allowance resulted in some 2,000 oil and gas discoveries not being made in the U.S.

These many delays in the exploration and development of our domestic resources have led to our present dependence upon foreign suppliers for a large part of our petroleum needs. We are ex-

periencing the effects of external political and economic pressures exerted by foreign suppliers, and how disruptive they can be to this nation.

Within recent weeks tax legislation was passed by Congress eliminating the percentage depletion allowance, among other things, which further affects the industry's ability to find and develop new energy resources by removing badly needed funds. Capital requirements for the domestic petroleum industry will be well over \$20 billion a year for the period 1975 through 1985. Loss of the depletion allowance is "another straw" which will result in increased dependence on foreign crude oil. It is obvious that the proposals currently being considered at the joint hearings could accelerate this trend if they are not corrected to permit us to move ahead in the development of the potential reserves of this nation's Outer Continental Shelf.

The congressional intent as expressed in most of the bills before the Senate Committees is meritorious. The purpose of these bills is to increase domestic production of oil and natural gas from the OCS, to achieve national economic goals and assure national security, to reduce dependence on unreliable foreign sources, and to maintain a favorable balance of payment in world trade. However, the underlying theme of these proposals is not consistent with some of the provisions contained in the bills themselves. There are many built-in delay factors which would have an adverse effect on the stated purpose. Some of these delays manifest themselves in such forms as a moratorium on OCS leasing, delays which the coastal state governors may impose on the lease sales, and the requirement that the Federal government perform exploratory work.

With this background, we would like to discuss specific points within the bills which we feel are particularly important.

1. Leasing Program. Gulf favors the concept contained in .

S. 426 and S. 521 of advance planning in the establishment of a ten-year leasing program designed to bring about rapid and responsible development of the OCS oil and gas reserves. However, it is not clear in the Jackson bill (S. 521) whether the Secretary, after approving the leasing program, may issue leases within the two-year period required for submitting it to Congress. This ambiguity should be clarified to provide that the program be approved by the Secretary within six months after enactment, so that he can issue leases thereafter. The leasing program would then be subject to periodic updating.

In conjunction with the development of a leasing program, S. 521 requires that areas be set aside as a National Strategic Energy Reserve. Any strategic reserves established in the offshore areas would not be as militarily secure as those onshore. We should like to point out that the provision in the bill to establish a National Strategic Petroleum Reserves is premature in the light of similar legislative proposals pending before the Senate. Other bills now under consideration by other committees also propose the establishment of civilian petroleum strategic storage onshore which will make oil readily available in the event of an emergency, such as an embargo.

2. OCS Survey Program. Under the Jackson bill (S. 521) the Secretary is directed to conduct a survey of OCS oil and gas resources to provide a basis for developing and revising the leasing program. For this purpose the Secretary may conduct his own exploratory surveys and drilling, or purchase data from commercial

sources. In addition, the Secretary may require any person holding a lease under this act to furnish any existing data about oil and gas resources in the area covered by the lease. All proprietary data shall remain confidential until such time as the Secretary determines that public disclosure would not affect competitive positions. This is different from other provisions in the Jackson Bill which provide that proprietary data is to remain confidential for a period agreed to by the parties. We strongly urge that proprietary data not be disclosed until both the Secretary and the private party making such data available agree to such disclosure, or that the Secretary obtain confirmation from the lessee that release of such data would not in any way damage the competitive position of the lessee.

3. Federal Exploration Program. The Hollings Bill (S. 426) directs the Secretary of the Interior to conduct a government exploratory program, including drilling in the OCS. This represents a radical shift from the discretionary authority contained in the Jackson Bill which permits the Secretary to conduct his own exploratory program only where the required information is not available from commercial sources. Those who desire direct federal involvement claim that a federal exploratory and drilling program will benefit the

American people by providing government with a more accurate measure of the value of the oil and gas reserves in the OCS tracts prior to leasing. However, there is no reason to believe that a government exploratory program would yield greater revenues for the American people than the present system of competitive bidding for leases. It has been said by some that the pre-lease sale values of OCS tracts have been grossly underestimated by the Interior Department. However, this is only one side of the coin --let's look at the other side --the MAFLA sale in "frontier areas", off Mississippi, Alabama and Florida, in the Northeast Gulf of Mexico.

Prior to the December 20, 1973 lease sale, Interior had estimated recoverable reserves of about 2 billion barrels of oil and 2 trillion cubic feet of gas. During the five year period preceding the sale industry had spent in excess of an estimated \$60 million for geological and geophysical exploration in the sale area. Cash bonuses and prepaid rentals totaling \$1.5 billion were paid to the government at the sale for those tracts in "frontier areas". Subsequently, our industry spent approximately \$20 million in wildcatting on the more attractive prospects. Results to date? Not one barrel of new

reserves has been discovered. The Committee members are invited to read the article entitled, "Hopes Wane for Big New Reserves in Eastern Gulf", appearing on Page 21 on the March 10, 1975 OIL AND GAS JOURNAL.

The point made is that no one can determine with a high degree of accuracy if oil will be found until wells are drilled. We will be dealing with other frontier areas which pose greater uncertainties than the MAFLA leases. It is not reasonable to risk billions of dollars of taxpayers' money by having the federal government enter the exploration business.

Another and yet more serious problem is that when government makes mistakes, these mistakes will be enormous ones. The problem is that the government will have only one system evaluating exploratory surveys, rather than the checks and balances found in our competitive system, which provides multiple exploration programs of a number of companies. Additionally, the free market system reduces the range of issues that must be decided through political means, thereby minimizing the extent to which government needs to participate directly in business. Our economic system and political freedoms must be preserved by keeping political and economic considerations separated.

If the government undertook to explore for oil and gas it would mean more years of delay. An effective governmental exploration mechanism would require expertise and trained and experienced personnel. It takes a minimum of four years to educate engineers and geologists and the government would need this type of staffing. These people not only need to be educated, but must have extensive experience in order to perform the type of analysis necessary to estimate reserves and determine their values. There is no question that it would take too many years to wait for the education and training of personnel to undertake such a program as suggested by this proposal. The American people do not have the time to wait for these badly needed resources, nor can our economy function adequately under the depressed conditions we have been experiencing lately.

For the reasons discussed, we are opposed to this proposal and to S. 740 which provides for a National Energy Production Board to carry out exploration and production activities on federal public lands.

4. Leasing and Development Plan. The Hollings Bill (S. 426) proposes that 90 days prior to inviting bids on each tract, the Secretary must transmit a leasing and development plan to Congress, and that it would be deemed approved if not acted upon by Congress within the next 90 days. Also, the bill provides that no lease

will be issued to a lessee if he does not submit his "development plan" consistent with that filed by the Secretary. Failure to comply with the development plan terminates the lease. Further, a similar submission of a development plan is required for existing permits and leases. Failure to submit a development plan or comply with an approved plan terminates the permit or lease.

Under provisions of the bill a lessee has no opportunity to have any input into the development plan before it is submitted to Congress. When he is issued a lease he then must conform his development plan with the plan previously developed by the Secretary. It would seem to be in the government's best interest for industry to be consulted while the Secretary is formulating his development plans and before submitting them to Congress.

Additionally, where a lessee has failed to submit a plan or comply with the approved development plan, his lease will be terminated automatically. This provision is unduly harsh. A lease should be terminated only after the lessee has been notified and given an opportunity to comply with the plan and fails to do so.

The provision terminating pre-existing permits, licenses and leases unless a development plan is submitted to the Secretary and, after approval, complied with by the lessee is arbitrary and probably unconstitutional. In

most instances the holders of previously granted rights-of-way or oil and gas leases have invested large amounts of money and considerable time in obtaining and paying for such permits, rights-of-way and leases and in conducting operations such as laying pipelines or exploring and drilling for oil and gas and, if successful, in development and producing operations. To require a new and perhaps onerous development plan for an existing producing lease could be an abridgment of contract. In addition, to cancel any existing lease without notice or hearing is unconscionable and amounts to an unlawful taking of property without due process. The present OCS Lands Act requires notice to the lessee of any alleged violation or failure to comply, plus an opportunity to cease or correct any act or failure to act before a lease is cancelled. Further, cancellation of a non-producing lease is subject to judicial review and a producing lease may be cancelled only by an appropriate proceeding in the U.S. District Court. Gulf agrees with the establishment of these basic safeguards to prevent arbitrary and unjust action and urges that they be retained.

Delays in Leasing. Senate bills 81, 426, 470, and 521 would suspend leasing of OCS tracts from 18 months to three years. Three of these bills permit a coastal state governor to request postponement of the sale of any lease for a period of up to three years if he determines that the proposed sale has an adverse environmental or

economic impact on his state. We recognize that the coastal states have a serious concern and legitimate interest in the development of the offshore areas which will affect them, but it would be inappropriate for any state to act as a deterrent to the development of our national energy resources which are necessary for the economic well-being of the nation and our national security. Not only that, we cannot afford to delay the development of our own resources. Continuing to depend heavily on costly foreign petroleum causes a tremendous drain on this nation's financial resources.

After the discovery of oil or gas on an OCS tract, up to 7 years is required for production to be brought onstream. During this time frame we in industry could ascertain the extent and amount of production and work with the state and federal governments in resolving the questions raised by the governors. We strongly urge that the coastal states plan for the impact of offshore oil and gas development so as not to delay offshore lease sales or exploratory and development drilling. The time lag from discovery to production will provide those states with the time they need to formulate and implement their coastal zone plans without the necessity of holding up lease sales and actual exploration drilling.

6. Liability for Oil Spills. Both S. 521 and S. 426 provide that lessees and a newly established "offshore fund" are to be held strictly liable to all parties damaged from OCS spills regardless of fault. A lessee would be liable for the first \$7 million of any one claim with the fund paying the balance up to \$100 million. Such strict liability provisions would place a potential financial burden of great proportions on many offshore operators with the result that it would discourage entry on the part of smaller companies which have been more prominent in the offshore bidding in recent years. We submit that the \$100 million "fund" should be the principal source available to satisfy all valid claims attributed to a specific oil spill including both damages and clean-up costs. The operators as a class will establish the fund, and it should be made available for the purpose of an immediate response to containment, clean-up and damages and thereby minimize the probably damage. The lease operator by contributing to the fund on a barrel basis is in effect buying insurance. He ceases payment into the fund once it reaches the \$100 million and resumes payment to replenish amounts paid out in claims. This system has built-in incentives to promote safeguards.
7. Citizen Suits. The Jackson and Hollings bills (S. 521 and S. 426) provide that any person having an interest which is adversely affected may bring a civil action

against an oil company or the U.S. to enforce provisions of these acts. We believe that governmental agencies have demonstrated ample capacity to police the industry and safeguard the public interest. The provisions in these bills would generate a multiplicity of suits, continuous litigation, and harassment of the government and industry, and would lead to serious delays in developing the offshore resources. However, if these provisions are to be adopted, we recommend that they prohibit an action from being filed by any person if the Interior Secretary is proceeding administratively or in the courts to enforce compliance, and that as a condition precedent to filing an action the person who is alleged to be in violation of the statute be given notice and allowed time for corrective action.

8. Revised Bidding and Lease Terms. The Jackson and Hollings bills (S. 521 and S. 426) set out a number of alternative bidding systems. We view this as a step in the right direction due to the enormous capital investment the industry will have to make to find and produce the offshore resources. A major portion of this capital requirement goes toward lease bonuses under the present bidding system. By testimony on May 10, 1974 Gulf proposed to the Subcommittee on Minerals, Materials and Fuels of the Senate Interior Committee, a type of work obligation arrangement whereby a portion of the bonus could be used in actual drilling and development. With some slight

modification this is basically an alternative bidding system suggested by Mr. Michel T. Halbouty, an independent oil operator of Houston, Texas. Gulf believes that increasing the size of the OCS blocks as proposed in the Hollings bill will remove one of the obstacles to efficient offshore exploration. This is especially true in the frontier areas. Therefore, we suggest that in these frontier areas the OCS lease tracts be increased in size from the 5,760 acres in the present law to increments of 20,000 to 100,000 acre blocks. This increase in size would result in many high-risk areas being explored that probably would not be with the present block size. Thus, it is more likely that oil and gas would be discovered quicker. A bidder would be afforded the opportunity of investing badly needed capital more wisely in both exploration and field development, and more effectively in terms of drilling rigs and tubular goods. Subsequent sales in these areas could be held using smaller tracts, scaling down the size of blocks until the original 5,760 acre tracts are reached. This would occur as the areas in question became more mature in both exploration and development, similar to the situation in offshore Louisiana today.

9. Assisting Coastal States. Several proposals being considered suggest differing means for assisting coastal states impacted by development of the Outer Continental Shelf. Coastal state and local governments are right-

fully interested in the onshore implications resulting from the OCS exploration and development activities adjacent to their shores.

Under the Mineral Leasing Act of 1920, any state having federal public lands within its boundaries receives a share of the revenues paid to the federal government from oil and gas leases on such lands. We believe that this general concept should carry over to oil and gas leases in the OCS adjacent to coastal states. The lessee would continue his payment of bonuses, rents and royalties to the federal government and a procedure should be worked out between the state and federal governments to allocate a portion of the revenues to the states.

In conclusion we would like to comment on provisions relating to safety inspections, research and development, and environmental baseline studies, which are contained in S. 426. These would require other federal agencies, such as the Coast Guard and the National Oceanics and Atmospheric Administration, to conduct and monitor these programs. This can only add to the confusion of an already complex problem and we would advocate that the agency presently responsible for these functions continue to handle them.

We appreciate this opportunity to express Gulf's views on the various bills being considered at the joint hearings concerning exploration for and development of oil and gas on the Outer Continental Shelf of the United States.

Senator STONE. Next we will hear from William Sessions, Vice President for Energy Management, the American Can Company testifying on behalf of the National Association of Manufacturers.

STATEMENT OF WILLIAM SESSIONS, VICE PRESIDENT FOR ENERGY MANAGEMENT, AMERICAN CAN CO., ON BEHALF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS

Mr. SESSIONS. Mr. Chairman, my name is William Sessions, vice president for American Can and I am here to testify on behalf of the National Association of Manufacturers, which has more than 13,000 members around the United States on the subject of Outer Continental Shelf leasing. We are glad to have the opportunity to contribute to the policy debate on the important issues raised by the Administration's program to accelerate offshore oil and gas production.

The preamble to S. 521 states that it is "a bill to increase the supply of energy in the United States from the Outer Continental Shelf." The NAM strongly supports this objective. We believe that a program of expanded offshore drilling is now essential to ensure a stronger domestic energy base and in particular to reduce our excessive dependence on imported oil and to mitigate our critical shortage of natural gas. We are concerned however, that many of the specific provisions in these various bills conflict with that stated objective in S. 521 and would in fact retard rather than encourage resource development on the Shelf.

Some of these provisions attempt to address legitimate and serious concerns. However, we feel that these concerns are being generally over-emphasized at the expense of our very real need for more energy and more employment.

In the first part of our testimony, we will briefly outline why we believe it is so important for industry and for the nation as a whole to proceed with development on the Shelf. We will then go on to analyze critically individual features of these bills and what we judge as their impact.

The most important impact of expanded offshore drilling will be to improve our national energy posture. A wide gap has opened between the U.S. supply of and demand for energy which has been filled by increased imports, not increased domestic production. As long as we delay developing our own resources, we have little choice but to pay the price exacted and to endure whatever uncertainties accompany this growing dependence. Increasing domestic supplies is essential to achieve diminished dependence on imports.

The U.S. demand for energy in 1985 will probably be at the very least 100 to 105 quadrillion BTU's. Meeting this demand at the same time as lessening U.S. dependence on imports constitutes a massive task. Energy conservation alone will simply not be enough.

The development and utilization of alternative energy sources will be extremely costly and involve considerable lead times and environmental uncertainties. Although in the future these other sources are going to have to play a much greater role, the need to develop new

oil and gas supplies is going to remain of central importance in the near and medium terms.

The Alaskan North Slope and the Outer Continental Shelf are the only areas which offer significant potential for increasing domestic oil and gas production. The first sections of the Alaskan pipeline are just being laid. The delays in its construction should provide an object lesson. The years of delay did not significantly alter the final balance between environmental and energy goals. Meanwhile our energy position has worsened.

The other significant impacts will be regional. We feel that the positive effects of offshore development on the energy balance of individual regions have often been insufficiently stressed. Some part of the country have a far greater imbalance between energy supply and demand than the nation as a whole. New England is a notable example. Offshore production can contribute significantly in redressing these regional imbalances.

In an even wider sense expanded offshore production will have a clear and beneficial impact on the economies of coastal states. Many new jobs will be created. The refining, petrochemical and construction sectors will be particularly stimulated. Service sector jobs will expand as will local manufacturing opportunities. Regional unemployment rates will decline and local wage rates will go up.

In short, there is a pressing national and regional need for expanded offshore development. We feel this development can and should be achieved in an environmentally responsible manner. Bearing these perspectives in mind, we would now like to comment on some of the details of these bills. We are concerned that many of their provisions will impede development and that many of the suggested safeguards are not in fact necessary.

Rather than examining provisions in isolation, bill by bill, our comments will focus on the key issue areas addressed by these different bills. Most of them relate to S. 521, S. 426, and S. 586, the bills with the most sweeping scope. As we see them, these issues are the following: a moratorium on leasing, the preparation of OCS development plans, greater Federal involvement on the OCS, stronger environmental and safety standards, and increased coastal state participation both in the decisionmaking process and in the fruits of OCS development.

Some of the provisions in these bills would establish a moratorium on leasing in frontier areas until either a specific date is reached or a specific condition complied with. This is expressed in its most far-reaching form in the section of S. 426 providing for a moratorium on leasing in all "frontier" areas. This would call for a continuing moratorium on leasing in a particular area until the following steps are implemented: The government has completed a plan for a Federal oil and gas exploration program in that area, drawn up a leasing and development plan, submitted it to coastal states (who could then request—but not necessarily be granted—a three year delay) and then transmitted it to Congress for Congressional approval or disapproval. We oppose any such moratorium. There will be a very considerable lead-time between leasing and ultimate production and

the coastal states will have time to finalize their coastal zone management plans and to establish the balanced planning procedures needed to meet the onshore impacts of production. A moratorium such as that in S. 426 would result in years of unnecessary delay.

These bills also call for the preparation of OCS development plans. We agree that offshore drilling must become an effective component of a coherent national energy strategy but feel that a system calling for detailed plans which would then have to undergo a complex process of approval would not achieve this objective but would result instead in slowness and rigidity. Lengthy delays in development would ensue. This would be particularly the case with S. 426. Furthermore, future material constraints cannot be seen with confidence nor, while the increasing magnitude of our energy crisis is apparent, have we developed effective methodologies for predicting future energy supply and demand. We need development but within the context of a flexible regime.

A third thrust of these bills is closer Federal involvement in the form of a Federal oil and gas exploration program. Much interest has been expressed recently in the idea of separating exploration of the Shelf from its development.

A Federal exploration program would be inefficient because it would substitute a single exploration strategy for the variety of strategies which would be adopted by private explorers. There are any number of case histories of initial failures followed by subsequent and unexpected discoveries of hydrocarbons. Some of the salt dome structures in the Gulf of Mexico were explored for years before hydrocarbons were discovered. The North Sea was believed to have widespread gas potential in its southern sector but the major oil finds in its central and northern sectors were unexpectedly made after 29 dry holes had been drilled and most groups had ceased drilling. It is questionable whether a Federal exploration company would persevere in this way without competitive incentives.

Second, a Federal oil and gas exploration company could not be assembled from scratch in a short period of time. Its creation would lead to a further lengthy period of uncertainty as to the potential of our continental shelves and an effective moratorium on development.

The bills also contain a number of provisions attempting to strengthen environmental and safety standards. The underlying objectives of these provisions are excellent. If accelerated development is to take place, there must be adequate environmental safeguards. We question however, whether the complex series of safeguards provided in these bills are all strictly necessary or whether they in fact represent overkill. Like any major enterprise, OCS development involves risks but the nature of the risks may be overstressed. The evidence indicates that it is environmentally safer than many other options, including increased, massive importation of foreign oil. The technology is well established and careful evaluations have indicated that physical technologies used on the OCS for discovery, development, and transportation are generally safe and adequate. The present system offers adequate safeguards and does not need the degree of strengthening provided in these bills. The idea of an oil spill liability

fund is a good one however, particularly if it is widened to include spills from other sources such as tankers.

A further important thrust of these bills is increased coastal state participation in the OCS planning process and an increased coastal state share in the benefits. These are worthwhile objectives but only if they are balanced with national goals.

There is understandable coastal state concern over the impacts of offshore development on the coastal zone. Constructive participation by the coastal states will be needed in the future. Yet while they should be consulted and have a stronger say in management decisions, we have serious reservations about the overall ramifications of what might effectively amount to a veto over offshore development.

The Coastal Zone Management Act will clearly be the planning mechanism which will be used to meet the impacts on the coastal zone. Offshore development is closely related to the issue of planning in the coastal zone and offshore developers will have to take this into account. In certain areas, development may have to be concentrated in corridors or be located inland instead of on the coast.

In administering the Coastal Zone Management Act, however, the "national interest" clause of the legislation should be weighed against the "Federal consistency" clause so that the national interest will be taken into account in the state planning process. In this way a balance can be struck between local objectives and the Nations wider energy goals. The danger of some of these bills is that they are likely to lead to the wrong balance being struck.

These bills and in particular S. 426 and S. 521 are so broad in scope that we have only been able to address a number of their provisions. We are concerned about a number of other provisions such as those dealing with data sharing and those providing a wide scope for citizen's suits. The geological data disclosure authority granted by S. 521 for instance is far too extensive and would tend to strongly discourage private initiatives. Section 27 of S. 521 and section 25 of S. 426, the citizen suit provisions in each bill actually permit "any person having an interest which is or may be adversely affected" to commence a civil action on his own behalf. These provisions do not include the concept of injury and represent a carte blanche invitation to would-be plaintiffs to challenge almost any action made pursuant to these bills. This is objectionable in the extreme and should be removed from the bill. Our greatest concern however, is over the cumulative impact of these bills which would establish a too tightly circumscribed regime. The likely result will be a crippling of OCS development. We would urge you to look at OCS development not in isolation but in relation to the wider energy picture and to alternative energy strategies. Within this context the signature of OCS development becomes compelling. These bills, and in particular S. 426, have a misplaced emphasis. Measures should be taken to encourage oil and gas production offshore, not to delay it. Thank you.

Senator HOLLINGS [presiding]. Mr Sessions, I saw back in your statement that we agree on many things. The citizens suits measure that you describe, all apprehension and misgiving is in the Deep

Water Ports Act signed recently by the President of the United States. Everybody thought it was good. You go then up to the top of page 8, the right balances being struck. We hope there are some suggestions about it rather than the apprehension about balancing national interest in Federal consistence. We think we have struck it in the legislation. Are you to say we might have not have done it. You come now to the veto of offshore development that is not in any of the bills. We come to the Coastal Zone Management Act. I am checking paragraphs that go along. There is not any veto in any of these bills. And the first important thrust is increased coastal, and you and I agree on that. And we go right on up about the environmental clause. You said we just do not have overkill which is fine. Most of the time is spent about the moratorium. This was gone into in detail with Secretary Morton at the time he testified before the joint hearings. We had a chart and we asked him on numerous occasions whether our particular approach constituted a delay and whether he objected on the basis of delay and he could see no delay. And I see you have taken the word moratorium and listed these things as if they could be disregarded.

Let us look at the top of, for example, on page 2 is it, no it is the top of one of these pages here, 4. As we see the issues are as following. That is where you list them on the top of page 4. Well certain things are being done, the time schedule is now where the Secretary is going to have to wait. We have got environmental impact statements and we have got experience in the Alaska pipeline where we know environmentally different special interest groups, environmental groups, citizens groups, and everything else there is no law to prevent them. And the Congress is saying too well look, we cannot bog down the public and there are no groundrules for these different groups. Since in fact that they are going to be there. The courts recognize them and they can delay anybody anywhere from 3½ to 4½ years. We cannot be doing that on every little drill operation offshore. We have had the Coastal Zone Management Act. So the Governors all come here and they charge the law says it and everybody signed it. President Nixon on October 12 said it was one of the finest developments. We had the Council of State Governors. We had the Association of Mayors, Association of Port Authority, we had all different groups in here saying this is what we really need. Some comprehensive approach and try to leave the initiative back at the State level with some Federal assistance and guidelines and it is there. So now they are being told to get the coastal zone management plan by the way the most important factor is the impact sociologically, economically, industrially, highwaywise, and schoolwise, and everythingwise on the drilling offshore there in New Jersey. Now the Governor of New Jersey said get your plan, we are not going to tell you anything that is going to be in the proprietary interest of the particular oil companies involved and you have got a duty under the law and what are we going to do. Governor Brendon Byrne from New Jersey and 18 Governors said hell no, we are not going to stop we are not going to go take the responsibility of having to do these things under the law and then not have the fact at

hand. Of course Secretary Morton went down there to persuade him and conjoin him and he did not get anywhere.

They had a Governors conference there and still opposed it. They have got the responsibility. So you have got the preparation of OCS development plans that the American Can Co. was going to sell a new line of products. That is the first thing you can do is get the development plan. Greater Federal involvement on the OCS itself is going to have Federal involvement, strong environmental safety standards, increased coastal State participation and safety making. Fruits of the OCS development we say all right, there is an impact there and various things suggested. I thought it noteworthy that the Governors said, no, we do not want a payoff. What we want is an impact, take care of some of these impacts.

There have been complaints about revenue sharing and payoff, different approaches. But when you come right down to it the Secretary of Commerce, the National Association of Manufacturers found this program outstanding. I will give you the document, instituted an energy conservation program for industry, all members of the NEA and you got a little movie and he runs around the country showing the movie. Your organization, he probably showed it to the American Can. The first thing they do is they get a development plan, they get an inventory of what they are doing they bring in all of the parties that are interested, get all the supervisors, and production and delivery and everything else. They submit how they can conserve. This is nothing in legislation. It is what industry does every day. Industry does every day rather than just saying look, this has been a sweetheart deal with the few fellows down in the Department of Interior. Geological survey in big oil, big, big, oil, so big all of them have been just joint ventures. Billions of dollars. You could not bid American Can could not afford it. Say look, we realize this—the vice president, you heard him testify, Mr. Carter of Gulf Oil said he would not dare sell his property unless he knew what he was selling. No. 1, we are going to find out what we are selling while we are finding that out, we can do these things. Promulgate a general plan of the areas. In fact we can break down and take further time because I understand before I arrived, I had to be at a Budget hearing, that Senator Stone got on into the 5,000 acres mythological approach rather than the entire geological look and probably would make economically, less exploratory drills. It required for the 5,000 acre approach. And while that is being done, you get the plan, you get the environmental impact, you bring in the Government. There is not a veto, everybody has got a time period and then you go down and then you lease and then as a multiple and flexible leasing approach it gives the Government the best of both worlds. If possible, that is the people's interest. It makes it economically sound and competitive for the industry to come and drill. It has got to be that way, and otherwise it could expedite or take into cognizance the fact that you do not have the drilling rig and all of these many things. And I am trying to study your statement, and you have got several apprehensions that we have, that we think on balance, on environmental in here. We have got those

various groups to come in and file at a certain time. We have gotten the Governors to come in and study and bring it back to the Congress. So everybody is taking, because this is the only part that is really left, off the Atlantic and the frontier areas, off the Pacific and the Gulf of Alaska. And while we are doing it, we know Secretary Morton sat in that same chair and said if we leased 10 million acres this afternoon there would not be one quart of oil in less than 5 years. So I do not mean to sit around and wait for 5 years.

Incidentally, that was the administration's position on the automobile on fuel economy. They said wait for 5 years and if it did not work then come in 5 years later. Come January the President said that I got a plan; where is yours, where is yours, where is yours? As soon as we start a plan the administration came up from the Department of Transportation and said wait 5 years. Rather than doing the waiting the 5 years, let us give everybody a time frame and cut up the appeals so you would not have an exploratory drilling for oil because oil company lawyers, they are bonanzas in these things. One of the great things we got somehow limited to the congressional level. These are lengthy type proceedings that handle on the drilling things like the Alaska pipeline on one hand, and the matter of natural gas regulations and everything else where it takes 18 years for an area rig. That is just one big bureaucratic boondock. It is unjustified and we are going to have to eliminate it.

We agree with most of your testimony here. We think we are implementing good businesslike approaches like you do at American Can.

Incidentally, how are you doing without all of the vice presidents you gave us that are over at the Postal Department? Is American Can making a profit this year?

Mr. SESSIONS. American Can made a profit last year. This year—

Senator HOLLINGS. Yes sir, we have got a lot of them.

Mr. SESSIONS. May I make a comment?

Senator HOLLINGS. Certainly.

Mr. SESSIONS. First, with respect to energy conservation we are not only familiar with the Department of Commerce program, we would proudly be a part of it. We have an extremely active conservation program and it has produced results. Unfortunately, our costs of energy are nevertheless rising much faster than we can control. They are up 42 percent last year and we are looking at a further increase of close to 70 percent in 1975. Additionally, you mentioned natural gas. This is becoming so critically short we are worried about the integrity of some of our operations and this is partly what is behind our intense interest to get on the offshore program. We fully recognize that it is going to take years to bring this oil in if it is there. But any delays in trying to find it and implementing its development, once found, we think is—

Senator HOLLINGS. Where is the delay once found? Now the delay, the initial stages on the leasing and not exploratory drilling. We can start exploratory drilling right away and we have talked to the geological survey. We are ready to go in certain areas right now. They are the one doing a lot of the drilling. I noticed in your testimony you did change the word "ignorance" because the geological survey is the only one informed.

Mr. SESSIONS. Senator—

Senator HOLLINGS. It is creation which would lead to a further lengthy period of ignorance as to the potential of our continental shelves and even that shocked you. I do not want to get the stenographer to go back but—

Mr. SESSIONS. Senator, I hope we will have the chance to submit an amended version. Ignorance might be in there.

Senator HOLLINGS. That is right, the geological survey, now there it is. You see there is not a delay on the matter of drilling. There is a delay on leasing until you first drill. But at least that is going on ahead of time. We put the horse ahead of the cart for the first time. Now while that is going on you are getting these plans and programs and statements and environmental studies and everything else going conjunctively. I should say concurrently, and once you find it, no delay in here on the matter of leasing it. In fact, we can more intelligently do it and probably take a large tract rather than a 5,000-acre approach, and I understand that Senator Stone ran into that with Mr. Carter and let all the oil companies come in. This would expedite the matter. I would think that when you talk about the increased cost of natural gas, I tell my industrial leaders, which incidentally American Can is one, are you not all down in Arlington?

Mr. SESSIONS. Yes, sir.

Senator HOLLINGS. And mostly the textile leaders, can they stand running their rate arbitrarily? Do not talk about private free enterprise when the Arab shiek is the one setting it at \$2. Can they stand jumping from 35 cents under their contracts to five times that amount in their cost to the manufacturer. What we are trying to do is the Federal Energy Agency—FEA says all over 80 cents would not bring additional NCS gas. We know that 80 cents or below is a good competitive price.

I noticed when I got back from an NATO conference I was reading one of the overseas bulletins that Standard Oil of Indiana in about a year they had \$9.3 billion gross sales and they made a profit of over 10 percent, \$970 million I should say, and his vice president was up here too and said 70 percent Standard of Indiana had was gas, not oil. You do not go broke in the gas business evidently. It has grown to the ninth largest industry, or seventh, it was in one testimony in the country.

Mr. SESSIONS. If there is gas on the OCS, we certainly would like to see it brought in.

Senator HOLLINGS. And oil, one of the private companies went out there and found nothing off the Atlantic. Suppose the Atlantic oil companies went out there and found none?

Mr. SESSIONS. Senator, we are getting into an area beyond my scope, but I believe it is a real possibility. But we will not know until we go after it, will we?

Senator HOLLINGS. We just have to use the experience like you say up in the North Sea they are drilling still.

Mr. SESSIONS. Yes, sir.

Senator HOLLINGS. That is another thing from the other witness.

I appreciate your testimony and I appreciate your apprehension and your willingness at least to come and take a position. But let me emphasize that your position and misgivings are almost the same

as this committee. We think we have had it generally in these bills before us and we think you cannot disregard the various elements of society. We do not want to. We do not think this old time deal of sitting there and moving them all up and getting the business leaders to say do not delay, we have got to go, I need gas and everything else just like a college cheer. When you bring it all here and you look at all the facts and figures if we leased it all this afternoon you would not get any results until 5 years. Now having that time frame within which to bring in that oil, why do we not do it as a private free enterprise. We can find what we got where we have it and break down the shipless of 5,000-acre areas having so many drills in each one of them and rather drill an entire tract. It may go in one area that is 2 acres instead of 5,000 and then a leasing program on the entire amount and in the meantime it is an orderly way in which interested parties are all brought into the decision and under that decision we can go into 2½ or 3 years with actual drilling and bring it in. And under the Secretary's plan they could actually get the leasing in a year by October, say next year. But under the general practice is another 5 years before they begin bringing in any drilling, that is 6 years. Now our plans we would hope to bring in some drilling in 3 years and their's is 6. So it is no use talking about moratorium and delay. We are the ones that are more concerned. Their words got somehow emphasized in the headlines. We just had no, no, you can not do it. And it was unfortunate because it is wrong. We are interested in this committee and this group and this Congress to expedite it. We have been trying to get an energy policy passed in this U.S. Senate three times. It has been bogged down by opposition of the administration over in the House. We cannot get an energy policy in this Government. And now the latest czar, I do not know if you have ever met him or not, is the Under Secretary of Commerce. We got another new czar.

Mr. Sessions, we appreciate very much, unless you want to add something further. We both have woes and troubles.

Mr. SESSIONS. I appreciate being here.

Senator HOLLINGS. We appreciate your preparing this testimony.

Mr. SESSIONS. Thank you sir.

[The prepared statement of Mr. Sessions follows:]

PREPARED STATEMENT OF WILLIAM SESSIONS, VICE PRESIDENT FOR AMERICAN CAN

My name is William Sessions, V.P. for American Can and I am here to testify on behalf of the National Association of Manufacturers, which has more than 13,000 members, on the subject of Outer Continental Shelf leasing. We are glad to have the opportunity to contribute to the policy debate on the important issues raised by the Administration's program to accelerate offshore oil and gas production.

The preamble to S.521 states that it is "a bill to increase the supply of energy in the United States from the Outer Continental Shelf." The NAM strongly supports this objective. We believe that a program of expanded offshore drilling is now essential to ensure a stronger domestic energy base and in particular to reduce our excessive dependence on imported oil and to mitigate our critical shortage of natural gas. We are concerned however, that many of the specific provisions in these various bills conflict with that stated objective in S.521 and would in fact retard rather than encourage resource development on the Shelf.

Some of these provisions attempt to address very legitimate and serious concerns. However, we feel that these concerns are, to a greater or lesser

degree being generally overemphasized at the expense of our very real need for more energy and more employment.

In the first part of our testimony, we will briefly outline why we believe it is so important for industry and for the nation as a whole to proceed with development of the Shelf. We will then go on to analyze critically individual features of these bills and what we judge as their impact.

The most important impact of expanded offshore drilling will be to improve our national energy posture. A wide gap has opened between the U.S. supply of and demand for energy which has been filled by increased imports, not by increasing domestic production. As long as we delay developing our own resources, we have little choice but to pay the price exacted and to endure whatever uncertainties accompany this growing dependence. Increasing domestic supplies is essential to achieve diminished dependence on imports.

The U.S. demand for energy in 1985 will probably be at the very least 100 to 105 quadrillion BTU's¹ Meeting this demand at the same time as lessening U.S. dependence on imports constitutes a massive task. Energy conservation alone will simply not be enough.

The development and utilization of alternative energy sources will be extremely costly and involve considerable lead times and environmental uncertainties so that, although in the future these other sources are going to have to play a much greater role, the need to develop new oil and gas supplies is going to remain of central importance in the near and medium terms.

The Alaskan North Slope and the Outer Continental Shelf are the only areas which offer significant potential for increasing domestic oil and gas production. The first sections of the Alaskan pipe-line are just being laid. The delays in its construction should be an object lesson. The years of delay did not significantly alter the final balance between environmental and energy goals. Meanwhile our energy position has worsened.

The other significant impacts will be regional. We feel that the positive effects of offshore development on the energy balance of individual regions have often been insufficiently stressed. Some parts of the country have a far greater imbalance between energy supply and demand than the nation as a whole. New England is a notable example. Offshore production can contribute significantly in redressing these regional imbalances.

In an even wider sense expanded offshore production will have a clear and beneficial impact on the economies of central states. Many new jobs will be created, a fact of special importance in the current economic climate. The refining, petrochemical and construction sectors will be particularly stimulated. Service sector jobs will expand as will local manufacturing opportunities. Regional unemployment rates will decline and local wage rates will go up.

In short, there is a pressing national and regional need for expanded offshore development and that this development can be achieved in an environmentally responsible manner. Bearing these perspectives in mind we would now like to comment on some of the details of these bills. We are concerned that many of their provisions will impede development and that many of the suggested safeguards are not in fact necessary.

Rather than examining provisions in isolation, bill by bill, our comments will focus on the key issues addressed by these different bills. Most of them relate to S.521, S.426, and S.586, the bills with the most sweeping scope. As we see them, these issues are the following: a moratorium on leasing, the preparation of OCS development plans, greater federal involvement on the OCS, stronger environmental and safety standards, and increased coastal state participation both in the decision-making process and in the fruits of OCS development.

Some of the provisions in these bills would establish a moratorium on leasing in frontier areas² until either a specific date is reached or a specific condition complied with. This is expressed in its most far-reaching form in the section S.426 providing for a moratorium on leasing in all "frontier" areas. This would call for a continuing moratorium on leasing in a particular area until the following steps are implemented: The government has completed a plan for a

¹ E.g. Project Independence scenario—103 quadrillion BTU's at \$11 a barrel world oil prices—in the Executive Summary: Section on "Domestic Energy Through 1985: The Base Case".

² S.426, S.470, S.826.

federal oil and gas exploration program in that area, drawn up a leasing and development plan, submitted it to coastal states (who could then request—but not necessarily be granted—a 3 year delay) and then transmitted to Congress for Congressional approval or disapproval. We oppose any such moratorium. There will be a very considerable lead-time between leasing and ultimate production and the coastal states will have time to finalize their coastal zone management plans and to establish the balanced planning procedures needed to meet the onshore impacts of production. A moratorium such as that in S.426 would result in years of unnecessary delay.

These bills also call for the preparation of OCS development plans.³ We agree that offshore drilling must become an effective component of a coherent national energy strategy but feel that a system calling for detailed plans which would then have to undergo a complex process of approval would not achieve this objective but would result instead in slowness and rigidity. Lengthy delays in development would ensue. This would be particularly the case with S.426. Furthermore, future material constraints cannot be foreseen with confidence nor, while the increasing magnitude of our energy crisis is apparent, have we developed effective methodologies for predicting further energy supply and demand. We need development but within the context of a flexible regime.

A third thrust of these bills is closer federal involvement in the form of a federal oil and gas exploration program.⁴ Much interest has been expressed recently in the idea of separating exploration of the shelf from its development. We believe this would be inefficient and would create a de facto moratorium on development.

A federal exploration program would be inefficient because it would substitute a single exploration strategy for the variety of strategies which would be adopted by private explorers. There are any number of case histories of initial failures followed by subsequent and unexpected discoveries of hydrocarbons. Some of the salt dome structures in the Gulf of Mexico were explored for years before hydrocarbons were discovered. The North Sea was believed to have widespread gas potential in its southern sector but the major oil finds in its central and northern sectors were unexpectedly made after 29 dry holes had been drilled and most groups had ceased drilling.⁵ It is questionable whether a federal exploration company could persevere in this way without competitive incentives.

Secondly, a federal oil and gas exploration company could not be assembled from scratch in a short period of time. Its creation would lead to a further lengthy period of ignorance as to the potential of our continental shelves and an effective moratorium on development.

The bills also contain a number of provisions attempting to strengthen environmental and safety standards.⁶ The underlying objectives of these provisions are excellent. If accelerated development is to take place, there must be adequate environmental safeguards. We question however, is whether the complex series of safeguards provided in these bills are all strictly necessary or whether they in fact represent overkill. Like any major enterprise, OCS development involves risks but the nature of the risks may be overstressed. The evidence available indicates that it is environmentally safer than many other options, including the increased, massive importation of foreign oil. The technology is well established and careful evaluations have indicated that physical technologies used on the OCS for discovery, development and transportation are generally safe and adequate.^{7 8} The present system offers adequate safeguards and does not need the degree of strengthening provided in these bills. The idea of an oil spill liability fund is a good one however, particularly if it is widened to include spills from other sources such as tankers.

³ Most specifically in S.426 (Section 20) which provides for submission of each plan to the governors of coastal states and then to Congress.

⁴ In both S.426 and S.521. The provisions in S.426 (Section 19) are more detailed, call for a greater role for the National Oceanic and Atmospheric Administration and more coordination with the provisions of the Coastal Zone Management Act. They also call for a \$200 million appropriation during fiscal years 1976 and 1977.

⁵ Interior Department figures.

⁶ Too many to cite. Provisions dealing with use of less available technology, inspection and enforcement requirements, environmental impact statement guidelines, oil spill liability, research into safety techniques and other studies.

⁷ University of Oklahoma Press: "Energy Under the Ocean: A Technology Assessment of Outer Continental Shelf Operations".

⁸ Council on Environmental Quality Report—"OCS Oil and Gas—An Environmental Assessment."

A further important thrust of these bills is increased coastal state participation in the OCS planning process and an increased coastal state share in the benefits.⁹ These are worthwhile objectives but only if they are balanced with national goals.

There is understandable coastal state concern over the impacts of offshore development on the coastal zone and constructive participation by the coastal states will be needed in the future. Yet while they should be consulted and have a stronger say in management decisions, we have serious reservations about the overall ramifications of an outright veto over offshore development.¹⁰

The Coastal Zone Management Act will clearly be the planning mechanism which will be used to meet the impacts of the coastal zone. Offshore development is closely related to the issue of planning in the coastal zone and offshore developers will have to take this into account. In certain areas, development may have to be concentrated in corridors or be located inland instead of on the coast.

In administering the Coastal Zone Management Act however, the "National Interest" clause of the legislation should be weighed against "Federal consistency" clause¹¹ so that the national interest will be taken into account in the state planning process. In this way a balance can be struck between local objectives and the nation's wider energy goals. The danger of some of these bills is that they are likely to lead to the wrong balance being struck.

These bills and in particular S.426 and S.521 are so broad in scope that we have only been able to address a number of their provisions. We are concerned about a number of other provisions such as those dealing with data sharing and those providing a wide scope for citizen's suits. The geological data disclosure authority granted by S.521 for instance is far too extensive and would tend to strongly discourage private initiatives. Section 27 of S.521 and section 25 of S.426, the citizen suit provisions in each bill actually permit "any person having an interest which is or may be adversely affected" to commence a civil action on his own behalf. These provisions do not include the concept of injury and represent a carte blanche invitation to would-be plaintiffs to challenge almost any action made pursuant to these bills. This is objectionable in the extreme and should be removed from the bill. Our greatest concern however, is over the cumulative impact of these bills which would establish a tightly circumscribed regime instead of the current regime which is both flexible and provides for adequate safeguards. The likely result will be a crippling of OCS development. We would urge you to look at OCS development not in isolation but in relation to the wider energy picture and to alternative energy strategies. Within this context the significance of OCS development becomes apparent. These bills, and in particular S.426, have a misplaced emphasis. Measures should be taken to encourage oil and gas production offshore, not to delay it. Thank you.

Senator HOLLINGS. The committees will be in recess until tomorrow at 9:30 a.m.

[Whereupon at 4:45 p.m. the committees recessed, to reconvene Wednesday, April 9, 1975, at 9:30 a.m.]

⁹ S.130 Revenue sharing with coastal states. S.825 Assistance to states to face up to onshore impacts of offshore drilling. S.521 coastal state fund. S.426 constant emphasis on coordination with coastal zone management plan. S.586 A complementary bill to S.426 whose whole thrust is assistance to coastal states.

¹⁰ S.81, S.426, S.521—Delay mechanisms for governors of coastal states.

¹¹ The federal consistency clause calls for federal actions to be consistent with a federally approved state Coastal Zone Management Plan.

OCS LANDS ACT AMENDMENTS AND COASTAL ZONE MANAGEMENT ACT AMENDMENTS

WEDNESDAY, APRIL 9, 1975

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
AND COMMITTEE ON COMMERCE,
Washington, D.C.

The committees met, pursuant to notice, at 9:30 a.m., in room 3110, Dirksen Office Building. Hon. John V. Tunney, presiding.

Present. Senators Tunney, Johnston, Hollings, and Roth.

Also present: Grenville Garside, special counsel and staff director, and D. Michael Harvey, deputy chief counsel.

OPENING STATEMENT OF HON. JOHN V. TUNNEY, A U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator TUNNEY. The committees come to order. The OCS contains much of our last remaining domestic supply of oil and gas. Few would argue that we should leave these resources untapped.

I believe that we must develop these resources, but we must do so within the framework of a comprehensive national energy program, including development of alternative energy sources and a realistic and effective energy conservation program; also with protection of the rights of the consumer and the taxpayer, and with proper regard to the protection of the environment, both onshore and offshore. Today's hearing concludes the examination of current OCS energy policy and various legislature alternatives to current policies. I would like to welcome our first witnesses, Senator Alan Cranston, and Rich Maullin, who is chairman of the California Energy Commission.

Congressman Tom Rees was planning to be here, and maybe he will be along. Senator Kennedy has a statement for the record. Mayor Tom Bradley of Los Angeles was to appear also but could not be here today. He has asked me to include his statement in the hearing record.

[The statements of Senator Kennedy and Mayor Bradley follow:]

STATEMENT OF HON. EDWARD M. KENNEDY, A U.S. SENATOR FROM THE STATE OF MASSACHUSETTS

I appreciate this opportunity to testify on the legislation pending before this Committee to strengthen the ability of the federal government to regulate activities on the outer continental shelf and to protect the public interest in the development of the oil and gas which lies offshore.

Governor Michael Dukakis, who will also be appearing before the Committee this afternoon, has been working closely with local groups in Massachusetts, with other governors of coastal and New England States and with the New England Congressional delegation, in the effort to ensure that no one area has to bear an unfair share of the risks, with no promise of any of the benefits, of offshore development. He and members of his Administration have come to Washington on numerous occasions to press New England's case before the Interior Department. I am sure he will present to the Committee strong recommendations in support of a clearly defined role for the states in offshore development decisions, full protection of coastal and marine resources, and an equitable formula and procedure for the sharing of the revenue which offshore leasing will generate.

I speak as a member of the National Ocean Policy Study, as Chairman of the Senate Subcommittee on Administrative Practice and Procedure and as a New Englander. I believe that the formulation of a national energy policy which takes into account regional needs, alternative energy sources strict conservation measures, and carefully administered development of our remaining domestic fossil fuel reserves, is one of the most important public policy issues before the 94th Congress.

Hearings which have been held over the last year in Washington and in the field have raised serious questions about the ability of the federal government, under present law, to develop our offshore oil and gas reserves without endangering the public interest. Joint hearings in Boston last year held by the NOPS and the Administrative Practice Subcommittee, emphasized the magnitude of the problem. Witness after witness testified that their voices were not being heard by policy makers in the Interior Department. State officials testified that they were not able to open up lines of communication with federal officials drafting plans for offshore oil and gas development. All expressed concern over the lack of information about the extent, the location and the value of the oil and gas which may lie beneath the OCS.

The legitimacy of these concerns now has been documented.

At a hearing in Washington last October held by the Subcommittee on Administrative Practice and Procedure, representatives of the Interior Department and the FEA were unable to give the Congress any assurances that the massive offshore leasing program they proposed had taken into account citizens' concerns, state coastal zone planning efforts potential equipment and materials bottlenecks, capital shortages, or the larger question of the need to develop offshore leasing plans in the context of an overall national energy policy.

The GAO, in its report submitted to the Congress last month also documents serious deficiencies in the Interior Department's plan to initiate an accelerated offshore leasing program covering 10 million acres. It found that the plan was hastily conceived, based on overly optimistic assumptions and inadequate data, was developed and adopted without adequate consideration of environmental impacts, national and regional supply and demand needs, or alternatives to large scale expansion of offshore leasing.

The National Academy of Sciences has found that actual U.S. oil and gas reserves may be less than half of the federal government's own predictions.

Draft material prepared for the Office of Technology Assessment indicates that it may not only be feasible, but desirable, for the federal government to undertake exploration on the OCS prior to turning any tracts over to the private oil companies for development.

The evidence that the federal government is not presently equipped to conduct a carefully planned offshore development program is overwhelming. This situation and the recent Supreme Court decision re-affirming the federal government's jurisdiction over oil and gas resources beyond the three mile limit, have placed the burden on the Congress. We now must establish by law mechanisms to regulate the development of offshore oil and gas. We must establish by law that new production comes into the domestic pipeline at reasonable prices. We must establish by law a system that will protect the shorelines and marine reserves of adjacent states as we meet national energy needs.

I commend the Congress for the high priority it has assigned to consideration of amendments to the Outer Continental Shelf Lands Act. Last year, under the leadership of Senators Hollings and Jackson, the Senate passed legislation which would have significantly improved offshore practices and

procedures. It was overwhelmingly approved by the Senate, but not acted on by the House.

Now we are moving again, and with the additional information which has been developed in the intervening months, it is my conviction that the Congress can send to the President a measure which is even more comprehensive and far-reaching. We can ensure the effective utilization of our remaining domestic oil and gas resources and we can provide for full participation by state and local governments in the decision making process. We can write into the law provisions guaranteeing that affected coastal states will share in the benefits as well as the risks of offshore development. And, most importantly, we can act to bring down the cost of oil—by placing a realistic ceiling on the price of the energy we extract from publicly held offshore lands.

There are key provisions which must be included in any legislation which this Committee sends to the Senate floor, provisions which have already been exhaustively studied and many of which were approved by the Senate last year. They include:

Separation of exploration from development on the OCS, with full public disclosure to the government and to the public of resource information.

Strict environmental controls on all aspects of offshore oil and gas development.

Immediate initiation of environmental baseline studies in all frontier OCS areas.

Completion and implementation of coastal zone management plans, prior to any development activities on the OCS.

Establishment of a Coastal Impact Fund to alleviate the adverse economic, social and environmental impacts which can be expected to accompany offshore development.

The designation of certain portions of the OCS to be developed by a public entity as part of a national strategic energy reserve. An amendment I introduced last year and which was adopted in large part would achieve that purpose.

Assurance that federal leasing, development and production activities offshore are consistent with approved coastal zone management plans.

All of these provisions are included in bills referred to this Committee. All could be implemented promptly once the legislation is signed into law. None would result in substantial delay in locating offshore reserves, determining the size of those reserves, and bringing appropriate amounts of those reserves into the domestic energy pipeline.

In addition, I feel it is now time for the Congress once again to make an effort to bring down domestic oil prices. With the separation of exploration from development a major portion of the cost to oil companies of bringing in offshore oil and gas will be absorbed by the federal government. More exact information on how much oil we are turning over, where it is located, and what it is worth will be in the hands of federal agencies. It is oil which lies under land held by the federal government for the people of this nation.

I strongly urge the Committee to include in its recommendations the establishment of a ceiling on the price of this oil—a ceiling based on the \$5.25 now imposed on 'old' oil, with increases to take into account the increased cost of production. As more and more of our domestic oil supply comes in from the outer continental shelf, and as conservation reduces our dependence on imported oil, such a provision could significantly reduce this nation's oil bill and would be reflected in lower energy costs to the nation's hardpressed business, industries and homeowners.

No area of the country is more aware of the need for new sources of oil and gas than New England. We are more dependent on oil than any other region of the country. We already suffer under the highest energy costs in this nation. We stand to lose the most each time the price of oil goes up. We stand to lose the most if there is another oil embargo. Our petroleum based economy is endangered by dwindling domestic supplies and rising oil prices have been a significant contributing factor to our more than 10 percent unemployment rate.

At present there is little incentive to a coastal state to permit offshore oil and gas development to take place off its shores. The oil that becomes available sells at premium prices. The onshore impact is not reimbursed. The negative effect on other industries is not compensated.

In Massachusetts, where many of our communities are operating on a marginal tax base, we will find it extremely difficult to build the schools,

hospitals and other public facilities which will be required during an intensive offshore development effort. We cannot afford a boom and bust economic cycle, in which a community might gain jobs for a short period, only to be plunged back into high unemployment once the rigs are in place. Our fishing industry, a \$40 million enterprise is too valuable to be pushed aside without more accurate information on what the long term effects of offshore development will be on commercial fishing stocks.

If offshore oil and gas development will help reduce energy costs, if it can be done without jeopardizing our environment, if it can be done without distorting our future coastal development, then there will be little significant opposition to drilling.

We have been asking for the answers to these questions since 1971. We have repeatedly called for legislation to protect coastal areas. We have sought for years a comprehensive research program to access the impact of offshore activities on our fisheries.

The Congress must act on these concerns before the federal government turns any more offshore acreage over to the oil companies. We must seize this opportunity to make offshore development in frontier areas a model of how a well-planned and carefully regulated national effort can contribute to increased domestic oil supplies—at a price which will allow private industry a fair return on its investment and which will bring consumers some relief from skyrocketing oil prices and in a way that protects the legitimate interests of coastal states.

STATEMENT OF HON. TOM BRADLEY, MAYOR OF LOS ANGELES, CALIF.

One year ago your Subcommittee was holding hearings on the matter of exploitation of the petroleum and natural gas resources of the Outer Continental Shelf. I wrote to you at that time, expressing my concern with the apparent haste with which the Department of the Interior was moving toward leasing of tracts as part of an accelerated nationwide program. I pointed out, then, that "To move so rapidly to exploit so great an area, with so little concrete information concerning consequent environmental impacts, drilling technology in relation to local circumstances, oil spill containment and clean-up technology, relative priorities for the national OCS regions, federal and state coastal management plans, and the appropriate institutions, guidelines and criteria to provide such information and safeguards, would be to play fast and loose with a natural resource of immense demonstrated value to all the people of this nation." I urge that you in the Congress take strong action to assure that any further extraction from the OCS would be subject to new constraints incorporated in new legislation amending the Outer Continental Shelf Lands Act of 1953.

During the year that has passed since those hearings, the concerns I have reiterated have been largely confirmed, and have been compounded by additional questions as to the propriety of the proposed program in the light of a growing list of glaring inadequacies of information, of safeguards, and of intergovernmental arrangements requisite to any such program.

The precipitous federal haste in pursuing this program and the apparent disregard for state, regional or local interests, led to the formation, last summer, of a coalition of local authorities. The experiences of the coalition in the ensuing months demonstrate vividly the basis for our growing alarm. The group, which we have named the Council of Local Officials Concerned with Federal Proposals for Oil Development on the Outer Continental Shelf, represents an unusual experiment in "ad hococracy". It formed spontaneously, in response to a visit to Southern California last July, by Mr. Jared Carter, then Deputy Undersecretary of the Department of the Interior. Mr. Carter had come to Los Angeles to brief us on Federal plans to open large portions of the Outer Continental Shelf to lease bidding for oil development rights. That meeting represented the first contact between policy-level federal officials and elected representatives at the local level. Mr. Carter's visit confirmed, in our minds, our concern that the Department of the Interior had already decided on maximal and hasty exploitation of Southern California O.C.S. oil deposits.

At that hearing, I offered my offices and facilities as a base for the many clearly alarmed officials present, to come together and examine the implications which the federal proposals held for our communities and citizens. Since that

time, the Council has met regularly, probing these implications and hammering out an articulate response on behalf of local government. Forty-one cities and counties have participated. Meetings are conducted informally, questions are resolved by exhaustive discussion, and common positions are derived by democratic consensus.

At its first meeting, the group designated a working task force, which in turn developed a three-point resolution. This resolution has become the most widely endorsed position on the matter throughout the state, and has generated considerable interest in other parts of the nation. In brief, expressing deep concern for the precipitous nature of the proposed federal program, and for its apparent disregard for state and local considerations, the resolution calls for opposition to the federal proposal, until:

1. A comprehensive national, as well as regional, energy policy has been promulgated;

2. The Department of the Interior has submitted its proposed Oil Development Program to appropriate, affected state, regional, and local agencies for review—particularly the California Coastal Zone Conservation Commission; and,

3. Congress has enacted new legislation strengthening existing laws relating to oil development on the Outer Continental Shelf.

Adopted by the Council of Local Officials, this resolution has subsequently been endorsed by the Southern California Association of Governments and the State League of California Cities.

I want to be very clear *that we do not necessarily oppose the concept of development and use of the oil on the Outer Continental Shelf*. We do oppose the haste with which it is being undertaken, particularly with regard to the lack of understanding of the true value of this resource—a value which can be determined within the context of a comprehensive national energy policy.

The Council of Local Officials has mounted two additional efforts which we feel will help safeguard the interests of *all* Americans, not only those who live in our Southern California Communities:

First, in response to a request by Mr. Carter that we send local experts to work with the local office of the Bureau of Land Management in development of the forthcoming regional site-specific environmental impact statement, we were disturbed to realize that we in local government had no such experts in matters concerning either the Outer Continental Shelf or oil exploration and development. We set out to develop a mutual fund to commission an objective, unimpeachable critique of the regional document within the context of the 10,000,000 acre programmatic environmental impact statement, and also, because of the apparent need for a comprehensive national energy policy, in the context of Project Independence Blueprint. In this respect, we have contacted the National Academy of Sciences, as well as other distinguished authorities, to discuss requirements for such a critique of the federal documents.

The Department of the Interior released the programmatic document late in October, 1974, announcing a brief three-week period for review of the highly technological 1,300 page draft. In response, our Los Angeles City Attorney quickly brought together a group of City and County Legal Officers, and on behalf of this group, Mr. Pines succeeded in gaining a 60-day delay in the proposed hearing date, after discussing the matter with Secretary Morton, and Senators Cranston and Tunney.

Even this 60-day extension left us little time to spare. The Council of Local Officials quickly turned to scientists from Southern California for assistance in performing expert analyses of the programmatic environmental impact statement. Working with the staffs of the Los Angeles and San Diego City Attorneys, Professors from several of our most prestigious universities prepared an exhaustive critique of the document.

I consider the total effort, conceived and carried out in a very limited period of time, a new standard for local governmental contributions to the great national debate we are now entering.

The product, a 470 page *Analysis of Draft Environmental Impact Statement Regarding "Proposed Increase in Acreage to be Offered for Oil and Gas Leasing on the Outer Continental Shelf"*, finds the Department of the Interior severely inadequate in many of the matters it includes, and yet more inadequate in terms of matters which are not included. In the face of these inadequacies, the federal program for leasing on the Outer Continental Shelf forges ahead through ponderous procedures, compelling understaffed and underfunded local

authorities to make superhuman efforts in response, even as it mocks substantive issues of critical concern to the national public interest.

Subsequently, the Department of the Interior has issued a 2,000 page Draft Environmental Impact Statement on the site-specific proposals for Southern California, even before a final EIS for the national program has been filed. The Department maintains that it is complying with procedures required under the National Environmental Policy Act, but the practical effect of this overlapping of logically sequential decision-making procedures is further to reduce the process to a mockery.

We are now convinced that the issues of overriding importance will not be addressed adequately, if at all, unless you in the Congress seize the responsibility through the legislative process. A selection of substantive issues which have not been resolved, follows:

Above all, there is need for a comprehensive national energy policy, as a basis for judging all proposals such as the program environmental impact statement. Only development of such a policy can satisfy the basic thrust of The National Environmental Policy Act, bringing short- and long-term implications, and consideration of alternatives, to bear on the judgment. How adequate can Project Independence Blueprint be, for this purpose if it only poses options, and does not supply answers? It is neither a policy nor plan.

What are our priorities, for instance, for alternative energy source development? There has been no careful consideration of a balanced mix of new sources for exploitation which will benefit us most, at least cost to our people and our quality of life.

Have existing oil reserves, public and private, been adequately considered as full or partial alternatives? The Department of the Interior's documents give no consideration to developing Elk Hills and other military petroleum reserves. The House Subcommittee on Regulatory Agencies, and a study by the Brookings Institution, indicate that many shut-in wells could be producing profitably today. Senator Tunney has requested an investigation by the General Accounting Office on this matter. A specialist from our Scientific Advisory Committee further points to the potential for enhanced recovery from known reservoirs.

Protagonists of accelerated leasing say that "Congress will take twenty years to develop a national energy policy". In answer, we in local government do not envision a policy which prescribes every action for the rest of this century, but a plan for energy resource conservation and development which will be reasonably comprehensive—a plan which will avoid the all-out exhaustion of a single reserve in isolation from others and from alternative solutions to the immediate, perceived need.

What are our priorities for exploitation of the Outer Continental Shelf, itself, nationwide? No analysis of the relative environmental impact of drilling the various areas has been performed, as was done in the partial assessment performed by the Council on Environmental Quality last year.

What information do we have concerning the extent and value of the oil reserves on the O.C.S.? The present bidding system makes that information the proprietary right of the industry. What prudent businessman would sell his property without first getting his own appraisal of the value? Shouldn't the American people—the present owners—enjoy information of equal quality and adequacy, as that available to private industry? If our present bidding system does not permit this, let us change it accordingly.

It is vital that exhaustive consideration be given to alternative leasing plans. I am disturbed that once the leases are signed, the nation would have little or no say as to where the oil is to go, and when. It has been noted that, under present regulations, the Arab nations could bid on the leases, and sell the oil produced wherever they wish.

This raises the question, "what is the adequacy of present federal legislation covering O.C.S. exploration and development?"

Our local government task force specified updating of the Outer Continental Shelf Lands Act of 1953 as a cornerstone of its resolution on the federal development proposal. That law was written at a time when oil was widely regarded as cheap and virtually unlimited. Enormous administrative power was centered in one man—The Secretary of the Interior—to maximize efficiency of resource development. We have learned much since those days—much about our resource limitations, much about shortage crises, much about what happens to prices at

such times, and much about the concentration of administrative power. Revision of the outdated act is essential. Legislation recently introduced by Senator Hollings represents a good beginning in this direction. Some form of partnership must be developed, so that we will retain enough control over allocation of the oil to ensure its use in the public interest. This will be essential in building and implementing a national energy policy. And again, time is of the essence. The scheduled date for lease sales in Southern California has slipped several months, but remains very little time for congressional action on so critical an issue.

Such legislation must also permit, and aid in timely completion of coastal plans by those states which would experience coastal and onshore impacts. There has been talk of participation by the states in sharing the revenues of O.C.S. exploration, as an aid in mitigating such impacts. This remains speculation, however, as the date for leasing approaches. It is not enough to say that there is no threatened compromise of coastal plans since actual development will not follow for several years. The major patterns and procedures which will follow in the future, will be determined and sealed at the time of the lease sale. Surely the Congress can prescribe appropriate measures, including temporary suspension of leasing, if necessary, and increased federal assistance for coastal plan preparation, to assure that future problems can be averted rather than mitigated.

Finally, preoccupation with the specific action proposal for leasing for oil and gas development on the Outer Continental Shelf appears to have resulted in inadequate attention being given to large scale alternatives to the proposed action. We in Los Angeles have watched with interest as the rest of the nation has debated the efficacy of conservation. Various proposals have aimed at savings generally averaging a million barrels a day. Our experience during the Arab embargo indicates, however, that far greater savings could be realized, without significant disruption to our social and economic systems. To our surprise, we managed an 18% reduction below the previous year's use of electrical power, even as we were consuming up to 25% less gasoline. These two energy sources combined represent the largest part of our overall energy consumption in Southern California, yet no serious economic losses were reported. In fact, considerable amounts of capital were freed for other uses.

From this actual experience, we feel that the nation could safely realize a savings of 15% in energy consumption, without dampening the economy. This savings could be realized almost immediately, rather than five years in the future, and the increase in spendable income would go further to fight recession than the recent tax cut. Additionally, the nation would reduce oil consumption by 2½ million barrels a day, and foreign imports by 40%.

In this light, the rush to exploit our oil and gas reserves on the Outer Continental Shelf must be seen as precipitous. Why all the rush, when we have not even capitalized on actual experience? We have come full circle to the most fundamental question: We will only derive appropriate answers to these questions in the context of a comprehensive national energy policy. It would be irresponsible to sell American's publicly-owned oil resources without such a policy.

Senator TUNNEY. I would like to welcome Senator Cranston and Mr. Maullin. I think it is important that on the committee we have reflected the views of the State of California, and we are most appreciative to the Governor for having given you the opportunity to testify, Mr. Maullin.

Senator Cranston, it is a real pleasure having you here. Knowing your expertise in this hearing, I know you can contribute an awful lot to the committee's deliberations.

STATEMENT OF HON. ALAN CRANSTON, A U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator CRANSTON. Thank you very much, Mr. Chairman. I appreciate the opportunity you provided us to appear this morning to

discuss the impact of proposed Federal offshore oil drilling in our California.

As you know so well, southern California's offshore waters are well along on the Department of Interior's scheme which will culminate in a lease sale this September under their present plans.

Thus the questions under consideration by this committee relating to proposed revisions of the Outer Continental Shelf Lands Act and general reform of offshore leasing and management practices are questions of immediate concern to the citizens of our States.

On May 8, 1974, I testified before the Senate Interior Committee and recommended that the proposed southern California lease sale, then scheduled for May of 1975, be postponed until our offshore technology was improved and an energy policy for the Nation was established.

Today, nearly a full year later, I am testifying before this committee for the same purpose. Today I urge that immediate consideration be given to the imposition of a limited moratorium on offshore oil and gas lease sales in new frontier areas.

It is essential that the southern California lease sale, now scheduled for September, be postponed until the California Legislature adopts its coastal plan or until December 31, 1976, whichever comes first.

I urge this limited moratorium for three basic reasons. First, I am convinced after long study of the problem that basic reform of our current leasing arrangements for developing offshore oil and gas will be necessary to assure the taxpayer a fair dollar return and adequate environmental safeguards for the development of these public-owned resources.

These basic reforms, which are now under consideration by the Senate Interior Committee, must be implemented before major new areas are committed for development.

Second, the administration's proposed accelerated OCS leasing, of which the southern California lease sale would be a part, is ill conceived and unwise, particularly in the absence of a comprehensive national energy policy.

Third, the California Coastal Commission is now in the process of developing a coastal plan which must be submitted to the California Legislature by December with final action by the legislature slated to come before the end of 1976.

To go forward with a substantial lease sale before this coastal plan is adopted denies the State its proper role in these energy decisions.

Mr. Chairman, two significant studies have been released in the past year which bear on the need for this moratorium. The General Accounting Office released a study last month entitled, "Outlook for Federal Goals to Accelerate Leasing of Oil and Gas Resources on the OCS."

This study describes the administration's 10-million-acre plan as unrealistic. GAO states that the 10-million-acre goal was "developed and adopted without adequate consideration of environmental impacts, national-regional supply and demand needs, or alternatives to large-scale expansion of shelf leasing."

The Department of Interior's tract selection and valuation practices were judged to be inadequate even at the slower pace of leasing

in 1974. Speeding up this process to accommodate the pressures of leasing 10 million acres would only further jeopardize the validity of lease valuation.

A second study which underscores the need for a lease sale moratorium was conducted by the National Oceans Policy Study, chaired by Senator Ernest F. Hollings. This study, entitled, "OCS Oil and Gas Development and the Coastal Zone" pointed out that an accelerated leasing schedule will only exacerbate serious problems which already exist in our current offshore leasing and management practices.

The study cites inadequate environmental and safety regulations, the Federal Government's lack of information about the true value of its resources, and the muddled energy policy context in which OCS development is going forward. The national ocean policy study should be commanded for this thorough and thoughtful documentation of OCS problems and issues.

Mr. Chairman, I am not opposed to the eventual development of California's offshore resources. But I strongly object to this administration's decision to go forward with offshore oil and gas development in the absence of three essential conditions.

One, an assurance that the taxpayer will receive the full fair market value for the public owned resources.

Two, a mechanism to provide the adjacent State with some voice in the decisions that will surely impact on it; and, three, improved environmental and safety regulations.

And I vigorously object to the full-scale pursuit of offshore oil and gas unless it is done in the context of a sensible national energy policy which weighs the benefits and risks, region by region, of developing alternate sources of energy.

I believe that my fellow panel members agree that these three components must be included in any OCS policy reform. I am a cosponsor of S. 426, introduced by Senator Hollings, to reform our management of the resources of the OCS.

The key feature of this bill is the clear separation made between the exploration phase and the development phase of OCS development.

S. 426 provides for Federal exploration of the OCS before any decisions are made about whether development should proceed and before any leases are sold.

Separating the exploration phase from the development phase of offshore energy development is, in my opinion, the single most important policy change we can aim for. As it now stands, the Federal Government relinquishes control over critical energy policy decisions at the moment it accepts the high bid on a lease.

I have endorsed the concept of federally sponsored exploration prior to leasing, but there may well be alternate ways to accomplish the goal.

Furthermore, separating exploration from production will put an end to the enormous front-end bonus bids and will give the Government the vital information it needs to evaluate the full extent of the resources available on the OCS.

For example, the 1968 Texas sale of 110 offshore tracts resulted in \$594 million in bonus bids. However, 90 of these 110 tracts have been relinquished or their leases have expired without production on them.

Large front-end bonus bids in many cases are only serving to tie up large amounts of capital which should be applied to other forms of energy development. Permitting States to have a stronger voice in Federal offshore development decisions is another important concept.

Last year the Senate adopted an amendment Senator Mathias and I offered giving the States the right to request a postponement of a lease sale.

This will result in better State-Federal cooperation and minimize adverse impact on the States. The establishment of OCS environmental safeguards is also an essential aspect of any OCS reforms.

Although this point is discussed frequently, it cannot be overemphasized, particularly with regard to the seismically active southern California area. As the GAO study indicated, an accelerated leasing program has already placed severe restraints on the U.S. Geological Survey's ability to evaluate various aspects of the leasing bids.

One can only assume that it will be equally difficult to monitor widespread OCS production performance. The infamous Santa Barbara blowout was the result of a human error which would have been avoided had proper safeguards been in effect.

Proper environmental safeguards will not be employed unless they are mandated by new Federal legislation. California risks another catastrophe if development is allowed to go forward without the benefit of legislation such as S. 426.

Mr. Chairman, my message to this committee today is clear and simple: We must place a limited moratorium on new offshore lease sales so that basic reforms now under consideration in Congress can be implemented before major new areas are leased.

I hope that this committee will concur. Unfortunately, I have to attend a markup of the Budget Committee. I do want to say that I strongly share the view that you expressed this morning, when we were together before the Los Angeles Chamber of Commerce, that we have to consider not only the environmental aspects of this matter, which is of particular interest to the people of California, but from the point of view of the people of the Nation.

And of interest, certainly, to Senators who represent others elsewhere than in California, is the question of economics. And the question of whether under present economic circumstances in our country and present leasing proposals, the people of our Nation who own that oil and whom all of us together represent will get their clear, full share of the value of that oil, unless we make changes in the leasing program.

That is what we must consider doing. It is terribly important that we do so. It is also obviously important that we develop this resource in a way that insures its maximum availability to the people of all of our country, during this time of dwindling oil resources, of vanishing oil resources.

We must make certain we develop this oil in a way that will serve our Nation's needs the best. I trust that you and other members of this committee can help bring about that, and I thank you very much.

Senator TUNNEY. Thank you, Senator Cranston. We know that you have to go to the other committee. We really appreciate the points that you have made, because I think in those very few sentences you have hit the important issues.

And that is, first, the orderly development, from an environmental point of view, and to give the State an opportunity to participate in every detail of that planning process.

And, second, the economics of the development of the offshore oil areas. I think you have expressed it beautifully, and I want to thank you for coming and giving us the opportunity of—

Senator CRANSTON. Thank you very much. I want to say to Dick Maullin I am sorry that I can't stay with him. I have great respect for what he is doing in this field and what I know Gov. Jerry Brown is doing, and I look forward to working with you and the others in the State of California.

Thank you very much.

Senator TUNNEY. Mr. Maullin, do you have an extra copy of your statement?

Mr. MAULLIN. Yes; I do, Senator.

STATEMENT OF HON. RICHARD MAULLIN, CHAIRMAN, CALIFORNIA ENERGY COMMISSION

Mr. MAULLIN. Senator, I appreciate very much the opportunity to be here and be allowed to express the views of many people in California. I have a statement I would like to make for the record.

The State of California has a unique interest in the discussion of new legislative proposals for development of Outer Continental Shelf resources. First and foremost, we are faced with an imminent lease sale, which could take place as early as September of this year.

Petroleum-related development is not something new to California, nor is offshore drilling. Oil accounts for over 50 percent of California energy demand. About half of our needs are supplied from California crude oil production.

For the remainder, California is heavily dependent on imports. California has over 1,000 miles of irreplaceable coastal resources. California's coastal zone management plan is progressing according to schedule.

The plan already exists in draft form, and the coastal zone conservation commission has explicitly considered many of the issues related to offshore resource development and associated onshore impacts.

Hearings on the draft plan will be held this spring. Under California law, coastal zone management plan will be adopted before the end of 1976. Last year California's Legislature enacted a bill creating the energy resources conservation and development commission, of which I am chairman.

Our agency has wide-reaching responsibilities, including the balancing of energy resource development with the need to conserve these resources. In our view, there is an urgent need for prompt resolution of the issues now being considered by this committee.

Either the Congress should pass legislation to update the administration of the OCS program, or it should immediately declare a limited moratorium on further leasing activities in OCS frontier areas, until such changes can be made.

If this is not done, the utility of these deliberations will be lost as far as California is concerned. In my testimony today, I would like to address what we consider to be five key points for change.

First, we support the position of the National Governors' Conference regarding the separation of exploration from the decision to permit commercial production on OCS tracts.

Second, present bidding procedures should be changed to permit the separation of exploration programs from production while preserving a realistic incentive for industry participation, an equitable return to the public, and efficient management and development of OCS resources.

This is distinct from a Government-sponsored and managed exploration program, which we oppose. Third, we need an effective institutional mechanism for State participation in OCS resource management decisionmaking.

Fourth, we need to develop a framework within which affected coastal States could generate revenues necessary to offset the real costs and impacts of OCS development.

And finally, we need an equitable and objective means of ranking the relative environmental risks of development of different areas of the Outer Continental Shelf, and insuring the effective implementation of necessary environmental safeguards in areas where production is permitted.

I would like to address myself to these five points in a little bit more detail. Regarding separation of exploration from production, as the recently released national ocean policy study demonstrated, there is tremendous variation in the range of additional oil and gas resources estimated to be available to the United States.

There is certainly a national interest in determining promptly the extent of oil and gas resources on the Continental Shelf. There is a need for prompt exploration to determine our real, as opposed to conjectural, energy policy options.

We do not believe that this interest would be well served by halting further exploration activity until a Federal Government exploration program could begin.

If there is to be private development of OCS resources, then exploration must be separated from production in order to sidestep the impossible problem of guessing the value of the resources that are being sold.

Given the uncertainties surrounding both the extent of these resources, and their long-term prices, measurements of past returns to the public cannot be extrapolated into the future.

The present system of leasing confronts decisionmakers with an all-or-nothing dilemma, as any decision to lease is essentially an

irreversible commitment to development. Important as the issue of separation is, however, the problems that give rise to the need to separate exploration from the decision to permit production do not logically support the call for a Government-managed program.

This distinction must be recognized, and if Government exploration is desired, then other compelling justification must be produced.

The only basis for a Government-managed program would be an overriding desire to increase the Government's role in all phases of resource management. But greater governmental involvement would be unlikely to lead to the intended objectives of prompt exploration, avoidance of the valuation dilemma, and assurance of a fair return to the public.

The high risk nature of exploration, long leadtime, tremendous costs, and the need for decentralized decisionmaking, all argue against Government exploration.

Effective separation could be achieved without increasing the Government's role. If private capital and industry expertise are to be used, then separation of exploration from the decision to permit production should be accompanied by revision of the bonus-royalty relationship.

One example which has been evaluated within the Department of Interior would be to raise the royalty to approximately 40 percent. This would have several positive effects.

It would increase competition by lowering the financial barrier to entry. It would reduce the capital strain on industry, freeing up funds for exploration activities. It would increase the longrun return to the public, and reduce the hazards of guesswork in presale tract evaluation.

The major negative effect would be to reduce the immediate cash flow to the Federal Treasury, as opposed to the present system with its high front-end bonus bids. However, resource management policy should not be made on the basis of cash flow considerations, even under deficit budget conditions.

The Department of Interior has expressed its belief that such a change in the bonus-royalty relationship is permissible under existing law. In this regard, the flexibility in selection of bidding systems, as expressed in S. 426, is also welcome.

We should also note that Senate bill 426 has provided an excellent form of discussion for changes in the system. Senator Hollings and cosponsors from our view in California are certainly to be congratulated for real thinking on changing what is now an outdated system.

I would like to address myself to the subject of the State perspective on separation of exploration from the decision to permit production. To avoid any possible confusion, let us examine in some detail how a system providing for separation of exploration from production would work, and specifically how the coastal States could participate in the decision process.

OCS tracts would be offered for lease, with a fixed royalty of 40 percent, and a cash bonus as the bid variable. Winning bidders would be permitted to conduct approved exploration programs on their tracts, complying with applicable safety and environmental regulations.

The leases would contain specific stipulations to the effect that in the event of any commercial finds, production would be permitted only on the basis of a production permit.

Bidders would have to recognize the possibility that production might not be permitted. They would discount their bids accordingly to reflect the real costs of uncertainty. If production were permitted, then the holders of the exploration permit would be the ones permitted to produce.

The key question from the State's point of view is the effectiveness of the mechanism for State participation in the decision as to whether or not, when, how, and where to permit production.

The rationale for State participation is simple. Coastal States have the responsibility for planning and for coping with onshore and coastal zone impacts associated with OCS development.

The States and localities would suffer the consequences of any environmental damage. Most coastal States, except Alaska, will need the resources or, if they will become net exporters, will have to cope with the distribution and transportation requirements which would follow large-scale oil and gas activities.

In California, for one, such development would be very close to the 3-mile line, and the consequences of poorly planned development and lax environmental protection would be immediately and obnoxiously evident to citizens of our coastal areas.

Finally, State energy planners have the responsibility for trying to reduce consumption of, and dependence on, oil and gas. Once initial exploration had taken place, and we recognize that to a certain extent exploration is an ongoing process, closely tied to development, State representatives would be in a position to evaluate three key factors.

I am referring to the national need for the resource. The compatibility of proposed development with coastal zone and other land use plans, and the adequacy of environmental safeguards.

The model provision of S. 426, whereby the Governor of the coastal State could request a delay for a finite period, up to 3 years, in our view makes sense. It would be difficult to justify giving the Governor of a coastal State an absolute veto over an essentially national decision affecting development of a national resource.

Moreover, we are confident that the Governors of the respective coastal States would exercise their power responsibly. With exploration separated from the production decision, the real issues would be very clear.

The extent of the resources would be reasonably well known, the implications of development would be reasonably well known, and coordination with State coastal zone and energy planning policies would be assured.

Decisionmaking, in fact, might even be speeded up. When production was contraindicated, the costs, consequences, and future potential would not be the subject of uninformed speculation.

On balance, consistency with the laws, goals, and policies of the coastal States would be built into this process. A question has come up as to the funding of State participation in OCS development to

decisionmaking. As various proposals have been circulated for the funding of State participation in the OCS program, we would like to present some comments on the problem from the State's point of view.

Across-the-board revenue sharing, as recently proposed by Secretary Morton, in our view is not realistic. It would probably be inequitable and ill-timed in relation to the occurrence of problems.

It would not buy a political solution to State resistance, and would not assure affected States of adequate net compensation. A formula adequate for California would fall far short of Alaska's needs, and would probably lag far behind the real impacts of OCS development.

Alternate forms of revenue sharing, tied to a congressional appropriation process, would provide a disincentive to proper planning by penalizing States that dealt successfully with impacts.

What, then, is the answer? In California we are considering imposition of a pipeline throughput charge on oil that crosses State tidelands. There are several advantages to this approach.

Revenues would be commensurate with the State's particular needs. Funds would be under State control, and could be dedicated to relevant needs. Oil and gas revenues from California's State tidelands, for example, are presently assigned to recreation and fish and wildlife enhancement, and to capital outlay for higher education.

If each State were to set its own pipeline charges, the thorny problems of equity for all the States, and for producers and consumers, would be simplified.

If appropriately formulated, we believe that such charges would withstand the inevitable court challenges, and would be found not to represent a burden on interstate commerce. I should emphasize that we are leaning toward this option for California, because we cannot afford to wait much longer.

However, what is good for one State, in this regard, could lead to chaos if each State does not consider the systemic effects in making its own decisions.

Perhaps it would be appropriate for the Congress to address itself to this issue—of the pipeline throughput charge. I would like to turn to environmental issues.

I have reserved comment on environmental issues as the last item in my testimony, even though they are usually the first concerns to be raised by critics of OCS development.

In our view, regardless of the identity of the "lead agency" for the purpose of complying with the requirements of the National Environmental Policy Act of 1969, there are two overriding concerns.

First, the question of relative ranking with respect to environmental risks versus economic benefits, has never been adequately addressed. The best effort along these lines was certainly the Council on Environmental Quality's environmental assessment of OCS oil and gas.

Regrettably, southern California was not considered a frontier area for the purposes of that analysis, and we did not have the benefit of any environmental ranking, high or low.

Obviously, any future ranking exercise should include all prospective leasing areas. This may be a moot issue for California, but it is an unfortunate oversight that should not be repeated.

As another example, the Office of Technology Assessment is currently supporting an excellent systems study of new use demands for the coastal zone and offshore areas of New Jersey and Delaware looking at the interrelated implications of offshore nuclear, offshore oil and gas development, and deepwater superports.

We are much closer to a decision on leasing for southern California, and we currently have proposals for deepwater ports, LNG terminals, and other energy facilities, plus the prospect of increased tanker traffic due to transport requirements for Alaskan and offshore crude production.

Yet, we have not had an adequate examination of how these projects all fit together. Regardless of which agency is responsible for generating impact statements, we intend to take our responsibilities very seriously in this area.

Both systems interactions and highly localized impacts must be considered as part of the NEPA process. Most importantly, the States should have a continuing role in the implementation, monitoring, and review of environmental safeguards in Federal as well as State waters.

Although such a role would be costly for the States, in the long run it is probably the only way to fully satisfy the coastal States' need for stringent enforcement of safety and environmental regulations.

We are suggesting that the States should share responsibility for monitoring and enforcement on an ongoing basis, not that they should assume sole responsibility, which would be impractical and undesirable.

In closing I would respectfully reemphasize the urgency of these changes, and the need for prompt congressional action in view of the imminent sale of Federal leases in the southern California offshore areas.

Thank you very much.

Senator TUNNEY. Mr. Maullin, I want to thank you for a very thoughtful statement. I, perhaps, am being a bit chauvinistic when I say that I think California has gone further than any other State in developing a long-term planning mechanism for the purposes of protecting not only our coastline but also for assessing our energy resources and the conservation and development procedures that must necessarily follow if we are going to be able to have energy to fuel our civilization, fuel our society, and at the same time to protect it from the worst forms of environmental depredation.

I think as the new chairman of this California Energy Commission, you have been able, in a very short period of time, to produce an analysis of the situation that I think is really outstanding.

I want to congratulate you.

Mr. MAULLIN. Thank you very much, Senator.

Senator TUNNEY. I have some questions. I know we don't have much time, but I would like to just hit a couple of areas. You talk

about a throughput charge as being, perhaps, the most effective way of giving the States the revenue that they need, rather than revenue sharing.

Wouldn't the throughput charge come too late to help deal with the planning and public facility needs, before actual production? And doesn't that have the same problems associated with it, that revenue sharing would?

Mr. MAULLIN. If we knew that there was going to be extensive development, in effect, you could sort of plan for the revenues, and you might be willing, on a State level, to expend some moneys from the general fund in anticipation of the revenues that would come from the throughput charge.

It might be an earlier investment out of one source of money that would be compensated by another.

One of the advantages of the throughput charge, especially with the large budget deficits, is that it really places the question of finding the revenue to compensate for the problems outside the Federal revenue cycle.

You won't find an interior State, for example, complaining that California, a relatively wealthy State, is subtracting from the National Treasury to deal with a relatively localized problem, or at least what someone would define as a localized problem, and as I said in my statement, it allows us to calibrate the tax in effect to deal with the specifics, rather than just on a general formula.

Senator TUNNEY. Isn't the real answer that if you have a throughput charge that is not controlled by the Federal Government. If you have revenue sharing, it would be controlled by the Congress.

Mr. MAULLIN. One possibility on a throughput charge, Senator, is to have the Congress set a ceiling, in effect, on how much could be assessed as a throughput charge, and, in effect, give a Federal blessing and umbrella.

But we in the States have the responsibility of determining what are the problems, and what level of charge they want to assess would not exceed a national standard.

Senator TUNNEY. Would that all go to the State treasury? Or would some of it go to the local treasuries as well?

Mr. MAULLIN. There is certainly a possibility for a State to have its own form of revenue sharing by sharing the throughput return with local entities.

In fact, the county of Orange, which is facing one of the areas proposed leasing has made a request, both through the Federal Government and to us to examine that possibility.

Senator TUNNEY. What about a program of Federal loans to give to the States the revenue they need to plan for OCS development prior to the time that they have any revenue out of revenue sharing, or from a throughput charge.

Mr. MAULLIN. So long as we knew where the revenue was going to come from to pay it back, it certainly is another possibility that we would like to examine.

Senator TUNNEY. One of the things that you talk about in arguing for a revision between exploration and production and saying that

you do not favor a Federal exploration program, at least controlled and financed by the Federal Government, you go on to say that on page 5 of your statement:

Winning bidders would be permitted to conduct approved exploration programs on their tracts, complying with applicable safety and environmental regulations. The leases would contain specific stipulations to the effect that in the event of any commercial finds, production would be permitted only on the basis of a production permit.

You suggest that the variable is to be a cash bonus in addition to a fixed royalty of 40 percent.

Could you tell me how the Federal Government is going to be able to prevent the development of a resource when the company has paid a cash bonus to develop it?

It is one thing to restrict royalty payments, but once the company has put up a lot of money in cash bonuses, how can the Federal Government then say, "We are only going to allow you to produce x number of barrels per day, assuming that you find oil."

Mr. MAULLIN. The whole OCS exploration process under any system is a risky business, as past history has shown. Many dry wells are drilled after the payment of considerable bonuses to the Federal Government for lease rights.

This system would maintain some of that element of risk. However, what is to be contemplated is that the risk would be discounted by the bidder, to take into account the actual risk that they may not get a production permit.

Let me give you a specific example—

Senator TUNNEY. Let me just say this. I think that the great problem with that is that it would be a tremendous disincentive to the industry. We have seen the same thing, in my view, in the natural gas area, where we had FTC regulation.

Where we found in the interstate market that the number of wells being drilled was way, way down, whereas the number of wells being drilled for the intrastate market was going up, up, up because there was not that kind of control. I think you introduce a real wild card when you say you can expect the oil companies to put up a lot of money on a bonus bid basis, and yet you are not going to necessarily give them permission to produce, assuming they should find the oil.

Mr. MAULLIN. These systems are very difficult, I will grant you. But let us identify what our real difficulties are.

First of all, we do not know what is really out anywhere. If you talk to any oil company geologist or executive, no matter how much they say "We are pretty sure about this lot because of preliminary indications," it is a very risky business, and a lot of money has been spent in sure areas that come up with zero.

The Government as well as the industry needs to know what there is. In effect, we are lowering the price of finding out what is, and under this kind of arrangement, both the owner of the resource, the public, as well as through the Government, as well as the industry, would have access to real knowledge at a lower price.

And I think that is an important consideration. Second, because it is a public resource, and we are considering an expanded leasing

program to meet a national policy objective, that is, to get oil to replace imports, and we are not doing it to just provide a new lucrative economic situation for companies that are doing quite well under other circumstances, we then have, I think, as a nation, the right to control the pace at which this resource is attracted.

This is a nonrenewable resource, as we all know. Once you pull that oil out of the ground in southern California, there is no more. I think we have a very distinct responsibility as a nation, Government jurisdictions, to institute some kind of better control process over the rate of production.

And also the effects that that production would have. That is why the separation of exploration from development. If you institute some sort of permit process that is based not simply on the leasing of a good, but also an analytical process that looks at the question, "Do you really need it at this point in time, and at what rate, and what are going to be the other costs to the citizens of the State and the country?"

That is another key consideration. You might ask, "Why would any oil company want to get involved in a situation where they could not be absolutely sure that that bid they put out is going to lead to a permit?"

I can only say we need the oil, so there is going to be some development, one way or another. We are going to define the rules of the ball game, and if those rules are the only rules, my guess is that because of the very lucrative nature of exploring this resource, that you will get participation, even though it may not be participation under a system which is even more lucrative.

Senator TUNNEY. Mr. Maullin, why not have the Federal Government hire the exploratory drilling companies to do the drilling, and find out what the resource is, the same way that major oil companies do.

Then, once they learn what the resource is, then sell it, and sell it—sell only those areas that they feel ought to be produced, and not put those shackles on the company that would result from the plan that you suggest, where you ask them to bid on a project when they really don't know whether they are going to be permitted to produce it once they have found it.

Mr. MAULLIN. One argument for the system that I am proposing, and an argument against Government exploration is the following: The exploration process is a very risky process.

It costs a lot of money, I can foresee a situation where, if we really need the production of oil to offset costly imports from areas that frankly we don't wish to transfer a great deal of our wealth to, there is a question of how much burden do you want to place on the Federal Treasury for that risky exploration process.

It could be \$200, \$300 million a year to follow an accelerated development schedule. That is money out of the Treasury. You could argue that the money is coming back in through higher bonus bids, but still there is a cash flow situation, that every year somebody from the Interior Department is going to be up here asking for a couple of hundred million dollars to pursue a government-financed exploration program.

The likelihood that it is going to be done well or not well is quite problematical. On the other hand, you have an oil industry which at least right now is quite flush with a lot of money that could be channeled towards exploration under this kind of program that I am suggesting.

It seems sensible to me, since what we really want to do is control production for national purposes, to try to capture the financial resources of the oil industry, and orient them towards an exploratory process.

I think we can do it through this system. If the government goes into it, then you will have to raise the money for the oil companies through some sort of taxation scheme. It is very indirect, and very chancy.

Whereas if you continue to have the industry in the exploratory process through this two-tiered system we are suggesting, you immediately tap the money that they would naturally use to continue their business.

Senator TUNNEY. What about a refinement of what you are suggesting? What about letting the oil companies apply their bonuses to exploration costs.

Mr. MAULLIN. That is a variant that is similar to what we are suggesting here. That is certainly a worthwhile and interesting idea. What you are doing is essentially looking into their capital position and identifying an amount of money which the public would like—the government for the public would like to dedicate to the exploration of our resources, so that everybody knows what we have.

That seems to be a perfectly reasonable way of approaching this, as I think the one we are suggesting is also reasonable.

Senator TUNNEY. In the absence of a government exploration program, how could we get around the industry's insistence upon keeping exploratory data secret?

Mr. MAULLIN. Under the conditions of an exploratory permit. Again, it is a question of the Congress, through amending the Outer Continental Shelf Lands Act and other relevant legislation, setting the terms of this program.

Senator TUNNEY. Congressman Rees is here. Congressman Rees, do you want to come forward and testify? I know you must have other committee responsibilities in the House.

Congressman REES. Yes. I am supposed to be in the Banking and Currency Committee.

Senator TUNNEY. Why don't you come on up? You know Mr. Maullin.

Congressman REES. We are having a delightful time on variable interest mortgages. Have you heard about those?

Senator TUNNEY. Yes, I have.

STATEMENT OF HON. THOMAS REED, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Congressman REES. I appreciate the opportunity of testifying. Last year I was chairman of a rather esoteric ad hoc committee,

called the ad hoc committee on the Domestic and International Monetary Effect of Energy and other Natural Resource Pricing.

The only way to beat the seniority system is to think up an esoteric title like this for chairman of the subcommittee. This year I am now chairman of the Banking and Currency Committee on International Trade Investment and Monetary Policy, and much of the work we are doing in that subcommittee ties into the work of the ad hoc committee.

I am also a member of a very powerful Presidential Commission on supplies and shortages, where we serve together which has yet to have its first meeting. And I hope we will be looking at the long-term energy prospects for the United States.

We became very much interested in the OCS Leasing Act of 1953, because in our analysis of energy pricing we had to make an analysis of what energy development was in the United States, and our ability to produce our Outer Continental Shelf and the various problems in dealing with this resource that we have.

We went basically into the economics of the situation. We did not get near the environmental aspect, because I think that is being dealt with by other committees and other groups. Since the inception of the Outer Continental Shelf Leasing Act in 1953 we have leased out nearly 10 million acres.

We have quite a few leases off the southern California coast. I remember about 5 years ago you visited the Union Oil rig that blew, and I would say off the Pacific coast, off the Santa Barbara Channel there are about 9 billion barrels of reserves that are under bid.

They have already been bid by the companies, this was about 6 years ago. They are only waiting for their environmental impact statement, so there is active drilling going on now off the coast of California.

I find, in looking at the whole concept of leasing the Outer Continental Shelf, there seems to be no concept by Interior as to why they are coming up with a program. They come up and they say, "This year we are going to lease 10 million acres."

It has taken them 21 years to lease about 9½ million acres, so why do they have to lease 10 million acres this year?

They don't. It is the most uneconomical thing they could do because they will be putting 10 million acres of good OCS tract on the market, and you are going to have a glut of leases coming onto the market.

If they keep working on a bonus bid, they will take every nickel that every oil company has for exploration merely because we have a cash flow problem in the U.S. Treasury.

I think that is the main motivation behind Interior's plans. It is the same motivation that caused the administration several years ago to start selling off our strategic stockpile, because it was felt we could use 2 or 3 extra billion dollars to cover up the Federal deficit.

I contend that this matter of Outer Continental Shelf drilling is just too darned important to be done the way it is being done now. For example, and I will give you this report.

We made an analysis of shut-in capacity. In 1973 we had 3,814 active oil wells and we also had 3,054 shut-in wells. Part of these

are depleted wells, but many of them are just waiting for development.

But we don't have the onshore facilities. Let me give you an example in southern California. We have to use very low sulfur oil. The Southern California Edison Co., for example, has long-term contracts.

Not short-term but long-term contracts, and 50 percent of their imported oil is from Saudi Arabia. It is a very sweet oil, a very low sulfur oil. We have the situation on the Pacific coast, also, that in about 2 years the petroleum will be coming down in tankers from Valdes, from the Alaskan pipeline.

Where is it going to go? Where is the 9 million barrels that is already under lease in the Santa Barbara Channel going to go? We have refineries in California, but they are up to capacity.

Much of that capacity is that low sulfur sweet that we must have by law in the southern California Basin, and also in the San Francisco Basin and the San Diego Basin. I would say in 2 or 3 years we are going to have a substantial oil glut in the Pacific coast, without any refining capacity to take care of that glut.

We also have another situation that has not been looked at. Where the oil shortage is not in the Pacific coast or the Gulf coast, it is in the Middle West. The Alaskan pipeline probably should have come through Canada, because it is the Middle West that is receiving fewer and fewer oil supplies from Canada, because Canada is now starting to conserve more of their petroleum resources.

But there is no plan that I know of for an east-west pipeline across the United States to take the petroleum as it comes down, about a million barrels a day, and ship it into the Middle West.

I have not heard of a plan. I have not heard Interior talk about a plan. Even if we leased off every bit of acreage that we now have in the Outer Continental Shelf, it would be impossible to find the exploratory equivalent, to find the crews, to find the various rigs that have to be used to develop the pipeline, to settle the legal problems under the commerce clause of the Constitution—is what rights does the Federal Government have on that 3-mile State title area in terms of access of pipelines?

Already I think the State of California has disallowed an application for a pipeline to go across from the Federal title area across the State to the onshore facility. This is going to be a very difficult problem, trying to interpret the commerce clause, vis-a-vis access to the State title area.

I am just very disturbed about the approach that is being taken. I think if we are going to look at a policy saying, "What is the purpose of the OCS?" Well, the purpose is to get more oil and gas. What else?

What else is if we can structure our leasing procedure and our exploratory procedure in the correct way, we can develop good competition in the petroleum industry. Right now an independent cannot bid.

An independent cannot pay that bonus because the bonus takes all the money they need to explore and develop the tract. Therefore, the only bidders are the majors. Of course if 10 million acres go on the

market today they will be the only ones who can bid, and since you will have a glut of oil leases the bonus bids will get less and less and less money for the taxpayer.

I think we ought to structure this, for example, so that the Federal Government and the State might go into a joint venture with an independent. In California the largest oil field in the lower 48 is the Wilmington field that is owned by the State of California.

The city of Long Beach is the trustee, and they operate the Wilmington field. Under the contract with the majors, Texaco, Humble, Mobil, and Socal, they produced the field.

And I think that they received 5 percent—it is a cost plus, and they also got a guarantee of 5 percent of oil in kind. They also have another contract with the State where they can purchase the oil that they develop.

Now no one called this socialism, when I was in the State Senate, and we worked on this. It was just a fine arrangement, where the state owned it and there was a cost-plus contract with this group to develop the oil.

I think we can be looking at a lot of alternate concepts and really creating good healthy competition within the industry. There is always the problem of vertical integration. How do you compete against a vertically integrated company?

Because they can get you on each level of production, because they can cut their costs and put it on another level. If they want to cut the costs on crude, they can do that, but they can make it up by charging heavy fees on pipelines, because they control most of the pipelines. But if you could develop a program whereby a joint venture between a company and the Federal Government, and then the Federal Government takes 50 percent of the petroleum in kind and auctions it off at a weekly auction, this would mean that you would have more independent refiners.

You would have more independent pipeline companies. You would have more independent retailers, because they would have this independent source of petroleum, which in many cases they don't have now.

The specter of competition is something that we really have not had in the petroleum industry. There are fewer and fewer independents. In this report, and I will make a copy available to your subcommittee, we have a chapter on the problem of competition and what has happened in the last 20 or 30 years in the industry.

Again, I would like to caution against the use of bonus bidding, because there is just not that much money available with the oil companies. The majors have already lost their depletion allowance.

They still have tangible drilling costs and other benefits. But we cannot take all of their out front money and put it into the U.S. Treasury. These are funds which should be used for energy production.

I looked at a prediction by Chase Manhattan projecting oil prices to 1985, and I think they came up with a price of about \$21 to \$23 a barrel. They came to that price by taking the capitalized value of that in terms of what the development costs must be to develop petroleum.

There is going to be billions of dollars of production costs and they won't develop if we keep running bonus bids. They did that last year in shale. The best shale land in this country was leased off on bonus.

And now the companies that own the shale leases cannot develop them because they spent all of their out-front development money and gave it to the U.S. Treasury. Already Atlantic Richfield finds that it had to pull out of the Tar Sands Project in Canada, and it is not developing shale because it had to spend every nickel it has on the Alaskan Pipeline.

But this is the situation we are getting in, with the policy of Interior, it will exacerbate the whole situation of reasonable energy development in this country. I would ask the subcommittee in dealing with the legislation, the one important thing you can do is to not lease for about a year or two.

Frankly there is enough stuff out there that it will take 5 to 10 years to develop. You don't need any new leases. And in the year period we completely reevaluate the OCS, the purpose and what we can do to develop competition in the oil industry to give the people a cheaper source of energy, and come up with something that we don't have, which is a rational, coordinated program.

That is my basic thought.

Senator TUNNEY. Thank you very much, Congressman. What you are suggesting is that the Federal Government ought to be involved in sponsoring the exploration in the offshore area, rather than giving that responsibility to the companies on their own after they have purchased those lands or leased those lands through whatever mechanism is used, whether it is bonus bidding, royalty or some other mechanism.

Congressman REES. Yes, Senator. We have figures in this report that Interior consistently underestimates the reserves of every parcel they have put out to lease. Some of these underestimations are by several hundred percent.

This is also true of the companies, once they lease the tract. They underestimate the reserves in the tract. Then they are amazed when they finally develop to find out, "Oh, my gosh, they've got all this oil and gas and they never knew it was here".

In the OCS Act it says that all of these leases have to be looked at every 5 years to make sure they are being developed. If they are not being developed, Interior can take back the lease.

In 21 years they have never taken back a lease.

Senator TUNNEY. That is right. Senator Johnston.

Senator JOHNSTON. Congressman, I enjoyed your testimony. So much of it I agree with so very strongly. A couple of items, though, that I wanted to talk about. Did I understand you to say that the Federal Government should sponsor the offshore exploration on a 50-50 basis with private enterprise?

Congressman REES. Senator, that is merely one proposal. If one was to—in California, we auction off at regular intervals, like a week, our take-out oil, so that this provides a source for the independent refineries.

They can bid on the State oil. I think that if we went into a joint venture with private companies, it would help the private companies because we would be putting up some of the up-front cash for the venture.

This means that some of your medium-sized companies that are priced out of OCS development might actually go into a joint venture with the Federal Government.

Senator JOHNSTON. In other words, the Federal Government would put up half of the capital for the OCS exploration?

Congressman REES. Yes, sir.

Senator JOHNSTON. Would the Federal Government jointly participate in decisions as to whether to drill or not to drill and how much money to spend and that sort of thing?

Congressman REES. I think this would have to be negotiated. The Federal Government could do several things. For example if we do drill Elk Hills, and if we start opening up the Naval Reserve, which is in Alaska, it means that we drilling petroleum which for years has been set aside for a national emergency.

I think a national emergency could either be one affecting our national defense, or it could be an economic emergency, for example, with a boycott of Arab oil, for example. I think the Federal Government could enter into an agreement where they checkerboard the lease, and then some of the areas, once they have been proven, can be tapped and kept for national defense purposes or economic defense purposes.

There are so many things that could be done on the Outer Continental Shelf that would tie in with overall energy policy in this country. Unfortunately, Interior, I don't think has analyzed what could be done.

Senator JOHNSTON. But you are not suggesting for the Federal Government to actually go in the exploration business, but rather to participate more or less as an investor, so as to encourage the independent of whom we have too few, or which we have too few.

Congressman REES. No, I am not for a Federal oil corporation. I don't want the Federal Government to become a developer of oil. I see no reason why they can't become a participant in the joint venture, with all of the work really being done by the independents or the integrated company, whoever is dealing with the Federal Government.

In California, the State is in the oil business. But all of the exploration, all of the drilling and much of the selling and processing of the oil is done by private companies.

Again, these are the largest companies in the country, if not the world. No one seems to complain about it. As I say, it is the largest oil field in the lower 48.

Senator JOHNSTON. Congressman, off the coast of Louisiana, which has about 90 percent or so of the offshore production in this country, I think the figures would show that the majors who drill and developed that over the last 25 years have not made a bonanza out there.

As a matter of fact, the testimony we heard yesterday from Gulf I believe it was, indicated that prior to the 1972 lease sale they had just about washed out even with the gulf for the last 25 years.

Whereas since that time have gone half a million dollars into the red again. I think that is fairly typical in the gulf. They have spent a great deal more money than they thought they would.

The cost of lifting a barrel of oil out there is actually more than the North Sea. While it is more expensive to drill in the North Sea, reserves there on the average have been larger than in the gulf.

Has that same sort of thing been true in California? Or has it been a great bonanza for the oil companies?

Congressman REES. I think they are doing pretty well in California, because I don't think we have any rigs more than 5 or 6 miles offshore. It is very accessible, and the onshore refining facilities are very extensive in the Los Angeles area.

I would suggest that the reason they have not been doing well on the Outer Continental Shelf is they were drilling \$3.50 oil. Now they are drilling \$11 and \$12 oil. I do not foresee the price of petroleum going lower than \$8 a barrel.

This was our long term projection of OPEC pricing, and looking at the capital that is needed to develop new energy sources, of course I would think that the historical pattern would be for petroleum to reach the \$20 level in another 10 years.

So this will make our Continental Shelf drilling feasible if the Federal Government leases any of these companies any money so they can actually drill their lease.

Senator JOHNSTON. We have been wrestling here with various proposals to try to cure the very ill you were talking about, and that is all the front end money for bonus bidding.

We have got to get around that. I think you are dead right on that, and we are trying out various ideas, royalty bidding, net profit bidding, deferral of bonus, forgiveness of bonus, various proposals.

Each one that we consider somebody points out an objection as I guess they always will. But I think we can come up with a proposal that will cure this problem of using all our capital in the front end in the Treasury rather than using it for development and exploration.

Thank you very much, Congressman Rees. Mr. Chairman—Congressman Rees has to go to a meeting and I want to finish questioning, then I have a few questions for Mr. Maullin.

Senator HOLLINGS [presiding]. Thank you very, very much for your interest and leadership in this field.

Congressman REES. Thank you very much, Senator, and I will leave a copy of the subcommittee report on the Outer Continental Shelf development.

Senator HOLLINGS. Thank you, sir.

Senator JOHNSTON. Mr. Maullin, I am trying to understand your proposal in separating the exploration from production. How would that work? How would you make the decision as to production?

Mr. MAULLIN. On the production side? It is our view that the decision to produce, since we are trying to augment national oil suppliers, our basic public objective ought to be one based on a very careful analysis of the need for the resource nationally, and also in relation to regional markets, the capacity of our oil trends for intra-structure to take the resource and put it somewhere.

Senator JOHNSTON. Can't we make that decision before exploration?

Mr. MAULLIN. Under the current system, when a lease is let for a 5-year period, there is not very much control when in that 5-year period you are actually going to get production.

It is mainly a function of the companies to have it. Their own facilities, as they have it set up—

Senator JOHNSTON. It seems to me very wasteful to spend millions of dollars to go find if there is oil there and go drill for it and use essential equipment that is needed elsewhere, to find the oil, and you've got it in place and you can't produce it and you say "No, we don't need it".

Mr. MAULLIN. I am not proposing that we do this capriciously, saying, "Let's find out where it is" and then as a second step say, "No, we are not going to let you do it".

If the Federal Government decides to lease areas it ought to be with the good prospect that the resource is needed and there is a good likelihood that it is there.

We have to recognize it is a very risky business. One of the purposes of separating exploration from production is to ascertain the extent of the resource, how much do you have, and what its real value is.

That is a necessary step. That is part of gathering the information which I am sure you have had testimony on quite a bit. It is a critical element of using the offshore resources intelligently.

But there are other considerations before you actually go to full-blow production. If, for example, in southern California you rushed into production in the next 2 years, there are severe questions of where the oil is going to go, how you are going to get it from the West to the East.

As the Congressman pointed out, we have only the vaguest indications of the oil transport system.

Senator JOHNSTON. Would your proposal delay the eventual production?

Mr. MAULLIN. There is the possibility of delay in that procedure. It may be because of the absence of a sufficient transportation system, because of unresolved environmental risks that must be dealt with.

Because of the fact, just to take southern California as an example again, there may be a momentary glut of oil on the west coast because of the Alaska shipping. You may decide that now that we know what we have let's say in Santa Monica Bay and eventually we are going to produce it.

In a given time period we may not want to produce it right then and there. It may be 4 years from now. It makes sense, under some scheme of a national supply policy. What I am trying to suggest here, I am not trying to give you the absolute definite answer.

I am trying to suggest a mechanism by which the Federal Government, and I am suggesting the States participate in this analysis and decision, can make a determination of when you need it and how much you are going to get and at what rate.

I see that the only way to get that is by separating the exploratory prices from the actual production process. I think what we have to

do, we have to come to grips with what we have now, and that is once that lease is gone, there is virtually no control. The controls are minimal in terms of safety and conservation requirements through the OCS regulations that are administered by the U.S. Geological Survey.

We in California have had a very sad experience depending on that process. We had a rig on Federal lease which was not adequately policed and it caused the most severe oil spill.

And that spill was not only environmentally damaging, but if that is the kind of practice we can expect from an accelerated leasing program, we are going to lose a lot of oil. That is an economic deprivation.

Let me go back to a simpler point. This is a very complicated area. There are intelligent reforms referred to by S. 426. There is discussion within the Interior Department, amongst the economists and planners that they employ, to figure out a better way of doing this.

What we are faced with in southern California is the real imminency of a lease sale under the old system, which essentially says that's it for 1.6 million acres, more than one-tenth of what is proposed this year.

It is certainly one of the richest potential resources, it will go under an old scheme which, in our view, is not applicable for the current situation, which is one of trying to maximize production, guarantee fair return to the public, and mitigate considerable environmental risks.

If I might add one final sentence, Senator, it is for that reason particularly that we are calling for a limited moratorium. When I said limited, we feel more time should be taken by all the interested parties.

By the Congress, by the Interior Department, States and industry, to think through the best system. I talked to members of the staff, and I think there are fascinating and useful proposals being discussed here.

We cannot work towards the best solution when there is, effectively a gun to our head. In southern California there is a gun to our head.

Senator JOHNSTON. I was suggesting, Mr. Maullin, that there is a gun to the head of the nation. You should have heard the testimony of the labor leader with oil, chemical and atomic workers yesterday from New Jersey.

He was saying, in effect, that their people want to get on with leasing. They are out of work and they need the oil and the industry is crying out for it. He said, "We can't understand why Congress doesn't proceed. All we get is delay, delay, delay."

Somewhere between that sentiment and your sentiment we have to effect an intelligent policy that doesn't say, "Let's delay some more", but "Let's make haste with a reasonable policy".

We can talk here in this policy for years trying to put together a policy. It has been 2 years almost since the embargo, or a year and a half, yet we haven't gotten a policy yet.

Mr. MAULLIN. Senator, I share your sentiments completely. It is a seeming paradox when one says delay to speed up.

Senator JOHNSTON. The problem is, this delay will lead maybe not to the avoidance of the evil, such as drilling on the Santa Barbara Channel, but may lead to burning coal in the Los Angeles basin, or unemployment, one of the two.

Either one of which is a very unacceptable thing.

Mr. MAULLIN. I certainly share your sense of urgency. When I say "delay" a limited moratorium, it is not so that we can go back to the beach on Santa Monica. It is beautiful, but that's not the purpose.

It is so that we can really crunch down and get the work done. I will give you my personal experience, as part of a new administration in California. When we first learned of the extent of the Interior Department's program, there was virtually no consultation with the State administration, past or present.

It was "Here is the way we are going to do it; don't bother us with any details". It took a couple of months of knocking on the door before anyone would even discuss some of the alternatives we are discussing here.

One of the reasons you get a call for delay is that there has not been a concerted effort on the part of the Interior Department, especially, to really get down to work and figure out what the best alternative is.

There is bureaucratic inertia, which we sense. It says we have done it for the last 20 years, since 1953, this way and that is the only way. I think it is the responsibility of all of us who are concerned with this to work hard in a reasonable period of time to come up with the best program.

That is why I say a limited moratorium. We have a California Coastal Zone Act or Plan which would be adopted by the State legislature no later than December 1976. It seems to me that within that time period, a little over a year, we could come up with the best program possible.

That is a delay to work hard, not a delay to go to the beach.

Senator JOHNSTON. Thank you very much, Mr. Maullin.

Senator HOLLINGS. Mr. Maullin, one subject of this delay seems to highlight this entire story. Perhaps it would be out of fault in the wording or language of some of these proposals.

Specifically, wherein do you find the delay or halting further exploration activity as you outline on Page 3? We do not believe that this interest would be well served by halting further exploration activity until the Federal Government exploration program—I want you to elaborate some.

Earlier in your statement you say, "This is distinct from a government-sponsored and managed exploration program, which we oppose." In that context, you think actually the government exploration program is a delay?

Mr. MAULLIN. No, sir; I am sorry if there is confusion in the understanding of my statement. One, I am not suggesting that the government program has anything to do with delay.

The question of a delay is only related to going ahead with the current plan that the Interior Department has.

Senator HOLLINGS. On leasing.

Mr. MAULLIN. On leasing.

Senator HOLLINGS. We intentionally delay leasing, so we can plan and explore ahead and know what we are leasing. That is intended. But we start from the word "go", and all the competent witnesses, all the witnesses almost that have appeared and testified on this particular score have sat at that table and said:

Look, Senator, if you leased it all this afternoon you are not going to bring in whatever is leased, an extra quart of oil to the market before 1980.

Any way you look at it, and then it could be later, because where leasing procedures and actual leases could be consummated by Interior under the present 1953 law, by, say, October 1976, there is no guarantee.

If they take, as they have customarily, to develop what they have already purchased, some 5 years, it is 1981. Then you take in the physical shortage of drilling equipment, the physical fact of restrictions thereupon on the development of those tracts leased in 1973 and 1974.

They said it would keep all the drill rigs possibly on the sites, and to bring in on an emergency basis, if we had this emergency production boom and ordered them in, it would still take the next 3 or 4 years to develop what was leased in 1973 and 1974.

Then you look back over at the Alaska Pipeline, and you look at the environmental groups and you look at the Coastal Zone Management Act and you look at anxious governors who are charged with planning and development of their coastal areas.

You are saying:

Well, let's try to narrow these problems and solutions and work them out together in a coherent fashion without delay.

As a result, we charted in drafting these bills working very carefully a flow chart, which Secretary Morton was asked on numerous occasions—he said, "No, delay is not my apprehension here. It is capability, monitoring", he went into several other things.

I noted an intransigence, as you have, to just go ahead and do it the same old way. We have been talking with those in the Interior Department, with the Geological Survey, with independent drillers as to what is realistic, with big oil who will have the responsibility and wherewithal to carry it out, because we are not trying to get a government program.

We are trying our best to get a government exploration to do just as vice president Carter of Gulf Oil in that chair yesterday afternoon said:

If they had ten million acres and they wanted to sell that ten million in the Gulf to Texaco, you would have exploratory drilling and find out what you had and find out what you are selling, and determine in the first instance what was a fair return to the Gulf stockholders.

Why can't we in government do the same thing and find out what is a fair return to the taxpayers and citizens? One more time, when we find out that we can have exploratory drilling, we do have to plan it.

And where they could start the leasing, say, in October 1976, we could start exploratory drilling. After a year of this planning and taking areas and everything else. But once taken, an entire tract,

rather than 5,000 acres—those in the field with the talent tell us this is the sort of arbitrary way you have to drill so many holes in each one—why not take an entire tract?

Lease that entire tract. Let all the companies participate and enter percentage-wise on their bids and develop it, which is a far more practical approach to it, and that could expedite it.

We could have drilled after all these elements, during this 4- or 5-year period, where governors could come in and the Coastal Zone people, environmental groups and everything else.

We could actually start drilling, rather than the 4 or 5 years, in the most about 3 years. We know then we would have leases and drilling in the best interest of all concerned.

Now, do we see that—are you looking at this legislation from your vantage point? And you have tremendous experience out there in California. If we worded it wrongly, then let's reword this thing.

And I would like you to comment.

Mr. MAULLIN. As I talked to members of Congress and the staff in working on these bills, principally S. 426, it seems to me that we are pretty much on the verge of working out a better system than what we have today.

Let me restate again what I mean by these words, "Limited moratorium delay".

Senator HOLLINGS. I think "moratorium" is an unfortunate word. Every headline says "moratorium". Immediately people in America polarize between those that can do and those that cannot do.

Environmentalists have been depicted as those that can't do. When in doubt, do nothing, stay in doubt all the time—you have everybody hollering "No", and everybody with energy like the Senator from Louisiana referring to that person who had a boss with the union, plus he is on the wrong track.

If we leased at all it wouldn't get additional work for him. He has to work on the leases of 1973 and 1974. His appearance in Congress, where we are jobless and can't get any work and everything else, that is not the problem in front of us today.

This is not an employment problem, this is an energy problem.

Mr. MAULLIN. That is quite right, Senator. I think you very accurately pointed out one of the characteristics of this whole business is not going to bring jobs immediately. It will bring jobs in large numbers when it does happen, except in very localized circumstances.

But for certain, if we lease 20 million acres tomorrow we are not going to get anything going at any accelerated pace as regards jobs. But one thing we are going to do is if we lease the 1.6 million acres in Southern California, come July or September, if we do it without a reform of the current program, I feel that we are going to give away in effect a resource owned by the people of the United States under the least favorable circumstances.

The reforms mentioned in S. 426 and other related proposals are needed. Let me clarify again what I mean by these unfortunate words, "delay" and "moratorium".

I realize they are buzz words. People say that is an obstructionist tactic. We don't want to obstruct the development of a necessary resource. We agree that 35 percent of our oil needs coming from important sources is bad for the United States.

And we want to cut down those imports. But we have to do it in an intelligent way, where we don't give away the family treasure pursuing some goal of independence. When I say "delay" and "moratorium" I am saying for a very particular purpose.

And that is to give us the time to conclude these reforms which are so interestingly discussed in S. 426. We have the particular problem in southern California.

If I were in the position of a representative of an eastern seaboard state, I would not be here saying "delay" and "moratorium".

From the point of my state on the east coast, I am sure that the considerations would be finished long before there would be a lease sale that affects my coastal zone. But in Southern California we are in a very, very different and unique situation.

That is the Interior Department is going to go ahead with this lease sale in a very short period of time, and possibly before the reform proposals are completely worked out.

My call for a delay and moratorium is to give us the time at the national level to work out the appropriate program and also to give us time at the State level to conclude something which is called for in Federal legislation.

That is the completion of an intelligent coastal zone plan. We in California—

Senator HOLLINGS. S. 426 and the other bills would allow for that?

Mr. MAULLIN. That's right.

Senator HOLLINGS. We ought to be expediting the enactment of these particular proposals whenever we can agree upon them.

Mr. MAULLIN. I thoroughly agree with that.

Senator HOLLINGS. We hope to do that by the end of June. That is why we have been working and analyzing these hearings and working together, Interior, Commerce, Oceans and Policy Study, and working together.

You see Senators coming in and trying to get into other budget hearings and so on, and trying to get ahead with this hearing. The urgency is there and we are not trying to delay.

Mr. MAULLIN. I can guarantee that those of us in the State administration of California, we are ready to offer the best of our thinking and experience to bring to resolution this reform procedure which we all agree is necessary.

For some reason or other, if we get slowed down or whatever, I think we do need a continuation of a deliberation process, so that we can complete consideration of the reform, and certainly give us a chance to adopt the Coastal Zone Plan which we have completed in a draft.

It is before the State legislature. There is a finite time when it will be or not be. So we are not talking about indefinite time periods.

Senator HOLLINGS. One final question. When you say "the government-sponsored and managed exploration program, which we oppose"—why do you oppose that? If you do oppose it, who will conduct the exploration program, if you can separate it?

Mr. MAULLIN. I believe in the leasing procedures, through a separation process, an exploration permit after a bid—

Senator HOLLINGS. You would still have the lease consummated before exploration?

Mr. MAULLIN. Yes, I would.

Senator HOLLINGS. You would lose all the advantage of knowing exactly what you are leasing.

Mr. MAULLIN. But there is a production permit concept in my scheme.

Senator HOLLINGS. Which rather than 5 years—describe that for me.

Mr. MAULLIN. If a company or group of companies bid on a field or tract or some unit of exploration, they would have a first right to exploration and to production.

Senator HOLLINGS. They've got that now. They have the first right to exploration and production, so there is no change.

Mr. MAULLIN. I would separate the two processes by interposing another decision process by a competent Federal—I would suggest State participatory board, to go ahead on actual permit to produce the point there being—

Senator HOLLINGS. Do that slowly. You would have a Federal State board authorize actual production.

Mr. MAULLIN. Yes, sir.

Senator HOLLINGS. After exploration?

Mr. MAULLIN. After exploration.

Senator HOLLINGS. I ought to come to your hearings and say that would constitute delay. We ought to turn this thing around. I think that is when you really would have delay, and indecision.

I am speaking candidly and respectfully, but let's look at that closely.

Mr. MAULLIN. There is a possibility that it might not work, but there is also a possibility that it would.

Senator HOLLINGS. Right.

Mr. MAULLIN. If the law said you had to make up your mind within a given period of time, once findings were made to the board, that board has to do it.

Senator HOLLINGS. What would be the period of time? Say you leased to *x* Company 5,000 acres in June of this year, and they have now got what we call a master switch. We have turned the switch, and it is now transferred from government to private ownership. Provided, however, you are still going to retain some public decision.

How do you retain it? They have how much time to explore?

Mr. MAULLIN. We have not in our proposal worked out specific times, but let's just assume that you have—

Senator HOLLINGS. You could not work that out in legislation because you don't know what exploration would bring. You could run around and drill all the dry holes like they were talking to another witness about yesterday down in the Gulf by Florida and find nothing where large finds had been predicted.

Or up in the North Sea, where large finds had been predicted, and still dry holes. You could not legislatively say there shall be a find from an exploration.

Mr. MAULLIN. But under the current law you could lease for a 5-year period.

Senator HOLLINGS. So you would have 5 years to explore and find something?

Mr. MAULLIN. No. If we are going for increased production and ascertain what we having and getting it going, and not delaying production, which is our ultimate goal, we might work, say, a 2-year period.

Since we have heard much discussion of the fact that leasing a lot of acres is not going to lead to production, any predictable rate of production, the decision to actually lease a given unit for exploration, to lease it for exploration, might come after a consideration of the capability of the bidders to actually get the work done in a 2-year period.

It might be part of the bidding process, to make a declaration under some restriction that you are going to get the work done in 2 years or you lose your rights.

Senator HOLLINGS. That would be awfully restrictive if you are saying in 2 years you have to by exploration make a find.

Mr. MAULLIN. Right now it is 5 years, basically, so since we are trying to speed up in effect the process of exploration and ascertaining what our resources are, and hopefully speeding up the production of resources that we need for a national supply situation, why is it not reasonable to speed up this whole exploratory phase and give to the public jurisdiction, the Interior Department, if that is the case, the information that we are looking for, how much do we have?

If I can go on to the production phase of it and try to answer your question more fully—

Senator HOLLINGS. Please.

Mr. MAULLIN. We have some understanding of what our resource is, and a company or bidding group has something they want to go to production phase on, by having another permit process.

You can restrict it, the consideration time. You can describe how long that consideration can go on. The elements that would come in there would be the analytical elements. How much are we going to get out of that unit?

How does it fit in with the supply and distribution system that we have nationally? How does it fit in with our other oil resources, for example, the Alaska oil resources that are also coming onstream at the same time.

What is the availability of rigs for production? What are the environmental safeguards that need to be written particularly for that particular production unit?

Can the company or the group that is bid actually guarantee or show good evidence that they can utilize the technology or whatever restrictions you want to impose for environmental reasons on the actual production of that unit?

Those are the considerations which are now virtually absent in the Interior Department's program. It is a landlord business. If I have an apartment, I want to lease it to some guy who wants to live in there.

That is not the point of this program. We are trying to get oil reserves from the United States to serve a national purpose, and not simply act as a landlord.

I am not going to argue, Senator, that we have thought out completely the entire solution. But I threw out this idea of the separation and joint Federal-State permit procedure as one mechanism that will serve the national interest a lot more than what we have now.

I threw it out to discuss it.

Senator HOLLINGS. Very good. It is a very valuable contribution to our proceedings, and we appreciate it very much. Thank you very much. We are getting a little behind here with some of these other witnesses.

Mr. MAULLIN. Thank you very much. I appreciate the opportunity.

Senator HOLLINGS. Dr. Hargis.

STATEMENT OF DR. WILLIAM HARGIS, CHAIRMAN, NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE

Dr. HARGIS. Mr. Chairman, it is a pleasure to appear before you on behalf of the National Advisory Committee for Oceans and Atmosphere.

As you recall, NACOA has been asked to respond on this issue, on several aspects of this issue, to the National Ocean Policy Study Group. And we have been asked specifically today to consider certain aspects of the nine bills that are under consideration by the committee.

The National Advisory Committee on Oceans and Atmosphere as you know is a legislatively established Presidentially appointed committee of 25 nongovernmental representatives, representing a broad segment of oceanic and atmospheric affairs, science and industry, engineering, and other aspects.

In response to the request of the committee, we have reviewed the questions and the testimony that has been prepared as a result of the review has been distributed to the committee.

It is in two parts. That is, the basic textual material and then appended materials, in which we address the various issues, bill by bill. With the committee's permission, and in order to save time, we will offer the testimony for the record, and I will attempt to paraphrase it.

I am speaking to you as chairman of the National Advisory Committee on Oceans and Atmosphere. As a result of not only the consideration that the National Ocean Policy Group has asked us to undertake and the questions that are before the committee at this time, but also with the background of about 3 years of deliberation of energy needs of the country as they relate to oceanic affairs and ocean resources and atmospheric problems.

Over the last 3 years of considering the energy needs and strategies and possibilities of developing energy from the sea, we have come to the conclusion that the need for additional sources of oil and gas is clear.

And the Outer Continental Shelf appears to us to offer the best alternative at the present time, to develop resources to meet the interim or near-term and short-term, mid-term energy needs of the country.

The legislation you are considering, taken collectively, has these same objectives in mind. Perhaps NACOA's views and suggestions can be helpful to you.

The broad range and diverse scope of the nine bills you are considering reflects the magnitude of the promise and the problems implied by oil and gas development in the frontier areas of the Outer Continental Shelf, compared to the familiar circumstances that have surrounded the offshore oil and gas development in currently active lease areas.

We are well aware that moving into frontier areas will present adjacent States, it will present the environment in the vicinity with the possibility of rapid development of problems that have begun very slowly on the gulf and the California coast, and have addressed this problem specifically.

The issues identified in the chairman's letter, that is the chairman of the committee, Senator Jackson, are as follows:

(1) Improved coordination of Federal OCS programs with the States. (2) Increasing the role of the States in the decisionmaking process. (3) Methods of separating OCS oil and gas exploration activities from decisions to develop and produce the oil and gas.

(4) Alternative leasing systems or other methods of allowing private industry to develop OCS oil and gas. (5) Improvements in the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact statements.

(6) Improvements in regulation and enforcement of OCS operating practices for safety and environmental protection, and (7), the need for an appropriate form of Federal assistance to affected coastal States.

These are the seven issues that the chairman of the full committee identified in his letter. We would like to address the issues together, issues one and two together, because they are closely linked aspects of a larger problem which NACOA has considered.

That is the role of the states and state coastal zone management programs in the development of the oil and gas resources of the Outer Continental Shelf. By the way, I would interject here that we have considered six of these seven issues.

We have no position we can offer on the alternative leasing systems. We did not go carefully into that, and, therefore, cannot testify on that point.

We took the problem of the role of the states in OCS development in response to an invitation from you, Senator Hollings, in connection with the NOPS study, and have already communicated our recommendations to you.

I believe you have received the initial letter and the follow-up letter and clarification. Briefly, NACOA believes that the provisions and concepts of the Coastal Zone Management Act furnishes a means through which states can play an effective role in decisions affecting coastal zone uses.

The problem is that most coastal states have not yet had time to prepare their management plans and obtain the necessary Federal approval.

This seems to us in some cases, very probably it is going to require a fairly long period of time, and, therefore, some interim protection is required, pending the completion of acceptable plans, coastal zone management plans.

We believe that some of the legislation under consideration addresses his problem in a manner that we can support. Specifically, Senate 586.

The next issue that we were asked to address concerns the desirability of separating Outer Continental Shelf oil and gas exploration activities from decisions to develop and produce the oil and gas discovered.

NACOA has favored such a separation, but there are many subtleties involved. NACOA's position is that there is a point at which re-evaluation or a pause can be made in the continuum of one, exploration, and, two, development.

We feel that exploration can proceed under adequate regulation, under careful regulation, and that conditions can be written either into regulation or legislation, and we feel legislation is necessary, which will permit consideration of public interest.

Senator HOLLINGS. Who would conduct that exploration?

Dr. HARGIS. At the present time, NACOA's position is that industry is the best position to move ahead rapidly with exploration, and which we feel needs to go ahead rapidly.

Senator HOLLINGS. So it would be a totally industry controlled type of operation?

Dr. HARGIS. It would be a situation in which industry would be allowed to do the exploration phases under conditions that the government can, on receipt of not only the data for exploration, but also the analysis of those data from the oil companies, or from the geophysical companies, can insert conditions which would then protect the public's interest, both short-term and long-term.

Senator HOLLINGS. It would be, then, a government-supervised exploratory program carried on by private, independent drillers, in a general sense?

Dr. HARGIS. We think it could be done by industry under control, and adequate conditions—

Senator HOLLINGS. Under government control?

Dr. HARGIS. Yes, under government control in the sense—

Senator HOLLINGS. I am not playing on words—of a government exploratory program. That is what is contemplated in S. 426. Not that we would go down to Interior and they would go out and buy a bunch of rigs and set up a Department of Exploration and go and hire everybody like we said in the space program.

A government-supervised program where private industry was producing the component parts, and everything else, and generally coordinated in a comprehensive government-type approach to it.

If Gulf Oil, for example, who testified yesterday, Dr. Hargis, can hire the independent drillers, why can't the Geological Survey do the same type of hiring?

Dr. HARGIS. The Geological Survey, of course, could do the same type of hiring. It is a fact, of course, that not all of the work is done

by private organizations. We feel the essential aspects are that the public interest, both long and short-term, be protected.

We also feel that it is possible to do this without actually setting up a government exploration program. In fact, we feel it is possible to set conditions upon an exploratory lease, which could be awarded on a competitive basis to industry, which would give industry some preferential rights to development, but which would also allow the government to require full disclosure of data and analysis.

And it would also allow government to interject controls for the exploration phase.

Senator HOLLINGS. I am glad you got that down in the record. That is exactly what we hope to do.

Dr. HARGIS. In other words, what we see is that industry could be allowed to go ahead, leases could be given for exploration. But the coupling, there should be a de-coupling between the exploration and development phase to such an extent that the government could then decide whether it will or will not allow development of a field with some possibility of compensation if it can't.

And to decide also the conditions of development.

Senator HOLLINGS. Where do we interpose the word "leases" for exploration? Why not contracts for exploration? It is still the government land. Why put in a transfer of ownership until after exploration has been had? And we know exactly what we are leasing.

It interests me that you have slipped that word in, "leases" for exploration and "leases" for production. Why not "contracts" with independent drillers and otherwise to go ahead and explore, and then we will know what we are leasing?

Dr. HARGIS. We have considered primarily the lease approach.

Senator HOLLINGS. Why?

Dr. HARGIS. With some preferential consideration.

Senator HOLLINGS. Why the preferential? Who are you trying to prefer? We are trying to prefer the people of America. The Vice President of Gulf said he would not sell until they found out—the stockholders of Gulf, and I am getting back to the point, why not the taxpayers of America?

Are there oil members of your particular NACOA that demand that particular kind of testimony?

Dr. HARGIS. No, sir.

Senator HOLLINGS. Where is the interest of the public served to have leases and preferences when we are looking for energy? The best thing to do is to look, as you say, with independent drillers.

Not bringing on a big Government corporation, but let the independent drillers, on contract, find what we have and then move to the plateau of leasing, without any preferences and any leases in the first instances.

Why do you attach that to exploration, Dr. Hargis?

Dr. HARGIS. Based upon the deliberations of the full committee, we have concluded that it is possible, that it is necessary to proceed and is possible to proceed with the leasing arrangement and that the public's interest, both short and long-term, can be protected, if there are adequate provisions in regulation and in law which would allow, in a position of Government controls, whose the resources are known.

It is the committee's position that if industry is encouraged and allowed to undertake exploration under some lease arrangements, then the incentive will be stronger for them to do this.

Senator HOLLINGS. In other words, you get competent and responsive exploration, once you have transferred ownership to them, that cannot be obtained if you fail to transfer that ownership.

If you retain the ownership within the people of the United States, then you are saying you cannot get good and prompt and expeditious type of exploration; is that right?

Dr. HARGIS. No, sir. What we are saying is that it appears to us that the best strategy for rapid development of knowledge of the reserves on the Outer Continental Shelf is to encourage industry to take part in the exploration phase, but to do it—

Senator HOLLINGS. How does that do it? What does that get us? If you were the Secretary of Interior, and we had Secretary Hargis, say, go out to the competent drillers, because they have many organizations. I talked to one the other day and I will talk to another one next week.

They find good, independent, private, free enterprise drillers, and they will contract with Gulf, they will contract with Sun Oil or the U.S. Government, and they will do a competent job.

We have some of that expertise in the U.S. Geological Survey. What is the matter with Secretary Hargis going in, that we made these preliminary surveys, at the geological survey level, that is who has really made them.

What is the matter with Secretary Hargis going into a particular tract and doing the exploratory drilling under contract and turn that information over? What advantage is gained by first leasing it to oil companies?

I am trying to get that block out of my mind, and understand your commission's position.

Dr. HARGIS. The advantage that the committee perceives is that industry will be encouraged to proceed with the exploration phase, invest more money in it, and proceed more swiftly, if there is an incentive for the industry itself to get an advantage—

Senator HOLLINGS. We have an advantage at one level, and that is reelection. We have the money. The Oklahoma study said for the past 10 years all the exploratory drilling in trying to make out a budget, we put in \$200 million.

We don't have a shortage of money. Even President Ford says in the energy field we will adopt those new types of programs. So we can get the money. We can borrow just as much as industry can, so there is no shortage of money. We can borrow just as much as industry can, so there is no shortage of money and there is no shortage of incentive or inducement.

And I don't see where industry all of a sudden moves faster by this transfer of ownership. I am very bothered, as you can see, by my questioning about this master switch taking place, where the big pressure is on by the administration, by the Department of Interior.

Now you come in here as a representative of this particular commission and the first quid pro quo you are attesting to, bang, you

transfer ownership. You say Government exploratory drilling, Government controls, Government supervised, the information would go public, but please transfer the ownership of it by a lease before you do anything else.

How, why?

Dr. HARGIS. I think it would be unfortunate if we got bogged down in permits, lease, or contracts.

Senator HOLLINGS. It is not bogged down in my mind. Why do you insist on leasing to companies before we know? Specifically, let us put it in reverse. We have already done that in 1973 and 1974 and they haven't brought in anything yet from those leases.

Their own witnesses have attested that it takes 2 or 3 years to work them out. And the fellow who comes up here for a job, all I have to say is, the profits have been over \$100 million greater than in land.

If I am president of a corporation, I am representing stockholders trying to make a profit. Why have they not gone ahead? Under your analogy, since they have already leased them and not just have them for exploration, they have the lease for the entire production.

They have leased those millions of acres, and presently they are in the ownership of the major oil companies, and yet have not been developed or even explored. Under what you are attesting to, why hasn't that occurred in the 1973 and 1974 leases?

Dr. HARGIS. I cannot answer that question, specifically, Senator Hollings, because, of course, I have not had the benefit of listening to prior testimony.

In the last analysis, the committee's opinion and position is as follows. One, exploration in the frontier areas ought to go ahead as rapidly as possible. We do not advocate a moratorium. We advocate an immediate move. It seemed to us that because there is a mechanism now for leasing and there is a Government arrangement now for leasing and there is a Government arrangement now for leasing, that this offered—and because it does seem to us that adequate controls are now being developed as a result of all of the public interaction and legislative pressure and legislative action.

It seems to us that it is possible to write conditions in a lease or a permit which would, on the one hand encourage development, that is, encourage exploration so that we would be able to bracket the resources, and which would also require disclosure of information, data and information analysis and which would then allow the agency responsible, when the time comes to go from the exploration phase, whether it be by lease or by permit or by contract.

If, in fact, the legislative process would decide that that is the best way to go, that it is possible to—that the arrangements should be made so that conditions for exploration can be interjected after the data are known.

We feel that we have talked with the Interior people several times at several stages, and we feel that Interior, the Interior agencies are showing a greater awareness of various problems that have come up before the committee.

Now, in the consideration of the separation from the exploration, decoupling from exploration and development phases, we have rec-

ommended that field development plan approval, by whatever agency is responsible, BLM or Department of Interior, be accompanied by full and complete environmental impact statements, which meet NEPA requirements.

We do not advocate turning over the entire exploratory job to the Federal Government. Consequently, we would recommend against passage of section 209 of S. 426, which would establish an exploration program within the Department of Interior, to prove the presence of oil and gas prior to leasing.

Section 202 of S. 740 also establishes a Federal oil and gas exploration program which we feel we cannot support. NACOA stands firm in its conviction that managing and financing OCS exploratory drilling and production can and should be done by industry, with appropriate Government control.

Turning now to Issue Number 5, the need for improvements in the planning and execution of environmental baseline studies monitoring studies, and the preparation of environmental impact statement, my own experience as director of a coastal research, engineering and advisory service institute has led me to endorse most heartily NACOA's position as stated in our Third Annual Report of last June that the data base in these areas is inadequate.

We urge that this inadequacy be eliminated. Briefly, the existing progress address longer term problems and do not fully meet the needs of coastal zone managers for quick response studies tied directly to pending decision dilemmas. Coastal zone decisionmakers have needs for access on a relevant, timely, and useful basis for scientific data, knowledge and competence, adequate engineering knowledge and data, technical services and continuing technical advice.

In testimony before the National Ocean Policy Study, approximately a year ago in April 1974, I stressed that there were gaps in our knowledge regarding offshore oil and gas impacts that should be filled before the onset of large-scale development.

I feel, and the committee feels, that while the exploration phase is going forward, as we have urged, that the development of baseline information, adequate baseline studies be going forward.

But we do not believe that the exploration phase has to be delayed while this is going on. We see it possible for them to go along simultaneously.

Senator HOLLINGS. We do, too, under that legislation, Doctor.

Dr. HARGIS. I think it is well to point out again that the research studies, the studies of the coastal and offshore acquisitions that will produce data and information upon which sound environmental impacts statements must be based, need not and should not be delayed.

We believe that NOAA should have the lead role in developing the environmental baseline data upon which impact statements for all continental shelf development, including oil and gas development, must rest.

We see a number of activities that are closely related to Outer Continental Shelf oil and gas development. For example, deepwater ports, offshore fishing, international control problems, which could stand considerably more scientific data.

And we believe that NOAA, given the charge to go forward, considering the needs of all of the Federal agencies involved.

I would like to address for a moment the question or statement: Improvements in regulation and enforcement of Outer Continental Shelf operating practices for safety and environmental protection.

Several aspects are of concern. First, the actual development of the marine engineering and safety standards which would need enforcement.

Second, the development of operating regulations and constraints and their enforcement. And finally, a word about the current organization structure which handles regulation and enforcement of Outer Continental Shelf activities.

In a special report for the Secretary of Commerce, titled, "Engineering in the Ocean," dated November 15, 1974, a copy of which is provided for the record, NACOA recommended the establishment of an Institute for Engineering Research in the Oceans reporting to the Administrator of NOAA and which would be a focal point for the development of ocean engineering and technology required to improve both the safety and economy of Outer Continental Shelf operations and would take the lead in developing standards for structures and engineering operations in the ocean environment.

We feel that were such an institute in being, it would be—we would be in a better position to establish regulations relating to structures and operations of structures offshore.

And we believe the development of such an institute for such a program ought to also go forward while exploration is going forward.

Senator HOLLINGS. Dr. Hargis, you have been very helpful to this committee and all of our committees. We have this famous Governor from New Hampshire, and we are trying to move along.

We have been studying this statement, and there are a lot of questions we wanted to ask. We do not want to be short with you, but we will have to try to fit in some time so that the Governor can also be heard.

Dr. HARGIS. Yes, sir. I have just a few more—

Senator Hollings. Your entire statement will be included in the record. Thank you very much. I can do this to you because you and I are good friends.

Dr. HARGIS. Do you want me to summarize now?

Senator HOLLINGS. Yes. If you can summarize the remainder of that. I want to fit in some time for Governor Thompson.

Dr. HARGIS. Yes, sir. The last question was the need for Federal assistance to impacted coastal States. We recognize this need and in our letter to you, Senator Hollings, of February 11, we recommended that some means be set up for compensating impacted States for damages and for repair.

Also, for the cost of providing shoreside services to support offshore activities. We think that some of the legislation that you have under consideration, for example, S. 426 and S. 586 will help assure that there is an adequate role for the States in decisions.

And that there is also in some of the provisions of these bills means for accomplishment of the objective of helping impacted coastal

States, both with front-end money, as well as with funds which will help them deal with the day-to-day problems of coping with Outer Continental Shelf development.

Senator HOLLINGS. Do you still feel as you did earlier in a letter to us that exploration is what we must get on with now? This buys the time to learn what we must, before actual production starts.

Dr. HARGIS. Yes, sir.

Senator HOLLINGS. That is still a fundamental promise with which I think we can all agree. I tried to emphasize that, rather than the word "delay". The two can go along at the same time.

The other is just a speeded-up mechanism to transfer ownership. Not to produce. Not to explore. Not to do anything. Yet it is touted everywhere, even in the ads now, to come on in the evening after the Walter Cronkite show on Channel 9 at 7:30, I can give you the hour, and the time. Texaco puts on an ad and they say, "We want to go forward with Government leasing and cut out the delays".

But what is the fact? That is an expedition and a facilitating and speeding-up of ownership, going from public to private lands. Where does that bring us in an extra quart of oil?

That is what bothers me.

Dr. HARGIS. I think, Senator Hollings, NACOA would obviously have to leave it to this committee and the Senate and Congress to decide whether or not it is possible under the mechanisms now available to write adequate regulations which would protect the public interest.

We concur, of course, with the Senate and with this committee, that the resources belong to the people. They belong to posterity. The primary purpose is to make the best use of those resources for the needs of the nation, and of posterity.

We do recommend, however, that exploration go ahead, and that the committee take whatever steps it feels necessary to see that it does go ahead. We think that exploration can be decoupled.

We think the controls can be imposed, and we think that the energy can be made available without undue delay, but with reasonable consideration of public needs, and the committee, we realize that there is considerable that it has not been possible to discuss because of time.

If we can consider with this committee any details that we might not have been able to today, we would be pleased to do that.

Senator HOLLINGS. Abundant credit has been distributed for the enactment of the Coastal Zone Management Act, which is really the only land use act we have on the statute books in this country, and a goodly portion is due to you.

I know working for 3 years under your leadership in the Marine Institute, that if we had not had your leadership we would not have that statute on the books today, and we appreciate the leadership you have continued to give on this Advisory Commission.

Dr. HARGIS. Thank you very much, sir.

Senator HOLLINGS. Thank you very much, Dr. Hargis.

[The prepared statement of Dr. Hargis and the report "Engineering in the Ocean" follows:]

1028

STATEMENT OF
DR. WILLIAM J. HARGIS, CHAIRMAN
OF THE
NATIONAL ADVISORY COMMITTEE ON OCEANS AND ATMOSPHERE
FOR THE JOINT HEARINGS OF THE
SENATE COMMERCE COMMITTEE
AND
SENATE INTERIOR AND INSULAR AFFAIRS COMMITTEE
ON
LEGISLATION DEALING WITH OUTER CONTINENTAL SHELF
OIL AND GAS DEVELOPMENT AND ITS
IMPLICATIONS FOR COASTAL ZONE MANAGEMENT

April 9, 1975

Chairman Jackson and Chairman Magnuson and Members of the Committees:

I am William J. Hargis, Director of the Virginia Institute of Marine Science and Chairman of the National Advisory Committee on Oceans and Atmosphere. It is in the latter capacity that I speak to you today.

I welcome this opportunity to appear before you because, as you know, in the three and a half-years since Congress establish NACOA to advise the President and the Congress on these matters, we have placed great emphasis in our reports on the importance of moving ahead with the development of OCS oil and gas and at the same time providing for the protection of the environment and the coastal zone. The need for additional sources of oil and gas is clear and alternatives to the OCS are, by themselves, inadequate. The legislation you are considering taken collectively has these same objectives in mind. Perhaps our views and suggestions can be helpful to you.

The broad range and diverse scope of the nine bills you are considering reflects the magnitude of the promise and the problems implied by oil and gas development in the frontier areas of the Outer Continental Shelf, compared to the familiar circumstances that have surrounded the offshore oil and gas development in currently active lease areas. Rather than the gradual growth of an oil and gas industry along the coast, as has occurred in the Gulf States, we now appear to be faced with the prospects of an almost explosive growth induced by OCS oil and gas development in coastal areas which may be relatively unprepared to handle the social, environmental and economic impacts.

I would like to proceed by addressing each of the specific issues identified in the letter inviting me to testify at these hearings. At the same time, I will comment briefly on how our positions on these issues apply to the bills under consideration.

The issues identified in your letter are as follows:

- 1) improved coordination of Federal OCS programs with the States;
- 2) increasing the role of the States in the decision-making process;
- 3) methods of separating OCS oil and gas exploration activities from decisions to develop and produce the oil and gas;
- 4) alternative leasing systems or other methods of allowing private industry to develop OCS oil and gas;
- 5) improvements in the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact statements;
- 6) improvements in regulation and enforcement of OCS operating practices for safety and environmental protection; and
- 7) the need for an appropriate form of Federal assistance to affected coastal States.

They cover the scope of NACOA's work in the area very well except that NACOA has not yet taken a position on the many details involved in number 4, the matter of alternative leasing systems.

I would like to start by addressing issues one and two together as closely linked aspects of a larger issue which NACOA has considered at some length: this is, the role of the States and State coastal zone management programs in the development of the oil and gas resources of the Outer Continental

Shelf. We took this on in response to an invitation from Senator Hollings in connection with the Senate's National Ocean Policy Study and have already communicated our recommendations to him. Briefly NACOA believes that the provisions and concepts of the Coastal Zone Management Act furnish a means through which States can play an effective role in decisions affecting coastal zone uses. The problem is that most coastal States have not yet had time to prepare their management plans and obtain the necessary Federal approval. Interim protection is required, pending their completion. Strengthening and clarifying the 'Federal consistency' provisions of the Coastal Zone Management Act of 1972 will help serve to assure the compatibility of Federal programs with State coastal zone management plans. S.586 addresses this issue directly in a manner that we support; by requiring certification that a proposed Federal activity complies with, and will be conducted in a manner consistent with the developing State coastal zone management programs and in accordance with procedures for assuring the consistency of Federal activities with those developing management programs. There are complementary provisions in S.426 which we support requiring that OCS development plans be coordinated with State and local governments and that production plans are consistent with State coastal zone management plans.

The next issue concerns the desirability of separating Outer Continental Shelf oil and gas exploration activities from decisions to develop and produce the oil and gas discovered. NACOA has favored such a separation, but there are many subtleties involved. One problem is, what kind of a

separation are we talking about? Industry representatives, testifying at the NACOA meeting in February 1975, pointed out that exploratory drilling in a leased site must continue, long after development drilling and other production operations have begun. In fact, Allen J. Laborde, Past President of International Association of Drilling Contractors testifying before you last month stated that the only difference between exploratory drilling and production drilling was the result and that "oil and gas exploration activities are inseparable from those of development and production." Our position is that the point at which a reevaluation, a pause, or a separation should be made is subsequent to the first discovery of oil and gas in sufficient quantities to justify production development but before production begins. Industry is currently required to prepare both exploratory drilling plans and field development plans. We believe that the review process associated with the approval of a field development plan could become a sufficient separation mechanism as well as assuring State input and for insuring compliance of the development with State coastal zone management plans. The field development plan is really a production plan for the leased area and it contains proposed locations for production platforms, pipelines leading to shore and the location of required onshore facilities. The plan also includes features pertaining to pollution prevention and control and structural interpretations based on available geological and geophysical data. NACOA has also recommended that the field development plan approval process be accompanied by a full and complete environmental impact statement under NEPA. We do not

advocate turning over the entire exploratory job to the Federal government, consequently we would recommend against passage of Section 209 of S.426 which would establish an exploration program within the Department of the Interior to prove the presence of oil and gas prior to leasing. Section 202 of S.740 also establishes a Federal oil and gas exploration program which we feel that we cannot support, NACOA stands firm in its conviction that managing and financing OCS exploratory drilling and production can and should be done by industry.

Turning now to issue number 5, the need for improvements in the planning and execution of environmental baseline studies, monitoring studies, and the preparation of environmental impact statement, my own experience as Director of a coastal research, engineering and advisory service institute has led me to endorse most heartily NACOA's position as stated in our Third Annual Report of last June that the data base in these areas is inadequate. In that report we urged that the Coastal Zone Management Act of 1972 be amended to provide authority and resources for the support of research and development and advisory services for the States. In his response to this suggestion, the Secretary of Commerce pointed out that there is extensive research activity focussed on the problems of the coastal zone most notably through the Sea Grant Program of the National Oceanic and Atmospheric Administration in the Department of Commerce but also through other efforts. He therefore asked us to develop our assessment of the national need in more detail. We are now in the process of

doing so. Briefly, existing programs address longer term problems and do not fully meet the needs of coastal zone managers for quick response studies tied directly to pending decision dilemmas. Coastal zone decision-makers have needs for access on a relevant, timely and useful basis for: (a) scientific data, knowledge and competence; (b) adequate engineering knowledge and data; (c) technical services; and (d) continuing technical advice. In testimony before the National Ocean Policy Study, approximately a year ago in April 1974, I stressed that there were gaps in our knowledge regarding offshore oil and gas impacts that should be filled before the onset of large scale development. I pointed out three major concerns regarding offshore oil and gas impacts.

1. Current knowledge of Continental Shelf and slope circulation is inadequate. This is the singlemost important parameter involved because circulation determines the extent and direction of spills - that is, the extent of spread and direction of spread of spills and is critical to both complete geological assessment and physical assessment of damage.
2. Secondly of concern - relates to the point that if pipelines are to be laid across the Continental Shelf we must examine carefully the regions through which pipelines must pass. We find a serious data gap with regard to the bottom characteristics in certain areas. We do not know the depths of sediments or the depths to which bottom waves or sand waves on the bottom would impinge upon pipeline construction and operation.
3. Furthermore, there are biological resources which are used and yet unused or unexploited in the deeper portions of the Continental Shelf and on the continental slopes. The extent of these resources must be understood before an adequate assessment can be made.

I think it well to point out again that the research studies, the studies of the coastal and offshore ecosystems which will produce data and information upon which sound environmental impact statements must be based, need not and should not be delayed.

For example detailed shelf circulation models probably cannot be developed within a time frame necessary for immediate OCS development decision-making. Interim surface trajectory models can be developed which will however, enable impact assessment in the near time frame while the more sophisticated overall circulation models are being developed.

Of greater significance, we believe that NOAA should have the lead role in developing the environmental baseline data upon which impact statements for all Continental Shelf development including oil and gas development must rest.

While each individual development and management agency - in this case BLM, has specific data needs, the need for OCS environmental baseline data is more universal. Much of the same data required for BLM's assessment will be needed by EPA for ocean dumping activities, Department of Transportation for Deep Water Ports, Federal Energy Administration (FEA) and Nuclear Regulatory Commission (NRC) for offshore nuclear power plants.

The present piecemeal policy of having each development agency gather or contract for its own environmental baseline data results in a concentration of effort on the specific data needs of that agency with lesser attention paid to general data needs.

Coordination of these many environmental baseline data efforts by NOAA should provide significant cost efficiencies with regard to environmental baseline data efforts, funds which are badly needed for fundamental studies to better understand the OCS ocean system.

I will speak now about, "improvements in regulation and enforcement of Outer Continental Shelf operating practices for safety and environmental protection." Several aspects of this issue will be treated, first, the actual development of the marine engineering and safety standards which would need enforcement; second, the development of operating regulations and constraints and their enforcement; and finally a word about the current organization structure which handles regulation and enforcement of Outer Continental Shelf activities.

In a special report for the Secretary of Commerce, titled, "Engineering in the Ocean" dated 15 November 1974, (a copy of which is provided for the record) NACOA recommended the establishment of an Institute for Engineering Research in the Oceans reporting to the Administrator of NOAA and which would be a focal point for the development of ocean engineering and technology required to improve both the safety and economy of Outer Continental Shelf operations and would take the lead in developing standards for structures and engineering operations in the ocean environment. It is well known that the availability of standards for engineering in the oceans lags far behind the availability of standards in other engineering fields. There is no set of standard engineering specifications to which one can

turn when he is faced for example with the problem of designing an ocean platform or rig to operate in a given set of ocean environmental conditions such as the magnitude of the ocean currents, the nature of the bottom sediments, etc. Two things could happen, neither of which is desirable; the system may be overdesigned which is costly and inefficient or the system turns out to be inadequately designed and fails. An Institute for Engineering Research in the Oceans would set the stage for remedying such situations. It would be an organization whose function it would be to provide technology-gathering and technology transfer, to stimulate industrial efficiency and development in the oceans, to get an early start on ocean engineering problems before the problems become critical and to set standards for and back-up the regulators and the issuers of permits and safety certification in the oceans. This proposal is under active consideration within the Executive Branch, we feel that favorable action would directly serve the purpose of improving the ocean operations with which we are dealing today as well as others which will soon be upon us.

The responsibility for both the development of Outer Continental Shelf oil and gas resources as well as their regulation currently rests within the Department of the Interior. However, there are many other actors in the drama. Among them are the U.S. Coast Guard and the Office of Pipeline Safety in the Department of Transportation, the Army Corps of Engineers in the Department of Defense, NOAA in the Department of Commerce, the

Environmental Protection Agency, the Federal Power Commission who all have roles to play. Recognizing that this fragmentation could lead to conflict and inefficiency, NACOA recommended in its Second Annual Report that marine affairs be given a single focus in the Federal government and combined in a single Department. We recommended that the U.S. Coast Guard become the enforcement arm of that restructured Department. NACOA believes that the Coast Guard should have a stronger role in the enforcement of safety and environmental protection regulations for OCS oil and gas operations but that the promulgation of the regulations should remain with the Department of the Interior.

The need for Federal assistance to impacted coastal States is the last of the issues on which you invited comment. NACOA recognizes this need and in our letter to Senator Hollings on February 11, 1975, we recommended that some means be set up for compensating impacted States for damages and repairs, and also for the cost of providing shore-side services to support offshore activity. The first of these, compensating individuals and groups that suffer damage due to oil spills, leaks, and other accidents, is relatively non-controversial. Compensating States for other onshore impacts induced by Outer Continental Shelf oil and gas development is more complex because it is interwoven with the social and economic fabric of the States and has both positive and negative aspects difficult to assess. Our guess is that some form of revenue sharing is likely to be simplest.

In summary, I would like to say that we have been in communication with officials of the Department of the Interior, some of them briefed us during our meeting in February of this year. We find that they are making progress under existing statutes and regulations, apparently they now have the will and are getting the means to improve the entire OCS oil and gas leasing and development process.

However, NACOA is convinced that legislation is necessary to assure an adequate role for the States in decisions regarding the development of oil and gas in the Outer Continental Shelf and that this is best provided for in the provisions of S.426 and S.586 that I have discussed. For example legislation will probably be useful in assuring a proper pause between the discovery of oil and gas in a 'frontier' area and the decision to produce from that discovery. None of the bills under consideration provide specific provisions for this approach but we feel that you should look into the matter.

NACOA is convinced that the provisions of S.586 which establish support for research, development and advisory service programs will result in improvements in environmental baseline studies and the environmental impact statements upon which they will be based.

NACOA is convinced that additional legislation is necessary to assure improvements in the regulation and enforcement of OCS operating practices. We think that the establishment of an Institute for Engineering Research

in the Oceans would help provide the technical back-up.

NACOA is convinced of the need for some form of Federal assistance to impacted coastal States, but does not have a position on how this should be accomplished.

In order to comply fully with your request, we have prepared a more detailed commentary on each of the pieces of proposed legislation before the joint committees. NACOA's positions on the issues involved are presented in this commentary. Since the comments are detailed and rather lengthy they have not been presented verbally, but are included as an appendix for the record.

Thank you, I will be happy to try to answer any questions that you may have.

APPENDIXNACOA Comments on Some Provisions of the OCS
and Coastal Zone Bills Under ConsiderationS.81

S.81 provides for a delay of up to three years in a proposed lease sale at the request of a governor. NACOA does not believe that such a delay is necessary to protect the interests of the states, nor does NACOA believe that such a delay is in the national interest. We believe that the national interests may be best served if leasing and exploratory drilling in the frontier areas proceeds without delay so that it can be determined if and where offshore oil and gas deposits are present in commercial quantities and if associated environmental conditions are suitable for development of the fields. Only after oil and gas deposits in commercial quantities are located can onshore impacts be assessed and meaningful reconciliation with state coastal zone management programs take place.

S.81 establishes a National Coastal Appeals Board which would mediate possible disputes between Governors of coastal states and the Secretary of the Interior. It seems to us that the provisions of the Coastal Zone Management Act with respect to the development of state coastal zone management programs could be of assistance in the settlement of such disputes so that such an Appeals Board would be unnecessary.

S.130

S.130 would distribute revenues derived from leases on the Outer Continental Shelf, 25% to the adjacent state, 25% to each of the several states and 50% to the Federal treasury. NACOA supports the concept that financial assistance should be provided to the coastal states to enable them to prepare for and handle the onshore impact of the offshore operations, but we are not ready to insist that a fixed fraction of OCS revenues represents the best approach. We agree that some equitable method must be found to reimburse those coastal states which are adversely impacted by the development of the Federal oil and gas fields which may be found off their shores.

S.426

S.426, entitled Outer Continental Shelf Land Act Amendments of 1975 would make major revisions in policy for the management of the oil and gas resources of the Outer Continental Shelf. I will comment only on those major provisions of the bill that NACOA has addressed. Section 19 of the bill would separate exploration for oil and gas on the OCS from development and production of those resources by directing the Secretary of the Interior to conduct by government contract a comprehensive program of exploration on the OCS to determine the existence, extent and location of oil and gas in commercial quantities. This is one of the more important provisions of the bill and is an issue that NACOA has addressed during recent meetings. NACOA remains firm in its conviction that managing and

financing OCS exploratory drilling and production can and should be done by the petroleum industry and the associated industries with which it works. It will be necessary for the Government to establish regulations that will provide protection for the ocean environment and for the compatibility of OCS oil and gas operations with other activities within the coastal zone. This we think can be accomplished without requiring that the Government actually manage and direct and finance exploratory drilling.

We believe that NOAA should have the lead role in developing the environmental baseline data upon which impact statements for all Continental Shelf development, including oil and gas development, must rest. However, it should remain the responsibility of the development or management agency for the preparation of the actual environmental impact statement which is associated with each proposed development. The Environmental Impact Statement is a document which not only sets forth the environmental assessment but also alternative courses of action. We do not believe that such alternative courses of action can be effectively formulated by other than the Action Agency.

We have indicated that we support a stronger role for the U.S. Coast Guard in the enforcement of safety and environmental protection regulations for oil and gas operations in the Outer Continental Shelf. The Coast Guard is well suited for such responsibility and in this manner the regulatory responsibility can be somewhat separated from the development responsibility.

We support the recognition in the bill of the onshore impacts that may be induced by the activity in the Outer Continental Shelf and the recognition of the role of coastal zone management programs as a mechanism to properly plan for and absorb such impacts.

We oppose a moratorium on leasing in the frontier areas because we feel that procedures can be developed so that leasing can be accomplished in a manner that will protect both the national interests and the interests of the coastal States.

S.470

S.470 would prohibit leases for exploration and development of OCS oil and gas deposits before an adjoining State has an approved coastal zone management program or June 30, 1976. NACOA believes that we should proceed immediately with leasing so that the exploratory drilling which will follow is not delayed. Exploratory drilling is necessary to determine if oil and gas deposits in commercial quantities do in fact exist and where the deposits are located. Coastal zone management programs and environmental impact statements need the information that will result from the exploratory programs in the OCS.

S.521

S.521. Many of our views on S.426 apply to S.521 as well. One feature of interest to NACOA is the proposal for a Coastal States Fund to assist States impacted by offshore oil and gas production. The funds would be

used for planning purposes and for construction of needed public facilities. We believe that some form of Federal assistance is necessary but that this assistance might best be channelled through the apparatus of the Coastal Zone Management Act.

We strongly support the provision for Federally sponsored research and development to improve technology related to development of the oil and gas resources of the Outer Continental Shelf. However, I invite your attention to the NACOA proposal for the establishment of an Institute for Engineering Research in the Oceans, under which not only could research and development related to ocean oil and gas development be pursued but also research and development related to such other ocean oriented activities as offshore ports and floating power plant facilities. Our comments made on S.81 regarding a National Coastal Resources Appeals Board are applicable here. We feel that such is not necessary and would urge dependence upon coastal zone management mechanisms.

S.586

S.586, the Coastal Zone Environment Act of 1975, proposes a series of amendments to the Coastal Zone Management Act; which would in our view significantly improve the functioning of the Act. In our view S.586 has been structured with the intent to strengthen and then utilize the coastal zone management mechanism to provide for the rational and orderly cooperation of the coastal States in the planning and execution of Federal activities that impact the coastal zones. We applaud this approach.

The provision in the bill for a Coastal Impact Fund, to be managed by the Secretary of Commerce to provide assistance to the States, represents a sound option and should be able to solve the problem of the "front end" costs that state and local governments will face. The provision making explicit the application of the Coastal Zone Management Act's "inter-agency coordination" section to OCS-related activities, is important to clarify the intent of the Congress. The interstate coordination grants authorized in Section 309 as redesignated would provide an important addition to the coastal zone program. We have already commented and indicated our support for the research assistance provisions of the bill.

S.740

S.740, the National Energy Production Board Act of 1975 represents a bold imaginative approach for mobilizing both industry and government to help solve the energy problem. Unfortunately, NACOA has not yet had an opportunity to consider this important legislation.

S.825

S.825 would amend the Outer Continental Shelf Lands Act to provide for strict liability in the case of damage caused by oil spills and would establish an Outer Continental Shelf Research Fund to be jointly administered by the Secretaries of Interior, Commerce and Transportation. NACOA supports the purposes and intentions of this bill but will not comment on the specific provisions such as the source and amount of the Outer Continental Shelf Liability Fund.

S.826

S.826 would amend the Coastal Zone Management Act of 1972. In S.826 we have the same objection mentioned earlier that the provisions of the measure could unnecessarily delay leasing in frontier areas. It seems to us that the purposes of this bill, which include increasing protection for the coastal States could better be achieved through the approach taken in S.586. S.826 proposes segmenting coastal zone management plans according to the activity involved, this in our view could lead to an unmanageable situation.

A Report for
the Secretary of Commerce

Engineering IN THE Ocean

by the
National
Advisory
Committee on
Oceans and
Atmosphere

November 15, 1974

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**NATIONAL ADVISORY COMMITTEE
ON
OCEANS AND ATMOSPHERE**
Washington, D.C. 20230

15 November 1974

HONORABLE FREDERICK B. DENT
Secretary of Commerce
Washington, D.C. 20230

Dear Mr. Secretary:

In your letter of August 21, 1973, you asked NACOA to define the national need in civilian ocean engineering, and to discuss who ought to be responsible, as between the private sector and the government, for meeting particular portions of it.

Our reply has been longer in coming than we had intended. There turned out to be no obvious consensus in the answers to the questions you have asked. Reasonable suggestions for improving the national effort have been made by many—in studies over the last decade and in the interviews staff conducted during the last year. There were persuasive arguments for developing various aspects of engineering in the oceans. But no specific applications of ocean engineering to civilian needs swept the field as critical, urgent, national in scope, yet neglected.

The panel we appointed to look into this matter consisted of Dr. Donald B. Rice, Chairman, Mr. Charles F. Baird, Dr. Dayton H. Clewell, and Mr. Elmer P. Wheaton. It reports that it found itself in a position of concluding that the paramount national civilian ocean engineering need is not a specific number of projects in ocean engineering, but rather a modest organization whose function it would be to:

- a) work on and develop standards which presently, in ocean engineering, lag other engineering;
- b) fund good ideas in meeting basic engineering needs to the point where they could generate support on their merit or fade away on their lack of it; and
- c) animate technical transfer and professional communications.

The basic needs would be concerned not so much with systems as with special materials, techniques, and engineering characteristics required for many different kinds of marine operation.

The panel came to the conclusion somewhat unwillingly that an organization rather than a specific program was needed. Its expectation had been that at least several agreed-upon ocean engineering tasks would emerge as outstanding and essential to the civilian sector. It was aware of extensive Navy work in many of the areas of interest. The panel was prepared to find that if no agreement on particular civilian applications emerged as especially significant there was no real need, national in scope, for a civilian ocean engineering program.

But that did not settle the matter. Despite the fact that no "winners" emerged, the panel also became convinced that we would all be the losers if things were allowed to drift in ocean engineering as they have over the last decade. There is need for technical alternatives to be on hand when decisions are made so as not to be trapped into expedient, possibly environmentally detrimental, actions. There are simply too many things that should be done to avoid being caught by surprise in our expanding and conflicting uses of the oceans offshore, in the coastal zone, in the depth and the breadth of the sea.

None of the needs developing from this increased activity, by themselves, make for a national program. But together they seem to require a stimulus to progress because they fall into the gap which lies between short- and long-term programs and between the responsibilities of the private and governmental sectors. The gap lies between the immediately-targeted projects of the private sector in getting on with its operations (during which engineering problems are solved as part of the project) and the lower-keyed longer-range targeting of the government sector in laying in a broad fund of knowledge upon which we can all draw as time goes on. The former is quite specific, the latter quite general. The question of the relative roles of government and of industry is involved because each, to some extent, looks to the other to cover the inbetween area. The panel speaks of this grey area in more detail in its memorandum report which I forward with this letter.

Ocean engineering is more expensive than engineering on land, the panel noted, and the benefits are often harder to assess than the costs. This open-ended uncertainty is one reason recommendations in the past to start broad programs in ocean engineering have been unper-
suasive. But the panel felt it a mistake to take an all-or-nothing attitude about supporting and funding this work, especially since one reason ocean engineering is expensive is that its development is so uncoordinated.

While there are a number of ways in which this situation could be ameliorated, and it is disappointing that it has not proved practical to take full advantage for civilian purposes of the Navy's work in ocean engineering, NACOA proposes that an Institute for Engineering Research in the Oceans, with a strength of about 150 professionals,

be established as the effective way of organizing ocean engineering development without incurring large down-stream costs. To encourage the formation of a focus for marine affairs in NOAA, we believe this Institute should report to the Administrator of NOAA, who would maintain it as a distinct entity with appropriate bonds to other government agencies who have engineering tasks to perform in the oceans such as the Department of Interior, the Navy, the Coast Guard, etc. The Institute should be authorized startup funding of \$5, \$15, and \$25 million for three successive years with a mandatory reexamination and re-evaluation of the effort starting two years after day one and a major reassessment five years later. The task of this Institute would be to stimulate and support engineering research (advanced development) in the oceans to meet civilian needs by using seed money to get good work started but not supported indefinitely. *The essential task of the Institute would be to range the field rather than get bogged down in expensive demonstration programs.* It would be to support work and act as a catalyst in new areas of special materials and techniques which would serve a multiplicity of marine activities. It would have a central responsibility for improving professional communications and encouraging the development of standards.

To do this job the Institute would have to have the in-house technical capacity to be stimulated by technical problems, to help prevent falling behind in ocean technology, and to monitor the technical quality of contracts. It would need a Board of Governors representative of industry, the universities, and government to exert the pressure to keep the Institute technically competitive. It would be desirable to have a mix in funding with a major portion of the disbursed funds being used for direct out-of-house support and for fund-matching with outside sources as an earnest of effort and as a check on judgement. Thirty to forty percent should be reserved for in-house efforts or centralized facilities.

Det Norske Veritas, the highly regarded technical research and standards-setting agency in Norway which uses a mix of government, private, academic, and professional expertise on marine and offshore problems is an example of the organizational status we have in mind.

One of the National Institutes of Health with a touch of the National Bureau of Standards would be a closer analogy amongst U.S. institutions in organizational structure—more so, for example, than the Office of Naval Research or the Institutes which grew up around the Department of Defense in the fifties and sixties. The reason is that the mission of the Institute for Engineering Research in the Oceans would be to catalyze activity for many users who are dispersed throughout the nation rather than to stimulate technical activity by many suppliers for a centralized, government user. In any event we

do not propose in this writing the details of this organization. This Institute would best be formulated, NACOA believes, through the legislative process.

In brief: finding that the national purpose would be served by the establishment of a modest organization to stimulate more foresighted development of ocean technology than now occurs despite accelerating national activity in the oceans, we recommend there be established an *Institute for Engineering Research in the Oceans*

Whose function it would be to:

- Develop standards which presently, in ocean engineering, lag other fields.
- Fund good ideas in meeting basic engineering needs to the point where they could generate support on their merit or fade away on their lack of it.
- Improve technical transfer and professional communications in ocean engineering.
- Oversee the no-man's land between performing in the oceans and trying to describe and understand it.
- Provide seed money to develop good ideas (but not demonstration projects) before a certain market exists.

We suggest a size of:

- About 150 professionals with the technical competence to follow as well as lead, perform as well as monitor.

And a budget of:

- About \$5, \$15, and \$25 million per year (at full strength), more than half of which would be for outside grants and contracts.

Reporting to:

- The Administrator of NOAA as focal agent for marine affairs and Federal Coordinator for Marine Sciences and Technology.

This proposal is a step deeper into commitment to ocean engineering than was recommended in our Second Annual Report where it was suggested that a Federal Coordinator of Marine Technology Development be appointed who would at least assist in the transfer of information from the Navy into the civilian sector. Having looked into the matter with some care, the panel feels that minimum step would be insufficient even though beneficial. Another alternative—to await the effects of the stronger focus for marine affairs to be achieved by government reorganization as NACOA recommended in its Annual Report—would simply delay things, for ocean engineering efforts would have to be concentrated even there in some similar fashion.

What we propose here is not a general solution for marine affairs, but a specific one for ocean engineering. The exact form which it takes is less essential than that it pioneer in ocean engineering and scout out approaches to the civilian engineering problems which we will face tomorrow.

The memorandum we forward expresses those views in somewhat more detail and gives the general argument by which they were reached. The memorandum has been considered by the National Advisory Committee on Oceans and Atmosphere in full and approved by them. It is with pleasure that I forward it.

Sincerely,

/s/William A. Nierenberg

WILLIAM A. NIERENBERG
Chairman

Memorandum Report
by the
Ocean Engineering Panel

of the
National
Advisory
Committee on
Oceans and
Atmosphere

Engineering in the Ocean

INTRODUCTION

Modern technology is creating a dilemma for engineering by imposing on it precise demands for information on, and understanding of, complicated physical characteristics without relaxing the practical constraints of economics, schedule, and purpose. This dilemma poses especially difficult choices in the oceans where a harsh environment offers severe technical and economic limitations to gaining this technological information.

The civilian effort in ocean engineering both public and private appears to be undersupported in view of the rapid expansion of activities in the ocean and little or no reserve of technology to provide the technical alternatives to meet the requirements which thus develop. Use of the oceans is expanding faster than is the knowledge being provided to support it. While the difference in rates of growth may be temporary, it exists now, and creates a gap. That is why the lack of a conscious effort to do something about it on a national scale is troublesome.

Recognition of this gap is not new, of course, as many previous studies have testified, but almost all these reports suffered from a skeptical reception because the ocean engineering needs were defined so broadly they promised to be costly without promising any obvious results. The panel determined to avoid the general and look for the specific.

It is our purpose in this brief memorandum report to state the task as we saw it, describe our approach, recount what we found, and recommend a course of action we propose be followed.

THE TASK FROM THE SECRETARY

The task suggested by the Secretary of Commerce * was to survey the national civilian needs in ocean engineering, define the specific applications which should be undertaken, suggest the relative roles of industry and government, and recommend how government effort might be applied if other than is now the case.

* See Attachment A, Letter to Chairman, NACOA, from the Secretary of Commerce, 21 Aug '73.

THE APPROACH BY THE PANEL

Studies already undertaken were reviewed. Staff interviewed many active practitioners in marine affairs in government, in industry, in the oceanographic research community, and at universities, and reported to the panel on what they had been told. This memorandum has been prepared on the basis of what was learned.

FINDINGS: Introduction

The panel learned that there are many specific tasks necessary to the development of ocean engineering which need doing but no general agreement exists as to what, specifically, ought to be done first. No area of ocean technology stands out as critical yet totally neglected.

This could be interpreted as reassuring evidence of normal progress. But the panel feels there is a contributory cause to this drift which is not normal. The contributory cause is the expense of working in the ocean which occurs partly because of the nature of ocean engineering, partly because of the way we go about doing it. The inherent reasons are straightforward but worth noting. You can't leave something on the ocean's surface without mooring it; then, how long it remains there is uncertain. You can't put something on the bottom and find it easily when you come back. It is difficult in the ocean to see and touch what you work with. In addition to the extremes of weather over water, the physical, chemical, and biological effects of water on materials, instruments, and constructions are in general so much more extreme than they are on land, it costs extra even for impermanence. Furthermore gear can't exist except as part of a "system" which means that every upward adjustment in requirements balloons through a whole chain of inter-connected parts. Fighting cost, reliability, and weight at the same time means something has to give. It is usually all three. To top off the expensiveness brought on by the nature of the work, we characteristically add expense unnecessarily by a cut-and-try approach to complex system development in which we fail to work on components separately in advance and suffer further disadvantage in the use of otherwise suitable materials because of marine fouling, stress corrosion, etc.

This matter of cost has a major influence on what can or cannot get done. Further, it involves the important side effect of making it tempting to let someone else do it—or at least pay for it. Working out all the details in advance is expensive and time consuming and so rather more risk is accepted in groping forward. Or one looks to someone else to work things out. In any event many things which people or organizations would normally do for themselves are put on a wish list instead.

The panel's hope was to find a consensus on several critical needs, that is, several items on everybody's wish list, the lack of whose fulfillment was choking progress, and then ascertain whether government support had a role to play and suggest how it might be done.

FINDINGS: Sector Viewpoints

We had expected that government, industry, and the research community would exhibit needs common to their own sector but reflect separate sector interests, and their viewpoints would therefore be somewhat different. They are, and we will attempt to describe them briefly (despite the obvious danger of generalizing about specifics) because these viewpoints illuminate differing approaches to the specific tasks mentioned.

- (a) *Government* tasks are so endless, the requirements for program and budget justification so detailed, it was not surprising that ready-made plans exist to take ocean engineering one more step in about any direction named. The price however is a somewhat sluggish responsiveness to new problems and there seems not yet to have emerged forward-looking definition of what needs to be done, in the offshore zone in particular, with regard to ocean engineering aspects of multiple use, regulation, safety, environmental protection, and the like.
- (b) *Industry* exhibited a wider range and greater diversity of approaches on what needed doing than did the other sectors. This was reflected especially in the differences of opinion on what industry would like government to do, and what it wishes to reserve to itself. The oil industry has the incentive and the wherewithal to tackle brute-force almost any ocean problem it runs into, but it needs better environmental data. People who build submersibles, on the other hand, would like to see Government programs which use submersibles, even if the direct results are somewhat intangible. Government responsibility is apt to be defined broadly by most as the need for a technological basis—materials research, for example, or general investigations in soil mechanics, or structure loading, or sub-surface nuclear power, or in waste-management in coastal areas. But the economics of it look somewhat different from different vantage points.
- (c) The research sector, to lump the oceanographic and university ocean engineering communities, are more of one mind. With only minor variations they stress the theme of continuity, facility support, and receptiveness to a longer view than immediate applicability.

What is common to all sectors then is the judgement that not enough ocean technology is on the shelf, that learning as you go may be the only way to get things done now, but that it is not the best way because it means re-inventing the wheel or basing decisions on expediency which comes back to haunt you later. A little foresight would help a lot in many areas.

FINDINGS: Civilian Ocean Engineering Needs

We did not cover the entire field of ocean engineering in detail for we had neither the resources nor the desire to make a complete survey. We did not seek to find out why U.S. fishing vessels buy Swedish sonars, or why Japanese build bigger tankers. We accepted the judgment that American oil technology is the reserve on which all the world draws, that the U.S. Navy deep submergence capability is unparalleled, and that this won't keep on forever if we simply rest on our laurels. We felt that if we sought specifics where we could find them, a strong common trend would probably show up even in a partial sample if it existed.*

Attachment B samples the extensive collections of specifics collected by others. We did not try to compete with these studies. The specifics we did find independently were, in general, not very different from the rather more thorough surveys sampled in the attachment. As with these studies, we found no consensus or major imperatives. Unwillingness to invest effort in anything unless it is immediately needed—at which point it is often too late—seemed to be a root cause of many of the problems but that isn't new. Systems failed because the components had not been thoroughly tested. There was no time—or taste—for a disciplined engineering approach.

Engineering needs exist in such areas as offshore pipelaying, underwater storage tanks, mooring systems, oil spill prevention, dredging, resource recovery, environmental studies, and *adequate component testing of ocean engineering systems before deployment to lower the failure rate, which is high.*

For specific applications the panel's attention was drawn to the need for reliable underwater connectors, subsurface bench marks, non-fouling transducers, and meso-scale current measurements.

* Special thanks are due to the Sea Floor Engineering Committee of the Marine Board of the National Academy of Engineering for its courtesy in welcoming staff to its deliberations. They are still in progress, in the course of a two-year effort supported by the National Science Foundation, to define the precision with which characteristics of the sea floor and structures within and upon it are known, and the precision with which they should be known. This effort differs from being merely another tabulation in that it is more quantitative and is a step in the direction of standardization.

In all instances, the panel pressed for priority. "What would you do first?" In response to this, specific goals (not specific ocean engineering applications) were usually offered: The panel was offered not priorities, but selection schemes to find them. Criteria such as urgency, responsibility, return vs cost, multiplier effect, and impact were suggested. The relation to energy was offered as a selection device which would imply emphasis on exploration, surveying, offshore federal expertise in drilling and harvesting, information to get offshore plants on line faster, power-plant siting, subsurface soil mechanics, loading factors on structures from wind, wave, and current, and energy sources (oil, wind, wave, current).

Instrumentation was another area to draw attention, in particular monitoring gear, satisfactory subsurface instrumentation, instruments for tidal measurements, wave heights, and surveys. Suggestions were made that user needs would indicate priority, such as those for shipping, petroleum, minerals, construction, recreation, national security, and ocean sciences. Bold pilot projects in energy discovery were suggested from which ocean engineering priorities would develop—and so forth.

A persuasive case was made for the critical importance of materials research, especially as materials are affected by fatigue under cyclical loading, and in stress corrosion where the chemical action of seawater affects materials in an unusual way.

Nevertheless, the common trend did not turn out to be a specific high priority application. Instead it was the apparent inability to choose what ought to be done first. Despite an almost universal if poorly defined distress at not doing things that ought to be done there was instead a helter-skelter looking in all different directions and reaching for schemes to pick winners. Specific application of ocean engineering to civilian needs appeared trivial as candidates for a national effort, yet the more general suggestions for enhancement of ocean engineering capability sounded poorly thought out, open-ended in cost, and groping for support.

It was also evident that there is no natural government sponsor for the general support of civilian ocean engineering needs. Of the government agencies with direct interest in the oceans, only the Navy has responsibility for pursuing advanced technology directly; other agencies, such as the Department of Interior, NOAA, the Coast Guard, etc. relate the ocean engineering needs to their service requirements and so no one has a broad oversight.

FINDINGS: Summary

The marine implications of the over-riding need for the U.S. to decrease its dependence on other nations for what is critical to its own existence are too important for the United States to let drift.

There is an "ocean engineering problem"—it won't go away even though general goals are unconvincing because their costs are too open-ended and separate specific goals don't win enough votes.

Complaints from those with whom the panel made contact proved to be less along the line of specific technological deficiencies than they were organizational in nature. There was concern for the lack of understanding of the need for ocean engineering until it proved late and expensive to correct what foresight might have prevented. There was concern for the lack of continuity in ocean engineering development which meant inefficient, stop-start investigations. There was concern for the lack of meso-scale activity mid-range in size, mid-range in time, and mid-range in money. There was concern about the lack of timely communication of data that did exist.

The panel's findings were:

- The ground has been well-ploughed.
- There is no question but that there are things to do in ocean engineering but too many to do all at once.
- There is no general agreement on what projects or programs ought to be done first.
- This may be because no one thing ought to be worked on first and many ought to be worked on simultaneously.
- Drifting along until we hit a snag seems hardly the useful way to go.

On the relative roles of government and industry in ocean engineering—there seems to be agreement in principle. It is: The cost of ocean-engineering research and development is to be borne by those who would benefit from it. If the development is for a specific operation with specific users, the costs should be assumed by the operator and reflected in the price of the product or charge for service, or, if there are many and disparate operations by whose use the public is generally benefited, the cost should be borne by the general taxpayer and requests for funding must compete with other and unrelated demands.

The hitch comes in deciding whether a particular development fits one definition or the other. The ambiguities seem to arise in three ways: (1) when the direct benefits are hard to figure, (2) when the benefits are twice-removed, i.e., when the direct results might stimulate benefits but their nature is not directly foreseeable, and (3) when differing conception of the detail, the risks, and the time-to-payoff raises the argument of who should pay for the middle stages. This is especially complex because the expenditure of government funds in the early high-risk stages of development leads to a government interest in later stages where industry would otherwise prefer to go it alone. It is

the implication of continued government involvement (in addition to the normal divergence of opinion on regulation and monitoring) which leads to such differences of opinion by industry on government's role in a new field. It seems to depend a lot on how much is available to be put at risk in the early stages.

The panel sees no way out except by deciding each case on its own merits, for industry is not uniform in its attitudes and its needs; its relationships with government vary.

CONCLUSION AND RECOMMENDATIONS

Short-range ocean engineering problems and applications are being attacked and solved by industry if they otherwise would block operations, but the solutions are often expedient and expensive in the long run because they have been worked out in a hurry. A long-range program for supplying background information on the oceans exists in NOAA, though it is bound to fall short of satisfying everybody's requirements because it is expensive in the detail and the precise characteristics sufficient to keep everybody happy.

But the extensive lists of engineering to be done in the oceans include whole classes of problems in materials, techniques, engineering characteristics, and instrumentation whose solutions, if anticipated, could save time, and money, and possible environmental strain, if tackled now. They seem ripe for government encouragement if only of a limited sort. Since the candidates for support are so numerous, as are the selection schemes themselves, the panel came to the conclusion that what is needed is wide-ranging stimulation of the field to provide technical alternatives, with demonstration technology left to others once particular ideas prove out.

This conclusion was not independent or isolated. Two organizational examples of what kind of organization people in ocean engineering would like to see active kept cropping up: (1) the Office of Naval Research through its twenty-five years history and the role it has played in providing continuity to the support of basic research and in paving the way for the National Science Foundation, and (2) the National Advisory Committee on Aeronautics and the role it played in welding research, industrial, and governmental efforts in aeronautical engineering. Both were outstanding in stimulating progress in highly technical areas—the one in basic and the other in applied science. The heart of the matter is that support was offered for good ideas, not for predictable results.

However, neither the ONR nor the NACA concepts apply to ocean engineering today. ONR was launched to preserve the Navy-University relationship at the end of the vigorous fast-moving and successful

cooperation in research for weapon systems induced by World War II. And money was available. The NACA helped bring on the age of the airplane, it was an integrating device to harness what otherwise was scattered or partial. The conditions which made these agencies so singularly appropriate do not exist for ocean engineering today. A relationship has to be established outside of the Navy, not preserved. The analogy between the atmosphere's heights and the ocean's depths for those to whom ocean program seemed as impelling as a space program has been spectacularly unconvincing. And no war-end millions (with which ONR was launched) are there to be used.

But, if a catalyst to stimulate engineering in the oceans is needed since a programmatic solution does not seem sensible, there is no good reason why results similar to those produced by ONR and NACA could not be achieved, albeit in a somewhat different way. An organization is therefore proposed whose function it would be to provide technology-gathering and technology transfer, to stimulate industrial efficiency and development in the oceans, to work on the ocean's problems a few years ahead, to back good people and good ideas, and to set standards for and back-up the regulators and the issuers of permits and safety certifications in the oceans.

The panel therefore recommends an Institute for Engineering Research in the Oceans reporting to the Administrator of NOAA as the proper focus for marine affairs, but independent of the mainline components in that agency as too limiting, too confining for an organization which is to serve users in a broad range of government, industry, and research.

There are a number of government agencies whose need for ocean engineering expertise make them possible hosts for such an Institute such as the Department of Interior, the Navy, the Coast Guard, EPA, the National Science Foundation, the National Bureau of Standards, NASA, etc. But as we stated earlier, none of the civilian agencies presently has a responsibility for *general* oversight of national ocean engineering needs. NOAA, as the focus for marine affairs, is the most appropriate agency to hold in trust, so to speak, an Institute which would be geared to encourage needed progress in ocean engineering activities.

This Institute could not easily be part of the Sea Grant Program for it is essential that this Institute work with all types of organizations and individual practitioners and that it conduct its own in-house research. It must also be in a position to develop the special relationship with the Navy which would facilitate transfer of what can and should be transferred to the civilian sector from the Navy's extensive store of ocean engineering expertise. An organization close in its management of research in support of standard-setting functions in ocean engineering

to that suggested for the Institute is Det Norske Veritas, a Norwegian entity that certifies shipping (and offshore platforms) and is most highly regarded for its professional competence and the manner in which its setting of standards is backed by research. This organization is funded by those whom it services.

An Institute similar to one of the National Institutes of Health would be a closer U.S. analogy in its manner of operations to what the panel has in mind than the organization which grew up to serve the Department of Defense in the fifties and sixties. The DOD institutes gathered technical expertise from all over the country to assist one or two government-agency users. The Institute of Engineering Research in the Ocean would have the purpose of stimulating and contributing to activity in ocean engineering of interest to users dispersed throughout the nation—industry, federal, state, and local government, research institutions, etc. The customer is he who must work in the ocean, not a government agency.

The goal of the Institute would be to stimulate useful activities of others, which means it must possess the competence to judge what seems right for the field and have the dollars to back its judgement. It must have a necessary technical competence of its own, and be in a position to offer support directly or use matching funds to take advantage of local judgement on priority of importance. Some form of recovery of portions of the matching funds, on the basis of performance, or of results, could be offered as incentive (similar to the practice of the Defense Department in stimulating independent R&D along lines of DOD interest). The form and nature of the arrangement would clearly have to be worked out carefully with the utmost regard for keeping the Institute responsive, catalytic, technically aggressive, but reasonably controlled in the amount and the support it can offer. An essential function would be to improve timely technical publications and communication which is distressingly poor in ocean engineering today. A Board of Governors, representative of industry, the universities, and government is necessary to oversee the general course taken by the Institute and to provide a powerful means for keeping the Institute sensitive to changing national requirements and for keeping it technically competitive.

The panel estimates that for such an Institute to develop recognized technical excellence in ocean engineering, it must grow to about 150 professionals. To develop input from the nation at large and impact on the field it should disburse out-of-house at least one and a half times the funds it uses itself. This implies a start-up schedule for funding the first three years of \$5 and \$15 million to level off at \$25 million per annum although the nature of the facilities which would be required or used would have significant bearing on the rate of growth.

The panel is under the impression that the creation of such an Institute could best be accomplished by the legislative process during which the details of its composition, procedure for operation, and immediate tasks would be worked out in detail as a result of the broadest possible input from interested parties. It believes that the legislation should provide for an early review starting two years after startup to monitor the course the Institute is taking and a major review in five years to ascertain the Institute's contribution and the value of continuing it. The panel sees no conflict between its requirement for excellence and its suggestion that it come up to speed in a few years. Five years is a long time in which to make a case.

Recapitulation

To the Secretary's Question: What specific civilian ocean engineering applications to meet national requirements are not now being pursued? No major area seems to be without some attention, but it is less a question of specifics than of sluggishness in response to a whole category of mid-range problems in materials, techniques, and engineering characteristics, many having to do with responding forcefully to questions regarding environmental factors.

To the Secretary's Question: What are the relative roles of government and industry? Broad stimulation of the field by the former and specific development by the latter. If, as a nation, our development of technology in the oceans seems to be lagging (for which there is evidence, it is said, in the more rapid progress being made by other nations), it is not unreasonable to charge the Federal Government with trying to do something about it.

To the Secretary's Question: What do you recommend be done about it? We recommend the establishment of an Institute for Engineering Research in the Oceans, to report to the Administrator of NOAA, whose mission it would be to catalyze activity in the mid-range term 3 to 5 years ahead. This is not the only beneficial step which might be taken, but we believe it to be that most promising in effectiveness.

An Institute for Engineering Research with modest funds to expend in- and out-of-house should prove its own usefulness in about five years or rightfully sink out of sight. It would not be a sluice for funds nor would it have to wait on agreement on stated national goals and objectives—it would take off on those implicitly agreed to.

Attachments

Attachment A



THE SECRETARY OF COMMERCE
Washington, D.C. 20230

August 21, 1973

DR. WILLIAM A. NIERENBERG
Chairman, National Advisory Committee
on Oceans and Atmosphere
Washington, D.C. 20230

Dear Dr. Nierenberg:

The National Advisory Committee on Oceans and Atmosphere (NACOA) has commented extensively on the Nation's civil ocean engineering program in its second annual report. It has made recommendations for improved coordination of the Nation's ocean engineering activities and has suggested a number of areas for emphasis.

I believe that ocean engineering is one of the important elements in the Nation's future posture in ocean affairs. What is needed is an analysis and documentation of the requirements for an ocean engineering effort by the civil agencies of the Federal Government. There are many key questions about a civil ocean engineering program that need answers, such as:

- (a) What specific ocean engineering applications should be addressed by a Federal program to meet national requirements and what are these requirements?
- (b) What are the benefits that can be expected from Federal investments in specific types of ocean engineering?
- (c) To what extent should the Federal Government engage in and support civil ocean engineering activities?
- (d) How should such support be provided in those instances where Federal Government effort is clearly warranted?
- (e) What should be the relative roles of private industry and the Federal Government in fostering ocean engineering?

The above are all key questions, answers to which would be valuable in planning a civil ocean engineering effort.

The National Advisory Committee on Oceans and Atmosphere could be of great help to the Federal Government in organizing and carrying out an analysis directed at answering the types of questions that I have listed above. These questions should not be regarded as the only ones that are pertinent but only typical of those that require answers.

Accordingly, I am requesting that the National Advisory Committee on Oceans and Atmosphere undertake such a study and report to me on its results.

Sincerely,

/s/Frederick B. Dent

FREDERICK B. DENT
Secretary of Commerce

Attachment B

A Sampling of Civilian Ocean Engineering Needs

The Ocean Engineering panel was well aware that it was not the first group to take on an evaluation of national civilian ocean engineering needs and instructed staff to seek out previous studies with bearing on the task before it. A number of these previous studies turned out to be surprisingly explicit. A sampling from four reports covering a span of seven years is included in this attachment to demonstrate the care and detail with which ocean engineering needs have been specified. Excerpts from the Stratton Commission Report are not included partly because it is so well known, and partly because it generalized these needs into targets of national capability so that the underpinning specifics are not otherwise easily summarized.

It was the existence of reports such as these from which the attached concepts have been made which brought the panel to the early conclusion that it would not suit its own purpose to provide another set of what it would be nice to know about ocean engineering. Rather it needed to know what it would be good to do first of that which was already known.

Example I

1967

Excerpted from

“Underwater Technology Requirements for Non-Military Ocean Missions” prepared for National Council on Marine Resources and Engineering Development by Southwest Research Institute, 1967.

The manner in which this 1967 report classified the areas of underwater technology and related basic engineering, engineering components, to general systems, and operations to ocean missions is shown in Table 3.1 and Figures 3.2, and 3.3 immediately following.

Priorities and the relative roles of industry and government were also treated in Table 9.1, also attached.

Table 3.1

Areas of Underwater Technology

Basic Engineering

- Coastal and Oceanic Hydrodynamics
 - Wave motion, force, spectra
 - Tides, seiches, surges, tsunamis
 - Reflection, refraction, diffraction
 - Currents. Turbulence and diffusion
 - Sediment erosion, transport, deposition
- Underwater Soil Mechanics
 - Physical properties; in situ and laboratory
 - Sampling. Testing. Site surveys
 - Bearing capacity. Foundation settlement.
 - Anchoring. Breakout. Penetration
 - Scour. Stabilization. Slope stability
- Materials Engineering
- Structural Mechanics
- Mechanical and Electrical Sciences
- Naval Architecture and Marine Engineering

Engineering Components

- Instrumentation Systems
 - Navigation, positioning, communications
 - Observations, recording, measurements, sampling
- Power Sources
 - Batteries. Fuel cells
 - Radioisotope. Nuclear
 - Chemical dynamic. Closed cycle diesel
- Equipment, Tools, Devices
 - Motors, pumps, propulsion units, controls
 - Fittings, connectors, penetrations, seals
 - Tools: cutting, hammering, torquing, welding
 - Manipulators. Remote control systems
- Life Support Systems
 - Submersibles, habitats, divers

General Systems and Operations (multimission applications)

- Submersible Vehicles
 - Manned and unmanned
 - Tethered, untethered, towed
 - Bottom crawlers
- Mooring Systems
 - Anchor and cable
 - Dynamic anchoring

- Underwater Structures and Installations
 - Platforms
 - Petroleum production installations
 - Habitats, observatories, laboratories
 - Power generating and processing plants
- Man-in-the-Sea Operations
 - Free and hard hat diving
 - Saturation diving systems
 - Working and living underwater
- Underwater Construction Methods and Equipment
 - Dredging. Trenching
 - Piles. Caissons
 - Underwater fabrication, maintenance, inspection
 - Pipelines
 - Subaqueous tunnels

Mission-Oriented Technological Areas

- Fisheries Technology
 - Support of marine biology research
 - Location, tracking, identification
 - Concentration, control, harvesting
 - Modification of environment
 - Support of mariculture
- Petroleum Drilling and Production
 - Drilling platforms. Mobile rigs
 - Blow-out preventers. Marine conductors. Casing strings
 - Production platforms. Subsea completion systems
 - Underwater storage tanks. Gathering lines
- Ocean Mining
 - Exploration and evaluation
 - Extraction, processing, transportation
- Shoreline Modification and Island Building
 - Shoreline structures and construction methods
 - Beach erosion, transport, deposition, silting control
 - Land fills. Island building
- Underwater Technology Supporting Pollution Control and Waste Disposal
 - Standards and tolerance limits
 - Monitoring and sampling systems
 - Dispersion of wastes (industrial, mining, radioactive)
 - Removal of discharged oil
- Search and Salvage Methods and Equipment
 - Search and identification
 - Attachment, lifting, flotation
 - Recovery of cargo and equipment
 - Removal of debris

Figure 3.2
Relation of Basic Engineering and Engineering Components to
General Systems and Operations and Mission-Oriented Technological Areas

Basic Engineering and Engineering Components	General Systems and Operations and Mission-Oriented Technological Areas						
	Coastal and Oceanic Hydrodynamics	Underwater Soil Mechanics	Materials Engineering	Instrumentation Systems	Power Sources	Equipment, Tools, Devices	Life Support Systems
Submersible Vehicles			X	X	X	X	X
Mooring Systems	X	X	X		X		
UW Structures and Installations	X	X	X	X	X	X	X
Man-in-the-Sea Operations			X	X	X	X	X
Underwater Construction	X	X	X	X	X	X	X
Fisheries Technology			X	X			
Petroleum Drilling and Production	X		X	X	X	X	
Ocean Mining	X	X	X	X	X	X	
Shoreline Modification and Island Building	X	X	X				
Pollution Control, Waste Disposal	X			X			
Search and Salvage		X	X	X	X	X	

Note: All of engineering areas (basic and components) apply to a certain extent to each of the general and mission-oriented areas. The X denotes only the more important applications.

Figure 3.3
Relation of General Systems and Operations to Ocean Missions

Missions	Systems and Operations				
	Submersible Vehicles	Mooring Systems	UW Structures and Installations	Man-in-the-Sea Operations	Underwater Construction
Seafood Developments	X	X	X		X
Recovery of Petroleum	X	X	X	X	X
Recovery of Minerals and Chemicals	X	X	X	X	X
Underwater Transportation	X		X		X
Coastal Zone Development		X		X	X
Pollution Control and Waste Disposal		X			
Salvage and Recovery	X	X		X	X
Weather Prediction and Modification		X	X		
Exploration and Research	X	X	X		

Note: X denotes ocean mission for which a given system and operation will have an application in present or future developments.

Table 9.1
Areas of Underwater Technology

Area	R & D Effort Relative to Present Rate			Initiative for Developments		* Suggested Government Action	* Priorities for New Government Action
	Greatly Accelerated	Some Increase	Present Rate Adequate	Primarily Government	Primarily Industry		
Basic Engineering	1. Coastal & Oceanic Hydrodynamics	●			▼	A	1
	2. Underwater Soil Mechanics	●			▼	A	1
	3. Materials Engineering		●			B	2
Engineering Components	4. Instrumentation Systems Navigation, Communications, Bathymetry, Observations, Measurements, Sampling	●			▼	A	1
	5. Power Sources	●			▼	B	1
	6. Equipment, Tools, Devices		●			B	2
General Systems & Operations	7. Life Support Systems		●		▼	C	
	8. Submersible Vehicles	●			▼	B	2
	9. Mooring Systems		●		▼	C	
	10. Underwater Structures & Installations		●		▼	B	3
	11. Man-in-the-Sea Operations		●		▼	C	
	12. Underwater Construction			●			
	a. Dredging, Trenching		●		▼	C	
	b. Piles, Caissons		●		▼	C	
	c. Pipelines		●		▼	C	
	d. Tunnels		●		▼	B	3
e. UW Fabrication, Maintenance, Inspection	●			▼	B	2	
Mission-Oriented Technological Areas	13. Fisheries Technology						
	a. Support of Marine Biological Research	●			▼	B	1
	b. Harvesting, Mariculture		●		▼	C	
	14. Petroleum Drilling & Production		●		▼	C	
	15. Ocean Mining						
	a. Exploration and Evaluation	●			▼	B	1
	b. Extraction and Processing		●		▼	C	
	16. Shoreline Modifications, Island Building	●			▼	B	2
	17. Support of Pollution Control & Waste Disposal		●		▼	B	2
18. Salvage Methods & Equipment		●		▼	B	3	

* Table 9.1 is a digest of the summary Chapter 9 of this report and conditions under which evaluations were made are given there with some care. The stated judgements are clear with the exceptions of symbols under government action required and priorities which may be paraphrased as follows:

A. New or greatly expanded physical facilities required.

B. Management and coordination of existing programs needs strengthening.

C. Present arrangements seem OK.

The criteria for priorities were commonality, urgency, and criticality.

Example II

1972

Excerpted from

“Toward fulfillment of a National Ocean Commitment,” A Report of the Marine Board, National Academy of Engineering, Washington, D.C., 1972.

The National Academy of Engineering Report “Toward Fulfillment of a National Ocean Commitment” contains a great number of suggestions and recommendations for work in ocean engineering. The subjects covered give the shape of the Report’s content and a brief paraphrase or outline is given below. In some areas the guidelines for proceeding are given in extraordinary detail.

MARINE TRANSPORTATION

Marine Speed Gap: 30 to 200 knots not now covered.

Ship Operating Problems: High cost of domestic construction; high operating costs; trade route problems; regulation and cargo preference; conferences, etc.

Ship Building: Mixed Navy and Civilian construction sub-optimal.

Merchant Marine: Underutilization of available technology; unattended power plants; unattended ships; design, coating, propulsion, anti-fouling, routing to avoid weather.

NEW VEHICLES

Hydrofoil, air cushion, semi-submersibles.

LIVING RESOURCES

Fish location; preservation aboard harvesting vessel; processing in general; aquaculture, contaminants.

NON-LIVING RESOURCES

Recovery of minerals from deep sea floor.

ENVIRONMENTAL ENHANCEMENT

Recreation, urbanization, power, coastal works, water resources.

EXPLORATION AND SURVEYING

Fish, fuels, bottoms, navigation, etc.

CONSTRUCTION AND CIVIL WORKS**Effects of the Ocean Environment on Construction**

Bottom Aspects: Littoral drift and mud slides; bottom scour; mapping and bathymetry, soil mechanics, geology, earthquakes.

Air-Sea Interface: Wind-induced waves, tsunamis, sea-ice and icebergs, tidal motions and storm surges, weather forecasting.

Sea-Water Characteristics: Pressure effects, temperature; currents, biological effects, corrosion effects, overall environmental effects.

Construction and Civil Works in the Ocean

Systems Approach: Effect on the Environment

Ports and Harbors: Future requirements, planning and design, port authorities.

*Coastal Engineering**Facility Equipment*

Offshore Construction: New land; floating platform; artificial islands; offshore platforms and submerged buoyant structures; mineral exploration and exploitation; pipelines; tunnels; and habitats.

Materials and Fabrication Methods: Material needs; fabrication methods.

Exploration and Development Programs*Instrumentation and Testing**Oceanographic Data Acquisition**Models of Ocean Environment**Construction Material and Fabrication Methods Development***VEHICLES AND PLATFORMS****Introduction***Ocean Exploration Needs**Management Responsibility**Time Scales***Study Methodology****Analysis of Tasks for Vehicles and Platforms**

Critical Task Area: Launch; operation; navigation; communication; sensing/processing; work.

*Limitation in Technology***PRINCIPAL TECHNOLOGY REQUIREMENTS**

Structure/Material: Pressure; hull; fabrication techniques; coatings.

Mechanical Interfaces: pressure hull bolted joints, exostructure connections; deep-depth emergency escape; hatch sealing at extended depth; supplemental buoyancy material.

Power Sources: Batteries; fuel cells; nuclear; waste-heat dissipation; power-source technology.

Electrical System: Connectors; conditioning equipment; hull penetration; power cables.

Machinery and Equipment: Hi-pressure seawater pumps and valves; hydraulic fluids and connectors; deep-depth ballast tank blow system; propulsion and control system; winches and cables.

Data System: Viewing; signal processing; sensing; undersea navigation; underwater communication.

Work System Technology: Manipulator systems; lock-out systems; sediment stabilization systems.

Support System: Surface tanking system; submerged support; life-support system.

Man in the Sea, Instrumentation, Navigation, and Communications

These chapters all have large lists.

Example III

1973

Excerpted from

“Report on Marine Technology” by a Panel of the
Science Research Council, London, 1973, p. 28-43.

APPENDIX 3 Recommended Research Areas by Field Reference Number

(Asterisk denotes high priority)

Field Reference 01

SHIP DESIGN - STRUCTURAL AND STRESS ANALYSIS

The response of structures to static and dynamic loads is considered in this section. Both static and dynamic behaviour is of concern especially where non-traditional materials are considered, for example, ferro-concrete. The methods of obtaining dynamic responses are of interest, where new techniques are being applied, such as the use of finite elements in propeller blade vibration calculations and in ship vibration calculations where the ship is treated as a three-dimensional stiffened plate structure instead of the usually assumed beam simplification.

A better understanding of fatigue and crack propagation as experienced by ship structures is required to provide information for efficient and safe detail design.

Methods of analysing and designing 'open-deck' ships for torsional loads are required, and these should take into account variation of cross-sectional properties along the length of the ship.

The response of ships' structures to impulsive loading is of concern from the point of view of preventing damage locally and also from the point of view of transmission of periodic forces which may cause unacceptable forced and resonant vibrations.

Recommended Topics

The design of a ferro-cement, pre-stressed concrete hull with technical and economic considerations taken into account.

The application of finite element techniques to the calculation of vibration responses of ships' hulls.

The assessment of the vibration characteristics of large marine propellers.

The assessment of structural response to impulsive loading.

A study of fatigue and crack propagation in ships' structures to provide design guidance.

The analysis and design of 'open-deck' ships under torsional load.

Field Reference 02

SHIP DESIGN - PROPULSION

The topics listed below range from the very specific to the rather general and, undoubtedly, the general ones would require specification in greater detail before they could be supported with confidence.

Apart from the very general items there appears to be very little – if any – overlap with work already underway. This is not, perhaps, very surprising as most of the undermentioned topics have been suggested by non-educational institutions.

Recommended Topics

Standby steam superheating by induction heating at normal supply frequency.

Investigation of increased steam speeds in saturated steam lines.

Effects of steam wetness on condensing heat transfer.

Design of boilers to accept rapid changes in steam demand.

Design of condensers.

Investigation of the future use of supercharged boilers in marine installations.

* The effect of fluctuating torques in the gearing of medium speed marine diesel engine systems.

Development of theoretical methods of solution for the determination of natural frequencies and normal elastic curves of heavy shaft marine propulsion systems.

Strength and vibration characteristics of main engine seats at higher powers.

Fundamental design procedure for steam bearings.

Aeration of lubricating oil in geared turbine systems.

Techno-economic studies of choice of main machinery system for factory trawlers including A.C. and D.C. electrics, hydraulics, C.P. and fixed propellers as means of transmitting power.

Production of data for, and preparation of, a series of propeller performance charts especially for (a) C.P. propellers, (b) shrouded propellers, (c) all propellers at speeds of advance associated with towing of fishing gear.

Analysis of vibration of ducted propellers.

Aerodynamic design of large 3D diffusers in gas turbine uptake and downtake systems.

Removal of waterborne salt from air in gas turbine intakes.

Coalescer filters – the effects of vibration and throughput of fuel and water.

* Air flows in confined machinery spaces containing supercharged i.c. engines, large electrical machines and men.

* The environment effects of noise in ships.

Computer drawing of pipework.

Field Reference 03**SHIP DESIGN - HYDRODYNAMICS, PERFORMANCE****Recommended Topics**

Performance of ducted propellers with hull boundary layer interaction.

Effect of form on the resistance and propulsion of small craft and determination of correlation factors.

Measurement of wave pattern resistance full scale and correlation of same with model.

Development of computational techniques in non-linear wave resistance theory.

Measurement of drag and lateral force components for asymmetric hulls.

Effects of viscosity on wave resistance – theoretical and experimental treatment combining boundary layer and potential theories.

Resistance of trailing side pipes and suction heads of dredgers – variations with configuration and load on sea-bed and sea-bed materials.

Investigation of the characteristics of turbulent wakes (fully immersed bodies).

Study of scale effect on separation, particularly on the after-body of tanker forms.

Laser measurements of velocity, turbulence of boundary layers and rotational wakes at both full scale and model scale.

Physical understanding of flow patterns over different surface curvatures.

An examination of the hydrodynamic laws governing the separation of flow at the stern of a 3D body, leading to the derivation of design rules for bodies of minimum separation.

*Determination of the scale effect of vortices from model to ship size.

*Finite element treatment of hydrodynamic phenomena.

*Research on noise, especially in relation to onset of cavitation, with a view to reduction in noise output of fishing propellers, shafts, etc., in certain frequency bands.

*Investigation of the distribution of bubble streams (generated by the bow wave) around and beneath the hull.

*A study of the hydrodynamic and scaling laws for water currents induced by streams of air bubbles, with the aim of exploiting such currents for use in ship manoeuvring and berthing.

*Physical understanding of skin friction for rough, smooth and chemically treated surfaces in various fluids.

Field Reference 04**SHIP DESIGN - HYDROELASTICITY (INCLUDING FOIL BEHAVIOUR)****Recommended Topics**

Studies in propeller excited vibration.

*Control of propeller induced vibration.

Fundamental work on boundary layer theory to predict the distribution of wake velocity over the propeller disc.

Prediction of fluctuations in propeller blade loads due to variation of wake velocity over the propeller disc.

Torque and thrust characteristics for fixed pitch and controllable pitch propellers and interaction with hull under dynamic conditions.

Factors influencing, and control of, wave induced transient vibration.

Understanding of wave excited vibration.

Vibration of surfaces moving through fluid (eg bottom panel of ship).

Causes of cable vibration and its effect upon the drag characteristics of a towed cable both plain and faired, including vortex shedding.

Most of these suggestions emanate from non-university sources and, clearly, propeller induced vibration and wave excited vibration are the favoured areas for future work. From the data supplied it appears that only University College and Newcastle have current work in the field of hydroelasticity, but the degree of detail supplied does not enable much matching to be done with the proposed items. There is probably very little overlap. However, there is some overlap and redundancy in the proposed topics themselves and some could coalesce into single items.

Field Reference 05

SHIP DESIGN - HULL LOADS AND SHIP MOTIONS

Of interest to this section is the derivation of the forces acting on a ship's structure in a seaway. These forces are a result of the passage of waves, the ship motions, and the sloshing of liquid cargo, all of which create pressure forces and may cause impact forces. An accurate definition of these forces is necessary before full advantage can be taken of advances in stress analysis techniques.

Work on ship motions is required to help define underkeel clearance in shallow coastal waters; this is of particular concern to large tankers. The requirement is to define the ship responses of pitch, heave and roll, and the sinkage effect caused by the relative forward motion between the ship and the water. For all these, it will be necessary to take account of the proximity of the sea bottom as it will influence the hydrodynamic damping and added virtual mass associated with ship motions and will also influence the sinkage effect caused by the restricted area of flow under the keel.

Recommended Topics

General and local hydrodynamic loading on ships' structures owing to the effects of wave action, ship motion and liquid cargo.

The determination of added virtual mass and damping for ship shape forms for three-dimensional flow in deep and shallow water.

The determination of underkeel clearance for ships at various speeds in shallow water with a seaway.

The determination of propeller pressure forces and wake forces and moments.

Field Reference 06 (See Field Reference 19)

SHIP DESIGN - MANOEUVRABILITY, STABILITY AND STEERING SYSTEMS

The work of interest to this section is concerned with the manoeuvrability and directional stability of ships and boats, and also the associated optimum automatic steering system. Of immediate interest is steering and manoeuvring in shallow water at slow speeds, as typified by harbour approaches, and a longer term interest is the mathematical description of the motion of a ship with random wave disturbance.

Also considered under this section is transverse stability which requires investigation for fine ship forms travelling at speed in calm water and in a seaway. The effect of speed is to alter the righting ability of a ship and this is further modified by the passage of waves.

Recommended Topics

The development of analytical techniques for the determination, at the design stage, of manoeuvrability and directional stability properties leading to specifications for optimum automatic steering systems.

The determination of manoeuvrability and stability of hydrofoil craft and hovercraft.

The determination of ship manoeuvrability characteristics at slow speeds in shallow water and in channels.

The determination of transverse stability at speed and in a seaway.

Field Reference 07

PLATFORMS AND STRUCTURES AT SEA

Recommended Topics

Foundations

Foundations on various types of sea-bed.

Buoyant foundations.

Effect of structures on erosion and sedimentation.

*Scouring action in vicinity of fixed structures.

Erosion and sand movements around underwater pipes.

Design Loads

Wave forces on pipes and columns.

Properties of random waves and corresponding response of structures.

Full scale measurements on structures.

Estimation of wave forces for structures under tow.
Validity of small scale models in predicting loads on structures.

Structural Design

Rational design criteria for marine structures.
Design loadings for marine structures.
Measurement and comparison of stresses in structures.
Stress levels in 3D joint configurations.

Measuring and Monitoring Equipment

Wave recorder to measure wave spectrum.
Development of improved wave recorders.
*Design of buoy system to measure currents and wave heights.
Data recording and transmission buoys.
Acoustic emission techniques to monitor stresses.

New Concepts

Concrete pontoons, platforms, drilling rigs.
Precast submerged tunnel units and erection gantries.
Ice as a structural component.
Design of breakwater for attachment to legs of platforms.
Devices to protect deep water terminals from surface effects.

Field Reference 08

DESIGN AND CONSTRUCTION OF UNDERWATER PIPELINES

Recommended Topics

Design

Improved weighting techniques less susceptible to damage than the present concrete coating.

- *Forces on pipelines due to waves and current.
- *Trenching and surface stabilising techniques.

Interaction with Sea-Bed

Effect of structures in causing erosion and sedimentation.
Study of erosion and sand movements and development of stabilising techniques to avoid exposure of underwater pipelines.

Field Reference 09**MATERIALS FOR MARINE APPLICATION****Recommended Topics**

Use of Composite Materials and Laminates

eg Glass reinforced plastic

Low density Epoxy

Fatigue strength – bi-axial fatigue behaviour

Toughness

Corrosion Resistant and Animal Growth Resistant Materials,

eg coated steels or naturally passivating steels.

***H.T. Steels**

Fatigue in welding details.

Stainless and Low Elongation Steels.

Hydrogen embrittlement.

***Shaft and Seals Materials**

Fundamentals of behaviour of materials of different hardness in contact (Application to stern tube seals).

Simulation and assessment of self-lubricating bearing materials.

Gaskets

Ability to maintain sealing properties after serious distortion of mating structure.

***Fire Resistant Materials other than steel or mineral based material.**

Welded Structure in Sea Water

Fatigue.

***Fracture Toughness**

Fundamental investigations of factors mainly near welded joints in plates.

Field Reference 10**CORROSION AND ANTI-FOULING MEASURES****Recommended Topics****Anti-fouling**

Fouling of metals and plastics in coastal waters.

Influence of marine growth on flow resistance of static structures.

***Development of a rubber or plastic skin for ship plates to prevent attachment of marine growth.**

Destruction of spore of algae or prevention of sediment other than by poison, e.g. bacteria.

Corrosion

*Corrosion fatigue in relation to off-shore structures.

Development of alternative to blast cleaning for the pre-treatment of welded areas to ensure adequate adhesion of protective coatings.

***Paints**

Inter-coat adhesion

Permeability to water and ions.

Extension of cathodic protection to splash zone.

The behaviour of metallic couples under sea-bed conditions, specifically the rate hydrogen evolution, the rate of corrosion and the effect thereon of a covering of sediment containing decaying organic matter.

Field References 11, 12, 13, 21, 22

11 DIVING TECHNOLOGY

12 UNDERWATER HABITATS

13 UNDERWATER POWER PLANT AND TOOLS

21 UNDERWATER VIEWING, PHOTOGRAPHY AND OBJECT LOCATION

22 UNDERWATER COMMUNICATION

Recommended Topics**Improved Diver Work Capability**

Development of improved life-support systems and details for shallow, medium and deep depths. These items would include the diving suits themselves (including insulation/heating), decompression chambers, personnel transfer chambers, perhaps underwater habitats (lock-out submersibles), etc. Some fundamental work on basic parameters might be of value, but any system developed must take into account the necessity for it to be economical both to build and operate.

Development of improved underwater communications system for divers between themselves and to the surface. This brings in the need for improved unscrambling devices to counteract helium speech.

Development of greatly improved lighting or other systems to improve visibility underwater, and give the diver 'eyes'. This could include the adaptation, for use underwater, of some methods at present under development for blind people.

Development of improved light-weight navigation and homing systems for divers, both for safety and for search/location/rescue.

Development of a light-weight, reasonable endurance, cheap diver transport vehicle.

Development of improved handling systems for divers, diving systems, equipment, submersibles, habitats, etc. through the air/sea interface in weather up to sea state 5/6 or higher.

*Study and analysis of diver accidents and existing safety regulations, with a view to developing better regulations, codes of practice, training standards and methods,

support and diving equipment, etc. This would require the analysis of such statistics as exist, and research into other accidents which have gone unrecorded in statistics but are available from Coroner's Court reports, insurance archives, the Factory Inspectorate, etc. This work should be done in conjunction with the Medical Research Council Decompression Panel, the Underwater Engineering Group, the Royal Naval Physiological Laboratory and any others already involved in certain parts of this work.

The use of lasers and other possible methods in the improvement of communications and viewing underwater.

The development of a 'black box' to be carried by divers, with a pressure and temperature recorder versus time, to be used in the analysis of existing work practices and the correct use of decompression schedules. This work should be done in conjunction with the Medical Research Council Decompression Panel at Newcastle (Professor Walder), which has already made some progress in the development of such a monitoring unit.

A study of the design and dimensions of the mating assemblies of one-man and large-scale decompression chambers throughout the country, including those in naval establishments, to try and find the best design and recommend standard dimensions, to permit the mating of portable chambers with the major facilities in various centres, so permitting the transfer of divers under pressure. This study should also result in the preparation of a complete list of available facilities throughout the country.

Underwater Work

Development of underwater power sources.

*Development of underwater acoustics for surveying, navigation, search and location, communications, control, etc.

Development of improved underwater television and photographic systems for control of underwater work, surveying, etc.

Development of underwater welding systems and techniques, preferably for welding in the wet, rather than in the dry. Such systems must eventually be to the standards acceptable for pipelines by the petroleum industry, or by the Registration Societies for Ships and Structures.

Development of underwater cleaning, survey, maintenance and repair systems for ships and structures. Apart from diver operated tools and units, this could include the development of floatable coffer dams or part dry docks, or special chambers in which a dry atmosphere could be provided in which surface workers could carry out the necessary repairs or other work.

Development of underwater 'cranes' using lifting bag or equivalent techniques to exploit buoyancy..

The further development of practical underwater hand tools to suit the many tasks of divers.

The further development of economical and convenient power tools, reactionless where appropriate, and pneumatic, hydraulic or electric according to the type of tool, the depth at which it has to operate, and the method shown to be the most practical for the conditions involved.

The development of compact, light-weight, safe gas generators for displacing seawater at various depths.

The development of improved designs of multi-core cables, cable handling gear and cable connectors for underwater use. These are particularly vulnerable in most present systems, and there is much room for detailed improvement.

Development of underwater demolition techniques.

Field Reference 14

MARINE ASPECTS OF PORTS PROBLEMS

Recommended Topics

Ship Movements

Speed ranges of ships moving in restricted waterways.

Effect of shallow water on motions of ships.

Motion of ships in confined waterways.

Behaviour of small ships in a seaway.

Development of equipment to determine bottom clearance of ships entering harbours.

***Berthing & Mooring**

The effect of hydrodynamic mass on berthing forces.

Collation of information on berthing forces of large ships.

Improved mooring systems.

Study of mooring and anchoring equipment for large ships – new methods of anchoring required.

Offloading of large tankers either between ships, or at offshore station.

Forces developed by anchoring systems and factors affecting them.

Exploiting currents induced by air bubbles to assist in ship manoeuvring and berthing.

Dredging Siltation

Dredging technology

Control of density – induced siltation.

Separation of river bed silt from water by mechanical processes.

Investigations of materials for hopper barges, door sealing arrangements.

Effect of estuary circulation on sedimentation.

Field Reference 15

HANDLING OF BULK MATERIALS

Recommended Topics

Manoeuvrability of trailing suction dredgers with one or two sidepipes in different fore and aft locations.

(As part of the problem of dredger positioning this is significant mainly in channel clearing (capital and maintenance) dredging rather than in sand and gravel dredging. Believed to be a profitable line to pursue in association with ship control techniques and automation. As a result of studies of dredging economics and the CIRIA survey, but depending on support offered, studies may be launched of ship-positioning systems for this and other applications. A short study (as described by heading) would, however, not be inappropriate).

Heavy lift movements within containerisation. Engineering considerations of equipment and handling methods.

*Settlement of material in hopper-dredgers-configuration of discharge pipes and mechanical settling devices.

(Settlement of dredged material in hoppers (Mechanical/hydrodynamic techniques): DTI information is that this could be significant in increasing productivity, but no study in existence; chemical (flocculant) techniques being considered currently by DTI and NPC, should be able shortly to indicate order of improvement required for a non-chemical technique to be viable).

Field Reference 16

SEA-BED INVESTIGATIONS

Recommended Topics

***Mechanisms** (This is an area in which NERC are also interested).

Investigation of mechanisms leading to ripple/dune formation. Movement of sand/gravel under action of waves and currents. Interaction of sea and sea-bed (ie sand waves, shoals, etc.). Long term research into movement of sea floor sediments. Effect of dredging on sea-bed.

Inspection Techniques

Application of nuclear techniques to sea-bed investigations.

Recorders to provide continuous indication of constitution of upper three feet of the sea-bed.

Improved coring methods for soft ground in the open sea.

Acoustic properties of sea-bed, etc. for sonar applications.

Field Reference 17

FISHING TECHNOLOGY, FISH FARMING ENGINEERING

Recommended Topics

Conventional Fisheries

Development of improved sonar systems for locating and identifying fish shoals, both for catching and for surveying the extent of resources including fish-counting.

Development of economical side-scan sonar systems to follow nets and fish shoals in the horizontal and vertical planes, as opposed to solely in the vertical plane, to improve the effectiveness of fish hunting and capture for both pelagic (free-ranging) and demersal (bottom-living) fish.

The development of improved telemetering systems from nets or gear to the fishing vessel.

On-line applications of computers on board ship.

The development of improved and more economical fish catching methods and fishing gear, together with handling methods on board the fishing vessels. This work would require an analysis of the characteristics of towed bodies and the various parts of the gear, to elucidate design parameters, with a view to seeking means of improvement in design and effectiveness.

Studies of propulsion systems and towing winches and other equipment on deck, in relation to their effects on fishing gear and catching efficiency.

Machine tools for automatic gutting, filleting, etc, and associated systems for sorting, size grading, conveying, washing, temperature conditioning etc.

Thermal insulation (freezer trawlers and cold stores).

A study of existing freezing and refrigeration systems in relation to the fish products themselves and to conditions on board ship, with a view to making improvements in operation, safety and economy.

Secondary refrigerants (a non-toxic, non-inflammable, non-corrosive liquid, mobile at minus 55°C).

Shipborne navigation systems.

A study of ship control and navigation problems, with a view to the judicious and economical application of automation to machinery surveillance and ship navigation on passage and while fishing; the object is always to reduce labour and watch-keeping.

Operations research and systems analysis.

A study of the optimum requirements for a fishing port/terminal, including its location, together with the facilities required for dealing with the catch and for servicing and maintaining the fleet in the most economical manner, and taking into account commercial, hygiene, fish quality and other related considerations. The relative merits of independent fish terminals and those closely related to commercial ports should also be studied.

A study should be made of the minimum requirements of a fish terminal to improve the handling of catch and vessels at a typical fishing village in a developing country. This should take into account the need for minimum expenditure and maximum effectiveness, in terms of improving the demand for fish and/or the price paid for it by buyers from inland or other communities.

Active training simulators for fishing skippers.

Aquaculture

A study of the water, wave and other forces on the different types of structure employed in fish farming, with a view to identifying gaps in existing information and to developing improved designs and methods.

A study of the problems involved in establishing fish farming in open water, and the gaps in existing knowledge which need to be filled before such an installation could be attempted.

A study of the engineering problems involved in maintaining the required conditions in different types of enclosures, and the identification of the instrumentation required to permit correct monitoring of the various characteristics; the development of the necessary instrumentation and equipment.

Dynamics of exploited fish populations.

Field Reference 18

INSTRUMENTATION APPLIED TO MARINE ENGINEERING

Recommended Topics

Cheap, reliable wave recorders indicating directions as well as other wave characteristics.

(This requirement has not been highlighted earlier as of great significance, but a number of offshore engineering problems and activities could be dealt with more effectively if meaningful wave data were available. The first problem is to establish what is meaningful, which may differ according to the application; we doubt whether it can be simplified as far as is suggested. NIO and other places have wave-measuring equipment and MATSU is looking into the possibility of rationalising some of the requirements. A study of the significant factors in relation to various offshore operations would be worthwhile; a number of bodies would be interested. The suggested instrumentation can, however, probably be developed from existing technology, and is perhaps not a suitable task for a University).

Data recording and transmission buoys to monitor wind/wave velocities and amplitudes, temperatures and direction.

Information on physical conditions in or surrounding a ship and its equipment.

(The new techniques likely to be needed would be mainly those involved in adapting to the marine environment. DTI are not investigating this aspect of instrumentation).

Survey of design recommendations for shipborne instruments (propulsion, navigation, cargo handling, fire protection, computers etc.) and comparison of effectiveness of equivalent land instruments, maritized-land instruments, and the need for special development.

*The development of a technique for the accurate measurement of large mass flows of cryogenic liquids and vapours. Similar measurement is also required on board ship for other fluids. The primary objective would be for use with custody transfer.

(Many methods of flow measurement exist, including recent ones using sound or light traversing the pipe at an angle; for gases or, especially, for mixed liquid/gas flows these are unlikely to give sufficiently accurate results. The problem, though not exclusively a marine one, appears difficult, interesting and well matched to university investigation).

Shipborne information systems. Study of the total information processing problem in large merchant ships with a view to incorporation of a hierarchy of computer-processors.

Field Reference 19 (See also field reference 06)

SHIP CONTROL SIMULATION

Recommended Topics

*Adaptive and optimal control of marine gas-turbine installations with and without variable-pitch propellers.

An integrated study of yaw stability, steerability, manoeuvrability and automatic steering and engine control systems for large ships.

A study of optimum man-machine systems for the navigation, control and manoeuvring of merchant ships and submersibles.

(The topics proposed above will be included in the DTI systems and automation studies, out of which separable longer-term studies may well emerge).

Use of hybrid computers for simulating non-linear ship manoeuvres.

Investigation of ship response to hydrofoil control systems.

(To DTI knowledge, there is no great emphasis on the use of hydrofoils at present, but the proposal need not be rejected on that account).

Study of human error in Radar using simulation and ergonomic equipment.

Field Reference 20

NAVIGATION (INCLUDING SURVEYING)

Recommended Topics

Navigation

*Study of the techno-economic factors involved in optimum ship routing and weather routing.

*Systems study of a fleet activity in relation to particular cargo-carrying or other activities, bringing in the economic and other factors involved, and isolating where possible the obstacles in present systems, both technical and commercial, to the attainment of optimum efficiency. Simulation computer programmes covering such activities would be of value.

The development of automatic and centralised control of ships from the bridge, but taking into account the paramount requirements concerning safety at sea and the observance of the Rule of the Road.

*Development of means for decelerating very large under-powered vessels such as tankers.

A study of the problems in manoeuvring large vessels in confined and shallow waters, both to negotiate channels and during berthing.

A study of existing methods of transferring at sea, and the development of improved methods, both between ships (stationary or under way) and between small supply vessels and structures such as oil rigs, lighthouses, etc.

A study of existing dynamic positioning systems, and the development of a new optimum and cheap system.

A study of the problems involved in underwater navigation and position-fixing, and the development of improved and more reliable methods, taking into account various possibilities including inertial, acoustic and other systems.

The development of automatic track-keeping systems, with special reference to the avoidance of collisions at sea.

The development of low-cost materials for Satnav to permit the facility for continuous fixing.

A study of bridge layout and the arrangement of navigational equipment and displays on ergonomic lines, to improve ship control and safety.

A study of the propagation characteristics of subsonic radiation in clear weather and in fog leading to the development of efficient equipment for generating subsonic sound, and also for its detection and sensing by direction and, if possible, distance.

The development of an under-way draught gauge for large vessels.

Surveying

Development of a wide-band true-to-scale double-side sector-scan acoustic system for bottom surveying.

Development of a surveying system incorporating automatic chart reduction.

*Development of a reliable deep water tide gauge and recording/telemetry system with the possibilities of developing an advance information system to advise approaching vessels of the tidal height.

Field Reference 21

UNDERWATER VIEWING, PHOTOGRAPHY AND OBJECT LOCATION

See Field Reference 11 et seq.

Field Reference 22

UNDERWATER COMMUNICATION

See Field Reference 11 et seq.

Field Reference 23

POLLUTION

Recommended Topics

- *Handling bulk materials and pollution.
- *Pollution near undersea structures.
- *Effect of harbour construction on pollution.
 - Turbulent diffusion and marine effluent dispersal.
- *Design of outfall pipes for sewage and heavy liquids, and their pollution pattern.

Marine surface diffusion as a function of wind speed.

Activation analysis techniques for estimating:

- i radioactive waste
- ii sea water pollutants
- iii dangerous trace elements in fish

Two-dimensional numerical model studies of marine pollution problems.

Design of pollution indication device for use in rivers and coastal waters.

Field Reference 24

SAFETY AT SEA

Recommended Topics

Control problems involved in compensating for ship's heave, roll, pitch and yaw when handling objects inboard and outboard, in order to reduce vertical and pendulum motions of the load.

*Systems of centralised ship-position monitoring in confined waters.

*Submerged tide recorder with telemetering to land.

*The effect of a seaway on the stability of a ship.

*The behaviour of slurries within a ship under the effects of hull vibration and/or ship movements and its effect on the stability of a ship.

Fundamental research into the basic physics and chemistry of the initiation of ignition of hydrocarbon/air mixture.

Development of a technique for the safe disposal of 100% light hydrocarbon vapours from liquefied natural gas tanker.

*Examination of marine accident statistics and their analysis according to types of accident, causative factors etc. Correlation of this information with ship type, crew training and qualifications etc.

*Ergonomic study of commonly used ships instruments and equipment such as compass, engine room telegraph, helm angle indicators etc., with the object of unifying and improving designs so as to improve accuracy in use and to reduce incidence of error at the instrument/human interface.

*Ergonomic study of ships structural features such as ladders, doors, hatches, bunks etc. with the aim of improving designs so as to reduce the risk of injury due to slipping and falling when the ship rolls and general improvement of comfort levels.

Field Reference 25

SHIP PRODUCTION AND MANUFACTURING SYSTEMS

The table below summarises the specific suggestions for research under five sub-headings.

The largest group of suggestions for further work concerns methods of improving some basic shipbuilding processes. Most of these are essentially problems in applied

mechanics and production engineering; in some of them the scale of the practical problem may present difficulties for University research.

The next largest group concerns proposals for work in applications of the computer to ship production, and in ways of reducing production costs. Both of these are receiving attention at Strathclyde and Newcastle, and at BSRA; but more needs to be done. In both areas, the practical implementation of improved methods by the shipbuilding industry remains a source of difficulty. A similar comment applies to the two studies proposed on the larger problems of shipbuilding strategy and corporate planning.

The final small group is of the kind which could well expand rapidly if non-ferrous materials come to be widely adopted for marine use. In the context of ocean engineering, these seem well worthy of further study.

Recommended Topics

Organisation and Planning

- Application of group technology techniques to shipbuilding
- Mathematical model for corporate planning in shipyards

Cost Studies

- Design for economic manufacture and costing
- Value analysis in shipbuilding
- Study of shipbuilding costs
- Design-production studies for minimum cost

Computer-Aided Production

- Automation of shipbuilding processes
- Use of graphic terminals in ship production
- Steel flow studies for N/C applications
- Dynamic modelling of assembly processes

Plant and Processes

- Methods of bending thick plates
- Techniques for defining non-developable surfaces
- Fundamentals of welding and cutting
- Devices for positioning large, heavy units
- Methods of reducing weld distortion
- Development of steelwork jiggling system

Construction Problems in New Materials

- Concrete construction for marine uses
- Concrete and GRP production problems

Example IV

1974

Excerpted from

“British National Committee on Ocean Engineering:
National Policy on Seabed Engineering,” Council of
Engineering Institutions, London, May 1974.

This report is a broad policy report similar in tone and sweep to the Stratton Commission Report on which one feels it depended to some extent. The major intent of the report is to discuss management of an ocean engineering effort having established broad policy recommendations. Of particular interest to the ocean engineering panel was enclosure 17 which indicated the fields in which Navy activities could assist in other marine activities and simply indicated how broad and how deep the question of technical transfer from naval to the civilian areas might run.

N.B. Not all the items listed below presently exist at least in the form described.

- I. Vessels and Craft**
 - a. Warships, submarines, Royal Fleet Auxiliaries, auxiliary and harbour craft
 - b. Salvage and rescue craft--tugs (ocean and harbour), lifting craft, heavy lift cranes, diving vessels, helicopters
 - c. Submersibles, telechirics, habitats
 - d. Hydrographic and research craft and vessels
 - e. Mooring, buoy and boom defense vessels and systems

- II. Engineering**
 - a. Propulsion systems
 - b. Auxiliaries and systems, including automation
 - c. Desalination
 - d. Ship construction
 - e. Materials, corrosion, protection

- III. Electronics**
 - a. Communications, radio and visual
 - b. Position-fixing systems for navigation and hydrography
 - c. Radar
 - d. Underwater acoustics--echo sounders, sonar (side-scan, doppler, etc.)
 - e. Underwater communications, navigation, search and location
 - f. Ship control and collision avoidance systems. Training simulator system
 - g. Instrumentation
 - h. Data acquisition, processing, storage, dissemination. Buoy systems
 - i. Meteorological systems--weather, storm, tide prediction

- IV. Other Facilities**
 - a. Diving and underwater work systems and techniques. HMS "Reclaim" replacement
 - d. Environmental testing centres, and sea-borne "test beds"
 - c. Structural, shock and vibration testing facilities
 - d. Structural testing at full scale
 - e. Desalination experimental station

- f. In-water survey, maintenance and repair techniques
 - g. Hydrographic and oceanographic survey and chart-making systems
 - h. Meteorological forecasting systems
 - i. Pollution monitoring and counter-measures
- V. Research and Development**
- a. Procurement Executive
 - 1. Research and development establishments
 - 2. Outside contracts with industry, universities, etc.
- VI. Miscellaneous**
- a. Procurement of ships, equipment, services, stores
 - b. Defense sales (exports)
- VII. Education and Training**

Senator HOLLINGS. Senator Helms, we apologize for the delay. Governor Thomson we welcome you to the committee and we are sorry we could not give you a schedule today.

You can see we have other witnesses backed up, but any time a chief of state comes to town we want to hear from him. It is important that your views be known and be on our record.

We now recognize our distinguished colleague from North Carolina. He introduced Billy Graham this morning at the prayer breakfast, and now you are bringing Governor Thomson. Are you the chief introducer in town?

Senator HELMS. I am working at it, Mr. Chairman.

STATEMENT OF HON. JESSE A. HELMS, A U.S. SENATOR FROM THE STATE OF NORTH CAROLINA

Senator HELMS. Mr. Chairman, members of this distinguished committee, while it may seem at first glance a bit unusual that a Senator from North Carolina should be here this morning to enjoy the privilege of presenting to this committee the distinguished Governor of the State of New Hampshire, it is really not all that unusual.

Governor Thomson is a very close personal friend of mine, a man for whom I have immense respect and admiration. He is courageously forthright, and unyieldingly vigorous in his great State, and all of the States of the union.

He holds the belief, which I happen to share, Mr. Chairman, that the sovereignty of his State is being at this moment transgressed by the Senate of the United States which has thus far failed to seat the Senator-elect from the State of New Hampshire, duly certified under the law by that State.

Senator HOLLINGS. There are two certifications, Senator.

Senator HELMS. No. 1.

Senator HOLLINGS. I will show you the one that came up here over the signature of Gov. Meldrim Thomson. Let us not oversimplify this record. Let's speak to this particular measure here on energy and offshore drilling. If you want to get into the other subject, we can show you Governor Thomson's certification, which he tried to recoup from the Secretary of the Senate.

Senator HELMS. I want to say, Mr. Chairman, that is beside the point, as far as these hearings are concerned.

Senator HOLLINGS. I would say it is beside the point, but you are trying to make a point of it. Go ahead.

Senator HELMS. Suffice it to say, Mr. Chairman, that Gov. Meldrim Thomson, born in Pittsburgh, reared in Florida and Georgia, has earned the confidence of the people of the New England State that proudly proclaims the motto, "Live Free or Die."

I thank you, Mr. Chairman, for the privilege of presenting the chief executive of the State of New Hampshire, Hon. Meldrim Thomson, Jr.

Senator HOLLINGS. Thank you, sir. Governor Thomson, we will be glad to hear from you, sir.

**STATEMENT OF HON. MELDRIM THOMSON, JR., GOVERNOR OF THE
STATE OF NEW HAMPSHIRE**

Governor THOMSON. Mr. Chairman, I appreciate very much the courtesy of the Senator from North Carolina, introducing me. I certainly will not get into the matter that is before the Senate Committee on our election, other than to say that if we did have a Republican Senator now, I would not have to call on my friend, the Senator from North Carolina to introduce me.

I want to thank you, also, Mr. Chairman, for making it possible for me, in a very few words, to present the view of the chief executive of the State of New Hampshire, with respect to several bills that are before your committee.

You had me scheduled yesterday. I had a very important piece of legislation, probably the most important that will come before our legislature, and it was imperative that I be there to try to win the victory on the issue, which we did.

As you know, Mr. Chairman, New Hampshire is an Atlantic Coast State. We have only 17.8 miles of coastline. As Daniel Webster said of Dartmouth College, I can say of our coast.

It is a small coastline. But there are those of us who love it. I believe deeply in State sovereignty. I am appalled at the persistent and escalating intrusion of the Federal Government into the lives of our people, and the operations of our State government.

However, in the search for and development of energy, I am a nationalist, I believe, firmly, that energy is as much a national matter as the general welfare and common defense. In fact, without a dramatic reversal of our present do-nothing energy policy, we will continue our tragic unemployment trends and destroy our present tenuous ability to defend ourselves.

Mr. Chairman, I have studied Senate bills S1, 130, 426, 470, and 521. I am opposed to the delays in exploration and development which these bills would cause. Neither our economy nor the state of world affairs permits us the luxury of a single moment of procrastination.

I am opposed to the general concept and thrust of these bills. There is nothing in the history of bureaucracy to suggest that several paper shufflers can match the proven expertise of the man in the private sector who mans the rigs.

From that day in April 2 years ago when President Nixon challenged our people to achieve energy independence in 1980, I became a believer. In the months since April 17, 1973, no Governor has worked harder, and few as hard as I, to encourage the development of American energy resources.

I led the fight in New England for the Alaska Pipeline, when most officials thought that tundra and caribou were more important than gas and oil. Last May, I called on energy officials in London, Edinburgh, Frankfurt, and Vienna in search of answers to offshore drilling problems, and onshore impact.

I visited, by helicopter, an exploratory platform in the North Sea, saw Russian fleets competing with Scottish fishermen, and felt the growing pains of ancient Edinburgh, as hundreds of oil service companies found new homes in that silver city by the sea.

I fought for a 400,000 barrel oil refinery in New Hampshire, and saw the environmentalists throttle a great project, that would have brought thousands of real free enterprise jobs to our State, and essential refined products to all of New England.

I toured refineries in this country, and four foreign countries. I visited the big nuclear plant at Turkey Point, in south Florida, where the environmentalists forced the company to install a \$32 million cooling system so as not to disturb the lovelife of the mudworms in 30 acres of bay bottom.

I have struggled to get a construction permit for a nuclear plant at Seabrook in my State, where hearings and studies have run to 27 volumes, cost \$25 million, and where, after 6 years, we are now told that it will be another 2 years before we can even turn the first shovel of dirt on the construction site.

From these experiences I am convinced that our national need for energy is great, and grows more urgent with each passing year. We now use about 18 million barrels of oil a day.

Several million barrels of this came to us from foreign countries. This heavy dependence on foreign oil costs us about \$25 billion dollars, and contributed to our high adverse foreign balance of payments of about \$7 billion dollars in 1974.

Our sources of domestic oil are being depleted at the rate of 8 percent a year. When the Alaskan pipeline is completed, 3 years from now, its delivered capacity of 2 million barrels a day will equal the energy of 70 nuclear plants.

Yet today we have only 53 such plants in the Nation. They tell us, sir, that it takes 2 to 5 years to explore after leasing, and another 5 years to reach full development in a field.

Now come these bills which, by statutes, regulations and court actions, would add, in my judgment another 5 years of delay. The Governors are given a provisional veto power for a period of 3 years over exploratory plants.

The coastal States are to share in the decisionmaking and thus vulcanize the offshore seas. They are to get a bigger share of the revenue take, as though they had some preferential rights to a resource which our Supreme Court has only recently reiterated was a national asset.

If this is not bad enough, I learned the other day that the New England States create a combine at the poor taxpayers' expense, and buy up the George's Bank, to explore for and develop the oil and gas resources there.

Mr. Chairman, on matters of energy I am a national citizen. I do not want a veto power over my sister States, nor do I want them to have one over New Hampshire. Except for the actual loss resulting from onshore economic impact in my State, I want to share tax revenues from oil and gas only as a part of the United States.

Yes, I approve of coastal management studies, which can be completed concurrently with actual exploration and thus save valuable time. Yes, I believe we must protect our sea, the bordering shores, and all of our environment, while at the same time we protect our energy-starving industries, our homes and our national security.

The leasing program that has provided \$19 billion for our taxpayers, the great oil industry that put America on wheels, so that we could ride into a new civilization of mobility, the regulations that have guided without socializing have all proven themselves successful.

Why should we now plunge into an unknown and untried quagmire of that bureaucracy when we have the world's finest methods and expertise for discovering and producing energy?

Mr. Chairman, there are some features of these bills that could improve our present offshore techniques. Let us make these, knowing that we will make more oil by putting a new bit in the rig, rather than blowing the whole platform out of the water.

The next words from the OPEC countries may tell of an increase in oil prices for our consumers. Or, far worse, advise of a new embargo. Then, sir, what shall we do? Watch our people starve and freeze while Congress prints more money with less value?

The right decision on these bills is to let Interior go forward with its present leasing plans. Thus alone can we make jobs for 8 million unemployed and insure our national safety in a world where greed still motivates the worst in nations as in man.

Mr. Chairman, if I may, I would also like to leave with you a letter on this issue from Representative Russell Chase, of the New Hampshire Legislature.

Senator HOLLINGS. It will be included in the record.

[The letter from Representative Chase follows:]

NEW HAMPSHIRE HOUSE OF REPRESENTATIVES,
REPUBLICAN CAUCUS COMMITTEE,
Concord, N.H., April 8, 1975.

Hon. MELDRIM THOMSON, JR.,
Governor,
State House,
Concord, N.H.

DEAR GOVERNOR THOMSON: It has come to my attention that there are a number of proposals before the United States Congress that, if approved, would put off the exploration of the Atlantic Shelf to determine the availability of oil deposits for several years.

This would be, in my opinion, an irresponsible action that must not occur.

The very real energy crisis existing today and the future problems facing our industrially oriented economy plus the petroleum requirements of our citizens demand that we expand our known supply of oil to the utmost.

Some citizens of the Northeast section of the United States, including a few from New Hampshire, noisily recommended putting off the required early drilling on the premise that our ecology must be protected. This misbegotten and misplaced conception must be rejected. Certainly, we must protect our natural heritage but in doing so, we must not neglect our national needs.

I urge you to use all methods available to you as Governor to impress these New Hampshire beliefs on the Congress and others involved in the decisions relative to this subject.

Very truly yours,

RUSSELL C. CHASE,
Chairman.

Senator HOLLINGS. Thank you very much, Governor. We got the last bell to make that rollcall.

Governor THOMSON. I appreciate your time very much.

Senator HOLLINGS. Thank you for your participation this morning. The committee will be in recess temporarily for the rollcall.

[Whereupon, the hearing was adjourned, to reconvene at 2 p.m.]

AFTERNOON SESSION

Senator ROTH [presiding]. The hearing will come to order.

I have a preliminary statement, but in the interest of conserving time, I will ask for my own unanimous consent to put it in the record, and do so.

[The statement follows:]

STATEMENT OF HON. WILLIAM V. ROTH, JR., A U.S. SENATOR FROM THE STATE OF DELAWARE

The Hearing will come to Order.

In the interest of saving time, I will confine my introductory remarks to several brief observations.

First of all, on behalf of the Committees on Commerce and Interior and Insular Affairs and on my own personal behalf, I want to welcome each witness here to testify this afternoon and to thank you for your interest and cooperation.

This afternoon's session is the wrap-up of 5 full days of hearings scheduled over a 2 month period.

The purpose of these hearings has been to gain information from as many points of view as possible on how the Congress can best design a comprehensive package of legislation concerning exploration and development of the oil and natural gas resources on the Outer Continental Shelf at the completion of today's hearings, testimony will have been recorded from national, state and local leaders and spokesmen from the oil and gas industry, labor, public interests and environmentalists, and government.

It will then be the Senate's task to distill this information into a comprehensive statutory framework which addresses all aspects of this very important subject, in a fair and objective manner.

At a time when our nation is facing unprecedented disruptions in our economy, rising unemployment and critical shortages of needed domestic sources of energy, it is particularly important that all resources alternatives are given the closest possible scrutiny as to the roles they can play in restoring vigor and vitality to our economy and supplying needed sources of energy.

At the same time, our efforts to find and develop new energy resources such as the oil and gas on the Ocean Shelves surrounding our nation, must be designed to assure that all adverse impacts to our social, economic and cultural institutions and to our natural environment are minimized. Also, is it imperative that responsive systems for management and administration of OCS exploration and development programs at the Federal, state and local level be developed that respond to the needs of protection of private citizens and assure that publicly owned resources are developed in the most efficient and effective manner possible.

The Outer Continental Shelf Lands Act has served us well in these 20 years since its enactment, however, today it is apparent that updating and reform are needed. New policies and procedures must be prepared which improve and streamline working relationships between all levels of Federal, state and local government, on OCS programs and which bring together the collective capacities of all sectors of our nation to assure a cooperative, effective system for developing these vital energy resources.

In closing, I want to congratulate the Commerce and Interior Committees for holding extensive and comprehensive hearings such as they have done with

regard to this legislation, and again thank each of you for your willingness and enthusiasm in participating.

I see that our first witness for this afternoon is the Honorable Mike Dukakis, Governor of Massachusetts,

Governor Dukakis would you proceed with your statement.

Senator ROTH. At this time I would like to call the Honorable Mike Dukakis, Governor of Massachusetts. Governor, it is a privilege to have you here today, to get your testimony on this most important matter.

If you have a prepared statement you can either read it in its entirety or if you choose you can speak extemporaneously and we will put your full statement in the record.

STATEMENT OF HON. MICHAEL DUKAKIS, GOVERNOR, COMMONWEALTH OF MASSACHUSETTS

Governor DUKAKIS. Thank you very much, Senator.

I have a fairly detailed statement I would like to file for the record, and a somewhat briefer statement that I would like to deliver, and if you have any questions I would be happy to answer them and respond.

I think the last time you and I met was on "The Advocates" show up in Boston. I was the moderator, and you were a witness.

Here we are again, and it is good to be here. Twenty-two years ago Congress enacted legislation, as you know, developing offshore development. Since then, more than 3 billion barrels of oil and over 15 trillion cubic feet of natural gas have been produced on the Outer Continental Shelf, bringing some \$13.4 billion to the U.S. Treasury.

The legislation of 22 years ago is insufficient to meet the energy demands that America faces today. We must extend the frontier of our energy exploration, and I think all of us agree to that.

But the development of new energy frontiers must be controlled and managed, or else we will experience intolerable damage to our economy, and our environment. The first and most essential element of a frontier leasing process must be the separation of the exploration stage from the development stage with provision for full disclosure of all information gleaned from exploration.

I feel very strongly, Senator, that we cannot afford to sell our natural resources without at least knowing exactly what we are giving away. No private business would be so reckless.

Monte Hall has a television show that is a lot like this, and while "Let's Make a Deal" might be a decent show, it is a terrible way to run a Government. Keep in mind, Monte Hall knows what is behind those doors.

There has been almost unanimous support for separating exploration from development, from the National Governors' Conference, from the eastern coastal States, which are the New England States, and I want to emphasize that to you.

I must say the degree of unanimity on this subject, at least among the governors, has been remarkable. Since 426 achieves this separation by establishing a Federal Outer Continental Shelf Oil and Gas Exploration Program. I support that provision.

In fact, I should say, Senator, that virtually all of the elements of the intelligent, comprehensive and all-round program for the development of our offshore resources are contained in the bills before you.

I am not suggesting anything new, but rather suggesting a sense of urgency and a sense of frustration which I personally feel and I think my fellow governors feel, that what has been happening and what we think is needed if this matter is going to be dealt with successfully.

I would also suggest a change in bidding procedures, to increase competition in the offshore oil industry. If we were to adopt a system where payments increase as production increases, we could bring in the smaller companies so that 17 companies do not control more than 90 percent of our offshore production, as they did in fiscal 1974.

I join Governor Byrne of New Jersey in urging that local or interstate gas companies, rather than the oil companies, be allowed to develop natural gas deposits, if that is at all possible.

A new frontier leasing policy with the State and Federal Government joining as full partners must be the cornerstone of future offshore oil development. I think the States and Federal Government must share responsibility for regulating and controlling offshore development.

I don't mean to suggest that it is not the Federal Government who should not have principal responsibility for planning the process and also the economic costs and benefits.

And that is something that does not happen today. Let me cite three examples. In addition to whatever environmental problems the States of Louisiana, Texas have as a result of offshore drilling, these two States are now spending some \$88 million a year to provide services for offshore development, without sharing in any of the Federal revenues.

While at the same time, 37½ percent of the royalties and rentals received by the Federal Government for mining on Federal lands is returned to the States.

In Alaska, something over 50 percent is paid into a reclamation fund. The impact of offshore development is still greater than onshore. Beyond the danger of ocean spills, to the fragile coastal environment, the concentration of support services of prime coastal lands requires very careful planning and great expense.

In my own State, for example, we have two very vital industries, tourism and fishing, which will be severely impacted. Yet there is no program at the present time to assist us in undertaking this burden.

Let me dwell, if I can, on the problems of the Massachusetts fishing industry for just a moment. It is the oldest business in Massachusetts. Our citizens have lived from the sea since the Pilgrims landed at Plymouth more than 350 years ago.

When oil development began in the North Sea, fishermen in Scotland were driven out of their traditional port cities, as facilities for oil production took over. Our fishermen do not have the resources to survive if that happens here. But our loss is more than just their loss.

In a world facing a serious protein shortage, their contribution cannot be replaced. Therefore, I would propose the following: First, that persons responsible for oil spills be liable, without regard to fault, for up to \$7 million, and that a fund be established for the balance of the claims up to \$100 million per year.

And that provision, as you know, is included in at least one of the pieces of legislation before you. Second, that a Coastal Impact Fund be established to compensate States for adverse environmental impacts, including secondary social and economic impacts.

As 10 percent would not adequately cover the three major nonfrontier States, and as the initial costs to a frontier State is substantially greater, I would propose the same 37½ percent of the revenues derived from the mining program to the offshore leasing program.

Although I understand in some cases that may result in what might be considered an inordinate return to the States. And there, perhaps, Congress might want to put some kind of ceiling or cap on total available annual amount that might be given to a particular

The Department of Commerce should be required to submit for congressional approval within 6 months of the passage of this act detailed regulations and criteria for the use of these funds, special compensation should be provided for the port industries that might be impacted by development.

Third, 10 percent of production value of oil produced offshore should go to a Federal petroleum development bonding authority, to provide us with low interest loans for public works projects which are needed, or which will result onshore for development offshore.

A portion of this money might be set aside for revenue sharing with all the States, distributed not only on the basis of population, but the price of energy within the State.

As we begin to adopt a new and virgorous national energy policy, there will be some disparities in energy prices in different regions of the country.

Natural gas prices will affect other areas of the country, particularly the Rocky Mountain States, as seriously as New England is affected by oil price increases. So I have attempted to present this afternoon, briefly, a blueprint for the manner in which the Outer Continental Shelf can rapidly be explored and developed with adequate environmental safeguards.

It recognizes the uniqueness of frontier leasing, and is sensitive to the future health of our priceless environmental and economic resources. It is a blueprint for a new spirit of Federal-State cooperation, in which all the benefits and costs will be shared. It is not, I believe, a provincial blueprint, but one which reflects the interest of all parts of our country and all sectors of our society.

We are truly in an energy crisis, and I think we all agree that we are. Let us meet that crisis in a responsible and enlightened fashion. Let us realize that the ways of the 1950's are not the answer to the problems of the 1970's.

In saying all of this, Mr. Chairman, I would simply reiterate that I and my fellow Governors are experiencing an increasing sense of frustration about the failure of this Nation of ours to undertake, now, a comprehensive scheme and procedure for developing our offshore resources under appropriate safeguards and procedures.

I have been discussing this matter with my fellow Governors ever since I was elected back in November. As I said at the outset, I think it is a remarkable degree of unanimity, with, obviously, some exceptions, among the Governors, on what ought to be contained as part of a total national approach to this problem, and a very cooperative Federal-State relationship.

I am deeply troubled about the speed with which this process seems to be moving in the executive branch, and the absence of that kind of a policy. I think it is only the Congress now that can fashion such a policy for us. I know the Senate has been holding hearings.

Unfortunately, the House has not yet begun and I gather the House side, with the sharing of responsibilities for holding of hearings and reporting out of legislation among some full committees.

But I would hope that we would not be stopped by that. I think it is terribly important that we have such a comprehensive legislation this year. I think I speak for most of the Governors, certainly of the coastal States, and perhaps the Nation, as well, when I say we are looking to the Congress now for action on this matter.

I think we have provided as much guidance and assistance as we can, and I would hope very much that we would have congressional action this year, just as quickly as possible this year.

Thank you very much, Mr. Chairman.

Senator ROTH. Thank you, Governor.

I share your concern as a representative of a coastal State, that there be close Federal-State sharing of authority in this area. I think it is very important that the States do have an effective voice.

I might say I also agree very much with you on the area of strict liability. I am not sure whether I agree on your specific proposal or some others, but I think there should be strict liability on the part of those doing the exploration, and the work that follows.

In my own legislation I propose that we give the State 50 percent of the revenue.

Governor DUKAKIS. I would not object to that, Mr. Chairman.

Senator ROTH. I did not think you would. To take care of the impact and effect that it necessarily will have on our respective States. Let me ask you, first of all, Delaware, like Massachusetts, also has a very important tourist business.

We happen to think that our beaches are one of our most important natural resources. Do you feel that the Federal Government

as well as those who do the exploration have made adequate environmental studies from your own standpoint?

Governor DUKAKIS. I think the answer to that question is no, but it is bound up with this problem of how you proceed to make such studies.

It seems to me that if you have some resources out there which might conceivably be of great value, and if at the same time you have serious environmental problems, the first step that rational people would take would be to carefully explore exactly what is out there.

That is not taking place, as far as I know, to any serious degree at the present time. That exploration process presumably should be done to very careful controls, and without the leasing of real estate as part of the process.

It seems to me that unless that is done, and done in that fashion, it is very difficult for anyone to make an intelligent decision as to the environmental consequences of what might be happening.

I have seen some of the environmental studies. I know that a good deal of time has been spent on them, but there are many, many unanswered questions which it seems to me might well be answered if, in fact, there was a carefully planned and programed controlled exploratory phase before we start seeking leases and nominations go out and so on.

I think that is really the missing piece here, Mr. Chairman. It is one of the reasons why a carefully controlled and planned and yet expeditious exploratory phase would make sense.

Senator ROTH. That was the next point that I wanted to ask you. If I understand correctly, the thrust of your remarks, you think it is important that offshore exploration proceed as expeditiously and rapidly as possible.

Governor DUKAKIS. I think we are at that point. I suppose all of us would prefer that we could get our energy someplace else and not even encounter the kinds of environmental problems that may be involved.

But I think, particularly in light of the court decision on Federal-State jurisdiction in this matter, it is clear that the Federal Government is prepared to move forward, and I understand that and appreciate it and accept it.

But having done so, it seems to me the first step is a careful exploratory phase, which is not undertaken for the purpose of delay, but undertaken for the purpose—

Senator ROTH. How long do you anticipate that aspect would take?

Governor DUKAKIS. I can't honestly say to you how long it would take, but I don't think it should unduly delay production, since, in fact, the period between actual—the beginning of this process and actual production is a period of 4, 5, 6 years, perhaps.

I don't know if it would be a year or 18 months or whatever, but it seems to me something along those lines would not only be appropriate but absolutely essential. Otherwise, I don't think we will ever

have the baseline information to acquire or do an intelligent environmental study.

Senator ROTH. You talk about creating a special organization—some people are proposing that the exploration not only be divorced from actual production if any oil is found, but also have proposed that it should be done by a Government corporation, rather than by private enterprise.

Governor DUKAKIS. I am not sure that I am hung up on the question of a Government corporation. I say that the Government can certainly contract with private organizations or consulting firms or technical organizations to do it.

I would not have any objection to that, as distinguished from setting up a Federal entity. What I think is important, however, is that it be done under close scrutiny, and for the purpose of exploration by entities or firms or people whose principal interest is in exploring and developing information upon which we could base further decisions.

And not on exploiting the resources as part of that process. It seems to me that when you find yourself in a position where people who ultimately may be pulling the stuff out of the ground are doing the exploring for you, there is a built in conflict of interest, which I think is an unwise thing.

I suspect it could be done either way. That is by Federal entity, or conceivably by some kind of Federal program involving contracts with consulting firms or others.

Senator ROTH. One of my concerns, looking at the practices in other regions of the country, is that many times we lease, and I don't see where the private firm moves ahead, necessarily.

There doesn't seem to be any obligation, but it does seem to me that if we are going to move through private enterprise which I personally think we should, the basis of these leases or agreements have to pretty carefully set out what they are expected to do, on what kind of a schedule.

Otherwise, I see no sense in leasing the lands out. Well, I thank you very much for your helpful testimony. I am hopeful that as a result of you and others coming here that the Senate, at least, will act very promptly.

I might say we have the same problem in the Senate as several committees having jurisdiction, but that is the reason why we have people from several committees serving on this ad hoc committee.

Governor DUKAKIS. I would hope that the other branch of the Congress might follow your example. Again, I have to emphasize to you that I think talking has gon on long enough. I think particularly among the Governors, and the Governors of the New England region.

We discussed this at great length, and it is up to you to act, and I hope you will give us a bill before the end of this session, and just as quickly as possible.

Senator ROTH. I hope we act much faster. Thank you Governor.

[The prepared statement of Governor Dukakis follows:]

TESTIMONY OF GOVERNOR MICHAEL S. DUKAKIS OF MASSACHUSETTS
BEFORE THE SENATE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
AND THE SENATE COMMERCE COMMITTEE
APRIL 9, 1975

Mr. Chairmen and members of Interior and Commerce Committee:

I appreciate the opportunity to participate in these historic hearings.

Similar hearings took place before the Congress over 22 years ago, producing legislation which has governed our country's offshore development for the past two decades. Since then, over 3 billion barrels of oil, and over 15 trillion cubic feet of natural gas have been produced on the Outer Continental Shelf, bringing \$13.4 billion into the U.S. Treasury.

Today we are faced with the reality that this legislation is no longer sufficient to meet the challenges of the 1970's and the decades ahead.

We are faced with the prospect of declining domestic oil and gas reserves. The Federal Energy Administration estimates, for example, that domestic oil reserves could decline by almost 30 per cent between now and 1985, and that natural gas reserves could decline by 56 per cent.

It has become necessary to look towards offshore "frontier areas" as potential sources for new oil and gas supplies. I do not believe that there is any difference of opinion on this point between the states, the federal government and private industry. However, the type of offshore leasing and development program appropriate for non-frontier areas is not the appropriate program for frontier areas.

If we have learned anything from the last thirty years, it is that we cannot allow development to be a function of profit. There must be control and management, otherwise both the existing economy and the existing environment may suffer.

I read the statement of my colleagues from certain Gulf states who argue that federal offshore oil development costs other states millions of dollars every year, while slowly destroying sections of their coast line. These governors are advocates of offshore development, but even they recognize the serious implications inherent in such development.

The legislation pending before your committees demonstrates that Congress clearly recognizes the uniqueness of the problems of "frontier leasing." Both Senator Jackson and Senator Hollings have demonstrated foresight and sensitivity in dealing with these problems, qualities heretofore lacking in the Department of Interior.

I come before you today to ask for the establishment of a new leasing process for "frontier" areas, and for a new spirit of cooperation between the states and the federal government.

The first and most essential element of a frontier leasing process must be the separation of the exploration stage from the development stage with provision for full disclosure of all information gleaned from exploration.

From the national perspective, it is intolerable that the U.S. Government continues to sell off a resource to large oil companies without knowing the value and scope of the resource it is selling. I assure you that no private interest would sell a commodity before the value of that commodity had been ascertained.

Furthermore, if offshore oil development is to be a part of a national energy plan, then let us learn the facts about offshore oil reserves rather than continue our present guessing game.

Remember: Presently we have government exploration programs for coal and uranium, and for oil on the naval oil reserves. Therefore we are not asking for a major change in government policy.

From the perspective of the coastal states, there is a greater need for separation. Coastal states cannot assess and plan for the onshore impacts of offshore development until we know the extent of our offshore reserves.

In Massachusetts, for example, the impact of offshore development cannot be assessed until we know the extent of the oil reserves on the George's Bank.

If we are to make effective public policy decisions on the development of offshore oil and if we are to be in a position to manage any subsequent impacts, then control of the development decision process must be in the hands of government--not the oil companies.

There has been almost unanimous support for the separation of exploration from development from the National Governors' Conference, from the Eastern coastal states, and from the New England states.

Senate bill 426 achieves this separation by establishing a federal Outer Continental Shelf Oil and Gas Exploration Program. I support this provision.

Once we separate exploration from development, then we can develop a leasing process that will enable us to undertake informed environmental impact statements and appropriate baseline studies.

Under the present system the impact statements have become no more than hollow justification of decisions already made by the Department of Interior, while baseline studies are scheduled purposely so that their results will have no bearing on the leasing decision. In both instances, the intent of the studies has been circumvented in a mad rush to meet a wholly unrealistic leasing schedule.

Finally, provision must be made to inject increased competitiveness into the offshore oil industry. In fiscal 1974, seventeen companies accounted for over ninety per cent of the offshore oil production. And the prospects for independent companies participating in future development are extremely poor. Under the present system, the smaller companies simply cannot obtain sufficient up-front capital to compete with the major oil companies.

If we are seriously interested in making the oil industry competitive, we must allow the small companies to participate in the development of our Outer Continental Shelf. Therefore, I urge the adoption of new bidding practices which would minimize the initial payment for the right to develop, but increase subsequent payments as production increases.

I also join with Governor Byrne of New Jersey in urging that local or interstate gas companies, rather than the oil companies, be allowed to exploit natural gas deposits.

A new frontier leasing policy must be one cornerstone of future offshore oil development. The other must be a new spirit of cooperation between the states and the federal government. The federal government can no longer look upon the states as opponents. It must adopt them as partners. To achieve this end, several significant actions must be taken.

First, the dispute over who gets the revenues from offshore development must be resolved to the satisfaction of all parties, or else it will continue to be a major obstacle to close cooperation between the states and the federal government.

Presently the coastal states do not receive any direct revenues derived from the OCS leasing program, yet they must bear substantial costs. For example, the State of Louisiana says it spends \$38 million each year in providing services for OCS developers. Texas claims an expenditure of \$50 million annually. And these figures do not reflect the environmental degradation that has affected the coastline of these two states.

At the same time, federal law provides that 37 1/2 per cent of the royalties and rentals received from mining on federal lands be paid to the state within which the leased lands lie. It also provides that 52 1/2 per cent of the funds received from federal lands in Alaska go into a reclamation fund. Admittedly, the federal OCS beds do not exist within a state boundary, but because of the nature of the ocean environment, offshore production imposes a greater economic and environmental burden to the coastal states than onshore production. Very simply, the environment we are talking about is water, and we

have not yet learned how to control the impact of ocean oil spills on the fragile coastal environment. Furthermore, there will be an immediate concentration of support services within the perimeter of the prime coastal lands which will also require careful planning and great expense.

In Massachusetts, we could be talking about a severe impact upon our fishing and tourist industries, both of which are vital to our economy. Yet there is presently no program whatsoever to assist the states in assuming this burden - a burden which will be substantially larger for "frontier" states than for those with existing petroleum industries.

Therefore, I would propose the following:

First, that this Committee accept the recommendations contained in S.426 and S.521 that any person responsible for an oil spill be liable, without regard to fault, up to \$7 million, and that a fund be established for the balance of the claims up to \$100 million per year.

Second, that this Committee accept the recommendations set forth in these two bills for the establishment of a Coastal Impact Fund to compensate the states for adverse environmental impacts and to help control secondary social and economic impacts.

I do, however, believe that substantially more than ten per cent of the revenues will be needed to compensate the coastal states adequately. In fact, ten per cent would not even cover the three major non-frontier states, and, as I have mentioned, the initial costs to a frontier state will be substantially greater. Therefore I propose that 37 1/2 per cent of the revenues derived from the offshore leasing program be placed in the Coastal Impact Fund.

The Department of Commerce should be required to submit for Congressional approval within six months of the passage of this act detailed regulations and criteria for the use of these funds, including provisions to compensate the states for direct environmental and economic impact as well as for secondary impacts. Furthermore, special compensation should be provided to important industries which might be severely affected by the development of on-shore petroleum support services.

In the case of Massachusetts, I am referring to the fishing industry. In Scotland, North Sea oil development has driven the fishing industry almost entirely out of certain port cities. If this happens in Massachusetts, we must have the financial resources to insure that the fishing industry survives and can coexist with the oil industry. This may mean substantial amounts of money for new fishing ports, facilities and even vessels. I assure you that our fishing industry does not have that type of money.

This request is not parochial, for the New England fishing industry supplies a valuable source of protein to the entire nation.

Third, I urge that the federal government establish a fund to be financed from an additional royalty equal to ten per cent of the production value of the oil produced offshore.

These monies would be used for two purposes. A portion would create a Federal Petroleum Development Bonding Authority, which would provide low-interest loans to states which have to build or alter public works projects in order to provide support services for onshore development resulting from offshore oil development.

Many states are in serious financial trouble and do not have the capital necessary to get such public works projects underway. We will need federal help. I believe that such a bonding authority could provide such help.

Secondly, a portion of this money should be set aside for revenue sharing with all the states. The disbursement formula should be based not only on population, but on the existing price for energy products within that state.

As we begin to adopt a new and vigorous national energy policy, there will be some severe disparities in energy prices among the regions of the country. We in New England have already been confronted with this problem, for our energy prices are not only the highest in the country, but have increased more in the last two years than those in any other region. If natural gas prices are allowed to rise, as suggested by the President, other regions of the country, especially the Rocky Mountain states, will find themselves in an equally serious situation.

Therefore, if we are to reach the goals set forth by the President and the Congress, let us meet them without unfairly burdening any one region of the country.

Finally, I would urge that Congress consider expanding the principles set forth in the Alaska Native Claims Act, which provides for the establishment of a joint Federal-State Land Use Planning Commission for Alaska.

Relations between the states and the Department of Interior have been poor. We are rarely brought into the decision making process until after the decision has been made. Last fall the Commonwealth repeatedly asked the Department if George's Bank would be included in the accelerated leasing schedule. We were repeatedly told it was not, and that if it was to be put on the list, the state would be consulted. Our "consultation" occurred at a White House briefing on a decision that had long since been made. That is not my notion of close cooperation. Interior has repeatedly shown a great insensitivity to the problems of the frontier states. I believe this attitude may be changing, and I hope the new Secretary will be sensitive to our concerns.

However, given our past experiences, I would urge Congress to consider legislation allowing affected states to join together with the Department of Interior to plan for the potential development of our offshore resources. In some instances states may not want to take advantage of such a mechanism, but I believe it is the only way to establish an on-going spirit of coordination between the two levels of government.

I have attempted to present this afternoon a blueprint for the manner in which the Outer Continental Shelf can rapidly be explored and developed with adequate environmental safeguards. It recognizes the uniqueness of "frontier" leasing, and is sensitive to the future health of our priceless environmental and economic resources.

It is a blueprint for a new spirit of federal-state cooperation in which the benefits and the costs will be shared.

It is not a provincial blueprint, but one which reflects the interest of all parts of our country and all sectors of our society.

If we are truly in an energy crisis, let us meet that crisis in a responsible and enlightened fashion. Let us realize that the ways of the 1950's are not the answer to the problems of the 1970's.

Thank you

Senator ROTH. At this time I would like to call the Environmental Panel, Barbara Heller, Bob Armstrong, William Futrell, and the Honorable Dudley Dudley, member of the New Hampshire House of Representatives.

STATEMENT OF BARBARA HELLER, STAFF MEMBER, ENVIRONMENTAL POLICY CENTER

Ms. HELLER. Thank you very much, Senator. We realize you have a lot of people scheduled for this afternoon and we will try to be brief.

Senator ROTH. We will do the same for you. If you have a more comprehensive statement that you wanted included in the record we will do that.

Ms. HELLER. Thank you.

To my right is Bob Armstrong, State lands commissioner from the State of Texas. To my left is Representative Dudley, from the State of New Hampshire, and to her left, William Futrell, who is the director of the Sierra Club.

I will begin. I am not going to read my whole testimony but will hit some of the specifics about the legislation we are concerned with. We are very grateful for the opportunity to present our views today on this important legislation.

The ocean policy study and national fuels and energy policy study have been in the forefront in developing valuable information on energy, both with regard to energy supply and to our environmental, social, and economic concerns.

Pending before your committees is legislation concerning offshore oil development, an extremely important part of any energy-development program, and one which has become a matter of heated national debate over the last several months.

The debate has become heated chiefly because the leasing and development program has been administered in a manner which local and State officials and the concerned public believe to be environmentally and economically irresponsible.

I doubt that you have heard any witnesses say, during your many days of hearings, that they are absolutely opposed to OCS development.

OCS development is clearly a viable energy option, particularly when compared with the devastating environmental impacts of some of the other energy alternatives like oil shale and strip mining.

There is no excuse, however, for the irresponsible way in which the Interior Department is proceeding with the Federal leasing program. No good businessman would run his business the way the Interior Department deals with our public resources.

No good businessman would put a product on the market without knowing what he is selling. The Interior Department does that with our public resources. No good businessman would sell his goods without trying to be sure there was some competition among the buyers so that he could obtain a decent price for his goods.

There is very little competition among the bidders for our public resources. Any good businessman thinks not only about the present but about the long-term welfare of his company.

The Interior Department apparently thinks only about the next 10 years, and not about the long-term implications of developing our oil resources on a vastly accelerated schedule.

The Office of Technology Assessment, in its February 1975 "Analysis of the Department of the Interior's Postponed Acceleration of Development of Oil and Gas on the Outer Continental Shelf, examined all of the estimates of the reserves on the OCS, including those of the industry and the recent estimates of the National Academy of Sciences, Mineral Resources and the Environmental, NAS, 1975.

OTA determined that:

The appropriate rate for development of domestic resources is dependent upon which estimates are correct.

OTA concluded further that:

If the pessimistic estimates are correct, it may be necessary not only to take very strong measures to curb demand and to accelerate the development of alternative sources of petroleum products but also to limit production from domestic sources below the maximum efficient rate and accept a relatively high level of imports, in order to avoid a period of extremely heavy dependence on imports toward the end of this country.

Thus, we must question whether rapid development of the Nation's offshore petroleum resources is in the national interest in terms of balance of payments and import vulnerability in the long term.

In addition to the question of whether rapid development makes sense for our foreign policy and economic interests, there is substantial evidence that, from an energy supply perspective, rapid development of our OCS reserves is not necessary.

Congressman Rees this morning referred to a report of a committee he chaired, "The Accelerated Development of the Outer Continental Shelf," from the Banking and Currency Committee.

That report documented some of the shut-in statistics for the Gulf of Mexico, and for the onshore as well as the offshore. They concluded that there was quite a potential for increasing production from a shut-in well.

I think that rather than questioning the motives of the companies in these public policy matters, if you look at this problem from a business perspective, you have to conclude that if you were running an oil company it only makes sense to hold those shut-in reserves for the time being.

If you know that you can sell good oil at \$10 or \$11 a barrel, and old oil will only bring \$5.25 a barrel, it just does not make sense to be producing that old oil. We looked at some of the figures from the Project Independence Report of FEA.

If you examine those figures, you see that under business as usual at \$15 a barrel, the whole Atlantic could be producing by 1985, less than half a percent of our daily demand. Under accelerated development, the whole Atlantic could be producing less than 4 percent of our current consumption demands by 1985.

If you look at the fisheries statistics for the same areas, the Middle Atlantic and New England fisheries alone in 1973 supplied 16½ percent of the total national fish catch.

I think those are the kinds of costs and benefits we have to weigh. George's Bank, off the coast of New England, is being fished by the

Poles, the Russians, the Rumanians, the Bulgarians, the Portuguese, the Spanish, the Japanese, not to mention the few fishermen from New England.

I think we have to look at the fisheries resources. Other nations recognize the value of those resources and we have to recognize them, too.

A lot of people ask whether we can afford not to develop the Atlantic resources if, in fact, they exist. I think we have to ask whether we can afford to develop them not knowing what the impacts will be.

In light of the studies mentioned above, the OTA study and the House Banking and Currency Committee study, we think some of the principles and policies set out in 521 and 426 are supply oriented, toward total independence.

In light of these studies we think some of those policies have to be reconsidered, and at the end of the testimony we have included some suggested changes in those policies.

The argument for Federal contractual exploration has been made many times, and they are set out in the testimony and I will not go into them. But we support Federal exploration, as set out in 426, as the best way of getting out the information on the resources to the public.

We cannot support Federal exploration as set out in S. 740. That permits joint exploratory ventures between the Government and oil industry. There is too much cooperation now between the Federal Government and the oil industry. And a joint venture between USGS and Texaco or Gulf or Exxon would be unconscionable, and would make it more difficult for the agency which is supposed to regulate the oil development industry to do its job.

We favor the separation as in S. 426, of the regulatory and enforcement mechanisms, separating those authorities away from the Interior Department.

We think it is the same kind of situation that existed with the AEC where you have one agency both promoting and regulating. We suggested in this testimony some changes with regards to which agency it should be in cooperation with other agencies.

We think EPA has more expertise in regulating than the Coast Guard. I think the State road has been expressed very strongly at these hearings. The determination of the States to maintain control of the natural resources has become very clear over the last several months.

The only way to resolve the confrontation which will result—if the Interior Department does not change its policies voluntarily, is for Congress to legislate mechanisms for involving the States and local communities in the decisionmaking.

S. 426 recognizes this need better than the other bills before you, yet we feel that even S. 426 does not go far enough. In our view the State must be able to express objections to a leasing program on the grounds that the development would force the State to bear unreasonable social, environmental, or economic burdens, or because an adequate basis did not exist to determine whether this particular development was needed in terms of a national policy.

If, after appropriate studies or appropriate hearings, the Secretary and the State could not resolve their differences, then the matter could best be settled objectively by a court proceeding.

In addition, we believe that a Federal leasing proposal should be consistent with a State coastal zone management plan which has been developed according to State laws and regulation, whether or not it has been approved by the Secretary of Commerce.

Our goal should be to get the State and local governments working together on energy development and coastal management programs. This will never occur if the States feel that the Secretary of the Interior or the Secretary of Commerce can override any carefully planned State decision on facility siting, on the rate or manner of coastal development, or on other matters of similar importance to the States.

The States have made their feelings on this subject quite clear. To ignore these feelings is only to delay important decisions concerning both environmental protection and energy planning.

We make several suggestions about liability. We don't think the liability in any of these bills is strong enough. The \$7 million dollar limit seems to be arbitrary. There is no basis for it.

The oil companies can get insurance for much more than that. That seems to us to be a give-away of public funds.

Senator ROTH. Do you have any suggestions on that point?

Ms. HELLER. Yes. We feel there are three goals which you have to aim for. One is immediate compensation to the little guy who gets hurt.

Another is immediate clean-up, so that the damage is as little as possible. And another is to provide an incentive to prevent the spills in the first place. We think that the liability provision which came out in the deepwater port bill which the Senate passed last year is excellent, and we would suggest that that be used as a model.

It is unlimited liability. It sets up a fund for that purpose. The other part about the liability thing that concerns us very much is that the payments are reduced proportionately if they exceed \$100 million.

We don't think that the fishermen or the beachfront owners should have to pay, if a spill is more than \$100 million dollars. Our last comments in here are with regard to S. 740, which concerns us very much.

There is a Federal Facilities Energy program delineated in this bill which directs the Energy Production Board to develop a program which would put the Federal Government in the business of producing energy-related materials, such as drilling platforms, drilling rigs, pipe for drilling operations and pipelines, anything they think necessary for expediting energy production.

This mandates the Federal Government to go into the steel business, the oil business, the mining business, the ship construction business or any business which it deems necessary for energy production.

Alternatively, under this provision, the Federal Government is authorized to procure necessary material, equipment and supplies, and arrange for the leasing or contracting out of Federal facilities and installations for the production of energy-related materials, equipment and goods.

Either of these alternatives is an outrageous intrusion of the Federal Government into the private sectors. Furthermore, there is no indication that this proposal would expedite OCS production, which presumably is the dubious goal.

The shortage of equipment and material in the offshore industry is thought by most to be a short-term phenomenon, and the Federal Government could not possibly gear up a program to be producing the required materials in a short-term, certainly not more quickly than the industries which are already set up for those production purposes. There is one other section in 740 which concerns OCS development, and other energy proposals, and that is a section entitled, "Expediting Government Action". This allows total circumvention of those procedures which have been developed by Congress and agencies to protect the rights of the public.

This section directs the Energy Production Board to "identify unreasonable procedural delays and impediments resulting from Federal procedures and requirements that significantly delay decisionmaking and action on specific projects which are determined to be needed for increasing domestic energy exploration, development, and production."

The Board is then authorized to propose measures to "expedite Federal action and overcome procedural delays and institutional impediments."

The Board is to put its recommendations, as a separate report for each project, which it then submits to Congress. If Congress does not act negatively within 60 days the new expedited procedure "shall become law."

This provision would not only allow circumvention of the National Environmental Policy Act, and impact statements, but also of procedures for involving the States and local communities, and perhaps of the Coastal Zone Management Act as well.

In sum, we feel that S. 740 poses a substantial and critical threat both to private enterprise, to development incentives, and to the rights of the public and their State and local governments.

Thank you. I would like us to move on to Mr. Futrell's testimony.

STATEMENT OF WILLIAM FUTRELL, SECRETARY, BOARD OF DIRECTORS, SIERRA CLUB

Mr. FUTRELL. I am William Futrell, secretary of the board of directors of the Sierra Club, and I am appearing today to represent its views concerning proposed amendments to the Outer Continental Shelf Lands Act.

We believe Senate 426 is a significant improvement over existing law. We support the proposal to separate OCS oil and gas exploration activities from considerations to develop and produce the oil and gas.

I am going to address my comments specifically to sections 19 and 21 of Senate 426. We believe there is a great need for improvement in the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact studies.

Specifically we endorse sections 19 and 21 of Senate 426, which remove the exploration phase and environmental planning phase from

the Bureau of Land Management. Two agencies' expertise needs to be called on; the U.S. Geological Survey and the National Oceanic and Atmospheric Administration. It is our opinion that the Bureau of Land Management's planning and environmental assessments have never dealt adequately with the onshore impacts of offshore activities.

The Sierra Club's representatives have reviewed and made comments on each of the BLM impact statements since 1971, and we have found all of them to be inadequate; although we have tested only two of them in the courts.

The first test was titled, *National Resources Defense Council v. Morton*, which resulted in an injunction against the lease sale for inadequacy of the environmental impact statement.

The result of the second test came down from the Fifth Circuit Court of Appeals 10 days ago, and I believe that it changes the whole picture, as far as this committee's work is concerned. It changes my testimony, and that is why I will submit my written testimony for the record, while making these verbal comments.

BLM's planning and environmental assessments have never dealt adequately with the onshore impacts. They have been critically deficient in their failure to assess these onshore impacts of the offshore development.

They have failed to discuss in detail what needs to be done onshore to mitigate the damages. Offshore drilling has been carried out in each of the lease sales without regard to the damage being done to the coastal zone.

Coastal zone planning has never been considered a part of the offshore drilling and lease sale process. For instance, the Department of Interior's Environmental Impact Statement, No. 90-74 at volume II, page 340, finally comes to the point of discussing onshore impacts of offshore drilling.

It is given eight lines, three sentences. This same alternative of delay, until land use planning mechanisms are in place, is the alternative recommended by the National Oceans Policy Study Committee.

It is the alternative that people from California, Mayor Bradley, the Governors of the eastern coastal States except for one whom you heard this morning, have urged on the Senate.

I suspect that the reason for the covert dismissal of this sensible alternative is the failure of BLM planners to adequately assess the value of the coastal zones.

You read their impact statement and you are convinced that they are written by men who know a lot about the oil industry, but not very much about their country. Their statements fail to report recent studies, such as the Odum-Gosselink Study from the University of Georgia and Louisiana State University, which places the value of any single acre of marshland in the gulf or east coast at \$80,000 at a minimum, and that is with the amount of marshland that we have at present.

They predict values will rise, as marshland decreases. However, the impact statement on the 1973 Florida OCS sale in its discussion of land use planning and coastal zone management took up one-half page, one paragraph, discussing the alternative of delaying the lease sale until coastal zone management programs had been in effect.

The Sierra Club, along with one dozen Florida organizations and local governments filed suit to enjoin the Florida lease sale, pending the filing of an adequate environmental impact statement.

The courts did not do their duty. Under the shadow of an Arab oil embargo in a proceeding at which the judge had not read the papers filed before him, a preliminary injunction was refused.

Two weeks ago, on March 27, the Fifth Circuit affirmed in an opinion by Judge Clark that must be studied if one is concerned with coastal protection. If you are not concerned with coastal protection, and you are only concerned with energy development, and if you are willing to write off the renewable resources of this country, the fisheries, the coastline, the estuaries, then what the Fifth Circuit did is right down your alley.

Judge Clark acknowledged the plaintiff's detailed list of environmental harms, and the impact statement omissions. He ticks them off one by one. He says, "Yes, there is no discussion of water quality in here. Yes, there is no discussion of what happens if one component of the ecosystem collapses."

Then the court bases its opinion on a deferral to agency expertise, and the belief that that Congress did not mandate what it calls "perfection in NEPA statements" and it upholds the statement.

One concludes that as a result of this, BLM is free to discuss only the ocean impacts of offshore lease sales; that the duty of assessing environmental impact ends at the water's edge.

Mr. HARVEY. Do you have a copy of that opinion that you can submit for the record?

Mr. FUTRELL. I do not. I do not have one that I can leave. I am trying to get some others. I will supplement my comments with a letter, including a slip opinion of *Sierra Club v. Morton*.

Our counsel sent me one copy and said, "Read it and weep".

Mr. HARVEY. Go ahead.

Mr. FUTRELL. This decision entitled *Sierra Club v. Morton's* calls for a legislative response, a legislative overruling. This would be accomplished by sections 19 and 21 of Senate 426.

If the committees are concerned with the coastal protection, then sections 19 and 21 are essential in any future amendments to the Outer Continental Shelf Lands Act.

Environmental analysis of offshore operations cannot end at the shoreline. The coastal zone and Outer Continental Shelf is one area, one contiguous area which needs to be managed for multiple use, not for the single, dominant use of petroleum extraction.

Maybe the committee needs to put a clause in the Outer Continental Shelf Lands Act similar to the Multiple Use Act, governing our national forests, which acknowledges that the coastal zone is a multiple use zone and not a zone to be sacrificed for the dominant use of extraction of petroleum.

The agency in the best position to perceive OCS problems and deal with coastal zone planning is NOAA, just as USGS is best equipped to deal with the contracting out of exploratory activity.

We believe that sections 19 and 21 of Senate 426 are two of the most important strengthening amendments to the Outer Continental Shelf Lands Act. Some way must be found to raise the level of

environmental assessment, and planning, for the Outer Continental Shelf.

Thank you.

Mr. HARVEY. Thank you very much. Go ahead, whoever is next.

STATEMENT OF HON. DUDLEY W. DUDLEY, STATE REPRESENTATIVE FROM THE STATE OF NEW HAMPSHIRE

Ms. DUDLEY. Thank you, Mr. Chairman. My name is Dudley Dudley, and I am a member of the New Hampshire Legislature, and I thank you for the opportunity to testify here today. I feel that we need all the conscientious leadership we can get in the energy area, and I appreciate your efforts to carry out a responsible national policy on off shore oil.

I believe you have heard my Governor this morning. Regardless of what you may hear from him, there are many in my state who are deeply worried about the heavy industrial impacts associated with offshore development.

I want to impress on you all that Governor Thomson does not speak for all New Hampshire people. I would like to give you an example. A year ago, at Governor Thomson's invitation, the late Mr. Aristotle Onassis proposed to build the world's largest oil refinery in Durham, N.H.

He also proposed a superport off one of our most precious natural resources, the Isles of Shoals. Durham townspeople voted nine to one against the refinery. The following day the New Hampshire Legislature voted two to one to support that vote, all in spite of a massive lobbying campaign by the Governor's office, and an advertising blitz by the lobbyists for Olympic Refineries.

The size of the grassroots opposition to the Governor's proposal is significant, over 7,000 petition signatures protested the refinery and superport. Over 15 citizens groups organized to fight it.

New Hampshire has only 18 miles of coastline, the smallest in the country. It now holds the Portsmouth Naval Shipyard, Pease Air Force Base and is the proposed site of the largest nuclear powerplant in the country.

We also have a large shoe industry, asphalt plants, electronic undersea cable plants and many others in the coastal region. These few miles also support major tourist and fishing industries which are critical to the state's economy.

They accounted for \$75 million in income in 1974 and are growing at a rate of 8 to 10 percent annually. These industries are among the largest in the entire state. OCS development on George's Bank, which the Interior Department would like to lease about a year from now, would impact heavily on our already active coast.

New Hampshire has financial problems as do all the other States, but we also have a tradition of respect for our surroundings and the quality of life which is unique to New England.

We value this tradition and so do the millions of people from other parts of the country who come to New Hampshire every summer to use our beaches and enjoy our mountains, who come in the fall to see our spectacular autumn colors, and who ski with us in the winter.

These too, are national public resources and we are happy to share them. We question the benefits of massive heavy industrial development, whether it be for energy or otherwise, which threatens to change our entire economic base, our landscape and our lives, as accelerated OCS development surely will.

We know the importance of energy production to the welfare of this Nation, and we recognize that offshore oil development may be preferable to other, more environmentally hazardous ways of producing energy.

However, we have no assurance that our Outer Continental Shelf leasing program is being administered properly. Now, with the nomination of former Governor Hathaway to the post of Interior we are more worried than ever before.

I have gathered the signatures of 55 State representatives from New Hampshire, protesting the nomination of Governor Hathaway. [See April 22, 1975, hearing on the nomination of Governor Hathaway, pp. 168, 169.]

Ms. DUDLEY. Turning to the legislation now before you, I want to be recorded in support of S. 426, S. 586, and some of S. 521, but I have three chief concerns: (1) Participation by the States; (2) access to information; and (3) funding. First, as to participation, I know offshore development needs onshore support. What happens if a State decides that the proposed lease sale or a portion of it would impose excessive economic, social, or environmental burdens upon it?

In such event, I think a Governor should be able to do more than request a delay in leasing, he should be able to object to the sale, and have the substance of his objections debated in public hearings scheduled by the Secretary.

Or, he should be able to request the Secretary to carry out studies on the substance of those objections to assess their validity, and to make specific findings and recommendations on each objection.

And what if the State finds that the Federal Government is going forward without cause for leasing founded on a coherent national policy which demonstrates the need for such leasing?

Again, I think the State involved should be able to object and request the Secretary to proceed as I have said.

Second, as to access to information, I know offshore development needs onshore preparation and planning. The force of the development impact depends on how much oil there is out there, on the size of the mineral resource, and we have no way of knowing what that resource potential is under the present system.

How can States be expected to make the siting, land use, air and water quality decision which are necessary in planning, when we cannot know how many or even what kind of facilities will be necessary onshore?

We've got to have the facts, and I strongly support the proposal for Federal exploration, so the information on resources would be in the public domain. As an elected representative from a coastal State, I want to be sure that the information which would allow us to plan will be available for public scrutiny.

Third, as to funding, I know offshore development means onshore expenses borne by the States. I have read about Texas and Louisiana

bearing \$62.1 million and \$38 million, respectively, of the cost of offshore operations in the gulf, without revenues to compensate them.

I have a letter from our own commissioner of the department of resources and economic development, saying that he doesn't know what it will cost New Hampshire for OCS development, and he hasn't the money or the staff to find out.

We have just had one source of revenue in our State closed off by our Supreme Court, and as much as I would like to see those federal revenues come into New Hampshire, I do not honestly believe that a no-strings-attached revenue sharing proposal, some as high as 37½ of revenue, is a responsible position.

But we absolutely do need help to cope with the impacts which will result from OCS development.

Senator JOHNSTON. Representative Dudley, let me stop you there, if I may. I have read your statement and I have questions to ask you, and I am afraid time will get away from us if we spend more time reading.

You have endorsed the idea of the State participating in the revenue, but you feel it should come from the Coastal Zone Management Act?

Representative DUDLEY. I think that would be preferable to a revenue-sharing proposal, yes. I think it would be better than setting up another Federal bureaucracy.

Senator JOHNSTON. Revenue sharing does not call for Federal bureaucracy, does it?

Representative DUDLEY. It could.

Senator JOHNSTON. How?

Representative DUDLEY. I refer that to—

Ms. HELLER. S. 521 sets up a whole system for the coastal States fund, I believe. It seems to make sense to do it through a process which is already in existence, which is the Coastal Zone Management Act.

Senator JOHNSTON. It is the Secretary of Commerce, under 521, that does it; isn't it?

Mr. HARVEY. That is correct.

Senator JOHNSTON. Who is the man responsible for coastal zone management?

Ms. HELLER. I do not see the problem with whether it goes through the Coastal Zone Management Act.

Senator JOHNSTON. Let me suggest to both of you that if you take a look at—revenue sharing, as Mike said, is writing checks. And you can do that without too many employees. I would suggest and invite you to take a look at S. 1269 which has been filed and put in by an outstanding group of Senators.

That was filed after we began hearings on this. But I think it compromises out the problem pretty well. Half of the money goes through the coastal zone—to the Secretary of Commerce, on the fund, and half of the money goes to a revenue sharing process.

Frankly, there are a lot of Governors and a lot of people who do not trust the Federal bureaucracy to make the right decisions with regard to the impact. There are others who think that through

strict revenue sharing you might not get some of the environmental problems taken care of.

You might not be able to have your participatory grants for part of the time that the drilling is done. 1269 seeks to rationalize and reconcile those competing interests, and I think it does.

With respect to the dismemberment of the decisions to explore and produce, I think both of you have addressed that problem. What would be the reason why you would not produce, once you had explored.

Ms. HELLER. It seems to me there could be several. One is you could find, after exploration, that it is not worth it to develop the resource. That it is not a commercial find.

Senator JOHNSTON. That would be something we would not—we would not need legislation on that. Companies have always done that.

Ms. HELLER. There are other reasons, also. A State could say—could decide that the impacts were going to be much more than they could bear.

Senator JOHNSTON. Couldn't you make that decision in advance of the exploration?

Ms. HELLER. I don't see how you can. How could you know what the impacts are going to be until you know what the extent of the resource is? The onshore impacts depend, to a great extent, on how much oil is actually out there.

Mr. FUTRELL. I just finished managing a lawsuit for the Sierra Club, *Sierra Club v. Morton*, concerning leases on the eastern Gulf of Mexico. If we had had production and exploration split we would not have had that lawsuit. You would not have had the confrontations between Mr. Simon and Governor Askew and Senator Chiles that you had during all the fall of 1973, which ended with the State of Florida not being a coplaintiff in that lawsuit, only because of the Arab oil embargo, and the energy leadership crisis in the fall of 1973.

You could come to a point where I, personally, would have little objection to offshore exploration on the Blake Plateau off coastal Georgia. The coastal Georgia marshes are probably the best remaining marshes in the continental United States.

Senator JOHNSTON. You mean second best.

Mr. FUTRELL. No. They are the best. I am a native Louisianan and spent most of my life in Louisiana, the first 30 years of my life in Louisiana. The standards of environmental protection are far higher for the State of Georgia than for Louisiana.

But be that as it may, now you will have a chance to weigh the environmental costs versus the possibility of benefit. There is the net energy concept, which comes into play, how much energy will we have to expend to extract what energy may be on the OCS.

We will be in a position to weigh the cost and benefits if we do the exploration, and I think it would be a tool to diffuse some of the confrontation we have had between environmentalists' groups and the oil industries.

Ms. HELLER. And the States.

Mr. FUTRELL. And the States and the oil industry. Then you can also plan—

Senator JOHNSTON. We are talking about spending millions of dollars. Some of these rigs cost as many as \$65 million dollars to build. You go out there, you have this bidding process, apparently, or whatever process that we pick those to explore.

And you would have the Federal Government do it at a cost of \$10 billion dollars. You go out and spend all this money, and you determine the limits of the field and you say, "No, we don't want to bring this in."

Why? We need to define what the reasons are, because if we don't define those reasons, then it will cost us a whole lot more to bring it in. Why? Because the company will say "We have to bid and we have to figure it into our bid," the cost of bringing the oil in, the cost of exploring, the cost of finding a dry hole, plus the cost of—that the Government may be saying, "We can't bring it in at all because we don't need it."

I think there are environmental reasons for not bringing in oil sometimes. Like in California, at that fault. We can define that without just saying "We will decide later", depending on how some possibly unreliable politician decides or who gets elected in the next election.

Ms. HELLER. I think you can define some of those things. I think one of the important things here, though, is to look at all of the things involved in separating exploration and development.

But what the people who were talking about that want, the States want time to look at what the impacts are going to be and to plan for them. Unless they—and time to do the environmental studies and the onshore studies, and develop coastal zone management plans as they are mandated to do under the Coastal Zone Management Act.

Senator JOHNSTON. Is there any evidence that oil hurts fish?

Ms. HELLER. Is there any evidence that oil helps fish?

Mr. FUTRELL. There is negative evidence from the Louisiana Wetlands prospectus, that there has been an 80 percent decrease per boat; that they have to put out eight times as many shrimp boats to keep a sustained shrimp yield, partially because of the onshore support facilities for offshore oil. There is evidence that the rich nursery areas and estuarine areas in southern Louisiana have been severely impacted making the onshore support facilities for offshore oil the primary environmental problem in that State.

Senator JOHNSTON. I challenge that. I challenge first the fact that that is true, and secondly the fact that anybody knows what caused the shrimp to go down last year and to go up this year.

Mr. FUTRELL. The Louisiana Wetlands prospectus which has the conclusions, recommendations, and proposals of The Louisiana Advisory Committee on Coastal and Marine Resources in September 1973, uses the work of Dr. Gagliano, Sea Grant institutions of L.S.U., as to what has impacted the deterioration of Louisiana's coastal marshes, which is the State's primary environmental problem.

The primary problem, the primary concomitant is dredging, channelization for access to and from the Gulf of Mexico.

Senator JOHNSTON. Dredging—

Mr. FUTRELL. Channelization. This has been the canal access, pipeline access.

Senator JOHNSTON. Can I see the part that says that the oil industry is causing it—what do they cause?

Mr. FUTRELL. Pardon? It is all throughout the entire thing.

Senator JOHNSTON. Is there anything in there that says oil has caused—

Mr. FUTRELL. Yes, sir, but I don't have all the material with me and I will submit this in writing. If I might attach it to my statement, just as I did the text of the *Sierra Club v. Morton*, and I will do that.

There is a paper before the Gulf Coast Geologists' Association which ties down the erosion and saline intrusion problems.

Senator JOHNSTON. This is something different. I think salt water intrusion is a very serious thing environmentally. My question was directed towards oil. Believe me, I am not trying to say, "Let's spill some oil and see if hurts the fish".

Mr. FUTRELL. We are not talking about oil spills.

Senator JOHNSTON. That is what my question was.

Mr. FUTRELL. No, sir, not about oil spills, but by dredging and channelizing to get the offshore oil equipment out into the Gulf and back again.

Senator JOHNSTON. Most of that was actually caused not by dredging to get the oil equipment out, but rather by the onshore drilling. You know, in south Louisiana, all those locations have dredged there.

Mr. FUTRELL. It is a checkerboard.

Senator JOHNSTON. That is where your problem was.

Mr. FUTRELL. The conclusion of the people doing these studies in Louisiana is that that dramatic impact could have been lessened, if there had been even minimum coastal zone planning in effect in Louisiana during the last 20 years.

What we should do on the east coast is learn from Louisiana. It is a valuable lesson to be learned.

Senator JOHNSTON. I quite agree with that. But my point was that I don't think there is any evidence, there are suspicions and all that, but no real evidence that oil itself hurts fish.

Ms. HELLER. I think the problem is that we don't have enough information to say, the impact statement which Mr. Futrell mentioned earlier showed very clearly that we know very little about what the real impacts are.

The good studies have only been done over the last few years and are not complete. The impact statements of the Interior Department have said that there have not been any significant signs of significant changes in plankton population in the Gulf of Mexico, over the last 25 years.

That is an absurd statement. Nobody has been monitoring plankton populations in the Gulf for the last 25 years. That is why we need a little time to look at these things, and a little more money for the appropriate agencies to do those studies.

Mr. FUTRELL. If I might speak as an individual for the Sierra Club, my concern with the offshore oil problem has been always

coastal zone impacts. I don't lose any sleep or I don't take any time in drafting statements on oil spills, and oil in the oceans.

Others are worried about it, but I have lived with and been a lawyer for offshore oil and am familiar with the economic boom that is obviously visible for employment in the coastal zone.

Senator JOHNSTON. I couldn't agree with you more on that. I think we ought to have our unlimited liability funds, such as we drew up on the Alaskan pipeline. If nothing else, it will reassure people that if the shrimp get wiped out they will get reimbursed, and I think we ought to.

But it is the onshore impact that is so serious.

Senator ROTH. May I intercede a moment? We have another vote. I was going to suggest that I go down and vote and you continue questioning. But because of the time frame I think we are going to have to move on.

We still have not heard, I believe, from Mr. Armstrong. We would like to give you an opportunity. Then, if the panel would agree, a number of us may have some questions we would like to submit to you in writing for the purposes of the record and we can proceed that way, if that is all right.

Senator JOHNSTON. Yes.

Mr. FUTRELL. We would be glad to respond.

Senator JOHNSTON. I think one thing we all need to keep in mind, that is that we need to consider offshore OCS drilling not simply by itself in a vacuum, but in relation to other things, like burning coal and that sort of thing.

I am not telling you any news, but I think that sometimes we tend to lose sight of that when we speak of too much delay in the OCS. We have to find our energy somewhere, and I cannot think of anything worse than simple delay on the OCS.

Ms. HELLER. I do not think any of us are talking about delays. I had hoped we made that clear. We don't think these bills would cause delays.

Senator JOHNSTON. One thing I think you can be sure of. If the government got in the exploration business it would cause delay. The Office of Technology Assessment has said the bad things about Government exploration are delay, cost and inefficiency.

You do get some knowledge about that—if you have the Government go out there and drill, you get some knowledge. I do not know what you will use that knowledge for. It suggests that there is a problem.

To suggest getting the Government in the drilling business suggests that there is a problem. I would challenge you to define that problem that is going to be corrected by spending \$10 billion in Federal money, and paying the cost of delay and inefficiency.

Ms. HELLER. You probably don't want me to go into explaining that, but I think we have outlined some of the problems in the testimony. My testimony hits on the Federal exploration aspect pretty clearly.

I think our biggest concern is getting the information out, so that we can make decisions, production decisions based on something substantial.

Mr. FUTRELL. I have that, about the impact of oil on the Louisiana coast. I will send it to you.

[Subsequent to the hearing Mr. Futrell submitted the following information for the record:]

OPINION OF THE FIFTH CIRCUIT COURT OF APPEALS

Sierra Club v. Morton

Appeal from the United States District Court for the Middle District of Florida. Before GEWIN, BELL and CLARK, Circuit Judges.

CLARK, Circuit Judge:

This case involves yet another clash between a federal agency and environmentalists over a proposed development of the nation's resources. The judicial focus, blurred as usual by the lack of technical and scientific expertise, is upon whether the impact statement compiled during consideration of the federal action satisfies the National Environmental Policy Act (NEPA), 42 U.S.C.A. § 4321 *et seq.*

At issue here is a lease sale by the Department of Interior (Interior) of 147 tracts on the Outer Continental Shelf along the coasts of Mississippi, Alabama and Florida consisting of a band of underwater coastal land lying from the tidal zone to roughly thirty miles off shore, extending from the Mississippi Delta to Tampa Bay and including offshore islands and enclosed bays. This leasing is referred to as the MAFLA sale.¹

Plaintiffs, who attack Interior's decision to proceed and its predicate environmental impact statement, are national, state and local environmental organizations and certain individuals. This action seeks a declaratory judgment, injunctive relief, and a writ of mandamus to prohibit the sale of oil and gas leases by Interior on the MAFLA sale area. Intervenors are 17 oil companies who, at the December 1973 MAFLA sale, along with several other parties, made bonus bids of more than 1.5 billion dollars for the right to explore for oil and gas on these submerged federal lands.

The sale was made pursuant to the provisions of the Outer Continental Shelf Lands Act, 43 U.S.C. § 1337. Interior's Bureau of Land Management first called for nominations of desired tracts. A draft environmental statement was later issued. After discussions and revisions, the final environmental impact statement (EIS) under attack here was filed with the Council on Environmental Quality (CEQ). The notice of lease offer was then published in the Federal Register and, finally, the leases were awarded between December 27, 1973 and January 18, 1974.

The district court found the EIS to be sufficient under NEPA requirements and the decision to proceed on the basis thereof to be reasonable. We affirm.

On appeal plaintiffs assert that (1) the EIS is inadequate under Section 102 (2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332 (2)(C); (2) Interior failed to fully study, analyze, and evaluate the effects of the leasing program on the environment in violation of Section 102 subsections A, B and D of NEPA and Interior's own regulations; (3) the decision to consummate the sale violated the substantive requirements of NEPA and is arbitrary, capricious, and an abuse of discretion in violation of the Administrative Procedure Act, 5 U.S.C. § 702 *et seq.*; and (4) the decision to leave to adjacent states the responsibility to safeguard the environment from the effects of construction of pipelines and onshore facilities violates the NEPA requirement that federal agencies protect the environment from harmful effects resulting from their actions.

Under existing jurisprudence, plaintiffs were required to establish by a preponderance of the evidence, rather than by a *prima facie* showing of deficiencies,

¹The acronym MAFLA is derived from Mississippi, Alabama and Florida. The estimated reserves to be developed on this sale area are 1.5 to 2.4 billion barrels of oil and 1.8 to 2.9 trillion cubic feet of gas. This would require from 700 to 1,120 wells, from 75 to 125 platforms and from 480 to 800 miles of pipeline. It is estimated that the proposed leases may produce 270,000 to 443,000 barrels of oil and .34 to .52 billion cubic feet of gas per day after development and production stabilizes.

that the EIS for MAFLA was inadequate.² The additional attack on the Secretary of Interior's decision to proceed with the leasing must be founded on proof that it was arbitrary and capricious. Since the basic legal premises on which the district judge based his determination that the federal agency actions passed muster were correct, plaintiffs must shoulder a more imposing burden in this Court. Having failed to convince the trial court that the EIS was inadequate, the plaintiffs must now demonstrate that the lower court's findings accepting the EIS as adequate and the decision to proceed as permissible were clearly erroneous.

Section 102(2) contains the procedural requirements designed to compel all federal agencies contemplating actions having a significant impact on the environment to consider NEPA's substantive policies and goals as enunciated in Section 101.³ The effectiveness of Section 102(2) depends upon compliance with procedural duties "to the fullest extent possible," i.e., a compliance, the completeness of which is only limited by the agency's statutory obligations.⁴ While no agency may properly adopt a less demanding standard for their effort, judicial review is based on a pragmatic standard. In determining whether an agency has complied with Section 102(2), we are governed by the rule of reason, i.e., we must recognize "on the one hand that the Act mandates that no agency limit its environmental activity by the use of an artificial framework and on the other that the act does not intend to impose an impossible standard on the agency."⁵ The court's task is to determine whether the EIS was compiled with objective good faith and whether the resulting statement would permit a decisionmaker to fully consider and balance the environmental factors.⁶

TESTING THE EIS

Plaintiffs submit that the EIS fails to comply with Section 102(2) (C) of the Act⁷ since it: does not adequately describe and analyze the present environment

² *Sierra Club v. Callaway*, 499 F.2d 982, 992 (5th Cir. 1974); *Environmental Defense Fund, Inc. v. Corps of Engineers (Tennessee-Tombigbee-Waterway)*, 492 F.2d 1123, at 1131 (5th Cir. 1974). More than "hindsight and sophisticated editing" is required to carry this burden, *National Forest Preservation Group v. Butz*, 485 F.2d 408, 412 (9th Cir. 1973).

³ Section 101(a) provides:

The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local government, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

See *Environmental Defense Fund v. Tennessee Valley Authority*, 468 F.2d 1164, 1174 (6th Cir. 1972).

⁴ *Iowa Citizens for Environmental Quality, Inc. v. Volpe*, 487 F.2d 849, 851 (8th Cir. 1973); *Atlanta Gas Light Co. v. FPC*, 476 F.2d 142, 150 (5th Cir. 1973); *Environmental Defense Fund v. Corps of Engineers (Gillham Dam)*, 470 F.2d 289, 296-97 (8th Cir.), cert. denied, 409 U.S. 1972, 93 S.Ct. 675, 34 L.Ed. 661 (1972); *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 146 U.S.App.D.C. 33, 449 F.2d 1109, 1114-15 (1971).

⁵ *EDF v. Corps of Engineers (Tombigbee)*, supra, 492 F.2d 1123, at 1131. See also *Carolina Environmental Study Group v. AEC*, — F.2d — (D.C.Cir., 1975). *Trout Unlimited v. Morton*, — F.2d —, No. 74-1974 (9th Cir., 1974).

⁶ See *Sierra Club v. Froehke*, 486 F.2d 946, 950 (7th Cir. 1973); *EDF v. Corps of Engineers (Gillham Dam)*, supra, 470 F.2d 289 at 295-96; *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, supra, 449 F.2d 1109, at 1114-15.

⁷ Section 102(2) (C) provides:

Include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

of the area ; fails to adequately describe and analyze the most significant impacts that will result from the MAFLA sale; fails to analyze the cumulative effect of oil development in the Gulf of Mexico; and fails to adequately analyze reasonable alternatives to the MAFLA sale.

The purposes of an environmental impact statement are to detail the environmental and economic effects of proposed federal action "to enable those who did not have a part in its compilation to understand and consider meaningfully the factors involved,"⁸ and to compel the decisionmaker to give serious weight to environmental factors in making discretionary choices.⁹ The sweep of NEPA is extraordinarily broad, compelling consideration of any and all types of environmental impact of federal action."¹⁰ To carry out this statutory mandate, every relevant environmental effect of the project must be given appropriate consideration.¹¹ Section 102(2)(C) seeks these goals by specifically requiring a *detailed* statement.

The purposes served by this "detailed statement" requirement have been succinctly enumerated by the First Circuit in *Silva v. Lynn*, 482 F.2d 1282, 1284-85 (1st Cir. 1973). The *Silva* court stated :

The "detailed statement" required by § 4332(2)(C) serves at least three purposes. First, it permits the court to ascertain whether the agency has made a good faith effort to take into account the values NEPA seeks to safeguard. To that end it must "explicate fully its course of inquiry, its analysis and its reasoning." . . . Second, it serves as an environmental full disclosure law, providing information which Congress thought the public should have concerning the particular environmental costs involved in a project. To that end, it "must be written in language that is understandable to nontechnical minds and yet contain enough scientific reasoning to alert specialists to particular problems within the field of their expertise." . . . It cannot be composed of statements "too vague, too general and too conclusory." . . . Finally and perhaps most substantively, the requirement of a detailed statement helps insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug.

id. (Citations omitted.) Again, the courts have approached their review of claims that congressionally specified detail of environmental effects was lacking in an EIS with a view that Congress did not intend to mandate perfection,¹² or intend "for an impact statement to document every particle of knowledge that an agency might compile in considering the proposed action."¹³

PRESENT ENVIRONMENT

Plaintiffs contend that a most serious shortfall of the EIS is its lack of necessary baseline environmental studies upon which any reasoned decision on the environmental effect of the proposed sale must be based. Four specific omissions are asserted.

First, the statement does not include sufficient analysis of present air and water quality in the area. For the most part, plaintiffs are correct in this censure. While the statement does include an analysis of the impact of lease operations on water quality it does not describe the present quality of these environmental

⁸ *EDF v. Corps of Engineers (Tombigbee)*, *supra*, 492 F.2d 1123, at 1136.

⁹ *Monroe Cty. Conservation Council, Inc. v. Volpe*, 472 F.2d 693 (2nd Cir. 1972); *accord*, *Committee of Nuclear Responsibility v. Seaborg*, 149 U.S.App.D.C. 385, 463 F.2d 783 (1971); *National Helium Corp. v. Morton*, 455 F.2d 650, 656 (10th Cir. 1971); *Calvert Cliffs' Coord. Comm., Inc. v. AEC*, *supra*, 449 F.2d 1109, at 1114.

¹⁰ *Calvert Cliffs' Coordinating Committee, Inc. v. AEC*, *supra*, 449 F.2d 1109, at 1122.

¹¹ *Save Our Ten Acres v. Kreger*, 472 F.2d 463, at 467 (5th Cir. 1973).

¹² *See, e.g.*, *EDF v. Corps of Engineers (Gillham Dam)*, 342 F.Supp. 1211, 1217, *aff'd* 472 F.2d 289 (8th Cir. 1972).

¹³ *EDF v. Corps of Engineers (Tombigbee)*, *supra*, 492 F.2d 1123, at 1136.

factors although it does contain a brief discussion of water quality degradation which previously occurred in the Mississippi Sound, Mobile Bay and along the Florida Gulf and of climatological and oceanographic conditions.

Second, the statement fails to assess each ecosystem as to its unique character, productivity, and the manner in which it operates. This attack is hypercritical. The statement discusses significant portions of the biological environment. Descriptions of the communities of Phytoplankton, Zooplankton, Benthic invertebrates and the active swimmers (Nekton) of the Gulf, embracing an analysis of factors affecting the distribution and abundance of Benthos and the location of significant Benthic communities, are included.¹⁴

Third, the statement does not describe the operation of the Eastern Gulf ecosystem as a whole or the importance of the lease area to this ecosystem as a unit. While the EIS does contain general information about life in the Gulf there is a dearth of information explaining the interrelationship of localized biotic communities. No information is given as to the predicted effect on the whole if some part of the system were to be harmed.

Fourth, detailed geological data is absent from the statement. The statement does include a review of the geological history and present structural composition of the entire Gulf, with special attention to structures within the MAFLA sale area and a recognition of geologic hazards of MAFLA exploration and production. Additionally the EIS observes that tests necessary to determine shallow hazards, unstable bottom and mud waves are scheduled to be run after the sale,¹⁵ and that prior to approval of a drilling permit, the Geological Survey requires submittal of an operation plan that includes suitable safety procedures necessary to control anticipated hazards.

ENVIRONMENTAL IMPACT

Section 102(2)(C)(i) and (ii) require that the EIS contain a detailed statement of the environmental impact of the proposed action and any adverse effects which cannot be avoided if such proposed action is taken. Plaintiffs do not argue that defendants have failed to include references to environmental effects. Indeed, the summary of the EIS states:

"All tracts offered pose some degree of pollution risk to the environment and adjacent shoreline. The risk potential is related to adverse effects on the environment and other resource uses which may result principally from accidental or chronic oil spillage."

Rather, plaintiffs urge that the material included is inadequate to permit the proper evaluation of its probability or importance.

In a panoply of particularized criticism plaintiff's attack omissions and deficiencies in Interior's preliminary studies. While it is true that the pre-EIS research was either inadequate or nonexistent in some specific areas, the significant environmental effects were recognized and presented in the final statement in a way which afforded the decisionmaker an opportunity to properly weigh them. NEPA's procedural requirements do not exist to dictate form but to insure that judgments are no longer based on old values. This EIS clearly brings the significant long-term environmental hazards and detriments to peer status with the present need and economic costs considerations which formerly would have controlled decisionmaking. This being so, under the rule of reason it meets the minimum requirements of Section 102(2)(C)(i) and (ii).

Plaintiffs further assert that the EIS inadequately analyzes the effect of oil spills which carry a strong probability of reaching shore or other important natural resources. Here the attack is not upon the effect of omitting relevant material, but rather the manner of its inclusion. This EIS developed a matrix analysis for each tract in the proposed sale. The matrix is designed to predict the possible ad-

¹⁴ Because of a realization of its uniqueness, special attention is accorded to the Florida Middle Ground region. The presence of other aquatic preserves unique to Florida is also mentioned.

¹⁵ The statement provides that high-resolution geophysical data covering all tracts to be offered for sale will be purchased and analyzed by government geophysical personnel and that this data will be available prior to sale to support both pre- and post-sale lease management activities.

verse impacts from structures and oil spillage based upon the tract's distance from shore or another valuable resource.¹⁶

In addition to the predicted development structures, an assumed oil spill in each tract is analyzed on the basis of its potential magnitude and persistence and the tract's proximity to high value resources (wildlife refuges and management areas, unique and highly productive areas, biota seaward of estuary/nursery areas, and beaches) and coastal activities (shipping, recreation, commercial fishing, sport fishing and ordinance disposal areas). A series of scales was devised that would yield a range of values designed to integrate the importance and proximity to each impact-producing factor.¹⁷ A relative environmental factor of 50 or more requires careful scrutiny, and, depending upon the significance and character of the resource that may be affected, the decisional spectrum concerning that tract's inclusion can reach from withdrawing the entire tract, to offering the tract with special stipulations, to merely proceeding with the lease sale. A factor greater than zero but less than 50 predicts that the tract could be developed safely within existing standard practices and operating regulations without significant damage to the resource involved.

Plaintiffs contend that this matrix analysis is insufficient since the values assigned are arbitrary, that it is falsely assumed that all oil spills will be cleaned up within a few days and that the proximity values do not consider the possibility of oil spills which do not occur at drilling platforms. Plaintiffs point to the CEQ's report on continental shelf development off the Atlantic Coast and in the Gulf of Alaska as employing a more satisfactory method of projecting the likelihood of oil spills reaching shore. This CEQ report included specific calculations as to 23 different possible oil spill sites, stating the probability of spills reaching shore at different times of the year.

Interior's decision to project possible environmental damage from all tracts by the matrix approach, as opposed to the use of a more detailed analysis for a few select sensitive points, certainly does not evince a lack of good faith effort to afford the decisionmaker with the necessary quantitative information concerning the potential impact of oil spillage. Because no exact data exists until a spill occurs at a given location, any analysis of future oil spillage involves a degree of speculation. Therefore, every attempt to select quantitative values will be to some extent arbitrary. The use of relative proximity and importance scales to project adverse environmental impacts from all tracts is no more arbitrary than CEQ's selection for analysis of 23 specific points out of the vast Atlantic Coast and Gulf of Alaska area they analyzed.¹⁸

¹⁶ A sample matrix for one tract looks like this:

Significant resource factors	Impact factors					
	Structures			Oilspills (thousand barrels plus)		
	IM	PR	F(ST)	IM	PR	F(OS)
Natural resource systems:						
Refugees/management areas.....	20	0.0	0	100	0.5	50
Unique and highly productive areas.....	20	0	0	100	.1	10
Biota seaward of estuary/marsh/nursery areas...	0	1.0	0	40	1.0	40
Beaches.....	40	0	0	80	.5	40
Coastal activities/multiple uses:						
Shipping.....	80	1.0	80	20	1.0	20
Outdoor recreation.....	40	0	0	80	.5	40
Commercial fishing.....	80	1.0	80	80	1.0	80
Sport fishing.....	0	1.0	0	80	1.0	80
Ordinance disposal area.....	100	0	0	0	0	0

¹⁷ Tract is partially within 2 shipping lanes.

¹⁸ The importance scale ranges from 0 (no adverse effect) to 100 (complete destruction), while the proximity scale ranges from 0.0 (a tract beyond 10 miles) to 1.0 (a tract containing a valuable resource). The resulting environmental impact factor is a number derived by multiplying importance (IM) by proximity (PR).

¹⁹ Natural Resources Defense Council, Inc. v. Morton, 148 U.S. App. D.C. 5, 458 F. 2d 827 (1972), which involved the sale of oil and gas leases on some 80 tracts of submerged lands, primarily off eastern Louisiana, referred without criticism, to that impact statement's use of a matrix system very similar to the one utilized in this case.

As to oil spill cleanup procedures, the statement indicates that through joint efforts the lessees hope to perfect an ability to begin oil spill cleanup operations within 12 hours at any point in the MAFLA area. In fact, a stipulation to this effect was included in each lease. However, post-statement developments indicate that a rigid 12-hour requirement for all points within the MAFLA sale area may be unrealistic. While this indicates the necessity for Interior to consider cleanup alternatives and further preventive measures, it cannot retroactively affect the sufficiency of the EIS.

Oil spills from locations outside tracts, while not dealt with by the matrices, are considered and discussed elsewhere in the statement.

Next it is asserted that the statement inadequately assessed the hazards of leasing those 81 tracts which lie in military warning areas.¹⁹ However, after coordination and consultation with the Department of Defense, 36 of the originally proposed 195 tracts were withdrawn, and after the draft environmental statement was prepared 12 more tracts were deleted. Additionally, the Secretary of Defense determined that military operations in all non-defense areas would result in only moderate hazard, or no hazard at all, to any possible oil development in the area.

A probability analysis of potential hazards from military operations in the remaining tracts was not prepared until after submission of the EIS. Plaintiffs contend that this procedure fails to satisfy NEPA because the analysis was not included with the impact statement²⁰ nor was it subjected to the necessary comment and review procedures outlined by Section 102(2)(C) of NEPA.²¹ The statement did, however, note that this analysis had been requested and would be sent to the Secretary of Interior immediately upon receipt so that it could be considered in making a final determination on whether to lease the 35 tracts that might involve hazards. This procedure brought the information to the decisionmaker before he acted and also alerted other interested parties to the existence of the hazard. Given the specialized nature of the information, the unique expertise of the governmental agency involved, and the immediate need for the project to proceed, this course of action was not unacceptable.

Plaintiffs further complain that the statement fails to analyze the hazards relating to the 6 tracts which are located in salvo areas. While such military use will be discontinued prior to oil development, plaintiffs argue that the danger from previously dropped ordnance should have been analyzed. The statement did point out that the probability of accidental detonation was low since lease developers must determine bottom conditions before proceeding. The presence of any unexploded ordnance or sunken vessels is detectable through magnetometer surveys, by divers, or through the use of magnetic detection devices. The most important factor here is that the possible danger is stated and EIS readers have the benefit of the analysis of the Department of Defense to alert them to any possible conflict.

Although recognizing that the EIS includes a general discussion of the environmental problems that would result from pipeline construction, plaintiffs complain of the absence of analysis of the effects of pipeline location and construction and the impact of pipeline leakage on particular areas. While the EIS does not include an analysis of these matters, it does include a look at long-term effects of pipeline construction generally, mitigating measures that may be employed to prevent harm from such construction, and a special lease stipulation that reserves the right to require pipelines to be placed in designated areas or corridors. On leases in areas at depths above 200 feet, the pipelines of common carriers must be buried and only 18 of the 147 tracts lie partially or wholly beyond the 200 foot contour. This procedure is expected to minimize the adverse effects from these lines.

The EIS also reviews the effects in previous Gulf operations of gas leaks, oil spills and other pipeline accidents. It further suggests that if it is determined that official establishment of pipeline corridors will constitute a major federal action requiring preparation of an impact statement, then such will be prepared. Plaintiffs read this suggestion as an attempt to fragment the project, and, by

¹⁹ These areas are used for such activities as testing guns, rockets, bombs, guided munitions, and other arms and conducting gunnery practice, electronic counter-measure activities, and acoustic and electronic-mine neutralizing operations.

²⁰ *Sierra Club v. Froehke*, 359 F.Supp. 1289, 1341 (S.D.Tex.1973), rev'd on other grounds 499 F.2d 982 (5th Cir. 1974).

²¹ *Natural Resources Defense Council, Inc. v. Morton*, 337 F.Supp. 170, 172 (D.D.C.1972).

gaining acceptance of some parts, compel acceptance of the whole.²² We do not agree that this is the thrust of Interior's proposal. This project is an easily divisible one. In this continuously controllable project, the fact that a tract may prove productive would not mandate that an unsound method of delivering that production be utilized. We are not unmindful of the rule that the sufficiency of an EIS must be determined without reference to possible future action. Today's statement, however, includes sufficient pre-statement analysis of possible environmental hazards from pipeline location, construction or leakage.

The MAFLA sale is said to violate NEPA because it places the entire responsibility on the states to prevent environmental injury from construction of pipelines and onshore facilities. We are in accord with the district court's finding that "an examination of the [EIS] and the supplemental documents reveals that while states have a role to play in the planning of pipelines and onshore facilities, the federal agency has considered, and will continue to consider, these features." The fact that the MAFLA leases contain a stipulation that pipelines be placed in corridors selected by the federal government gives the government a great deal of control over placement of pipelines and, consequently, over onshore facilities. Thus, Interior retains the opportunity to select less environmentally hazardous areas whenever some harm becomes possible. Their lease controls give them even greater supervisory powers. Additionally, the states of Mississippi, Alabama and Florida have been consulted on several occasions and encouraged to begin planning environmental safeguards for the construction and operation of onshore pipelines and facilities. These states have been forewarned by the EIS of the possible harm that may result from unrestricted construction and operation. Such efforts do not indicate any abdication of responsibility in violation of Interior's NEPA obligations, rather they evince the agency's fulfillment of NEPA requirements that the impact statement be subjected to "the comments and views of the appropriate . . . State, and local agencies . . .",²³ and that the Federal Government "make available to States . . . advice and information useful in restoring, maintaining, and enhancing the quality of the environment."²⁴

An environmental statement "should disclose the history of success and failure of similar projects."²⁵ This requirement is also satisfied in the EIS now on review. Plaintiffs complain that the destruction caused to the Louisiana marshlands as a result of the construction associated with offshore development in the Western Gulf should have been analyzed. The statement acknowledges that such environmental harm has been suffered in Louisiana, but attributes the damage to construction of rig-access canals which will not be required for the present sale. Plaintiffs' contention that pipeline construction was also a significant contribution to the damage is precisely the sort of particularized controversy NEPA intended for an EIS to evoke. Its reasonable resolution by an informed decisionmaker is what the Act intended.

CUMULATIVE EFFECT

CEQ guidelines,²⁶ Interior regulations,²⁷ Bureau of Land Management regulations,²⁸ and prior court decisions²⁹ all require that federal agencies consider the cumulative effect of similar actions in making determinations under Section 102(2)(C). Plaintiffs assert that the EIS fails to analyze the cumulative effect of the MAFLA development on the Eastern Gulf. More particularly, they object to the lack of analysis of the cumulative effects of oil spillage from platforms or pipelines, the disposal of muds and oil spills and flushings resulting from increased tanker and barge traffic.

While the EIS does not analyze these factors, it does acknowledge that the increased number of platforms in the Gulf represents a potential increase in possible interference with shipping. It also approximates the number of additional platforms that will be needed, and notes that these platforms will cause

²² This practice was rejected in *San Antonio Conservation Soc'y v. Texas Highway Dep't*, 446 F.2d 1013, 1023-24 (5th Cir. 1971), cert. denied, 406 U.S. 933, 92 S.Ct. 1775, 32 L.Ed.2d 136 (1972).

²³ Section 102(2)(C).

²⁴ Section 102(2)(F).

²⁵ *Natural Resources Defense Council, Inc. v. Grant*, 355 F.Supp. 280 (E.D.N.C.1973).

²⁶ 40 C.F.R. 1500.6(a).

²⁷ 36 Fed.Reg. 19343.

²⁸ 37 Fed.Reg. 15018.

²⁹ *E.g.*, *Scientists' Institute for Public Information, Inc. v. AEC*, 156 U.S.App.D.C. 395, 481 F.2d 1079, 1089-87 (1973); *Jones v. Lynn*, 477 F.2d 885, 891 (1st Cir. 1973).

spillage. The EIS estimates the annual spillage expected to result from tanker and barge accidents and operations. It specifically points out that the long-term effects of oil spillage from production in the entire Gulf are not clearly understood and that the cumulative effect of more structures and pipelines in the Gulf must be considered.

Sierra Club contends that the statement should have totalled the amount of oil spills which have already occurred from all oil drilling in the Gulf and determined from these figures how much more was probable. It further asserts that similar calculations should have been made for other pollutants, and that the statement should have included a mathematical analysis of the probability of collision and loss of land from pipelines being placed in marsh areas. These contentions boil down to questioning the degree of detail rather than the lack of it. While agreeing that these additional facts may have been useful to the Secretary in reaching a decision, we still conclude that the detail presented was sufficient to uphold the EIS.

ALTERNATIVES

Section 102(2) (C) (iii) of the Act requires environmental statements to present the alternatives to the proposed action. This discussion-of-alternatives requirement is intended to provide evidence that those charged with making the decision have actually considered other methods of attaining the desired goal, and to permit those removed from the decisionmaking process to evaluate and balance the factors on their own.³⁰ A thorough consideration of all appropriate methods of accomplishing the aim of the proposed action is expected.³¹

Interior devoted a 352-page volume solely to an analysis of alternatives.³² Plaintiffs have enumerated still other alternatives which they assert were more feasible but which received little or no attention.

Plaintiffs are critical of the statement's failure to discuss federal exploration. We reject this criticism. The court below correctly observed: "[t]he short answer to plaintiffs' argument is that federal exploration is not an alternative to the project, but merely another means of proceeding *with* the project so that the environmental consequences should be substantially the same in either case." We agree that federal exploration would present substantially the same environmental hazards as permitting private developers to explore the tracts sold. An alternative which would result in similar or greater harm need not be discussed. Plaintiffs' rejoinder to this response is that the separation of exploration from production is of great environmental importance since information gained from exploration might result in modification or cancellation of the sale. The rejoinder remains unpersuasive since the continuing control which leasehold restrictions provide, gives Interior an equivalent right to prevent and control ecological detriment.

We also note that plaintiffs did not object to Interior's failure to consider federal exploration at any time prior to the final statement, nor did they adduce evidence that federal exploration would significantly decrease the possibility of environmental hazards.³³ While we would not be understood as holding that every alternative which an opponent fails to mention before an EIS is finalized is waived, plaintiffs' actions here are worthy of note in adjudging the statement's adequacy as against the contention that federal exploration was of such significance that the statement is faulty because it was not considered.

Plaintiffs contend that the EIS' rejection of the possibility of delay of the sale as an alternative was a "pro forma ritual,"³⁴ which failed to comply with the requirement of NEPA that the environmental statement give "information sufficient to permit a reasoned choice of alternatives so far as environmental aspects are concerned."³⁵ Plaintiffs' characterizations are inapt. The EIS discusses the feasibility of delay: (1) until new technology is available to provide increased environmental protection, (2) pending completion of studies of poten-

³⁰ Calvert Cliffs' Coordinating Comm., Inc. v. AEC, *supra*, 449 F.2d 1109, at 1114; Trout Unlimited v. Morton, *supra*, — F.2d at —, No. 74-1974 (9th Cir., 1974).

³¹ EDF v. Corps of Engineers (Tombigbee), *supra*, 492 F.2d 1123, at 1135.

³² Alternatives considered were: (1) modify the sale; (2) withdraw the sale with needed energy to be replaced by (a) conservation, (b) conventional oil and gas supplies, (c) coal, (d) synthetic sources of gas and oil, (e) hydroelectric power, (f) nuclear power, (g) energy imports, (h) other energy sources; (1) combination of alternatives; or (3) delay the sale until new technology is developed and/or until pending environmental studies are completed.

³³ One of their attorneys did talk with Interior officials prior to trial concerning whether the feasibility of federal exploration had been considered.

³⁴ Calvert Cliffs' Coordinating Comm., Inc. v. AEC, *supra*, 449 F.2d 1109, at 1128.

³⁵ NRDC v. Morton, *supra*, 458 F.2d 827, at 836.

tial environmental impacts, (3) pending development of land-use and growth plans onshore or (4) pending completed implementation of recommendations made in reports on outer continental shelf operating orders and regulations and amendment as necessary. These alternatives having been fairly presented, the choice was the Secretary of Interior's.

Should the statement have explored the feasibility of selling additional tracts off the coasts of Louisiana and Texas prior to the MAFLA sale? Plaintiffs suggest that this alternative would have the advantage of securing much needed petroleum production while permitting basic underlying environmental studies of the MAFLA area to be completed prior to sale. The fact that these tracts are in the Western Gulf where production is presently taking place does not indicate that development of the additional tracts there would incur less hazards than development of the MAFLA tracts in the Eastern Gulf.³⁶ Again, alternatives of equal hazard need not be considered.³⁷

Another "alternative" inadequacy is alleged to exist as to deletion of high hazard tracts. However, the statement points out that tracts identified by matrix analysis to have the highest relative potential of environmental risk could be deleted. It further calls to mind that while any such deletion would correspondingly reduce the potential overall environmental hazard of the proposed action, the sale would suffer a concomitant loss in estimated recoverable reserves of oil and gas which would have to be made up from another source. While this tract-deletion approach is somewhat generalized, it is detailed enough to satisfy the Congressional mandate that alternatives be considered.

In sum, we conclude that the statement did not lack that detailed statement of alternatives to the MAFLA sale which NEPA requires.

COST-BENEFIT ANALYSIS

Section 102(2)(C)(iv) of the Act requires an analysis of "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity." The question this appeal urges is how specifically must this relationship be quantified, i.e., must a dollar and cent weighing of the costs and benefits of the proposed sale be set out in the EIS?

"NEPA does not demand that every federal decision be verified by reduction to mathematical absolutes for insertion into a precise formula."³⁸ Nevertheless, "an agency [must] search out, develop and follow procedures reasonably calculated to bring environmental factors to peer status with dollars and technology in their decisionmaking."³⁹ We note that regulations promulgated by Interior⁴⁰ and by the Bureau of Land Management⁴¹ require quantification of costs and benefits where possible. However, every attempt to assign a dollar value to future effects of present actions necessarily involves prediction. Such opinion estimates can be most precise when the systems involved are simple. As they become more complex and interactive, the ability to forecast becomes more a guess and less a prediction.

The MAFLA development is in the complex, interactive category. The decision-maker's task nevertheless remains the same. It is not to total up dollars and cents in a sort of profit-loss ledger, but rather to consider the previously unconsidered by giving weight and consideration to the ecological costs to future generations in deciding whether present economic benefits indicate that the depletion of irreplaceable natural resources should proceed in the manner suggested, or at all. The use of a postulated economic equation to express these

³⁶ Plaintiffs offered no evidence concerning the relative possibilities.

³⁷ The frontier area of the Eastern Gulf also was chosen for exploration with the hope of insuring that Outer Continental Shelf production is maintained at least at its present rate. Interior contends that lead time is essential to the Department for a full evaluation of frontier area and for lessees to explore and begin production in such areas if these areas are to be producing at the time other areas have begun to pass their peak production. The commencement of such a new cycle is said to be essential to the future maintenance of a domestic fossil fuel supply. Interior maintains that the MAFLA area is a reasonable frontier for the next exploration since it is adjacent to the existing area and thus facilitates the interchange of personnel, equipment and facilities.

³⁸ *Sierra Club v. Lynn*, 502 F.2d 43, 61 (5th Cir. 1974).

³⁹ Subsection 102(2)(B) has been held satisfied by a good faith attempt to weigh and weigh ecology along with economics in reaching a decision. *EDF v. Corps of Engineers (Tombigbee)*, *supra*, 492 F.2d 1123, at 1133. *See also*, *Trout Unlimited v. Morton*, *supra*, — F.2d —, No. 74-1974 (9th Cir., 1974).

⁴⁰ 36 Fed.Reg. 19343.

⁴¹ 37 Fed.Reg. 15018.

values is permissible and in many instances desirable, but it is not a *sine qua non*. The MAFLA statement, by giving the decisionmaker and other readers enough detail concerning all of these costs and benefits to permit reasoned evaluation and decision, meets the Section 102(2)(C)(iv) requirement that long-term environmental costs be weighed against immediate benefits.

BASELINE STUDIES

Plaintiffs next allege that the defendants' actions violated subsections A, B, and D of Section 102. Subsection A requires an agency to carry out systematic, interdisciplinary studies of the environmental impact which would result from exploration and development. More specifically, plaintiffs contend that defendants failed to satisfy Interior's regulation 43 C.F.R. § 3301.4, which requires evaluation of the potential effect of the leasing program on the total environment, aquatic life, aesthetics, recreation and other resources in the area. However, the EIS does deal specifically with each of these items.

Plaintiffs contend that Interior's plans to gain more detailed information concerning the hazardous geologic conditions of the ocean floor after the sale do not satisfy the requirement that the statement "must stand the test alone—*i.e.*, in and of itself it must either meet the requirements of NEPA or fail."⁴² However, in a project such as this where developers sign leases and conduct separable operations over a period of months and years, and where restrictions in those leases give the agency the ability to constantly control and adjust future action, this continuing control must be considered in determining the reasonableness of the impact statement.⁴³ The MAFLA sale is a unique form of federal action. It does not involve a single undertaking or a project which becomes a *fait accompli* the day the decision to proceed is made. Because it contemplates numerous, successive lessor-lessee relationships involving activities over many areas and over many years, the agency's continuing opportunity for making informed adjustments has a major effect upon our evaluation of the sufficiency of the materials contained in the EIS itself.

The future ability to control development for ecological reasons is not given judicial recognition in a NEPA evaluation for the first time here. In *Gulf Oil Corp. v. Morton*, 493 F.2d 141, 144 (9th Cir. 1973), the Ninth Circuit held that the Outer Continental Shelf Lands Act⁴⁴ and NEPA⁴⁵ authorize "the Secretary [of Interior] to suspend operations under existing leases whenever he determines that the risk to the marine environment outweighs the immediate national interest in exploring and drilling for oil and gas." More specifically, the court held that the Secretary could properly suspend offshore oil and gas leases for a period sufficient to permit Congress to consider termination of those leases for environmental reasons. This Circuit, in *Canal Authority of State of Florida v. Callaway*, 489 F.2d 567, 577 (5th Cir. 1974) has cited *Gulf Oil Corp. v. Morton* for the proposition that "temporary administrative action to meet previously unconsidered environmental dangers may be appropriate if it furthers the public policy expressed by Congress in the National Environmental Policy Act (NEPA), 42 U.S.C.A. § 4321 et seq., even if it involves a temporary cessation of a project previously approved by Congress." Here, the right to exercise future control is directly contractual and even broader than the right which was judicially declared there.

Plaintiffs urge that no deference be given to stipulations, regulations and orders because the EIS fails to point out that they contain no provision for inspection of pipelines, that since 1971 there has been a jurisdictional dispute between the Geological Survey and Interior's Office of Pipeline Safety concerning who would monitor offshore pipelines, and that the result has been an absence of monitoring functions by either agency. Secondly, they point out that the stipulation requiring onsite cleanup equipment within 12 hours has not been placed in

⁴² *EDF v. Corps of Engineers (Tombligbee)*, *supra*, 492 F.2d 1123, at 1130, 1136-7, note 23.

⁴³ Additionally, interior regulations governing oil and gas lease operations in the Gulf of Mexico (30 C.F.R. §§ 250.1 through 250.100), and related Orders and Leasing Regulations (43 C.F.R. §§ 3100.03 through 3130.4-5) should be considered in concert with the impact statement itself since these regulations and orders must be complied with by the lessee throughout the life of the lease just as fully as lease stipulations. Noncompliance with such restrictions, based upon known rather than predicted facts, can result in forfeiture of the lessee's rights and thus foreclose any further activity within that tract until those requirements are satisfied.

⁴⁴ Section 5(a)(1), 43 U.S.C. § 1334(a)(1).

⁴⁵ Section 102, 42 U.S.C. § 4332.

the order concerned with control and removal of discharged oil, and in fact, has been recognized by agency officials to be "arbitrary and impracticable." These are classic examples of errors and confusion which future controls can best eliminate. Surely every EIS should strive for perfection, but the realist would not fail to recognize that it seldom results. What we hold today is that where shortcomings in a major federal action can be corrected or minimized when and if they surface, the EIS upon which such action is authorized may meet NEPA's objectives with some less detail and analysis than would otherwise be required.

DECISION TO PROCEED

Supplementary to their assertions of statement inadequacy plaintiffs attack the Secretary of Interior's decision to proceed with the sale. In view of our determination that the procedural requirements of Section 102 were satisfied, we look to see whether the secretary's decision, based upon the information contained in the EIS, was arbitrary, capricious or an abuse of discretion. However, our review does not include consideration of the merits of the actual decision to go forward with the sale. "[I]t is the court's function to insure that the mandate of the statute has been carried out and that all relevant environmental effects of the project [are] given appropriate consideration by the [secretary]." ⁴⁶ NEPA intended that courts and federal agencies collaborate to insure attainment of the Act's goals,⁴⁷ not that a court substitute its discretion for that of the executive as the decisionmaker.⁴⁸

This court may reject the secretary's substantive decision only if it was reached procedurally without a full, good faith, individualized consideration and balancing of environmental factors; or if, according to the standards set forth in Sections 101(b) and 102(1) of NEPA, it is "[shown that] the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental value."⁴⁹ The decision to proceed in this instance was not shown to be in clear disregard of the evidence contained in the EIS, nor does it appear arbitrary, capricious or an abuse of discretion.

The judgment appealed from is
Affirmed.

ENVIRONMENTAL MANAGEMENT IN THE MISSISSIPPI DELTA SYSTEM ¹

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ABSTRACT

The lowlands of the Louisiana coastal zone are exceptionally high in biological productivity. Unique natural beauty and a rich cultural heritage further identify this area as a nationally important resource. The coastal lowlands and its ecology are a product of the deltaic-fluvial system of the Mississippi River in a zone of interaction with marine forces of the Gulf of Mexico. Renewability of its resources is therefore dependent on preservation of the self-maintaining character of the delta system.

Human activity has seriously altered the natural balance of the delta system. Massive environmental degradation has occurred during the past 30 years, and the entire system may soon collapse. Primary causes of deterioration include: (1) flood control and navigation improvement, (2) accelerated subsidence, (3) urban encroachment into wetlands, (4) water pollution, and (5) canal dredging.

⁴⁶ *Save Our Ten Acres v. Kreger*, *supra*, 472 F.2d 463, at 467.

⁴⁷ *NRDC, Inc. v. Morton*, *supra*, 458 F.2d 827 at 838.

⁴⁸ *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416, 91 S.Ct. 814, 824, 28 L.Ed.2d 136 (1971).

⁴⁹ *Sierra Club v. Froehke*, *supra*, 486 F.2d 946 at 952. *See also* *Save Our Ten Acres v. Kreger*, *supra*, 472 F.2d 463 at 466; *Jicarilla Apache Tribe of Indians v. Morton*, 471 F.2d 1275, 1281 (9th Cir. 1973); *EDF v. Corps of Engineers (Gillham Dam)*, *supra*, 470 F.2d 289 at 300; *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, *supra*, 449 F.2d 1109, at 1115; *accord*.

¹ The support of the Office of Sea Grant, National Ocean and Atmospheric Administration and the New Orleans District, U.S. Army Corps of Engineers is gratefully acknowledged. We also wish to thank many co-workers within the Center for Wetland Resources who have contributed to the research upon which this paper is based. Special thanks are extended to Penny Culley, Daniel W. Earle, Jr., Peggy King, Curtis Latlouis, Phillip Light, Alice Rowland, and Roy Shlemon.

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Maintaining the Mississippi delta system as a renewable resource requires a coordinated decision-making process which allows for environmental management. Based on a pilot study for south-central Louisiana this paper addresses the problem of restoring the system's balance while allowing for projected growth and development. A multi-use management plan based on analysis of natural and human processes operating in the area and land use suitability is proposed. Highways and other public works projects provide the mechanism for directing growth and development to environmentally suitable areas. Renewable resource areas are identified, and management priorities and guidelines outlined. Of prime importance is water resource management program providing for conservation of local runoff as well as directing Mississippi River water and sediment for environmental maintenance and enhancement. Controlled delta building and introduction of supplementary water into estuarine basins are vital to restoration of the natural balance.

INTRODUCTION

In recent years it has become increasingly clear that we must learn to manage renewable resources or be faced with the loss of our most stable economic base. This has become evident particularly in the coastal zone which represents at the same time one of the most vulnerable and most productive environments. The Mississippi delta system is a case in point. Its estuaries and wetlands form a resource that in view of biological productivity, scenic quality, and cultural heritage must be considered of national importance. As a result of uncoordinated decision making and human intervention with the natural process response system, now and in the past, all of the above assets are threatened by massive environmental deterioration. The Mississippi delta system has become the site of a serious conflict between optimum use and actual use of natural resources. To solve this conflict and prevent total collapse of the system, establishment of environmental management and land use guide lines is called for. These guide lines must both guard the viable ecological system and respond to the demands of a highly urbanized and industrialized society.

THE DELTA SYSTEM

The Mississippi delta system has long served as a natural laboratory for the study of deltaic processes. These studies have led to a general and sometimes detailed understanding of the manner in which the system functions (see for example Fisk, 1955, 1960; Gagliano and van Beek, 1970; Kolb and van Lopik, 1966; Morgan, 1967; Russell, 1936). With regard to environmental management the most important knowledge that has resulted from these studies concerns the capacity of the system to maintain itself through renewal, and the process-form-material relationships that characterize the various deltaic environments and control their temporal and spatial distribution.

The self-maintaining nature of the delta system is evident in its well documented geologic history, and in the present surface configuration. These show us a sequence of delta building and abandonment in some state of balance. New delta complexes develop at the expense of older delta complexes with progradation and aggradation in one area being coexistent with deterioration in other areas. As time progresses each delta complex goes through a cycle leading from initial progradation with individual cycles partly overlapping in time and space. The product of these sequential and cyclic changes is a highly diversified assemblage of environments . . . all in a changing and constantly evolving relationship.

Directly related to the physiographic changes is the biological productivity of the delta system. The deltaic forms and associated physical processes and materials are the primary control for the distribution and occurrence of flora and fauna (O'Neil, 1949; Penfound and Hathaway, 1938; Parker, 1960). Thus with changes in environments come changes in biological productivity both in time and space. For this reason biological productivity in a given area is also subject to a cyclic change and at a given time some areas of the Louisiana coast are more productive than others (Gagliano, *et al*, 1971, 1973). Highest biological productivity is associated with the early stages of deterioration of a delta complex, as illustrated by the Barataria-Terrebonne estuaries of the Lafourche delta complex, (Lindall, *et al*, 1971).

Process-form-material characteristics are equally important from the point of human ecology. They determine the opportunities and constraint for each environment with regard to settlement and use. For this reason settlement has until

recently been restricted to the relatively high, well drained natural levee ridges, while wetlands favored fisheries, trapping, and recreation (Gagliano, 1972). This pattern represented an extensive use of renewable resources with a minimal adverse effect to the environment.

By taking into consideration all of the above implications of the natural setting one can arrive at a functional differentiation between environments. On a large scale these are the distributary channels, natural levee complex, interdistributary basin, barrier complex, and active delta front as illustrated in Figure 1. Each of these environments is characterized by a specific set of process-form-material characteristics, a specific ecological function, and a distant range of opportunities and constraints as to use. They represent in essence what may be called environmental management units. Through systematic inventory and analysis of physical characteristics and human use and modification a further division may be obtained. This will yield a hierarchy of units corresponding largely to the natural structure of the delta system.

HUMAN INTERVENTION

We have been slow to recognize the delicate natural balance that exists in the delta system and how modification in one part may severely affect another component or the system as a whole. Most consequential has been our endeavor to confine the Mississippi River for purposes of navigation and flood protection. The river has now been "harnessed" and overbank flooding, which once supplied fresh water and sediment to the flood-basin swamps and marshes almost annually, has been virtually eliminated. Overbank flooding was an important process in the hydrologic balance of the delta plain swamps and marshes, and although difficult to quantify, its elimination has undoubtedly contributed to their deterioration. Equally important, most of the sediment load of the river is now funneled into deep waters of the Gulf through three major passes and active land-building in the vicinity of the active delta is no longer taking place. In effect, the delta is no longer rejuvenating itself and the whole system is in a condition of deterioration. We have concentrated the flow of energy and material in a single conduit and failed to recognize that self-maintenance of the system is based on overflow and diversion.

Our studies indicate that the great Louisiana marshes are dying. This is not intended as a dramatic or sensational statement; the symptoms are everywhere. In the past the marshes and swamps have maintained themselves by producing organic litter which accumulated at rates equal to those of subsidence. Peat deposits as much as 20 feet thick attest to the fact that in some places these living surfaces maintained themselves for 3-4,000 years (Frazier and Osanik, 1968). In recent years, because of both natural and man-induced processes the swamps and marshes are dying and the living surfaces are replaced by open water. Marsh ecologists and botanists have recorded the progress of the disease during the past 30 years (O'Neil, 1949; Palmisano, 1970). The symptoms are so well defined on maps and aerial photographs that they can be measured, past changes documented and future changes predicted. Three main categories of loss can be identified on maps and photos, (1) loss through shoreline erosion, (2) loss through canal dredging, and (3) deterioration and breakup of the marsh into small ponds and lakes.

The results of our intervention is well illustrated by an interdistributary basin such as the Salvador-Barataria Basin (Fig. 1). Lying between the active channel and bordering natural levees of the modern Mississippi River and the abandoned channel-levee complex of Bayou Lafourche, an ancient distributary of the Mississippi River, this large basin functions as an estuary. Four tidal passes allow exchange of water with the Gulf of Mexico. Under natural conditions the landward end of the basin served as a fresh water reservoir, fresh water draining seaward at a slow rate through a system of sinuous, low gradient streams. Fresh water was derived not only from local rainfall but also from overbank flow of the Mississippi River during flood. The extended period of fresh water release and the sinuous tidal drainage network in turn limited salt water intrusion. Thus, even during the dry autumn months salinities would reach only moderate levels.

The hydrologic balance of the system was reflected by extensive and healthy marshes and swamps. These interfaced with broad shallow bays and lakes along a highly irregular shoreline. This extensive land-water interface along with favorable circulation patterns and water chemistry conditions resulted in one of the most productive estuaries in North America, if not in the world.

Although at present this single estuarine system produces an average of 371.35 million pounds annually of commercial estuarine-dependent fish with a production yield of 118.2 lbs/acre (average based on 1963-1965 figures, Lindall *et al.*, 1971), our studies indicate that man's intervention has seriously endangered this productivity. Confinement of the Mississippi River flow, dredging of canals, land reclamation, and disruption of longshore drift along the barrier islands have resulted in a decreased fresh water input, accelerated fresh water release, decreased fresh water dispersal, increased salt water intrusion and salinity variation, increased rates of erosion, and drastic changes in flora and fauna. Perturbation of the delicate hydrologic balance and the presence of positive feedback loops have greatly accelerated natural deterioration.

Another kind of balance possibly affected by man's activities is that between subsidence and aggradational processes. This balance related to coastal Louisiana's location within the Gulf coast geosyncline a downwarped region of the earth's crust which has been sinking for millions of years. Sinking is accelerated by sediment loading, and rates in the delta are high. Based on radiocarbon dating of buried peat deposits, it has been established that the average rate during the past 4,000 years has been 0.35 feet/century. However, tidal gauges and benchmarks indicate that during the past 30 years this rate has greatly accelerated, and much of the area has been sinking at more than two feet per century. A possible, yet unconfirmed explanation for this great increase in subsidence is the tremendous withdrawal of oil and gas from the region during the past 40 years. Regardless of the cause, increased subsidence has been a contributing factor to significant shifts in faunal and floral communities.

In recent years urban and industrial encroachment into wetland areas has increased at an alarming rate. The city of New Orleans provides an important case study. When established in the 1720's the 13-foot elevations of the crest of the natural levee ridge seemed quite adequate to Iberville and Bienville. Natural levee ridges provided good foundation, were reasonably well drained and could be protected from floods with modest levee works. But from the original city, or Vieux Carre, the city soon expanded. By the 1880's most of the natural levee ridges were occupied and reclamation of neighboring wetlands began. The city has now extended itself into reclaimed wetlands in all directions and is continuing to do so.

The value of these wetlands as renewable resource areas is now well established, but studies of urban encroachment have revealed a number of other important points. One is that wetland reclamation for urban development is not economically feasible in Louisiana today without massive aid from federal, state, and local projects. Flood protection levees, drainage canals and pumping stations are usually built at public expense. Wetland real estate values are also enhanced by new highway construction.

In addition to loss of renewable resource area and the massive costs to the taxpayer there are other important reasons why such wetland areas should not be developed. The land surface will be as much as five to ten feet below sea level after reclamation and they are prone to flooding from hurricane storm surge and excessive rainfall. Flood insurance must be subsidized. Foundation conditions are poor, significantly increasing construction and annual maintenance costs for homes, businesses, streets, utilities, public buildings and grounds. Urbanization of such wetland areas create perpetual consumer-taxpayer cost burdens and is clearly detrimental to the public welfare.

Coastal Louisiana enjoys the mixed blessing of exceptionally rich subsurface mineral deposits, which include salt, sulphur, oil and gas. Since there is no relationship between surface topography and the subsurface mineral accumulation, renewable resource areas such as marshes have often been severely impacted by the mineral extraction industry.

Barge-mounted drilling rigs were invented in Louisiana in the 1930's for use in the coastal zone. In 1938 barge-mounted draglines were first used in this area to excavate access canals for drilling barges. Submersible drilling barges moved down canals into swamps and marshes and were soon followed by water borne pipe-laying equipment. Intricate mazes of canals evolved in major oil fields. Pipeline canals religiously follow the engineer's straight edge from production field to refinery or market. Because they engaged in interstate commerce, right-of-ways can be acquired through the courts according to the right of eminent domain.

The entire coastal zone is now laced with an extensive network of canals dredged to provide access to drilling sites and for pipeline construction. The fabric of this canal network is largely incompatible with the natural hydrologic network of channels and water bodies in the area. Consequently major changes in runoff, tidal exchange, and salt water intrusion resulting from this channelization have occurred.

Approximately 10% of the Louisiana coastal area is underlain by proven deposits of oil and gas. The offshore, shelf area, just now being developed, is even richer . . . and all of its production must pass through the coastal marshes to reach refineries and markets.

Through detailed studies of maps and aerial photographs of the area, we have established that the deltaic coast of Louisiana is no longer gaining new land, as it has for the past 4,000 years. Rather, it has been losing land at the phenomenal rate of 16½ square miles/year (Gagliano, Kwon and van Beek, 1970). Our measurements document a total loss of almost 500 square miles during the past 30 years. Most of this is marsh land.

An obvious question arising from such measurements is: What is the cause? Why is a delta system that has been able to rejuvenate itself and build new land for 4,000 years now dying? In an effort to more closely identify the human factors responsible, we have classified and measured all man-made waterways on 1969 aerial photo mosaics in an area comprising about one-fourth of the coastal zone (Gagliano *et al.*, 1973). In this area of 5,258 miles, bounded by the Mississippi River and the east levees of the Atchafalaya Floodway and extending to the Gulf, we measured 106 square miles of canals, or about 2% of the total area. The mineral extraction industries are responsible for 65% of the total dredging, drainage canals account for almost 21%, and navigation canals for 11%.

Approximately 40% of the total land loss in the coastal area can be accounted for by dredging. The secondary impact of this dredging has greatly accelerated marsh deterioration and erosion. Prevention of overbank flooding and funneling of the river's sediment load into deep water have been detrimental to established marshes and have prevented formation of new marshes. Loss to urban and industrial reclamation amounts to another 116 square miles.

LOUISIANA WETLANDS PROSPECTUS

CONCLUSIONS, RECOMMENDATIONS AND PROPOSALS OF THE LOUISIANA ADVISORY COMMISSION ON COASTAL AND MARINE RESOURCES, SEPTEMBER 1973

An inventory of Louisiana's coastal zone resources and an analysis of trends and projections of uses of the coastal zone have shown that the coastal zone of this state is its richest and fastest growing sector. As stated earlier, population growth and economic indicators (e.g. per capita income, total wages paid and total industrial investments) are increasing, and increasing faster in the coastal zone than in the rest of the state. As mentioned earlier, the Commission focused much of its attention on the state's wetlands and coastal waters. Since fisheries production is one of the measures of the health of the coastal ecosystem, special attention was paid to trends in production of fish and shellfish and to certain other key indicators of marsh and estuary viability—saltwater intrusion, pollution of estuaries, and land loss.

The Commission notes that total fisheries production is on the increase in the coastal zone and that this has occurred while there has been intensive multiple use of the wetlands and coastal waters. However, there are certain trends which, if not studied carefully, monitored closely and perhaps checked, could result in damage, in the long run, to coastal marsh and estuary productivity. These trends are:

- (1) Increasing acreages are being closed by pollution to oyster harvesting.
- (2) Oyster yields per acre have decreased tenfold in the last 30 years.
- (3) Shrimp catch per boat has decreased ninefold in the past 30 years.
- (4) Saltwater continues to intrude farther inland.
- (5) Wetlands are being lost at a net rate of 16.5 square miles per year.

The commission does not and cannot point to any one coastal user group as primarily responsible, or even significantly responsible, for these trends. It is

the combination of many diverse uses of the coastal environment, working in an era of fast growth, and a geographic region of low-lying, flood and hurricane prone wetlands, which has brought about the conditions now being studied and analyzed so carefully. It is clear, however, that sufficient attention has been given to planning and managing conservation and growth in the Louisiana coastal zone region. Growth and development has been foremost. Conservation and environmental impact consideration have not been adequate.

The Commission recommends that Louisiana's fundamental policy be to encourage full use of coastal resources by as many citizens as possible subject to five additional policies:

(1) Water flow, water circulation, water quantity and quality are the single most important factors of wetlands systems, and the impact of uses on these factors needs careful review prior to their authorization.

(2) Impact of uses on coastal marshes and estuaries must be measured on a regional or ecosystems basis so that the cumulative impact of many small uses can be assessed in terms of the viability and productivity of the region or system.

(3) Proposed land uses in the coastal zone must be assessed in terms of the intrinsic suitability of the site for the proposed use.

(4) Transportation and utility systems must be designed to encourage urban and industrial growth in corridors where it is best suited, and discourage such growth in wetland areas which are substantially undisturbed.

(5) Multiple use and economically diversified uses must be preferred over single-purpose uses of the coastal zone.

To be implemented, these policies need a revitalized state government program with technical expertise and sensitivity to interest group and citizen needs. Louisiana's current coastal zone management effort has been assumed by the Louisiana Wild Life and Fisheries Commission as a peripheral responsibility to their primary duties as managers of the fish and wildlife resources of the state. They have not been organized properly, nor budgeted adequately, to do the job. The effectiveness of any program to plan and manage the resources of the coastal zone is determined by the organizational structure of the agency, the powers designated to it, the professionalism of its staff and the budgetary resources provided.

[From the Wall Street Journal, Feb. 10, 1971]

OVERLOOKED PERIL: SMALL OIL SLICKS RISE, POSE A WORSE THREAT THAN MAJOR BLOWOUTS—DAILY SPILLS, DRIPS AND LEAKS BY PIPES, BOATS AND BARGES SEEN CAUSING BIG DAMAGE—SICK BIRDS AND SOILED BEACHES

(By James C. Tanner)

NEW ORLEANS.—It is a sunny cloudless day in this delta city as A. L. Prechac, Jr. and a pilot take off in a Cessna plane. As the small craft climbs toward the southwest, a lush carpet of green marshes laced with bayous and spotted with lakes opens up below. The waters of beautiful Lake Salvador gleam in the distance.

But those gleaming waters bother Mr. Prechac, who is head of the anti-pollution-enforcement section of the Louisiana Wild Life and Fisheries Commission. He points out to a passenger that part of the gleam is caused by the sun's bouncing off a spreading oil slick. A few miles further, over some marshes and waterways, brilliantly colored rainbows reflect off oil creeping along the surface of canals. Beyond that, an oil slick oozes over part of an inlet.

Before the Cessna returns to New Orleans, Mr. Prechac will have observed, and duly notated, enough violations of the state's antipollution laws to warrant issuing 18 or 20 citations to companies and individuals. Few, if any, of these violations will receive any widespread publicity, however. For unlike dramatic tanker collisions and massive oil-well blowouts, the slicks here, when considered individually, are far too minor to arouse public indignation.

A SERIOUS THREAT

Yet, taken together, these small slicks are a far more serious threat to the environment than are the occasional spectacular blowouts, conservationists say.

"It's the small but chronic discharges that are the most debilitating," says Kenneth E. Biglane, a marine biologist who directs the division of oil and hazardous materials of the Environmental Protection Agency, the new federal anti-pollution agency.

The smaller spills can be blamed on a number of factors, including minor leaks in wells, deliberate dumping by ships, routine transfers of oil and minor accidents at sea. But whatever the cause, the small spills are difficult to detect; and despite new laws and harsher penalties, they are often impossible to prevent.

The amount of oil going into the seas around the world now is estimated at three billion gallons a year. Some authorities say that during the past five years more than one million gallons of oil have been accidentally leaked into the waters off the Texas coast. This figure is more than twice the amount spilled in California's Santa Barbara Channel in January 1969, an accident that provoked a major ecological uproar.

But many pollution experts maintain that petroleum problems are even more serious inland. They say oil in increasing amounts is being leaked, dripped, spilled, and poured into lakes, streams, marshes, bayous and bays. "Soon there will be oil all over the water, and that will be that," one pollution fighter glumly predicts.

CHASING PETROLEUM POLLUTERS

Recognizing the problem of small spills, Clark M. Hoffpauer, director of the Louisiana Wild Life and Fisheries Commission, in mid-1969 established a special pollution inspection force made up of game wardens. About 30 agents for the commission now spend much of their time chasing petroleum polluters, rather than game poachers.

Mr. Hoffpauer's inspection force, armed with Polaroid cameras, photograph whatever pollution violations they find. There's no lack of subjects. Mr. Hoffpauer suggests, in fact, that the oil companies should consider mining some of Louisiana's lake bottoms. "There is more oil in that mud than in oil shale," he says.

Mr. Prechac's recent flight over Lake Salvador illustrates the magnitude of Louisiana's problems with "small" spillage. After commission pilot Leo Rodriguez has flown a few miles beyond the apparently faulty rig operated by Texaco on Lake Salvador, Mr. Prechac spots five wells and one crude-oil waste pit that seems to be leaking into the marshes and waterways of Texaco's Lafitte field.

The plane heads south toward the Gulf Coast. About 10 miles offshore, a 22-well Shell Oil Co. platform has been blazing out of control since last Dec. 1, and a silvery sheen of oil is seen stretching along five miles of the beach front. As the Cessna turns to trace the sheen, however, it's seen that the source of pollution isn't the burning platform at all. Rather, it seems to be a tugboat pumping its bilge into the water.

TAGGING A TUG

The pilot swoops low over the tug, and its name is jotted down by Mr. Prechac. Regaining altitude, the plane passes over Port Sulfur, on the Mississippi River, and the captain spots an oil barge dripping petroleum into the waters of nearby Lake Washington.

Across the river in the Black Bay oil field, small slicks are spreading away from three producing platforms and oily rainbows fan out from several rigs. Mr. Prechac, busily taking notes, says most of the offending installations are operated by Gulf Oil Corp.

After his flights, Mr. Prechac usually radios his agents responsible for the aerially surveyed territories. The agents then go out in boats to collect additional evidence. More often than not they find what they're looking for; citations have been averaging about 100 a month. On this day, however, rather than issuing citations Mr. Prechac calls the oil companies and tells them what he has seen and warns them to clean up the situation.

The citations, however, carry an initial penalty of only \$100. Furthermore, few oil polluters are fined. Louisiana courts appear reluctant to prosecute petroleum producers, some observers say, since oil is the state's major producer of revenue.

This isn't to say that the oil companies don't respond to Mr. Prechac's citations. Most major producers, increasingly concerned about ouster from ecologists, attempt to avoid adverse publicity by quickly correcting pollution offenses. "If

we can get with an oil spill right away and get it cleaned up, it doesn't get into the newspapers," says an official of one large oil company.

"There is no way, when you're working over an old well or a new one, not to spill a little oil," says a spokesman for Gulf. "We contract for people to work over the wells, and it's awfully hard to get good workover crews."

A Texaco spokesman says his company is "concerned as much as anyone, maybe more than most, about situations like this. We do everything we can to prevent even the smallest sheen. We work very closely with the Louisiana authorities and the little mishap is taken care of on the spot."

The Texaco spokesman doesn't deny that Texaco gets a lot of citations in Louisiana, but he insists that the oil spotted by Mr. Prechac should be called "sheens," rather than "slicks." "There is a big difference between a slick and a sheen," he says. "Sheens can be caused by outboard motors."

Over and above bad publicity, the companies are becoming concerned by the increasingly tough stance of federal regulators regarding spills in coastal or navigable waters. Early last year, following a big Chevron Oil Co. spill in the Gulf of Mexico, the federal government charged nine companies with failing to following proper safety precautions in offshore drilling. Thus far, eight of the offenders have paid fines totaling more than \$2 million.

The Chevron spill is also credited for speedy congressional enactment last year of legislation providing stiff penalties for petroleum pollution. The penalties, which reach a maximum \$10,000 fine for each violation, are imposed on any concern that knowingly discharges oil into the water or that fails to report accidental spills.

But those U.S. agencies charged with enforcing the new federal restrictions aren't yet sufficiently geared up to be fully effective. "We cannot control the (spills) situation," says an official of the Environmental Protection Agency, "but perhaps we can mitigate the damages."

The extent of such damages isn't yet known. Gulf Coast resort operators have been increasingly grumbling about globs of oil they claim are spoiling their beaches. And environmentalists note with despair that pelicans and other coastal birds from Florida to Louisiana are often found dying from oil soakings.

Conservationists, however, believe the harm done to the birds and beaches is but a small segment of the total pollution picture in Louisiana. Throughout the state they say, formerly beautiful and fertile woodlands have been laid waste by the seepage of oil and brine from nearby petroleum fields. They add that some swamps and water bodies have become almost devoid of marine life because of oil runoffs.

Oil is important to Louisiana's economy, but the state's waters—sustaining vast fish, oyster and shrimp industries—are also major producers of revenue, some Louisianans note. Hardy oysters usually purge themselves of oil within a few weeks, but some species of fish continue to carry an oily taste long after contact with spills. And some shrimpers are complaining their catches are down because of the oil leakage problem.

The oil companies reply that the industry's antipollution spending has reached \$1.5 million a day—more than double the figure of five years ago. In addition, they say, the American Petroleum Institute has a 1971 budget of \$3.5 million for its drive against air and water pollution. The largest single item in this budget is \$1.3 million to study the best means for cleaning up oil spills.

The oil companies, in fact, are currently financing extensive research in the control and prevention of petroleum pollution. Shell's research laboratory in Houston is so highly regarded that Mr. Prechac plans to enroll some of his agents there for courses.

For Louisiana's waterways, however, the immediate future is clouded. Research aside, executives of the oil companies say they can't operate without a certain amount of spillage if they are to meet rising petroleum demands. "Railroads can't operate without derailing some cars," says one philosophical oilman. But that argument doesn't soothe a lot of people.

Senator JOHNSTON. One thing I would like very much is some standards by which we can determine after we find the oil whether to produce it.

For example, definitions of the kind of geologic situations that we should produce, and some sort of objective standards that we can use in assessing that. The planning process by which you plan onshore activities ought to be done.

But it seems to me they ought to be done simultaneously while you are doing your exploration. I can imagine no situation, personally, in which you find the oil and then decide not to produce it because of something you have learned after you found it.

You ought to know all of that before you find it. You might be wrong about the size of the deposit out there, but you cannot be surprised after you find the oil and say, "Gosh, we cannot handle this onshore."

You ought to know that before you put it out for lease in the first place. If you know that before you put it up for the lease in the first place, your environmental policy statement should cover it.

Mr. FUTRELL. The eastern gulf sale, the MAFLA sale, gives the exception to the rule you are stating. That would have been a fantastically environmentally disruptive onshore impact.

Land impacts were not discussed in the impact statement, and they were feared by Florida senators, the Governors, the representatives, straight through. If there had not been an Arab oil embargo, that lease sale would have been gone through.

But I am taking Mr. Armstrong's time.

Senator JOHNSTON. We want to come back and hear Mr. Armstrong, but on this MAFLA sale was it your position that it should not have been produced at all, or that you should stop and have some planning?

Mr. FUTRELL. You should have stopped and had some planning before. The Sierra Club's lawsuit there was to get money into the coastal zone management program and start setting up a Florida coastal zone, federally funded Florida coastal zone management program and an Alabama management program before the exploration and production phase begins, rather than to develop them at the same time, along with exploration. As it turns out, MAFLA has turned out pretty much to be a dry hole which, in some ways, is very unfortunate, because of the capital needs of the oil industry.

I take no pleasure in the losses of the oil industry. We may sue them, but we are all citizens of the same country and the same economic republic.

Senator JOHNSTON. Can't we do that planning in advance?

Mr. FUTRELL. Hopefully we would, but so far it has not been done.

[The prepared statements of Barbara Heller, J. William Futrell, and Dudley Dudley follows:]

ENVIRONMENTAL POLICY CENTER

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TESTIMONY OF BARBARA M. HELLER

BEFORE THE

SENATE COMMITTEES ON INTERIOR AND COMMERCE

APRIL 9, 1975

ON BEHALF OF

AMERICAN LITTORAL SOCIETY
CONSERVATION COUNCIL OF NORTH CAROLINA
ECOLOGY CENTER OF LOUISIANA
ECOS OF NORTH CAROLINA
FLORIDA AUDUBON SOCIETY
FRIENDS OF THE EARTH
LEAGUE FOR CONSERVATION LEGISLATION (N.J.)
NEW ENGLAND FISHERIES AND CONSERVATION COMMITTEE
NEW ENGLAND OIL COALITION *

* CONSERVATION LAW FOUNDATION OF NEW ENGLAND
SIERRA CLUB - NEW ENGLAND CHAPTER
NATURAL RESOURCES COUNCIL OF MAINE
FRIENDS OF INTELLIGENT LAND USE
SEACOAST ANTI-POLLUTION LEAGUE
SAVE OUR SHORES (NEW HAMPSHIRE)
CITIZENS COALITION FOR THE SEACOAST
MAKE EVERY SHORE SAFE
SAUGUS ACTION VOLUNTEER FOR THE ENVIRONMENT
SECON' LOOK COMMITTEE
MASSACHUSETTS AIR POLLUTION AND NOISE ABATEMENT COMMITTEE
MASSACHUSETTS AUDUBON SOCIETY
MASSACHUSETTS FOREST AND PARK ASSOCIATION
MASSACHUSETTS OIL COALITION
MASSACHUSETTS WILDLIFE FEDERATION
SAVE OUR SHORES (MASSACHUSETTS)
ASSOCIATION FOR THE PRESERVATION OF CAPE COD
VINEYARD CONSERVATION SOCIETY
SAVE THE BAY
CONNECTICUT AUDUBON SOCIETY

ENVIRONMENTAL POLICY CENTER

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We are grateful for the opportunity to present our views on the important legislation which you are considering. The Ocean Policy Study and the National Fuels and Energy Policy Study have been in the forefront in developing good information on energy issues, both with regard to energy supply and to our environmental, social and economic concerns.

Pending before your Committees is legislation concerning offshore oil development - an extremely important part of any energy development program - and one which has become a matter of heated national debate over the last several months. The debate has become heated chiefly because the leasing and development program has been administered in a manner which local and state officials and the concerned public believe to be environmentally and economically irresponsible. I doubt that you have heard any witnesses say, during your many days of hearings, that they are absolutely opposed to OCS development. OCS development is clearly a viable energy option, particularly when compared with the devastating environmental impacts of some of the other energy alternatives like oil shale and strip mining. There is no excuse, however, for the irresponsible way in which the Interior Department is proceeding with the federal leasing program. No good businessman would run his business the way the Interior Department deals with our public resources. No good businessman would put a product on the market without knowing what he is selling. The Interior Department does that with our public resources. No good businessman would sell his goods without trying to be sure there was some competition among the buyers so that he could obtain a decent price for his goods. There is very little competition among the bidders for our public resources. Any good businessman thinks not only about the present but about the long-term welfare of his company. The Interior Department apparently thinks only about the next 10 years, and not about the long term implications of developing our oil resources on a vastly accelerated schedule. The Office of Technology Assessment in its February, 1975, Analysis of the Department of the Interior's Proposed Acceleration of Development of Oil and Gas on the Outer Continental Shelf examined all of the estimates of reserves on the OCS, including those of the industry and the recent estimates of the National Academy of Sciences (Mineral Resources and the Environment, NAS 1975). OTA determined that "the appropriate rate for development of domestic resources is dependent upon which estimates are correct." OTA concluded further that "If the pessimistic estimates are correct, it may be necessary not only to take very strong measures to curb demand and to accelerate the development of alternative sources of petroleum products, but also to limit production from domestic sources below the maximum efficient rate and accept a relatively high level of imports, in order to avoid a period of extremely heavy dependence on imports toward the end of this century." Thus, we must question whether rapid

development of the nation's offshore petroleum resources is in the national interest in terms of balance of payments and import vulnerability in the long term.

In addition to the question of whether rapid development makes sense for our foreign policy and economic interests, there is substantial evidence that from an energy supply perspective, rapid development of our OCS reserves is not necessary. A special Ad Hoc Committee of the House Banking and Currency Committee recently issued a report, The Accelerated Development of the Outer Continental Shelf: Its Problems and Costs.¹ The report asks "Is the leasing of approximately 10 million frontier acres on the OCS in 1975 the proper approach to securing increased oil supplies from the OCS?" In answer to this question the report states:

"It appears that current OCS leases are not being exploited to their maximum potential. Note Table 1.4. Table 1.4 shows that there are almost as many producible shut-in wells on the OCS as there are producing wells. In 1973, for example, there were 3814 active wells and 3054 producible shut-in wells. Furthermore, the table shows that while the number of active wells on the OCS dropped from 5704 in 1971 to 3744 in 1972, the number of producible shut-in wells increased from 953 to 2996. This is a jump from 14 percent of producible shut-ins to over 44 percent. These figures suggest that oil producers have made a conscious decision to cut back on OCS production. Moreover, as Paul Davidson, Laurence Falk, and Hoesung Lee suggest in a recent article, oil producers may be further restricting oil production 'by reducing flow from producing wells, shutting in associated gas wells, and slowing down drilling activity on wells nearing completion.' The potential increase in OCS production from the reversal of these restrictive production policies with out increased OCS leasing, is probably great."

TABLE 1.4.--WELL STATUS OUTER CONTINENTAL SHELF

End of Year	New Wells Drilling		Wells Completed		Producible Zone Completions						Total Wells		
	Act.	Susp'd	Oil	Gas	Active		Shut-in		Total Act. & Shut-in	Serv. Ind. not P & A		Other Wells P & A	
					Oil	Gas	Oil	Gas					
1950 ¹	24		419	371			13	26	410			79	513
1951													
1952													
1953													
1954	27		130	50	20	15	45	130				104	261
1955	41		279	117	29	31	62	239				175	435
1956	75		397	195	32	41	89	327				261	594
1957	61	17	588	330	31	83	144	588				402	1,068
1958	25	21	795	487	74	80	154	795				483	1,278
1959	40	31	1,461	864	173	245	179	1,461				569	2,031
1960	54	53	1,923	1,138	210	376	249	1,923				686	2,720
1961	54	59	2,467	1,463	250	429	335	2,467				814	3,434
1962	56	107	3,091	1,863	313	513	382	3,091				1,002	4,256
1963	62	130	3,631	2,227	397	584	413	3,631				1,226	5,049
1964	73	153	4,313	2,708	417	622	486	4,233	80	102		1,372	6,053
1965	89	261	4,733	3,008	516	687	462	4,733				1,685	6,768
1966	82		3,205	3,588	660	747	504	3,498	35	444		1,871	5,022
1967	95		3,762	4,080	870	759	507	6,216	60	496		2,231	6,586
1968	113		4,258	4,483	1,040	908	578	7,009	91	592		2,592	7,575
1969	103	129	4,752	4,985	1,280	880	578	7,733	117	580		2,919	8,493
1970	106	115	5,339	5,565	1,574	882	645	8,666	164	534		3,278	9,392
1971	89	152	5,718	5,704	1,872	953	602	9,139	217	631		3,724	10,244
1972	79	263	6,032	3,744	1,808	2,996	872	9,420	286	637		4,168	11,079
1973	84	749	6,421	3,814	2,108	3,054	879	9,835	332	546		4,599	11,898

¹ Tide and submerged, California.

Note: Wells completed equal hole completions beginning with Calendar Year 1955. The producible oil and gas and service completions represent the various horizontal zone completions in each well completed. E.g., at December 31, 1973, there were 10,187 (9,855 oil and gas, 332 service) zone completions in 6,221 wells completed.

Sources: Outer Continental Shelf Statistics.

¹ Ad Hoc Committee on the Domestic and International Monetary Effect of Energy and Other National Resource Pricing of the House Banking and Currency Committee; Accelerated Development of the Outer Continental Shelf: Its Problems and Costs; December 1974.

Rather than question the motives of the major oil companies in matters of public policy, let's examine this situation from a business perspective. Given the current petroleum market situation, if you were the president of a major oil company wouldn't you be shutting in oil wells, too? If you knew that you could sell new oil at \$10 to \$11 per barrel, but your old oil would only bring \$5.25 per barrel, and if you had a pretty good idea that the price of that old oil might soon be deregulated (after all, this is the course advocated by the President), you would be a pretty lousy businessman and would probably not be meeting your obligation to your stockholders, if you did not find some way to delay production from those wells producing "old oil." We, therefore think there is good reason for those provisions in S. 426 and S. 521 which require a review and evaluation of shut-in and flaring wells, and we support them. We would suggest in addition, that some provision be included in the legislation which would require unitization.

While discussing the "need" for OCS oil we should see how our energy needs relate to other national needs. For example, the FEA Task Force Report On Oil (background paper for the Project Independence Blueprint) suggests that under "business as usual" (BAU) conditions at \$15 per barrel production from the entire Atlantic offshore area could be 73,000 barrels/day or .42 % of daily demand. Under an accelerated development (AD) scenario at \$13/barrel we could be utilizing 640,000 barrels/day of Atlantic oil or 3.7% of our current national consumption (which would be an even smaller percent of 1985 consumption.) In 1969 New England commercial fish landings alone amounted to 568.3 million pounds of fish worth \$80.6 million, or 13.44% of the nation's commercial fish landings. In 1973 the New England and Mid-Atlantic fisheries supplied 16.48% of the total national fish catch. Worldwide fisheries production has declined 10% since 1970, according to the Overseas Development Council. Georges Bank, although its production has diminished greatly in recent years as a result of overfishing by foreign nations, is still one of the most productive fisheries in the world. Great Britain, after losing its battle to fish off Iceland, for the first time sent several vessels to Georges Bank, where they joined the Poles, the Russians, the Rumanians, the Bulgarians, the Portugese, the Spanish and the Japanese. Other nations have recognized the value of these areas. Why haven't we? Who will determine whether U.S. energy needs or world food needs are more important? We cannot risk ignorance of potential effects of energy production on agricultural and food production.

In light of the conclusions of the above-mentioned studies (OTA, House Banking and Currency Committee) and in view of the other important uses of the oceans and the coastal zone, we believe that the principles expressed in S. 521 and S. 426 are too supply-oriented. We have appended at the end of this testimony (Appendix) some policies and principles which we urge that you incorporate in any amendment to the OCS Act in order to achieve the proper balance between development interests and the multitude of other interests which are effected by development.

One of the most important aspects of any production is the quality and availability of information about the potential of the mineral resource, and about the impact of the development of that resource on other resources in the region. The availability of geological and geophysical information is critical for several reasons:

- 1) The states and local communities cannot possibly plan for the impacts of development unless they know how much oil and gas will be developed. No one can know this until some basic exploration, including exploratory drilling, has been done.
- 2) The public cannot comment intelligently in the review process, as the National Environmental Policy Act intended, unless they know the extent of the resource. Environmental impacts are heavily dependent on both the extent and the rate of development.
- 3) The wide availability of exploratory information would allow all bidders for production leases to participate on equal footing. This would be preferable to the current system where the major companies have more information and where thus, the independent producers are taking a greater risk when they bid on a tract. It is generally agreed that this increased competition would also result in a greater return to the Treasury.
- 4) The Interior Department would have a better idea of what it was leasing. Many industry and Interior Department representatives have argued that the Government has as much information as the private industry does. They may have purchased (at taxpayer's expense) the same information, but it has become quite apparent that they are lacking either the expertise for interpreting the data accurately or some other parameter which the oil companies use. The huge differences between Interior Department pre-lease estimates and actual bids by the companies substantiate this thesis.² The main point, however, is that neither the companies nor the government has enough information before a lease sale under the existing system, on which to base a decision to produce. It seems indefensible to us that the federal government sells our public lands and public energy resources without knowing first what resources are located there. We know it is profitable for the companies, if it were not they would not be in the business. But this system is not the best and wisest management of our public energy resources. We support federal exploration as proposed in S. 426 as the best way to develop and publicize resource information. We cannot support the concept in S. 740 which would permit joint exploratory ventures between the government and the oil industry. There is too much "cooperation" now between the federal government and the oil industry. A joint venture between USGS and Exxon or Gulf or Texaco would be

² Compare the Department's pre-lease estimates of the value of tracts with the actual bonus bids. At the Texas offshore sale last spring, the government's 10 most valued tracts were estimated to be worth \$101,196,849 yet the bonus bids received amounted to \$232,571,373.60. In the March 1974, Louisiana offshore lease sale, the government's estimated value of tracts were \$679 million. Bids amounted to nearly \$2.175 billion. In one spectacular miscalculation (Tract 64) BLM estimated the worth of the area at \$5.6 million and Exxon bid \$76.2 million. In another (Tract 125) BLM's estimated value was \$4.2 million and the Hamilton Brothers Group bid \$77.8 million. The Federal government's pre-sale estimate for the OCS, 1974 lease sale off the coast of Louisiana was \$240.1 million. The industry bid \$1.4 billion - a difference of \$1.2 billion.

unconscionable, and would make it all the more difficult for the agency which is supposed regulate the oil development industry to do its job. Furthermore there is no provision in S. 740 which would mandate the availability of all exploratory information.

As we mentioned above, one of the problems with the administration of the leasing program has been the age-old issue of one agency with the responsibility both to promote and regulate development by one industry. Questions about the propriety of this and the objectivity of the Interior Department because of the situation have been raised often (Energy Under the Oceans, Kash, et all, p. 108, is one example). We believe that regulatory and enforcement authority ought to be with an agency other than the Interior Department. Congress saw the necessity of separating the regulatory and promotional functions of the old AEC. We suggest that much the same situation exists in the Interior Department. We support giving the impact assessment duties to NOAA. We question, however, whether the Coast Guard should be the lead agency in promulgating and enforcing standards and regulations. The Environmental Protection Agency is experienced in environmental regulation, and the Coast Guard has equipment for conducting inspections on the OCS. We therefore recommend that standard-setting and enforcement be entrusted to EPA, in conjunction with NOAA and the Secretary, with authority to call upon the Coast Guard (or other appropriate agencies) for any equipment which is necessary for inspection purposes. We suggest that EPA should report to Congress within 6 months after the effective date of this legislation regarding additional equipment and personnel needs for OCS inspection and monitoring, including intragovernmental transfers. Again, we would emphasize that we strongly support separating the regulatory and enforcement, and environmental functions away from Interior.

The determination of the states to maintain control over their natural resources has become manifestly clear over the last year. The Federal government has, in the past, pursued a policy of federal decision-making with regard to the sale of public resources (oil shale, coal leasing for strip mining, and OCS development), and has totally avoided any role in determining and enforcing the cost of protecting the public from the environmental and social consequences of energy development; leaving the janitorial chores - cleaning up the ill effects which inevitably result - to the state and local governments. The states and the public they represent will no longer tolerate being brought in at the last minute after leasing decisions have been made in Washington, as they obviously have in the OCS leasing case, and then having to cope with boom and bust cycles.

The only way to resolve the confrontations which will result if the Interior Department does not change its policies voluntarily, is for Congress to legislate mechanisms for involving the states and communities in the decision-making. S. 426 recognizes this need better than the other bills before you, yet we feel that even S. 426 does not go far enough. In our view the states must be able to express objections to a leasing program on the grounds that the development would force the state to bear unreasonable social, environmental or economic burdens, or because an adequate basis did not exist to determine

that this proposed development was needed to meet national needs. If, after appropriate studies and/or public hearings, the Secretary and the state could not resolve their differences, then the matter could best be settled objectively by a court proceeding.

In addition, we believe that a federal leasing proposal should be consistent with a state coastal zone management plan which has been developed according to state laws and regulation, whether or not it has been approved by the Secretary of Commerce. Our goal should be to get the state and local governments working together on energy development and coastal management programs. This will never occur if the states feel that the Secretary of the Interior or the Secretary of Commerce can override any carefully planned state decision on facility siting, on the rate or manner of coastal development, or on other matters of similar importance to the states. The states have made their feelings on this subject quite clear. To ignore these feelings is only to delay important decisions concerning both environmental protection and energy planning.

There are many proposals now circulating which would provide money to the states in exchange for OCS development. Some of these proposals are reasonable, and some were clearly intended to "buy the states off." We support the approach taken in S. 586 which provides for grants through the existing Coastal Zone Management program. The money is needed for both planning for the impacts of OCS development and for direct compensation for the impacts which state and local communities must suffer, as a result of the development. S. 586 recognizes these needs. We would hope that your final legislation would specify an intent and provide mechanisms to assure that some of the money is funneled to local governments. We oppose a "share-of-the-gravy" approach which some have proposed. Funding should be tied to planning and compensation. Revenue sharing is no substitute for federal environmental protection and regulation.

Liability has always been a concern of those worried about the potential for accidents from offshore operations. We believe any liability provision should be geared toward achieving three goals:

- 1) providing an incentive for the prevention of oil spills
- 2) rapid cleanup of spills when they do occur
- 3) immediate compensation of those damaged by spills.

The best way to achieve these goals is to impose strict unlimited liability on the spiller. A fund is certainly the best way to provide immediate compensation to victims of a spill, with the fund able to collect its costs from the spiller. A liability limit for damages of \$7 million as in S. 426 and S. 521 seems arbitrary and unjustified. The oil companies operating in the North Sea just completed an agreement to voluntarily cover \$16 million in pollution costs for their spills - \$8 million for clean-up and \$8 million for damages.

Companies participating in OIL (Oil Insurance Limited) ³ have \$75 million coverage for their offshore operations, and companies purchasing offshore pollution policies in the commercial market can get \$22 million coverage. If an incentive to prevent accidents is to be felt, then the spiller must face substantial costs if he does not prevent accidents: unlimited clean-up and damage costs.

We oppose the provision which would reduce damage payments to victims if costs exceed \$100 million. Why should the fisherman or the beachfront owner have to pay for damage caused by someone else, but which affects his livelihood? The liability schemes in both S. 426 and S. 521 contain these problems. We favor, as an alternative, a liability scheme similar to that which you incorporated in the Deep Water Port Licensing Act last year: establishment of a \$100 million fund, but without limiting the payment to those damaged to some arbitrary figure. Under the proposed legislation (S. 426, S. 521) the leaseholders are authorized to collect money from themselves and then administer it. Such a system is not likely to produce adequate damage compensation. Rather, the administration of the fund should be placed with an existing agency. We think that a liability proposal similar to the Deep Water Ports Fund would provide consistency and would come closer to achieving the 3 goals set out at the beginning of our discussion of liability.

We cannot conclude our discussion of OCS legislation without mentioning S. 740, a bill which has extremely serious implications for OCS development, for environmental protection, for government intrusion into private enterprise, and for the rights of states to make their own decisions. Among the programs which require express congressional disapproval is the "Federal Facilities Energy Program". This directs the Energy Production Board to develop a program which would put the Federal government in the business of producing "energy-related materials, equipment, and goods" such as "drilling platforms, drilling rigs, pipe for drilling operations and pipelines, and mining and transportation equipment goods and supplies." This mandates the federal government to go into the steel business, the oil business, the mining business, the ship construction business or any business which it deems necessary for energy production. Alternatively, under this provision, the Federal government is authorized to procure "necessary material, equipment, and supplies," and arrange for the "leasing or contracting out (of) Federal facilities and installations for the production of energy-related materials, equipment and goods" (~~rent-free?~~). Either of these alternatives is an outrageous intrusion of the federal government into the private sector. Furthermore, there is no indication that this proposal would expedite OCS production, which presumably is the dubious goal. The shortage of

OIL was established by 8 major oil companies in 1970 to provide oil pollution coverage that was not available at economic rates in the commercial market. It originally offered a \$100 million liability limit, but it soon changed that to \$75 million where it remains today. There are 3 deductible options: \$1, \$5, and \$10 million. OIL covers clean-up and damage costs from "pollution, seepage, or contamination" that was neither expected nor intended.

equipment and material in the offshore industry is thought by most to be a short-term phenomenon, and the federal government could not possibly gear up a program to be producing the required materials in a short-term, certainly not more quickly than the industries which are already set up for those production purposes. By the time any federal program was underway, we would have yet another famous federal boondoggle, and any need which may have existed, would be past.

The Section of S. 740 entitled "Expediting Government Action" would allow total circumvention of those procedures which have been developed by Congress and agencies to protect the rights of the public. This section directs the Energy Production Board to "identify unreasonable procedural delays and impediments resulting from Federal procedures and requirements that significantly delay decision-making and action on specific projects which are determined to be needed for increasing domestic energy exploration, development, and production." The Board is then authorized to propose measures "to expedite Federal action and overcome procedural delays and institutional impediments...." The Board is to put its recommendations in the form of an "Expedited Energy Project Procedure Report" (a separate report for each project) which it submits to Congress. If Congress does not act negatively within 60 days, the new expedited procedure "shall become law." This provision would not only allow circumvention of the National Environmental Policy Act (and impact statements) but also of procedures for involving the states and local communities, and perhaps of the Coastal Zone Management Act as well.....~~(CZMA)~~

In sum, we feel that S. 740 poses a substantial and critical threat both to private enterprise, to development incentives, and to the rights of the public and their state and local governments.

APPENDIX

We feel that both S. 426 and S. 521 in their statements of policy and purposes are too promotional and supply-oriented, and too weak with regard to state concerns and environmental considerations. Both incorporate by reference the policy of the Mining and Minerals Policy Act which is developmental in nature. Neither provides that OCS development should be integrated into a comprehensive energy plan. We suggest that any amendment to the OCS Act should establish the following basic policies:

- 1) It is in the national interest to preserve and protect the vital resources of coastal zone.
- 2) It is in the best interests of the citizens of this nation to protect and preserve the rights and responsibilities of states and communities to determine growth and land use patterns within their boundaries, and to protect their marine and coastal environments which are important to their economic and social stability.

- 3) It is essential that states exercise control over OCS resource development of the extent necessary to prevent or minimize significant adverse environmental, economic, or social impacts on their marine and coastal environments, and participate effectively in policy and planning decisions concerning such development.

In addition, we believe that any new legislation on this subject should delineate the following principles:

- 1) that OCS development should take place only in the context of and in consistency with a comprehensive national energy plan which has identified the nation's needs for oil and gas in general and for oil and gas from the OCS in particular;
- 2) that energy conservation is a national priority, which will enable the nation to proceed with rational and orderly development of OCS resources;
- 3) that individual OCS development programs must be based on specific findings regarding the need for the OCS resources under consideration;
- 4) that OCS development which would entail undue threats to the marine or coastal environment should not be undertaken (and specific findings as to the existence of such threats should precede any development efforts);
- 5) that a priority system for leasing should be established based on the level of environmental risk and on the resource potential of the area;
- 6) that it is the purpose of this legislation also to protect the marine and coastal environment and that coastal energy development must be consistent with this important national goal.

** These policies and principles were adapted from suggestions made by Robert Hallman of the Center for Law and Social Policy.

SUBMITTAL OF J. WILLIAM FUTRELL
SECRETARY
THE SIERRA CLUB

OUTER CONTINENTAL SHELF LANDS ACT
AMENDMENTS OF 1975

Presented on April 9, 1975

Committee on Commerce
Committee on Interior and Insular Affairs
United States Senate

I am William Futrell, Secretary of the Board of Directors of the Sierra Club, and am appearing today as a representative of the Sierra Club to represent its views concerning proposed amendments to the Outer Continental Shelf Lands Act. The Sierra Club, a national non-profit conservation organization with approximately 150,000 members, has had a long history of concern with efforts to protect and preserve the scenic resources of the United States.

In recent years, Club members have focused on coastal problems, particularly those problems concerned with offshore oil.

We believe that the Committee's draft legislation amending the Outer Continental Shelf Lands Act is a significant improvement over existing law.

We believe that there is a pressing need for improved coordination of Federal OCS programs with the states and that the role of the states in the decision making process should be increased.

We support the proposal to separate OCS oil and gas exploration activities from decisions to develop and produce the oil and gas.

We believe that there is a great need for improvements in the planning and execution of environmental baseline studies, monitoring studies, and preparation of environmental impact studies. Specifically, we endorse section 21 of S.426 which makes the National Oceanic and Atmospheric Administration (NOAA) the "lead agency" for the purpose of complying with the National Environmental Policy Act (NEPA).

At the present time, the responsibility for the preparation of environmental impact studies is lodged with the Bureau of Land Management in the Department of Interior. BLM has filed a series of impact statements on lease sales since 1971. Sierra Club representatives, through the years, have reviewed and commented on these statements and found them to be of varying degrees of inadequacy. There are marked similarities between these statements. They have been long on description of species and thick with trivia concerning various geographical locations, but, uniformly, they have been short on information concerning the value of the coastal zone. Each of BLM's statements over the last 5 years has been seriously deficient in its failure to discuss the nature of and value of the resource impacted by the lease sales. Each of the BLM statements skirts the problems of the onshore impacts of offshore drilling.

Because of these significant omissions, the decision maker who relied on BLM's impact statements has, in the past, been only partially informed. The decision maker has not been in a position to weigh the costs and benefits of the proposed offshore drilling because the drafter of the EIS and the proponent of the sale, BLM, has consistently described the benefits of the sale in a heavy handed manner, while soft pedalling the costs of the action, the impact on the coastal zone.

No BLM EIS has ever adequately described or assessed how estuaries and wetlands work and why they are important. The value of our coastal marsh lands is practically immeasurable. They produce five to ten times more biomass per acre than the average agricultural areas of the United States.

Dr. Eugene Odum, Director of the Institute of Ecology at the University of Georgia, recently summarized research conducted by the Institute in conjunction with Dr. J. G. Gosselink and Dr. K. H. Pope of Louisiana State University as to the value of the coastal marshes,

" As a step towards realistic economic evaluation of the natural (i.e.c. "undeveloped") environment we have calculated monetary values for marshlands and estuaries of the South Atlantic and Gulf Coasts on the basis of : (1) by-product production (fisheries, etc.), (2) potential for aquacultural development, (3) waste assimilation; and (4) total 'life-support' value in terms of the "work of nature" as a function of primary production. Money values of marsh-estuaries in their natural state were calculated in terms of (a) annual return, and (b) an income capitalized value (equals R/i where R is the annual return and i is a standard interest rate of 5% (see R. Barlowe, *Land Resource Economics*, Prentice-Hall 1965). The results of our estimates in round figures are shown in Table 1.

TABLE 1. Marsh-Estuary Dollar Values as Determined
By Various Methods of Evaluation

Basis for Evaluation	Annual Return per acre	Income-Capitalization Value per acre (at interest rate 5%)
(1) Commercial & Sports Fisheries	\$ 100	\$ 2,000
(2) Aquaculture Potential		
(a) Moderate oyster culture level	630	12,600
(b) Intensive oyster raft culture	1,575	31,500
(3) Waste Treatment		
(a) Secondary	280	5,600
(b) Phosphorous removal ¹	950	19,000
(c) Adjusted tertiary ²	2,500	50,000
(4) Maximum Non-Competitive Summation of Values		
(a) 1 + 3c	2,600	52,000
(b) 2b + 3c	4,075	31,000
(5) Total Life-Support Value ³	4,100	82,000

¹Mean of values from two studies (see work paper referred to in footnotes at beginning of this article)

²Based on a SOD loading of 3.5 lb/day/acre a level that can be assimilated by an average estuary without appreciably degrading water quality. Many estuaries are now assimilating far more than this discharge into 5 mid-Atlantic estuaries averages 194 lb/day/acre. The cost of complete tertiary treatment of this amount for one year would be \$14,000 making the income-capitalized value of these natural systems more than \$250,000 for each and every acre.

³See test for calculation based on gross primary production.

" It is worth mentioning that, as high as the values herein determined for marsh acreage may seem to be, these values are based on availability of large areas of marsh and a moderate level of human population density and industrial development. All values will tend to increase with each increment of marsh lost to an alternative use, as well as through increases in population and industrial development. Less acreage in natural marsh doing the same or more work for man than is now done would indicate a higher value per acre to society, but it is apparent that sooner or later a limit would be reached, beyond which further reduction of marsh-estuary acreage may prove disastrous. This point has certainly been reached in the middle Atlantic states."

The National Estuarine Pollution Study of 1970 (Senate Document 91-58) revealed the extent to which the coastal zone has been impacted by industrial and unplanned residential development. Around the entire length of our coastline there is scarcely a mile which is not being used for several purposes: recreation, fishing, shipping lanes, etc. The coastal zone is a rich multiple use zone which must not be sacrificed to abuse by a single dominant use such as petroleum extraction.

Protection of wetland areas requires the proper placement and management of any construction activity and controls of nonpoint sources to prevent disturbing significantly the terrain and impairing the quality of the wetland area. Alteration in quantity or quality of the natural flow of water, which nourishes the ecosystem, should be minimized. The addition of harmful waste waters or nutrients should be kept below a level that will alter the natural, physical, chemical, or biological integrity of the wetland area and that will insure no significant increase in nuisance organisms through biostimulation.

BLM's planning and environmental assessments have never dealt adequately with the onshore impacts of offshore activity. Furthermore, BLM's statements have been critically deficient in their failure to assess the historical experience with the impact of onshore support facilities on the estuarine environment and the effects of secondary development (the socio-economic consequences) following on extensive OCS activity.

We believe the failure to discuss in detail the ramifications of these impacts has had serious practical consequences. The decision maker has not been given the full background. It is awareness of this ecological background which makes delay of any

major OCS oil activity until shoreside states have implemented an effective coastal zone management program such a compelling alternative. For instance, DES 90-74 (at Volume II, page 340) gives ten lines to the alternative of delaying drilling in frontier areas until development of land use and growth plans onshore have been developed. This same alternative of delay until land use planning mechanisms are in place is that recommended by the Senate Commerce Committee's National Oceans Policy Study Committee and a score of coastal state governors. I suspect that the reason for the covert dismissal of this alternative is the failure of BLM planners to adequately assess the value of the coastal zone. Their statements fail to report the recent studies which suggest that shoreside impacts of onshore development may result in the irreversible and irretrievable commitment of renewable wetland resources.

Both the Senate National Ocean Policy Study and the National Academy of Science pointed out that even generally the good CEQ study should have included a historical assessment of the land use impacts of offshore oil in Coastal Louisiana.

A synopsis of the Louisiana experience, published in part as "Oil and Trouble in the Louisiana Wetlands" in the July-August 1974 Sierra Club Bulletin states,

The history of Louisiana's coastal zone over the last generation is one of exploitation of nonrenewable resources and the deterioration of the natural environment on which renewable resources depend. The oil industry moved into the estuarine areas of the state in the mid-1930's, when drilling barges plied the inner waterways to drill for oil at the bottom of the many shallow lakes. In the late 1930's, canals were dredged to provide access to previously inaccessible marshes and bayous so that submersible drilling barges could be moved

into position. The first well out of sight of land was drilled in the Gulf of Mexico in 1937. Since then, the coastal zone has produced 90 percent of Louisiana's oil, with the majority of the producing wells located in swamp and marsh areas. These wells are serviced by dredged canals 65 to 75 feet deep. It has been estimated that for each mile of canal, eight acres of marshland have been destroyed. The oil is pumped to processing facilities through pipelines. In 1971, approximately 8,000 miles of oil pipeline stretched across the coastal marshes of Louisiana, and as new technology was developed even more inaccessible wetlands were explored.

The petroleum industry's impact on the economy of Louisiana has been significant, largely because the oil boom led to the secondary development of an associated petrochemical industry. The population of the state, which had remained static, shifted from the northern region to the coastal zone, where the population increased 51 percent between 1950 and 1970. The area of highest growth, of course, was the oil coast. From 1936 to 1971, approximately 80 percent of all new investments in manufacturing facilities in the state was in the coastal-zone parishes. More than five billion dollars was invested in the petrochemical industry in the Louisiana coastal zone during those years, when approximately 100 major petroleum and petrochemical plants were built.

Naturally, such rapid development caused great changes in the coastal marshes. A recent study entitled, *A Louisiana Wetlands Prospectus*, published by the Louisiana Advisory Commission on Coastal and Marine Resources, states that increasing acreages are being closed to oyster harvesting because of pollution, that oyster yields per acre have decreased tenfold in the last 30 years, that the shrimp catch per boat has decreased ninefold in the same period that saltwater continues to intrude farther inland, and that wetlands are being lost at a rate of 16.5 square miles a year. The prospectus declares. "It is clear that insufficient attention has been given to planning and managing conservation and growth in the Louisiana coastal-zone region. Growth and development have been foremost. Conservation and environmental impact considerations have not been adequate."

During recent years, pollution violations have been issued on the average of 100 a month to oil companies operating in the coastal marshes and offshore areas. Many observers believe that the chronic oil pollution resulting from these nickel-and-dime spills is a far more serious threat to the environment than the occasional spectacular blowout.

In the wetlands and coastal waters of Louisiana, a single structure or activity - whether it be an

oil well, a refinery, or a highway - will not by itself decisively affect the health of the environment, but the cumulative effect of such projects results in an irreversible environmental decline. No matter how rich a state's coastal area may be, there is a limit to the amount of environmental stress that it can withstand. A number of respected observers believe that Louisiana's coastal zone has reached that limit, that there is no longer an excuse for allowing the oil companies, agricultural drainage projects, urban developers, and the mining industries to work unimpeded in the coastal marshes.

Dr. Sherwood Gagliano of Louisiana State University's Center for Wetland Resources has warned that another 30 years of abuse at the present level will probably destroy the viability of the Mississippi Delta system, that if only half the projects and development schemes now on the drawing board were to be implemented in their proposed form the damage to the Delta would be irretrievable. Through the study of maps and photographs, Dr. Gagliano has established that the coast of Louisiana is no longer gaining new lands, as a delta coast should and as the Mississippi Delta has done for the past 4,000 years. Rather, it is now losing land at the rate of 16.5 square miles per year. In the past 30 years the Louisiana coast has lost almost 500 square miles.

Dr. Gagliano has further concluded that a major portion of the marsh destruction has resulted from the actions of the petroleum industry. Other contributing factors are canals, roads, flood control projects, and service facilities to service the secondary development of the oil-associated industries. The cumulative effect of onshore facilities for offshore drilling - the dredging and filling for sites, the use of the marshes as a dumping ground for waste - was led to the destruction of a large percentage of Louisiana's coastal wetlands. The introduction of a heavy industry such as offshore oil into the marshes presents a major crisis for the coastal zone.

In Louisiana, city and local governments, which once welcomed every increase in oil-company activity, now have reversed their position to the extent of bringing suit to enjoin the oil companies from further destroying the marshes. At public hearings, local officials are beginning to speak out for the protection of the renewable resources of the wetlands and to question the uncurbed dredging and pollution of the coastal zone during the past years.

Environmental Impact Statements on offshore oil lease sales drafted by BLM give, at best, a patchwork survey of coastal zone problems. A typical statement will give equal attention to many isolated technical details, but fail to give adequate emphasis to those features which are of special importance to the continued health of the ecosystem.

The coastal zone and outer continental shelf is an area which needs to be managed for multiple uses; not for the single dominant use of petroleum extraction. The Agency in the best position to perceive OCS problems and to deal with coastal zone planning is NOAA,

In his testimony of March 14, 1975, before this Committee, Dr. Robert M. White, Administrator of NOAA pointed out that NOAA's interest in outer continental shelf development, the protection of the environment, and the conservation of ocean resources goes far beyond the Coastal Zone Management Act. His review of NOAA's activities in coastal planning programs, ocean mapping, weather surveys, Sea Grant research and development programs reinforces our view that NOAA is the agency best fitted to be "lead agency" in the "Plan" for an environmentally sound development of our offshore oil and gas resources.

We believe that Section 21 is one of the most important strengthening amendments to the Outer Continental Shelf Lands Act. Some way must be found to raise the level of environmental assessment and planning for offshore drilling.

There are other excellent provisions of S.426 and S.586 which we endorse. We particularly support the provisions concerning Citizen's Suits. However, section 25 of S.426 should be

strengthened by adding language to the effect that the district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce the Act.

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TESTIMONY OF

DUDLEY W. DUDLEY

STATE REPRESENTATIVE FROM

NEW HAMPSHIRE

BEFORE THE

UNITED STATES SENATE COMMITTEES ON

INTERIOR AND INSULAR AFFAIRS

AND

COMMERCE

APRIL 9, 1975

WASHINGTON, D.C.

My name is Dudley Dudley. I am a member of the New Hampshire Legislature. Thank you for your invitation to testify here today. We need all the conscientious leadership we can get in the energy area, and I appreciate your efforts to carry out a responsible national policy on offshore oil.

Whatever you may hear from the Governor of New Hampshire, there are many in my state who are deeply worried about the heavy industrial impacts associated with offshore development. I want to impress on you all, that Governor Thomson does not speak for all New Hampshire people. A year ago, at Governor Thomson's invitation the late Mr. Aristotle Onassis proposed to build the world's largest oil refinery in Durham, New Hampshire. He also proposed a superport off one of our most precious natural resources, the Isles of Shoals. Durham townspeople voted 9 to 1 against the refinery. The following day the New Hampshire legislature voted 2 to 1 to support that vote - all in spite of a massive lobbying campaign by the Governor's office and an advertizing blitz by the lobbyists for Olympic Refineries. The size of the grassroots opposition to the Governor's proposal is significant - over 7,000 petition signatures protested the refinery and superport. Over 15 citizens groups organized to fight it.

New Hampshire has only 18 miles of coastline - the smallest in the country. It now holds the Portsmouth Naval Shipyard, Pease Air Force Base and ¹⁵the proposed site of the largest nuclear power plant in the country. We also have a large shoe industry, asphalt plants, electronic undersea cable plants and many others in the coastal region. These few miles also support major tourist and fishing industries which are critical to the state's economy. They accounted for 75 million dollars in income in 1974 and are growing at a rate of 8 to 10% annually. These industries are among the largest in the entire state. OCS development on Georges Bank, which the Interior Department would like to lease about a year from now, would impact heavily on our already active coast.

New Hampshire has financial problems as do all the other states, but we also

have a tradition of respect for our surroundings and the quality of life which is unique to New England. We value this tradition and so do the millions of people from other parts of the country who come to New Hampshire every summer to use our beaches and enjoy our mountains, who come in the fall to see our spectacular autumn colors, and who ski with us in the winter. These, too, are national public resources and we are happy to share them. We question the benefits of massive heavy industrial development, whether it be for energy or otherwise, which threatens to change our entire economic base, our landscape and our lives, as accelerated OCS development surely will.

We know the importance of energy production to the welfare of this nation, and we recognize that offshore oil development may be preferable to other, more environmentally hazardous ways of producing energy. However, we have no assurance that our Outer Continental Shelf leasing program is being administered properly.

Turning to the legislation now before you, I want to be recorded in support of S 426, S 586 and some of S 521, but I have three chief concerns:

1. Participation by the states
2. Access to information, and
3. Funding

First, as to participation, I know offshore development needs onshore support. What happens if:

- A. A state decides that the proposed lease sale or a portion of it would impose excessive economic, social or environmental burdens upon it? In such event, I think a Governor should be able to do more than request a delay in leasing, he should be able to object to the sale and have the substance of his objections debated in public hearings scheduled by the Secretary; or he should be able to request the Secretary to carry out studies on the substance of those objections to assess their validity, and to make specific findings and recommendations on each objection.

And what if:

B. The state finds that the Federal Government is going forward without cause for leasing founded on a coherent national policy which demonstrates the need for such leasing? Again, I think the state involved should be able to object and request the Secretary to proceed as I've said.

Second, as to access to information, I know offshore development needs onshore preparation and planning. The force of the development impact depends on how much oil there is out there - on the size of the mineral resource - and we have no way of knowing what that resource potential is under the present system. How can states be expected to make the siting, land use, air and water quality decisions which are necessary in planning, when we cannot know how many or even what kind of facilities will be necessary onshore? We've got to have the facts, and I strongly support the proposal for federal exploration, so the information on resources would be in the public domain. As an elected representative from a coastal state, I want to be sure that the information which would allow us to plan will be available for public scrutiny.

Third, as to funding, I know offshore development means onshore expenses borne by the states. I've read about Texas and Louisiana bearing 62.1 million dollars and 38 million respectively of the cost of offshore operations in the Gulf, without revenues to compensate them. I have a letter from our own Commissioner of the Department of Resources and Economic Development saying that he doesn't know what it will cost New Hampshire for OCS development, and he hasn't the money or the staff to find out.

We've just had one source of revenue in our state closed off by ^{our} ~~the~~ Supreme Court, and as much as I'd like to see those federal revenues come into New Hampshire I do not honestly believe that a no-strings-attached revenue sharing proposal (some as high as 37% of revenue) is a responsible position. But

we absolutely do need help to cope with the impacts which will result from OCS development: new and expanded hospitals, police and fire protection, schools and other public services. S586 clearly recognizes that need, and it makes supreme good sense to provide that funding through the Coastal Zone Management grant process, rather than by setting up another federal bureaucracy.

In closing, I cannot resist posing the question: With a population becoming increasingly conservation-minded, with a decreasing pattern of energy growth and with exciting breakthroughs in alternate sources of energy about to be made - can we risk irreversible ecological imbalance for the sake of energy self-sufficiency, particularly in oil, which is guaranteed to run out? Fishermen worked our New Hampshire waters before the Colonies were settled, even for centuries before Captain John Smith landed at the Isles of Shoals - and I want to believe they can do so long after you and I are gone. We just don't know the extent of threat to all life from tampering with the ocean environment and until we do know more about the effects of oil on the microscopic life that manufactures much of the world's oxygen and generates about 90% of the living material in the sea, I hope we'll proceed with development of the Outer Continental Shelf as slowly and cautiously as we can.

Again, I thank you for your responsive handling of these matters, and hope that your action on the OCS question will mark the beginning of a clearly thought-out well-planned, gradual leasing program which considers all the competing interests in the coastal zone, and will dispel our concerns about the many recent disclosures about alliances between big industry and big government.

Senator JOHNSTON. There goes our 5-minute bell, so I had better rush over. We are not ignoring you, Mr. Armstrong. We want to come back and catch your testimony.

[Recess.]

Senator ROTH [presiding]. The hearing will please come back to order.

Mr. Armstrong.

**STATEMENT OF BOB ARMSTRONG, STATE LANDS COMMISSIONER,
STATE OF TEXAS**

Mr. ARMSTRONG. I did not prepare a statement, Mr. Chairman, for a couple of reasons. One of them, it is my habit, and second, I have been here before and sometimes I think I can be of more help to you observing what goes on ahead of time and trying to relate some of our experience to what questions you have been addressing yourselves to.

Let me say, first of all, that with the exception of the Secretary of Interior, my responsibility is to manage in terms of oil and gas leasing environmental protection the second largest land area in the United States of America.

I have jurisdiction over the public lands of the State of Texas which were reserved to the State at the time we came into the Union. We have produced oil and gas from these lands, both onshore and off, with some success, we think, in terms of environmental consideration for some 24 years.

It was not until recent times that we began to address ourselves to the exact problems that I think you are coming to grips with when you talk about OCS development. In this context, let me say, also, that I bear the additional burden of having to be elected in order to do the job that I do.

So I perceive some of the problems you do, in terms of dealing with the public, as a statewide elected official. I am also president of the Western States Lands Commission Association which deals with many of the problems that we are talking about today in its meetings throughout the Western States.

And particularly those which have coastal boundaries. The Governor also appointed me to be coastal zone liaison under the Coastal Zone Management Act of 1972. So I am familiar with the workings of that program, and the attempts that you made in coming to grips with those problems that impacted on the coast.

Within this framework and context I would like to suggest some things that might be beneficial. The first one is that it strikes me that what you getting at, you want to do something, and you want to do something as rapidly as possible, but you want to be right.

This is the question that causes the problem, from what I have heard today. I would suggest to you that one of the things you might consider is that, within the framework of the coastal zone management program and its expansion, there may be some answer to some of the questions you have had for these reasons.

First of all, it is now operational, and has been since June. Most of the grants were made in June of last year. Secondly, these people

are charged with the responsibility of finding the very answers that these people are looking for, so that we do just one simple thing, and that is know where we are going. This is the thing that has perplexed us.

These people sometimes feel that Interior does not know where it is going. The statements they made arbitrarily this year to solve the energy crisis, that reads well, but what is its impact on the coastal States?

We had our first offshore lease sale by Interior off Texas this year. This comes as a surprise to some people. They think we have been producing offshore Texas for years. We have up to the first 10 miles, but for the first time this year we have had federal offshore lease activity.

It brought in \$400 million in bonuses. One of the things that disturbed us is the same kind of thing that disturbed the people in Florida, what was the impact, as far as the State of Texas was concerned?

We have done an input-output without the guesswork on economic impact alone of what we have to provide in order to stay in that operation offshore. Although we get to tax not one of those rigs, we get no money, as opposed to the 37½ percent of the onshore States.

We still feel that based on that economic input model it will cost us \$62 million a year for that offshore development to occur in terms of services that the State of Texas has to bear.

I do not share the feeling that general revenue, no strings attached, is a good thing. I think it should be earmarked so that we can ascertain and meet the demands placed on the coast directly, with at least part of this money.

I have not had a chance to look at 1,269 as thoroughly as I would like to. This may be a compromise and it maybe an answer.

One of the things you need to do is look at the leasing policies. We have tried to be very flexible about leasing problems. We have gone, in some instances, to royalty bidding. We have moved arbitrarily from one-sixth to one-fifth in terms of our bases.

People said they won't come to play, that's too much, they can't stand it. We felt the increasing prices would justify an increased royalty.

The next lease sale was the largest in the State of Texas.

Senator ROTII. Are there a lot of private royalties higher than a fifth?

Mr. ARMSTRONG. Many are higher than a fifth in royalty business. Our record is 96 percent. Now that's an exception but we will have a tract go for 76 percent. We had an offshore tract go for 42 percent.

There is no magic to one-sixth or a fifth as far as that goes. But you cannot really make that determination, unless you have some idea yourself about what it is that you are selling.

People have touched on that at some point today.

Senator ROTII. Does higher royalty bring about earlier shutdown?

Mr. ARMSTRONG. This is a problem. But this is also negotiable. Our lease is in effect so long as it continues to produce in paying quantity. It may well be that at the end of the term of this lease that

you do not think that that is a sufficient inducement to keep producing.

So maybe you talk about lowering the royalty arbitrarily at the end of the term to continue to produce it out. But I don't think it is sufficient justification to just say that somewhere out there you might quit early, do not get a piece of the action at an early stage, particularly when privates are getting 65 percent.

I would at least like to be flexible. You have to have knowledge to be flexible. You have to have some capability in terms of knowing what the surveys have shown, what the seismic work is.

I think some of the talk this morning in terms of explorations seemed to include government participation in actually pumping the well. But I think you can learn a lot about what you have, in terms of requiring when you give a seismic permit that the person who gleans the information from that permit then gives it back to the government that issued the permit.

The University of Texas which has 2.2 million acres of land that I also administer requires that this information be given back to them, but they keep it confidential.

It is a small enough operation that the confidentiality is never questioned, but at least they know in the people's hands what it is that is there. In the same measure, for people who are drilling for oil and gas, they do keep it confidential between companies.

There are other theories that perhaps you ought to go out and do your own work. I do not quarrel with this. But the main thing I am saying is, you ought to be better than just a simplistic—let's pay the high bonus and we will give you one-sixth if we find it.

Or, we will take a sixth if you find it. We know more than that now and should. I think these are the kinds of things that I hope we can get to.

Let me suggest one thing. I have fallen out of love with the environmental impact statement system. I think it is time for us to do better. It is a good stopgap. It came at a time when we needed it.

But at some point I think it is imperative that we come up with the capability, so that we can put the environmental decision in at the beginning. We have endeavored to do this by taking each tract before we lease it, and subjecting that tract to environmental review by the Bureau of Sports Fisheries, by Parks and Wildlife, by the Pine Island Seashore people whose refuge happens to be close by.

So we know going in and the companies know going in what they can expect in terms of drilling requirements. Sometimes we make them drill from the beach, and slant out under the wedge.

Sometimes we say they can't dredge. But the main thing is they know ahead of time. In this way we satisfy environmental requirements and at the same time we give the companies a fair shake, to know what they are getting into.

This may result in lesser revenues to us. But at this point, if Bill hadn't sued us, I hope he does propose that we are doing it right and that he is satisfied in his own mind that we know where we are going.

For these reasons I would suggest that you strongly consider that the coastal zone management program, because it is already under

way, and the states are addressing these problems, would be a satisfactory force to deal with the problems.

I would also have to observe that given the present state appropriations of that programs, it is woefully inadequate.

You are talking about \$361,000 for the entire State of Texas. How can you know where you are going in the course of a year with that kind of money, with the problems this involves?

Particularly when you look at the renewable resource capability, which in the case of tourism is \$2.1 billion and in the case of the shrimpery is \$85 million annually, renewable every year.

Yet our total allocation only comes to a total of \$361,000. I think we could do better if we had more, and we are prepared to match it. But I would stop with these random thoughts and see if you have any questions.

Senator ROTH. I think any further questions by other members of the panel or myself we will submit in writing. I want to thank all four of you for being here today, and I am sorry that we do not have more time to further pursue some of your testimony.

Thank you very much.

At this time we are going to call Mr. Ryan. I am pleased to have before the panel a fellow Delawarian, Mr. Theodore Ryan, who is president of the Building and Construction Trades Council of Delaware.

STATEMENT OF THEODORE RYAN, PRESIDENT, BUILDING AND CONSTRUCTION TRADES COUNCIL, STATE OF DELAWARE

Mr. RYAN. Thank you, Senator, and let me thank you for the opportunity to participate in this hearing dealing with offshore petroleum development.

We, in the Delaware building trades, enthusiastically support the concept of accelerated offshore leasing in the Outer Continental Shelf. The State of Delaware has an unemployment rate of close to 10½ percent, the highest it has been in the State of Delaware since the 1940's.

In the building trades we now have an unemployment rate in excess of 50 percent. If there is ever a time to try to make available jobs for the people of Delaware, it is now, not 2 or 3 years from now.

We have an energy crisis in the United States today, and I am probably correct in stating even more so in the eastern section of the United States. Because of the energy crisis, unemployment in the Delaware Valley is probably at the highest it has ever been.

Development of offshore oil-drilling facilities in the Atlantic Ocean off our Delaware shoreline would not immediately preclude what could be a national unemployment rate beyond 8 percent, but it will at least open the door to us in this area to avoid a catastrophic unemployment situation in the future.

It is my understanding that the Department of Commerce has stated that if the energy shortfall of 1 million to 2 million barrels per day continues for a year, the gross national product would be depressed by as much as \$48 billion, which in turn could cause the loss of millions of jobs, not only in the petrochemical industry, but also in every job where energy is the source of operations.

In the State of Delaware we are saddled with one of the most far-reaching personal income taxes in the country, while at the same time, we continue to discourage any substantial capital investment in our lands and the adjacent waters.

We all know that this substantial investment could create enough commerce to remove some of the tax burden from our citizens, and at the same time, give thousands of Delawarians those much-needed jobs.

We all know that unemployment has grown as a result of the energy crisis, and as long as we have the crisis, serious unemployment is going to stay with us. We need to continue to push for legislation that will allow exploratory drilling and the possible development of oil and gas off our Delaware coastline.

In 1973 I was invited by an organization called the Delaware Valley Council, to participate in a program called "Operation Understanding" where we visited and toured the offshore drilling platforms in the Gulf of Mexico.

We also toured one of Gulf Oil's newest refineries, and also met with representatives involved in proposing a Louisiana offshore oil port. I looked and listened for two important factors while there.

One was for the safety and environmental protection of the natural resources of the State of Louisiana, and, two, the economic impact on the State of Louisiana.

Let me say a few words on the issue that I am concerned about, and that is the economic impact that has hit the State of Louisiana as a result of the offshore facilities and the jobs it has created.

Louisiana is the largest gas-producing State, second largest oil-producing State, and third largest refining State in the Nation. The amount of people that were directly and indirectly employed during 1971, as a result of the existence of the offshore oil industry, was 114,000 people, and the total annual income was \$800 million.

It was estimated that each job in the petroleum and gas industry supports two service-related jobs in the New Orleans area, example, 700 people in helicopter service. State tax revenues from the oil and gas industry for 1972 totaled \$521 million.

More than 80 percent of the State contribution to public schools comes from the oil and gas severance tax collection. About 70 percent of the total conservation fund receipts are derived from oil and gas collections. The petroleum industry is a major consumer of products manufactured from all over the United States, 167,000 tons of steel are used annually in offshore facilities.

The United States as a whole looks toward the State of Louisiana for more than 25 percent of its domestic oil needs, and for one-third of its natural gas requirements. Petroleum supplies three-fourths of the Nation's energy requirements with coal, water, and nuclear energy providing the remainder.

36 percent of the fuel used in generating electricity comes from petroleum, and 99 percent of the Nation's transportation runs on petroleum energy. According to a recently published economic impact study of a proposed Louisiana offshore oil port, there would be 35,000 jobs created by 1980, resulting in \$480 million in increased earnings to Louisiana workers, and it was estimated that these impacts would double by 1985.

Therefore, it is evident that the Nation's economic health is greatly dependent on a prosperous Louisiana gas and oil industry. The State of Delaware and the Delaware Valley can be in the same economic position as the State of Louisiana and also take a spectacular part in the revitalization of this Nation's economy.

We in the Delaware building trades recommend that the petroleum industry, with its knowhow, and its readily available manpower and equipment, undertake the offshore drilling rather than the Federal Government. By allowing the Federal Government to do it, it would, in my opinion, cause more delays.

Because of lack of experience, what is needed is a serious and sincere effort to remove the barriers which have delayed development in the past, and impeded industry efforts to locate and produce the secure domestic petroleum this Nation so vitally needs.

Thank you.

Senator ROTH. Thank you, Mr. Ryan. I want to ask you one or two questions. I note with interest that both you, representing the building trades, and the environmentalists seem to be in agreement that it is better to have private industry do the exploration in lieu of the Government.

One question that I have. In talking about employment, do you have any estimates as to what it would mean in the various stages, in the early exploration stages. How much employment would be involved in that?

Mr. RYAN. At this time I could not give you a numerical figure, but there will be quite a bit of employment involved as a result of the pipe that would be placed together, manufactured, and shipped out to the platform for drilling, et cetera, which would mean quite a bit of manpower.

I understand, in fact I read in yesterday's paper in Delaware that a steel company in the lower part of the State of Delaware is now expecting to grow a little larger as a result of offshore oil drilling.

Senator ROTH. Would you agree with me that in proceeding it is important that we make certain adequate environmental studies are made, and we move in such a manner as to protect our coastal areas?

Mr. RYAN. Yes. I think this is probably the most important thing. The only thing I am interested in today is that there is not any delays as far as getting something going so that we can create jobs for our people.

As far as the environmental end of it, we have been in this field, I am not saying the State of Delaware, but there has been exploratory drilling going on in the United States for the past 22 years or better.

Each year we have improved on our environmental aspect.

Senator ROTH. So you think we ought to move ahead as fast as we can on environmental impact so that we can move on the basis of these findings. In other words, you are trying to avoid unnecessary delays.

Mr. RYAN. Yes.

Senator ROTH. I will do the same with you as I did with the others. If there are any further questions, I will submit them in writing, and I would appreciate it if you would give us an answer.

Again, you have been most helpful, Mr. Ryan.

Mr. RYAN. Thank you.

Senator ROTH. I apologize for going out of order here. But there was a train to be caught. At this time I would like to ask Mr. Hughes, the Assistant Comptroller General of the United States. Mr. Hughes, it is permissible, under this committee, to have staff hold the hearings.

I regret, because of another commitment, that I am required to leave. This does not mean that the committee is not very much interested in your testimony, and I do appreciate your coming here.

Mr. HUGHES. Thank you, Mr. Chairman.

**STATEMENT OF PHILIP HUGHES, ASSISTANT COMPTROLLER
GENERAL OF THE UNITED STATES**

Mr. HUGHES. We appreciate the opportunity to appear before these committees today to discuss the need for improved policies and procedures for the rational exploration and development of our Outer Continental Shelf fossil-fuel resources.

A number of legislative proposals under consideration here would also seek to insure the protection of, or orderly development of, our coastal zones, in part by opening the planning and management process to greater public participation.

The bills specifically under consideration are enumerated in my statement, and I will not read them. It is timely to consider these legislative proposals now.

Explosive growth and development could be the outcome if there is significant production of oil and gas from the so-called frontier areas of the OCS.

Until recently, little consideration had been given to the impacts of onshore commercial and industrial developments resulting from the production of OCS areas.

In this respect the situation is quite different from that which has occurred with the development of oil and gas resources in the Gulf of Mexico.

Development there has grown gradually over a period of more than 20 years. It has been viewed, and has been accommodated by the residents of the region, as an extension of an industrial development already in the area. The new areas now under consideration, the Atlantic, the Gulf of Alaska, and the southern Pacific OCS areas, have no such history.

The tensions that are generated stem from the inevitable conflicts over proposals which would change the character and lifestyle of a region to satisfy a national goal, increased energy supply.

Resolving these conflicts between local and national purposes will require a combination of individual and group accommodations which can be facilitated by the right kind of institutional mechanisms.

In some cases we may have suitable mechanisms. But in others we clearly do not. The Outer Continental Shelf Lands Act of 1953, which created the system now in use for leasing and developing our OCS resources, has never been amended.

Experience with its operation indicates that consideration must be given to improving leasing and operating practices. Whether such

improvements require legislative remedy, or just more aggressive and responsible administrative management, is and rightly should be one subject of these hearings.

In the remainder of this testimony, we will share with you some of the results of recent GAO efforts to evaluate existing programs in this area. In the light of our evaluations, we will comment on legislative proposals you are considering.

As you know, Mr. Chairman, the GAO has been deeply involved in reviewing a number of issues concerning offshore development as part of a broader investigation of federal leasing policies and practices for oil, gas and coal.

The results of these efforts will be a series of reports to the Congress. The first of the series, entitled "Outlook of Federal Goals to Accelerate Leasing of Oil and Gas Resources on the Outer Continental Shelf," was issued March 19, 1975.

We are submitting a copy of that report for inclusion in the record.

[The report is printed in appendix I, p. 1232.]

Mr. HUGHES. The second of the series deals with the processes by which we decide where to lease on the Outer Continental Shelf and at what dollar value. The report should be issued shortly and we will make it available to the Committee as quickly as possible.

These efforts, along with other related GAO work in the energy area, was designed to help illuminate both the issues and opportunities associated with implementation of a national energy policy.

In our March 19, 1975 report to the Congress we focused on the circumstances under which Interior's accelerated "10 million acre" leasing goal was developed, its relationship to the Project Independence effort, and constraints which can be expected to hinder accomplishing such an accelerated leasing program.

Throughout most of 1974 the Interior Department vigorously supported a stated goal of leasing 10 million acres of OCS lands in 1975. Several frontier OCS areas were potentially targeted for lease as part of that plan.

In our judgment, the far-reaching implications of such a leasing goal, both with respect to the direction of future energy resource development and potential environmental consequences, made it one of the most critical policy decisions in the 20-year history of Federal OCS leasing.

Yet we found that the goal was hastily conceived by Interior policy officials under pressures exerted by the energy crisis without adequate data or adequate consideration of several major factors, and despite opposition from Interior's program personnel.

Interior officials now say that Interior no longer has a 10 million acre leasing goal. They state that emphasis is on production and opening up frontier areas as quickly as possible by proceeding expeditiously with the preparatory steps for six proposed lease offers in 1975.

What concerns us most with this change, Mr. Chairman, is that Interior has not shed any light on what the magnitude of the leasing program might be.

No new acreage goals were announced and the rationale for holding six sales in 1957 rather than some other number remains a mystery. We do not see how it is possible to conduct a rational leasing program without setting reasonable goals of where to come, when to lease, how much to lease, with some preliminary estimates of how much oil and gas to expect from development of the leases.

Without clear guidance as to the relationship of any OCS leasing program to national goals and objectives, we do not see how Government or industry can effectively plan for OCS development.

Accordingly, our report recommends that the Secretary of the Interior clearly define the leasing goals and how they relate to overall national energy goals and plans.

The estimates contained in the Project Independence study issued by the Federal Energy Administration in November 1974, of increased domestic oil production expected to come from accelerated OCS leasing were not related to Interior's goal of leasing 10 million acres in 1975 and subsequent years, or to any other acreage leasing goal.

The bases used by Interior and the Federal Energy Administration to estimate 1985 oil production and the resultant estimates differed significantly. Interior's original estimate in January 1974, on which the accelerated program was based indicated that by leasing 50 million acres over a five-year period, oil production from the OCS could be increased to 7 billion barrels a year by 1985, as compared to nearly 400 million barrels produced in 1974.

The Project Independence study estimated production in 1985 of 1.5 billion barrels of crude oil from the OCS assuming accelerated development.

The Project Independence estimates were developed by projecting possible levels of oil production based on the relationship between exploratory footage drilled and oil discovered.

Target drilling levels were established and it was assumed that the acreage needed to meet the targeted drilling levels would be leased. Our rough calculations indicated that to meet the production estimates contained in the Project Independence study, anywhere from 15 to 28 million acres would have to be leased and drilled by 1985.

The total acreage leased likely would be higher because of the time lag which generally exists between leasing and exploration. The Project Independence estimates allowed for only a 1-year time lag between exploratory drilling and production as compared to industry estimates of 3 to 8 years oil in the Atlantic.

As an example, if the time lag was from 3 to 8 years oil production in the Atlantic would be reduced from 53 to 165 million barrels below the estimated production in 1985 of 179 million barrels indicated by the Project Independence study.

The divergence in estimates of expected production from accelerated development of OCS areas and the sensitivity of such estimates to changes in certain basic assumptions clearly indicates the need for better data on which to base Federal leasing decisions.

The question of data availability, what data should be available, to whom, and how soon after collection, is so recurrent in dealing

with energy problems as to be chronic. In testifying before the Senate Committee on Interior and Insular Affairs in February 1974, on a report on energy data done at the request of that committee chairman, I stated in our general view that the burden of proof should be on those who argue that energy-related information is proprietary and should be withheld from the public.

It seems to me this rule is particularly appropriate when the information concerns the public lands. With particular regard to data collected in the process of exploring or leasing the OCS, let me suggest some general rules which we believe appropriate in any legislation dealing with this question.

One, a clear distinction should be made between raw data and interpreted data. Two, data, both raw and interpreted, produced directly by the Government should be made available to the public.

Three, data, both raw and interpreted, produced through wholly Federally financed activities should be made available to the public.

Four, data, both raw and interpreted, gathered by private parties, under exploration permit, should be made available to the Government. The raw data should be made available to the public at large at a time certain, determined by the Secretary of the Interior, which would not be detrimental to the competitive interests of the permittee.

Five, data both raw and interpreted, gathered by private parties under a Federal lease should be made available to the Government. The raw data should be made available to the public at large at a time certain, determined by the Secretary of the Interior, which would not be detrimental to the competitive interests of the lessee.

With these general guidelines in mind, let me now discuss the tentative results of the second study we are completing regarding Interior's pre-lease evaluation program.

Mr. HARVEY [presiding]. May I interrupt you there. We have heard testimony before the committee on the question of data availability, that it is very hard to distinguish raw and interpreted data. That other than just the actual seismic records all data have some interpretation built into it.

Do you think it is a problem?

Mr. HUGHES. I can perceive some problem there, counsel. It seems to me the approach, though, rather than to abandon the availability of the data, the approach should be to establish in some person's hands, perhaps the Secretary of Interior's, responsibility to regulate and define questions of this sort.

It seems to me that should produce a workable result.

Mr. HARVEY. The other problem that has been mentioned to us with respect to making data available to the Government but not the public is the argument that, in effect, the executive branch is a sieve, and if in fact the data was made available to the Government, that they could come into the hands of some members of the public.

I think particularly what industry is concerned about is that one company's data will come into the hands some way or another of another company. In GAO's oversight of GS and BLM or any of the other agencies that may have that data, have you found that there is an inclination for data to leak out?

Mr. HUGHES. I have no specific familiarity with it. Some of the gentlemen here at the table do. I am not aware of any such leaks. Before dealing with this specific question, I think as a general matter, there are substantial quantities of data collected by Government agencies on a confidential basis, without question by industry.

The Census collects it, BLS collects it, and it is held confidentially, as far as I know, without any leakage whatsoever.

Mr. Hirschhorn might have a comment on this.

Mr. HIRSCHHORN. We have not run into any of those situations in the course of our audits. Also, there is a penalty provision that if it is released and if this was adhered to I think there should not be any problem of that nature, because the company would then have recourse, in case it were leaked.

Mr. HARVEY. Is there a practical problem with an employee of the Government who has access to the data, leaving the Government and going to work for a given segment of industry and then revealing the data?

Mr. HUGHES. I would like Mr. Canfield to comment also. He has worked in the Department of Interior in these areas, but the practical problems of that sort I think are fairly common conflict of interest problems, for which there are penalties and remedies.

Certainly those remedies should apply in this sort of situation. It is also possible, it seems to me, to establish special safeguards with respect to this kind of information, if, in the wisdom of the committee or the Congress, such safeguards are necessary.

They could relate, for example, to exempting the information from Freedom of Information Act, if there is any question about it, and so on. Mr. Canfield, do you have any comments?

Mr. CANFIELD. I generally support what you have just heard. As a matter of fact, it has been my experience, when I was in the Department of the Interior, that the difficulty of getting the information from one agency of the Department of the Interior into the hands of another agency with responsibility for actually managing the leasing process was next to impossible.

It was almost impossible to move it from one room to another, let alone to move it out of the Government and into a private party's hands.

I know of no instances in which the data which has been held confidential has been released to other private parties.

Mr. HARVEY. One other question and I will let you go ahead. With respect to the Government collecting a lot of data which they already do and they need more, to what extent does the Congress need through appropriations or otherwise to beef up the capability of the Government to work with and use the data?

There are those who say, for example, that the Geological Survey today has an awful lot of data, but they just do not have the money and manpower to adequately use what they've got.

Mr. HUGHES. It seems to me, Mr. Harvey, there are a couple of kinds of problems, two or three. One problem is the privacy problem, and what public access should be. We have made some suggestions here to deal with that.

A second kind of difficulty is authorization for the Government to perform certain functions, exploratory drilling for example. We will come to some suggestions with respect to that.

Yet a third problem is the one you suggest, funding. Funding both to obtain the raw data via the drilling process or seismic exploration or whatever is the appropriate way, and funds as well to analyze that data.

It is my understanding that there is both an authorization and a funding problem with respect to data collection and analysis. And that the Congress should deal with those problems.

Obviously, one is met through the authorization process by legislation such as you have here, and the other through the appropriation process.

Mr. HARVEY. Thank you. Go ahead.

Mr. HUGHES. I was about to discuss the results of the second study which we are in the process of completing. Actually the Department of the Interior has it for review and comment.

This study deals with Interior's prelease evaluation program. The study focuses on the adequacy of the Federal Government's program for deciding where to lease potential oil and gas resources, and at what dollar value.

In summary terms, the principal problem which the Government faces in its tract selection and valuation program is that it has neither enough resource data nor the capability to evaluate the data it has.

Interior's proposal to lease millions of acres more of OCS lands has compounded the problem by necessitating further abbreviation of the valuation process to meet workload demand.

In this situation, the Government is not in a position to reasonably insure the integrity of the valuation system. Under the present leasing system, we believe the Federal Government is frequently committed to development before it has sufficient information to make intelligent choices.

Authorizing the Secretary of the Interior to conduct a Government-financed exploration program, on a selective basis, will result in more informed resource development decisionmaking.

The kinds of data resulting from such a program are precisely those needed to appraise the worth of prospective leases.

This is especially important in the present situation where the pressure is toward early development. As more and more acreage is offered the conditions necessary to produce a truly competitive market tend to disappear.

It becomes more and more difficult to rely upon competitive forces to insure protection of the public interest. Better resource data will assist in better approximations of fair market price and help to assure that the public receives a fair payment for its resources.

Mr. HARVEY. May I interrupt you again? You mentioned that the Government does not have enough of the kind of data needed to appraise the worth of the leases.

The Secretary of Interior testified to us that the Government actually, in fact, had more data than any single prospective bidder. That, in effect, it had all the data from all the existing lessees and all the geophysical work and so on, where each individual company

obviously had only that data presumably that it was involved in collecting.

Is the problem that the Government does not have the capability—I gather that is part of it in your view. But when you say the Government needs more data, what kind would it be getting? Is this data that industry already has that the Government does not have?

Mr. HUGHES. The data that the Government gets from industry in many instances is obviously after the fact. The lease has taken place, and the results of the lease, the results of drilling on the lease then become available.

That doubtless is useful information for the Government to have. From a timing standpoint, however, it would be useful, we think, more than useful, essential, as our energy problems mount, to have information prior to the leasing process, which would give the Government some clues about where it should lease, what the value of the lease might be, and so on.

Mr. HARVEY. Do you think the industry now, under the present system, has more data before those decisions are made than the Government has?

Or are both parties involved in a guessing game?

Mr. HUGHES. Certainly none of the—there remain questions of judgment, guessing questions. In specific situations as we view the process, industry does have more data than the Government has before the leasing process takes place.

Mr. HARVEY. Go ahead.

Mr. HUGHES. I might say that we do not contemplate the replacement of industry exploration by Government, but rather an effort to move further up the spectrum of exploration and better equip the Government to manage its own public properties.

Mr. HARVEY. Do you have any estimates of what magnitude of program you are talking about? Either in terms of dollars or terms of type of activity.

Mr. HUGHES. I don't, Mr. Harvey. As far as I know, we have not attempted to gage the size of the program. It seems to me that there is such an apparent void here, with respect to preleased knowledge, that to embark on a fairly modest program could hardly be a mistake, and the cost-benefit comparison of that would seem to me to be extremely favorable.

Mr. HARVEY. How modest is modest? A \$100 million a year? A \$1 billion a year? We have had numbers thrown at us that range in orders of magnitude.

Mr. HUGHES. It is certainly not the second, in my judgment. I really don't know. We could do a little thinking and caucusing and endeavor to come up with some numbers.

Mr. HARVEY. That would be very helpful, if the committee had some idea of your thought of what you are talking about, not just in dollars, but in terms of x number of drilled holes that would cost so much. Those kinds of assumptions.

Mr. HUGHES. We will do what we can, Mr. Harvey. We also want to emphasize that we are not talking about necessarily a Government personnel-managed program. As we see it the Government should have the control of the information and of the drilling process, the

exploratory process, and it might well work through the same facilities, the same contractors, as are now doing the exploration for the oil industry.

The development of OCS gas and oil is an integral part of an overall strategy for balancing U.S. energy supply and demand. The extent of this resource base is a major determinant in setting policies to achieve the balance.

Before we make irrevocable development decisions, we used to do as much exploratory work as we can so that we will know as much as possible about the extent of our resource base.

We recognize that many factors in the tract selection and valuation process cannot be quantified with certainty, but we believe that the Federal Government could do much to improve the process.

Some of the improvements we are proposing could also be expected to result in more timely resource development and better use of scarce industrial resources. We are proposing that the Secretary of the Interior, (1) undertake a government-financed geophysical and geological exploration program, which would include selective test drilling, stratigraphic, for each OCS area prior to leasing.

Data gathered through the program should be available to the public. This proposal is very much in line with the thrust of legislation you are considering.

Mr. HARVEY. You are only talking about stratigraphic drilling. You are not talking about real exploratory drilling?

Mr. HUGHES. We are talking essentially about stratigraphic drilling.

Mr. HARVEY. Stratigraphic, onstructure or off structure?

Mr. CANFIELD. We are not talking about drilling to production. We are not talking, as the gentleman said earlier, about punching a well. We are talking about drilling essentially—it depends on where you are, whether you are off structure or onstructure.

In the Atlantic there will not be many cold structures. It is a different kind of arrangement there.

Mr. HARVEY. The Interior Department, I understand, is considering drilling stratigraphic wells in limited quantity—six in the mid-Atlantic. They are considering drilling some of those onstructure as compared to in the past, where they have intentionally gone off structure.

Do you think it matters whether they go on or off?

Mr. CANFIELD. They are onstructure. We are not talking to drilling to 8,000 feet and discovering oil. That is a distinction in our proposal, and the proposal in one of the bills.

We might go onstructure and drill to 1,000 feet.

Mr. HARVEY. Go ahead.

Mr. HUGHES. The emphasis would be on exploratory drilling, Mr. Harvey, and not on getting oil. The objective is to gather more information than the Government has to enable it to lease more wisely.

(2) The Government should schedule lease offers at a frequency which will permit Interior's Geological Survey to adequately consider geotechnical data in its OCS valuation program.

(3) Improve the economic analysis used in the valuation program by establishing procedures requiring periodic assessment and adjustment of economically sensitive factors on the basis of the most current information available.

(4) Establish a test program to evaluate, offer, and lease geological structures as opposed to the present practice of leasing tracts. The program should require unitization of exploration and development activities.

Interior officials appear to have some questions as to whether they have adequate legal authority to lease entire structures, and we are studying this issue further.

With regard to point 4, the Geological Survey has indicated that this structure valuation concept would mitigate problems of allocating potential reserves to a given tract within a structure.

Not only would this involve less work for geoscientists, but it may be possible to establish the overall value of the structure more realistically than the values for any given tract in the structure.

Current evidence suggests that structure leasing along with pre-lease arrangements for unified operating control could encourage more rapid and efficient development of frontier OCS areas.

Unitization also could minimize unnecessary duplication of effort and commitment of scarce manpower, drilling rigs and equipment. As noted earlier, industrial resources could be substantially constrained by any large-scale program for accelerating offshore oil and gas development.

We reported on efforts to control oil spills on the OCS to the Conservation and Natural Resources Subcommittee of the House Committee on Government Operations in June 1973, and February 1974.

We stated that improved inspection and regulation by the Department of the Interior could reduce the possibility of oil spills, and we made recommendations to the Secretary along these lines.

We recommended that the Department could improve supervision of these operations by, (1) strengthening enforcement actions against operators violating Geological Survey regulations.

(2) Establishing a realistic policy on the frequency of inspections of various types of offshore operations, considering the resources available and the risks of oil spills, and (3) regulating certain operations which were not regulated at the time of our review, but which potentially could cause pollution.

The Department has advised us that it has implemented our recommendations, except for the issuance of regulatory orders, which are under preparation.

We are continuing to do work in the OCS area and in the near future we plan to issue a report on Interior's environmental studies program. This year we also expect to issue reports comparing Federal OCS leasing policies and practices and onshore oil, gas, and coal arrangements.

We believe this perspective will be particularly enlightening, because it permits rather direct comparison of separately developed Federal policies, procedures, and legislation for fossil fuels.

In the committee's letter requesting our testimony, nine bills were cited. Four, S. 426, S. 521, S. 586 and S. 740, were highlighted as those principally to be discussed at these hearings.

These bills are lengthy, complex and in many ways duplicative. Rather than comment in detail on each, we will address our comments to key points in S. 426 and S. 521. These two bills are identical in many parts.

In addressing my comments to S. 426, they apply equally to the identical sections in S. 521 except where noted. If the committee has other questions on these or other bills, we will try to respond to them.

Generally speaking, we believe S. 426 would improve the Government's ability to deal with the problems the Nation faces in OCS exploration and development, and we endorse its overall thrust.

Some specific provisions of that bill, however, cause us concern. Section 202A provides for alternative methods of bidding for OCS leases, including bidding on work programs. We believe the Secretary of the Interior would have great difficulty in objectively choosing the winner from among submitted work programs.

We believe the choice would be judgmental, in any event.

In addition, section 303 provides for a report by the Secretary, including an assessment of several bidding systems. We believe it would be preferable to await the result of this report before enlarging administrative discretion to use any of the several untried lease-bidding systems that are outlined in section 202A.

Section 205 provides for development plans to be approved by the Secretary. While we do not object to such a requirement and understand its usefulness for environmental planning and monitoring of development activity, we would point out that the Department could have encouraged development in the past by strictly holding lessees accountable in the fifth year of the lease to be in production or forfeit the lease as existing law permits.

Section 202B would continue the existing power of the Secretary to extend the primary term of the lease without production for "as long thereafter as * * * drilling or well reworking operations * * * are conducted thereon." In the past, extensions have been routinely granted under such authority.

Section 209 would add new sections to the OCS Lands Act. In particular, new section 20 provides that the Secretary will lease the tracts on which oil and gas in commercial quantities have been found under procedures outlined in new section 19.

While we believe it is important to authorize the Secretary to conduct or contract for direct governmental exploratory work, including stratigraphic drilling, we question the necessity of extending that authority to proving the presence of commercial oil and gas.

We are undertaking an analysis of the pros and cons of extending the authority that far and, as soon as possible, will inform the committee of the results of our efforts. In this connection, section 19B of S. 521 contains language compatible with our concerns.

If that language were enacted, we would suggest also authorizing direct governmental conduct of necessary exploratory work as well.

There appears to be a significant distinction between S. 426 and S. 521 regarding when the de facto effect of the new requirements would take place.

S. 426 provides, in section 29, for a moratorium on further leasing in frontier areas pending implementation of the new Federal exploration program outlined in section 19. S. 521, on the other hand, would not restrict leasing in those areas.

It states that until

It states that until after the leasing program has been approved by the Secretary or after January 1, 1978, whichever comes first, no leases under this Act may be issued unless they are for areas included in the approved leasing program. Section 18G.

We believe that the planning and evaluation efforts mandated under either of these proposals should be carried out before leasing in those areas and therefore favor the provisions of S. 426 over those in S. 521.

The attachment to this testimony contains modifications we would suggest to provisions in S. 426 and S. 521 requiring some action by the Comptroller General.

We would appreciate your consideration of our suggested changes. That concludes my prepared statement. We would be pleased to answer any questions.

[The attachment referred to follows:]

GAO COMMENTS ON S. 426 AND S. 521 PROVISIONS WHICH REQUIRE ACTION BY
THE COMPTROLLER GENERAL

Two provisions in S. 426 would assign certain functions to the Comptroller General. These are sections 302 providing for a review of shut-in wells and wells flaring natural gas, and section 303 requiring a report on competitive bidding systems. S. 521 has a similar requirement on shut-in and flaring wells, but not on bidding systems.

Both bills would require the Comptroller General to review a report which the Secretary is to submit to this Office and to the Congress, listing all shut-in oil and gas wells and wells flaring natural gas on leases issued under the OCS Lands Act. The Comptroller General would be required to evaluate the reasons for allowing the wells to be shut-in or to flare natural gas and to submit his findings and recommendations to the Congress.

The requirement as written could involve our Office in a function requiring special expertise in OCS drilling technology. We believe the Department of the Interior as the agency administering the leases has the proper know-how and should have the primary responsibility. Accordingly, we recommend that the proposed legislation be changed to require the Comptroller General to evaluate the methodology and support for the Secretary's report and report thereon to the Congress.

Section 303 of S. 426 would require the Secretary, in consultation with the Comptroller General, to prepare a report with recommendations for achieving an equitable system of lease sales, including an assessment of various bidding systems. We believe that the assessment of bidding systems and recommendations thereon to the Congress should be the initial responsibility of the executive branch and that the role of our Office should be to review the Secretary's report after it has been submitted rather than participating in its preparation. S. 521 (on page 29) also would require a study by Interior of various leasing systems for the purpose of promoting competition and maximizing production and revenues from leasing, but would not call for participation of the Comptroller General.

Further, both S. 426 and S. 521 would require the Comptroller General to make an annual audit of the Offshore Oil Pollution Settlements Fund which

would be established under the legislation in connection with the required strict liability for oil spills. To provide desirable flexibility in the work of our Office, the annual audit requirement should be changed to requiring audits "at least once in every three years" in conformity with language recently enacted in Public Law 93-604 which amended the audit provisions of the Government Corporation Control Act.

Mr. HARVEY. Let me ask you some questions about this geologic structure leasing concept as one that has been suggested by some others and is intriguing a lot of people. When you talk about that, establishing a test program to lease by geologic structures, you say you are suggesting it to the Secretary of Interior. How would he do that under the existing law?

Mr. HUGHES. As I understand it, Mr. Harvey, there is a question in Interior as to whether he has the authority to do it under existing law. We are not certain of the answer to that.

Mr. HARVEY. He is limited in each tract to 5,760 acres by law.

Mr. HUGHES. Mr. Boland.

Mr. BOLAND. I think the legal question we are faced with is the acreage limitation as you mentioned, the 5,760. This is limited by tract. The tract may not exceed 5,760 acres. But there is no restriction as we see it based on the information we now have for an operator obtaining multiple tracts.

Mr. HARVEY. I think you are correct; that's right.

Mr. BOLAND. If you would divide up the geological structure in such a way that a group of businesses could participate on a unitized basis, the acreage limitation now included in the law would not pose a problem. Based on the information we have now, we think this could be worked out. But again, the Department of the Interior and solicitors have suggested that maybe there is a legal limitation.

Mr. HARVEY. Correct me if I am wrong; let's say a structure took 20 leases, a 100,000-acre structure. The Government could obviously split that structure into 20 leasing tracts. As I understand the law, we would have to sell each one of them individually, there would be an individual bidding on each tract. They could, I gather, propose terms and conditions that would tell the lessees that they would have to form a unified development program after they got the leases.

Mr. BOLAND. Yes; that is why we are suggesting that the unitization would be set up prior to development, actually prior as a condition of leasing. This has a real benefit we see because of the efficiency in the drilling operation so you don't have multiple drillings looking for the same oil, covering the same tracts and structures.

Mr. CANFIELD. If I might add to the comment, when I was in charge of the leasing activity in the Bureau of Land Management, there were situations in which geological structures clearly seated more than one tract. You don't normally get one tract, you get two or three. There have been situations in which it was clear that there was a total value established of presale evaluation number of dollars for a structure, x number of dollars and a company would come in and bid on two tracts, tract A and tract B. He may bid 20 million on A and 1 million on B, clearly indicating that he knew that the structure covered both tracts and he was putting most of his money on the one tract.

In several instances, I believe leases—offers have been accepted which would allow an individual company to develop the entire structure rather than accepting a higher bid offer by a second company on the second half of the structure. Because in that instance, that structure would not be economic to stand on its own merit. That has happened in the past and the question is whether or not Interior Department would do structural evaluation and then accept less than the highest bid on other tracts in order to lease on a structure basis.

Mr. HARVEY. They cannot accept less legally.

Mr. CANFIELD. In the past, that situation has occurred.

Mr. HIRSCHHORN. This is the legal question that we are looking into, Mr. Harvey. We are exploring that further in the study—

Mr. HARVEY. One problem that this committee has, the committee has been told for more than a year now, or almost a year, don't worry about changing the law, because we will do all the good things you want us to do administratively and things that a year ago they said were illegal, they now think are legal and apparently they are now thinking that even more things are legal that they thought were illegal. I am concerned, quite frankly, and advised the committee members that they are running into in some instances a situation similar to the Alaska pipeline situation where they proposed to issue a right-of-way that was in excess of their authority. Really, they need to get the law changed to avoid the kind of delay that I can see coming with litigation.

Has GAO looked at all into the alternatives of changing the law to permit the leasing of a structure? I understand the individual structures may be somewhat larger in the Atlantic than they have been in the gulf. One suggestion has been that the leasing be done of an entire structure. That was outlined by the Secretary. People would be allowed to bid on an undivided share of the particular structure and that group, which did not know in advance that it was going to be working together but after they got all through were working together, would then be in effect a joint venture that would develop the entire structure. Have you looked at that at all?

Mr. HUGHES. As far as I know, Mr. Harvey, we have not looked at any specific legislative approach. On the general question of, trust us—

It seems to me a legislative approach to that problem would have some real advantages. Among others, it would assure that it happened. As a guy who spent a fair amount of time in the executive branch, I think the trust us approach is not always the ideal one from the standpoint of national policy. I think it's important that the committee and the Congress set forth some ground rules here in this area, in the exploration business and so on.

Mr. HARVEY. Thank you very much. We are getting on in time and I think we'd better get on to the next witness. Thank you again very much. We look forward to getting that analysis of the exploration concept.

Our next witness is Mr. Alan Kaufman, Conservation Law Foundation.

**STATEMENT OF ALAN KAUFMAN, CONSERVATION LAW
FOUNDATION**

Mr. KAUFMAN. I don't know the protocol of addressing staff counsel, but in any case, by preordained discussion, it was decided that I would segregate my testimony somewhat from the environmental panel even though the title of the organization for which I work might indicate otherwise. The reason for this is that at the Conservation Law Foundation which is in Boston, I am directing a project known as the land use and coastal zone project. In that capacity, I have been working as a consultant to most of the State governments in New England in the development of their coastal zone programs under the Federal Act.

Consequently, I would immediately exclude myself as an expert on some of the kinds of questions being considered such as whether leasing should be segregated into exploration and development. I think it would be much more appropriate to spend a limited amount of time addressing some of the details that these particular proposals follow in trying to integrate planning by the States for the onshore impacts.

First of all, in response to some of the lines of questioning of Senator Johnston earlier this afternoon, I would like to acknowledge that to my understanding, very few if any environmental groups—I really don't know of any groups who are really saying "gee, we should not drill offshore."

The second thing is the reason they are saying that is because they also agree that, even though we would not want to dump some oil in the ocean to see if the fish die, the main concern has been with the onshore impacts. My experience in working with the States in coastal-zone management raises some question about the present structure of the bill.

What I would like to do is organize in response to the kinds of questions raised in the letter indicting testimony. The first two questions are really the same which is how can we improve coordination of OCS planning and development with the States? The second is how do we increase the role of the States in that decisionmaking?

The first thing that I would say from my exposure to the way the States are proceeding under the Coastal Zone Management Act is one, giving them much more money. Secondly, try to create some kind of leverage position which will force them to accelerate their planning. It would be appropriate ordinarily for someone to come in and say, give the States more money and then they will be ready to absorb all these impacts and things will move smoothly. But I would like to offer some testimony on the way the Coastal Zone Management Act is being implemented in New England.

First of all, there has been a complete shift of Governors in most of the States and the Governors' first prudent action at this time would be to freeze State hiring, announce there will be no increase in taxes and cut their budget. The consequence of that under something like the Coastal Zone Management Act of 1972—

Mr. HARVEY. The phenomenon is not limited to New England.

Mr. KAUFMAN. Maybe so. The immediate consequence of that is to inhibit the ability of these States to meet matching funds for the modest grants that they are getting already. Most States in New England receive no more than \$210,000 and some as low as \$60,000.

The addition—these programmed amounts and I would also note that the entire amount spent each year by NOAA for planning under coastal zone management is the same as we are spending on the bicentennial plan. I think that even though we are all in favor of the bicentennial, that we are planning for a longer period of time right now. Even with the \$9 million a year spent, that was directed to the States really not dealing with impacts of offshore drilling on their environments.

Consequently, I think, first of all, the money should be more than \$200 million because I believe we are dealing with 25 coastal States and I don't know what that comes to per State even if you were doing it equally. But based on my understanding of what they have the capacity to do in terms of planning and management development with the amounts they are getting now, that the 200 will be inadequate.

Since we are talking about huge sums of money in revenues to the Federal Government, I think it is reasonable to channel that back through, as has been pointed out earlier, an existing program to implement more soundly.

The second thing I would like to emphasize aside from money is that when we really do an investigation into what the States are coming up with in terms of management programs, and I think this is relevant because the language in the major bills we are discussing today talks about being consistent with a program being developed or a program that has been approved under the Coastal Zone Act.

When you actually look at the sense of what some of these programs are, I think you would find that even if they were being developed, the way they are being developed in their present form, they would not be able to cope with onshore impacts of offshore drilling. Some coastal zone management programs in the States consist of nothing but resource inventory. In some cases, they are moving along because they do have some criteria to try to come to some decision about where certain kinds of development should take place. But unless they actually adopt a management scheme and it should be emphasized they are not compelled to do this under the Coastal Zone Act, unless they adopt a management scheme that has such provisions as mandatory siting and so on, it would be highly unlikely that even if you accelerated the funding and even if you went ahead onto the Coastal Zone Management Act that they would be able to respond to offshore drilling.

I think it would be appropriate when this much money is being offered to the States to deal with something to make sure that it is going into a program that will deal with the problem being addressed. I am not sure that that is going to happen right now.

Another thing that I would like to respond to is the notion which I think has been presented in some of today's testimony about what offshore drilling, both in terms of the leasing and the money aspect

of it and the environmental impact aspect, can or cannot do for a State. There was testimony earlier today which would characterize this entire emphasis on offshore drilling as kind of a Works Progress Administration type of proposal in which tremendous numbers of jobs would be created in various States which would help alleviate unemployment. I would like to suggest in this regard that we look to the Saudi Arabians or the Iranians to see how we should be planning the use of this resource.

From all the reading I have done of the kinds of estimates we have of how much petroleum is left, whether it be in the outer shelf or domestically, we had best have about a 20- or 30-year supply and that does not even allow for increased consumption which may be possible. When the Saudi's and Iranians are worried about their economy, they don't talk about drilling and sit back and assume they will go on forever with this and I don't think we should either.

I know from a New England point of view that the median hope, when you look at the median estimate of what is on Georgia's Bank, we find it would only meet 3 percent of New England's present oil consumption. So to mislead people into thinking that this will radically alter their economy and it will lead to a tremendous acceleration and development is not necessarily true.

What lawyers learn in law school, the good samaritan rule, which is if you don't bother to help out someone that's one thing but once you tell them you will help them, you should not mislead them into thinking you will do something you can't do and once you undertake to do it, you ought to do it right. I think to sell this program for Outer Continental Shelf drilling which has been done in some occasions as a solution to some of the employment, serious unemployment problems throughout the country, is wrong.

A second thing I would also do from the New England experience is if this is only a 20- to 30-year program, even if all of these sites being considered turn out to be very productive, New England is very familiar with the loss of its textile industry base and its shoe industry base to the southern States in the early and middle parts of this century. The New England economy nearly disintegrated in the 1940's and 1950's until the electronics industry came in.

I think there will be serious social and economic impacts from offshore drilling in the States, partly because it is not always going to create unemployment and partly because when it creates substantial employment, that will be leaving in 20 years or so anyway.

I think in summary, I would want to emphasize that this should be coordinated, that the leasing and exploration and development and so on should be closely coordinated with the Coastal Zone Management Act and the regulatory functions discussed in these particular bills should be definitely segregated to the National Oceanographic and Atmospheric Administration on the grounds that environmentalists, I don't think, in particular are becoming very, very upset about the operation of the Department of the Interior. I think it has all the status that the Justice Department had 3 years ago when it was changing hands on an annual basis. We are seriously concerned,

based on the lack of quality in their existing environmental impact statement that they can ever come up with a product that will do anything but lead to further litigation.

I would want to say finally that any environmentalist I know looks on the kinds of bills that you are considering not as a source of future litigation but as a solution to the boring task of constantly having to bring a law suit whenever someone does something wrong. I think this is a first chance to take a major Federal program and plan it from the beginning rather than the end and I hope these bills will be shaped in that direction.

I will be sending testimony under separate cover which will have more detail about this.

Mr. HARVEY. Thank you very much, Mr. Kaufman. Have you seen the Fifth Circuit decision that Mr. Futrell described?

Mr. KAUFMAN. No, but I am going to.

Mr. HARVEY. I would be interested in your comments as to what the implications of that decision are. My second question is, I am not sure from your testimony whether you are saying that the Government should wait before it does or allows any exploration of the oil and gas resources on the Outer Continental Shelf until coastal zone management planning is completed or whether you feel that some of that activity can go on simultaneously because of the obvious uncertainty. Exploration may take place and nothing found so presumably there won't be much of an impact or even if exploration takes place, there could be retained in the Government the authority to say one way or another—whether it's a Government exploration program or simply a change in the law—that the Government could still say yes, you found oil but you will have to wait a year or two to develop it until the coastal States that will be impacted by the production and development get their ducks in a row?

Mr. KAUFMAN. I like the question because it brings up something I forgot to say. It is always important sometimes to get away from the policy level of thinking and think about how would this bill work if we had it and what exactly would happen? I think your question raises that. In fact, this is one of the problems I have, the indecisiveness of the bill.

Mr. HARVEY. Which bill are you talking about?

Mr. KAUFMAN. This would be 426 and 521, both of which have consistency provisions. What I would do is first of all, tremendously increase the funding of the Coastal Management Act. I would get it there immediately.

Mr. HARVEY. No matter how fast you fund it, you can't get there immediately.

Mr. KAUFMAN. It would be within a year, I believe, that you could do it. In doing that—

Mr. HARVEY. Do you want to make it mandatory on the States? Right now, obviously, they don't have to do this if they don't want to.

Mr. KAUFMAN. It is discretionary. In this case, you are giving them this money for a reason which is that the Federal Government

is about to undertake a major program that is going to impact on them. I think it is fair at this point to consider whether or not that should just be mandatory funding which is, if they undertake to pass a legislative management program that they are getting this money for that purpose because I think you are going to find in many States that they are going to spend their money and will not have a management scheme the way things are moving along right now.

A management scheme is dealing with land use planning. Management planning is dealing with home rule questions and people are seeing it that way and that's the way it's being debated. That is a problem right now and I would consider the mandatory feature.

The second thing is I think it is possible actually to go ahead with exploration as long as you can assume that they are going to have management schemes legislatively passed in the States, say within 2 years. The reason I say that is to avoid the very sad kind of situation that occurred in New Hampshire last year. I think New Hampshire has done less in every single kind of planning area than any State in the Union. The result is it was a lost opportunity for development. They blame environmentalists but if they had a management structure for making that decision, hearing procedures, due process procedures, they might have had a refinery.

What will happen, I think, if this bill is passed and if the States don't have coastal schemes is that then you will be dealing with the laws that really affect this kind of development which is not the Federal law. It is local zoning, it is local environmental policy law, State environmental policy acts, State wetlands laws and I know, as a lawyer working in the Foundation that gets 2,000 calls a year on environmental legal questions, that we will not look to these kinds of bills to file our law suits. We will look to traditional local kinds of regulations.

That is why I think it is important on the Federal level to understand that these programs moving ahead without delay depend tremendously on filtered down adjustments in the State and local response to development because when the companies announce a find, then the bad thing about going ahead with exploration and development without coastal management, because they might find a find in point A and might want to build a refinery in point B and they might want to have storage facilities at point C and D and they might want to have a pipeline landing at point E. They may find if those States don't have coordinated coastal management programs, that it would become very sloppy and inefficient. In some cases, there might be more delay waiting for the litigation over the proposed onshore facilities.

That is why I think it is naive to deal with the Coastal Zone Management Act as it stands on its statements assumes that that solves the problem. The real guts of the Coastal Zone Management Act is in the State programs adopted under it.

Mr. HARVEY. Can I oversimplify what you just said by saying that there would be more delay if the two laws, the OCS Act and the Coastal Zone Management Act, are not changed than if they are changed?

Mr. KAUFMAN. I think so. I think the status quo right now, if people want quick offshore drilling, and I would blame the oil companies on this. I was reading Mobil's series of 10 things on oil policy. Some day when I have a little more time, I would like to file a rebuttal on that but I think that in some cases, oil companies are doing themselves in because under the status quo, we could have a field day with litigation holding them up I would say, on a 3 to 7 year basis.

If this law were coordinated carefully, I think it will centralize the focus and the reason environmentalists are supporting this law is that they don't enjoy litigation either. They want to see some development take place as long as you quit putting refineries in sand dune areas or small population areas and buying up the land for the refinery under false names and then announcing the project, when those kind of practices cease, environmentalists can deal with more constructive questions.

Mr. HARVEY. Thank you very much, Mr. Kaufman. We have two more witnesses this afternoon. Mr. Charles Matthews and Mr. E. H. Clark, Jr. I am going to let the two of you flip a coin. I know Mr. Clark has to catch an airplane.

STATEMENT OF CHARLES MATTHEWS, PRESIDENT, NATIONAL OCEAN INDUSTRY ASSOCIATION

Mr. MATTHEWS. Mr. Harvey, my name is Charles Matthews, I am president of the National Ocean Industry Association on whose behalf I appear today. I have a rather long statement which I would appreciate being included in the record and with your kind permission, I will try to summarize it in about 10 minutes.

Mr. HARVEY. It will be put in the record. I have read it all already and it's a very punchy piece of work. Go right ahead.

Mr. MATTHEWS. NOIA is a Washington-based trade association serving as the legislative and administrative spokesman at the Federal level for all facets of the Nation's offshore and ocean-oriented industries. These include: Air and marine transportation; contract drilling; manufacture and supply of equipment; gas transmission; geophysical contracting; offshore construction; mineral production; shipyards; service; and others. We appreciate the invitation of Chairman Henry Jackson and Warren Magnuson to present our views on these important legislative proposals to amend the Outer Continental Shelf Land Act of 1953.

Because of the limitation on the committee's time and the complexities of these bills, I will not attempt in this statement to evaluate them all on an individual basis. Instead, my aim will be to discuss the broad categories of actions contemplated in the legislation. In NOIA's opinions which might tend to maintain or accelerate offshore activity for the common good or which would retard or misdirect necessary offshore efforts.

With the committee's approval, I would also propose to submit a supplementary statement for the record at a later date containing

specific comments, suggestions on particular sections of the legislation. The distinguished chairman of the committee, the Hon. Henry M. Jackson, wrote to the Interior Committee on January 6 and he said:

During the next decade, development of conventional oil and gas on the U.S. Outer Continental Shelf can be expected to provide the largest single source of increase of domestic energy at a lower averaged cost with substantially less harm to the environment than almost any other source.

We believe the best road to travel is to assume that the exploration development and production of the OCS energy resource will be carried out by the private sector. Direct governmental involvement in these activities is not in the national interest.

Let's put this discussion in its proper perspective. Section 1012 of 426 says:

* * * preserve, protect, and develop oil and natural gas resources of the Outer Continental Shelf * * * in a manner consistent with the Mining and Minerals Policy Act of 1970 * * * [underscore added]

Section 102(2) of S. 521 says:

* * * make oil and natural gas resources in the Outer Continental Shelf available as rapidly as possible * * * consistent with the Mining and Minerals Policy Act of 1970 * * *

Since the basic purposes of these two bills require consistency with the Mining and Minerals Policy Act of 1970, and since the act is a fundamental statement of national policy as enacted by the Congress, this policy statement should be a part of this statement so we can know what it says. Quoting from the Mining and Minerals Policy Act of 1970 [30 U.S.C. 21a]:

The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal, and mineral reclamation industries.

There it is for everyone to see and know. The continuing policy of the Federal Government is that it is in the national interest to develop domestic minerals through the private enterprise system. What does continuing policy really mean? Well, the Mineral Leasing Act in 1920 says: All valuable mineral deposits in lands belonging to the United States shall be free and open to exploration by citizens of the United States.

The Atomic Energy Act of 1974 says: The development, use and control of atomic energy shall be directed so as to strengthen competition in private enterprise. The Marine Resources and Engineering Development Act of 1966 says: It is hereby declared to be the policy of the United States to develop, encourage, and maintain a coordinated, comprehensive, and long range national program in marine science for the benefit of mankind to assist in protection of health and property, enhancement of commerce, transportation, and national security, rehabilitation of our commercial fisheries, and increased utilization of these and other resources.

There should be no doubt that Congress intended that the development of the OCS resources shall be accomplished by private enterprises. But I sometimes feel that in this day and age of future shock that repeating a litany of the virtues of private business enterprise as opposed to the evils of government going into business has about the same effect as reciting a religious creed. When the words are said too often, they seem no longer to stimulate thought.

There have been many questions about the ability of the ocean industries to meet the challenge of significantly accelerated OCS lease sales. I would like to comment briefly on this point. NOIA has never advocated an increase to 10 million acres per year in OCS lease sales. What we have repeatedly said at various hearings before the Congress and Government agencies is that the economic health and vigor of the ocean industry requires an acceleration of lease sales on a planned, orderly, and consistent basis in order for the companies to plan for orderly expansion.

Let me repeat, consistent basis. After several of the questions that we heard yesterday, I went home last night and in the solitude of my own little study, I made a little handmade chart, so to speak, to show how consistent the total acreages of OCS land offered for lease by year has been and this is that picture. That is what our inconsistent plans have been.

I think that you can see how impossible it is and I would like to make this part of the record even though it is a handmade chart. I think you can see and understand what we are talking about when we say a consistent plan. In fact, the manner and rate in which OCS resources are found, developed and produced are intertwined so tightly with the economic health of the companies such as those at NOIA that they cannot be dealt with separately. Naturally, NOIA companies prosper or not in direct relation to the pace and manner that the Federal Government permits OCS resources to be explored, developed and produced.

Conversely, such activities can proceed at an accelerated tempo depending on the companies' economic health and vigor. The up and down business like experienced by our members has been crucially contingent upon Government leasing policies. Senator Ernest F. Hollings spoke to the third annual meeting of our association in early March and he said in part and I quote:

We earnestly seek your views in these hearings, and he was referring to these specific hearings, but I want to warn you that simply to come forward in behalf of the status quo as inherently good and claim that any change is inherently bad will not be wise.

I sincerely appreciate those words of advice from one whom I respect so deeply and I do not come forward in behalf of the status quo because I agree it is not good. But the question must be asked as to whether the status quo is bad because of the OCS Lands Act or for some other reason. May I also suggest to the Senator from South Carolina that to believe change just for the sake of change is

inherently good will not necessarily be wise either. As one of the truly effective senatorial leaders of the past was so fond of saying, "Let us reason together."

Some of the actions being considered by these honorable committees, we believe, would result in acceleration of exploration, development, and production activity on the shelf and, therefore, we can support them. Some other proposed actions would have the opposite effect resulting in delays and a slowdown of activity. Such delays, in our opinion, are not in the best interest of the Nation, and we oppose them.

Some examples which would have a favorable effect would be to have increased leasing on a planned, consistent basis and this should be accorded by the highest national priority. Also, it is essential for the offshore industries to understand clearly the intentions and wishes of the Congress and the executive agencies, particularly with regard to the wishes to increase energy supplies relative to the achievement of desirable environmental goals.

If the Congress unequivocally indicates to the companies that a top priority national goal will be to develop OCS resources at a reasonable consistent rate, then private enterprise will be able to make firm plans for the necessary allocations of manpower and capital required to accomplish this goal.

Such a congressional indication would likely result in the various agencies of the Government streamlining their priorities with attendant salutary efforts.

A specific example of the favorable change would be the provision in section 202(b) of S. 426 that the size of an oil and gas lease should be "as large as necessary to comprise a reasonable, economic production unit as determined by the Secretary." This would be a step in the right direction, and we have discussed that several times today and we agree with that.

But what are some of these suggestions currently being considered that NOIA feels would have the unfortunate effect of retarding development?

Of particular concern are the various provisions which would mandate, rather than authorize, specific actions by the Secretary. You have been told that great progress has been made in this area of activity and it has come because of the industry's ability to respond to unanticipated changes or difficulties rather than being strapped into a rigid, prescribed set of requirements.

The Federal Government should not force rules upon the Secretary of the Interior which would limit his flexibility to work in this area of uncertainty and unpredictability. Such restrictions also invite lawsuits, even those of a frivolous nature from persons who do not feel that the Secretary might be acting in accord with his mandated acts or duties. Such additional legal actions could result in unwarranted delays.

Another area of extreme concern to NOIA and its members are proposals which would significantly increase the Federal Government's involvement in offshore exploration process.

Let me reiterate and emphasize some of these vital points in an effort to persuade these honorable committees to put such suggestions for Federal exploration out of your minds and considerations.

One, existing Federal laws state that private industry shall explore and develop the OCS mineral resources. Two, the policy of leasing Federal lands to private citizens for exploration and development has worked well for American taxpayers and consumers. Bonus payments have added some \$15.1 billion into the U.S. Treasury. If you add rents and royalties, that adds another \$2.7 billion.

Three, Government-only exploration would eliminate competition in gathering and interpreting data and in risking large sums of money on varying research techniques and interpretation of similar data. Four, the high cost of delay in developing and marketing needed petroleum is a high cost which the American people should not have to pay.

Five, you find oil and natural gas where nature put them, not where you would like for them to be. Only the drill bit can find that oil and gas. Technical, not political, decisions are needed to discover new petroleum reservoirs, wherever they may be.

Six, exploring for OCS energy resources is a high-risk gamble involving an incredible amount of expertise, determination, luck, and money. Most Government officials are not normally inclined to be risk takers, which is probably a good thing. High risk taking should be left to private enterprise staked by private, not public, funds.

Seven, the Federal Government, not industry, now decides what Federal acreage will be leased, how many acres, and on what schedule. The Government sets and monitors regulations relating to exploration, platform construction, drilling, production, transportation associated with Federal leases, including environmental regulations. It also establishes and regulates environmental standards for onshore operations.

In addition, States exercise further controls within their jurisdictions. There simply is no need for additional controls nor for exclusive rights to data gathering.

Eight, and final, there is no reason to believe that a Government-run venture would be anymore efficient than the Government-operated hydroelectric projects or Amtrak. Nor is there reason to believe that the Government could or would improve on private industry's offshore environmental safety record.

Let's look at the three points separately which advocates of Federal exploration put up for us. The need for more Federal information about the value of the resources—I have heard this so many times, its made me sick during these hearings. There is absolutely no way anyone, including the companies or the Government,

can know with certainty the value of the resources in a given lease until there have been several exploratory holes drilled and production has continued for many years. There have been some leases in the Gulf of Mexico that have been producing for 25 years and the full extent of the value is still not known. But the public's interest is being protected better than the companies' interest in making a reasonable profit on their risk taking.

We should all recognize there is actually no value of any given resource as long as it is in the ground. It only has value when it is extracted and used. Value is a fair market exchange of some medium, usually money except in a barter situation, for goods and services. The petroleum resources in the OCS have no value and the only time they have value is when they are pulled out by private enterprise and put into the system for the good of everybody else. The present system of setting this value is in the favor of the public.

Before a company decides to bid on a given tract in a lease sale, its various experts have arrived at a consensus potential worth which the company feels will express its own needs regardless of what other companies' attitudes are. These educated guesses are probably either too high or too low on individual tracts, because statistically there is almost no chance they can be exactly right. This is true because of the uncertainties and unknowns discussed previously. The other companies who participate in the bidding for the tract arrive at their own estimates based on the consensus of their equally qualified experts, who have been using better, worse, or even the same information. So when the sale takes place there is usually a considerable divergence of competent professional opinion as to the worth of any given tract. The assessment of the U.S. Geological Survey is no better or no worse than any individual bidder and can never be, regardless of the amount of additional guesses, estimates, assumptions, of hypotheses they make on basically unknown facts. The belief that the Geological Survey does not have, or is unable to purchase, all the information necessary to make as informed a guess about the potential worth of any OCS tract offered for sale is a myth or a lie. For the Congress to continue this fabrication in the form of this legislation does not serve the best interests of the American people.

It may be generally assumed that a company that places the highest dollar value on a tract in a sealed bid situation does so because it thinks it envisions more reserves there than its competitors do. The company which thinks it can see the greatest potential is likely to win the tract. In this circumstance, the winner tends to be the bidder who most overestimates true tract value. A bidder has a poor chance of winning tracts whose worth he underestimates and has a good chance of winning those whose worth he overestimates. Therefore, it is the public which benefits; because, to date, all the acreage leased has tended to be overpriced.

Senator Hollings asked repeatedly yesterday, should the government lease something that it doesn't know the value and would you,

as a seller, lease something if you don't know the value? If it is impossible at the time of the lease to know the value, a sealed bid competitive circumstances such as this is the best way that a reasonable value can be ascertained.

This is such an important point for the committee to ponder that I have attached to my statement an article which appeared in the *Journal of Petroleum Technology* on this very subject, talking about competitive bidding in high-risk situations. I have appended this to my testimony because I call it to the particular attention of the committee and urge each one of you to read it.

The second thing that people have used, and I have heard again today—

Mr. HARVEY. Mr. Matthews, may I interrupt you for one question? I have glanced through the article and I had already seen it. I have been involved in natural resource, sales of one kind of resource or another, to private parties for a long time. It has been my experience that people don't simply bid for resources based solely on the amount of the resource that is there. You said in your statement that somebody who bids higher does so because he thinks he envisions more reserves there than its competitors do. Obviously, that is a factor, I am sure, but there are many many other factors that enter into a company's decision to buy timber, to buy oil or other things.

One obvious one is a company, for example, who is willing to bid 104 percent royalty on oil off Long Beach, which I understand is the most recent high bid. They want the oil because they are going to make money downstream on that oil. I think this is a factor that some people tend to overlook as to why people bid certain things. They have individual reasons for wanting a supply, regardless of whether their estimates of the magnitude might actually be equal.

Let's assume they all have an equal guess as to how much the resource is out there. To a particular company, that amount of resource may be worth something more than it is to a different individual for a whole variety of reasons. Wouldn't you agree with that?

Mr. MATTHEWS. I would agree with that completely. It could also be that the particular company has a pipeline nearby and would not have to factor in a large expenditure for a pipeline.

Mr. HARVEY. What do we also about the situation that the government finds itself in when we only have one bidder, for example, or two but the most dramatic case is one bidder. We know one thing. We know that he thought it was worth more—you could argue that he thought it was worth more than anyone else since he was the only one who bid.

On the other hand, you can argue that it was not a competitive situation. One individual might be willing to say, I'll take a chance. I'm not that eager to get this oil but if I can get it for this amount, I will take it. Otherwise, if someone outbids me, fine, let him outbid me.

Mr. MATTHEWS. The government does not have to accept any bid, one. Even a one bid circumstance in my mind is a competitive bid,

however, because as I point out later in my statement, since all bids are sealed secret and may be turned in only moments before the sale starts, no potential bidder knows for sure the number of his competitors or the size of their bids. When I put in one bid, I don't know if there will be 15 or none others. To me, this is what it is worth and on an individual tract, the tendency normally is that one would overestimate because of these various things.

There have been indications and there have been circumstances where there have been two or more bids and the highest bid was still a relatively insignificant bid. They were less than what USGS in its judgment said was less than should be the value. Therefore, they have turned down those bids. I remember I sat in on a lease sale just to get a feel for it in December of 1972. There was one bid on one tract. It was a joint bid between two companies, I don't remember which one they were. But this was one bid for \$14 million for less than 5,000 acres. That's not an insignificant bid. They felt, obviously, there would be many other bidders bidding on that tract or they would not have bid \$14 million plus.

So I think the number of bids, particularly in a sealed bid, secret, putting in your bid up to the last moment, does not connote that there is less than full competition.

Mr. HARVEY. Do you think that the public is better served, I am not talking just about getting a return for its oil but getting the oil developed and all the rest of it—by relying so heavily, as it does now, for its cash return on the bonus as opposed to the royalty? Wouldn't it be, perhaps, in the public's interest, not only from a monetary return standpoint but from getting development to reduce its reliance on the amount of bonus and look more toward, in effect, sharing the risk with industry and getting a better return on the oil or gas produced, if any?

Mr. MATTHEWS. I think there are other systems that could be devised. I am not saying this is oil or nothing. All I am saying is the existing system should not be, cannot be implied that it is not a competitive situation. I also think that the existing situation is one which—the point I am trying to make is that the public is being protected. That's the point. The public's interest in that resource is being protected and the federal government has many other mechanisms. If it finds that the public "is being ripped off" as some people have indicated, there are other ways that federal government has to recoup that amount of money.

There is talk about windfall profits and all these sorts of things. There are other methods without causing undue delays in this particular mechanism.

Mr. HARVEY. Go ahead.

Mr. MATTHEWS. I won't concentrate on my next point which was competition between the bidders because you've just discussed that. There is one point, however, relative to competition which we did not cover. This is a good indication of the degree of competition

present in the present OCS lease sales. That's the level of overbids, the difference between the highest bid and second overbid. That is what is referred to as money left on the table. If there were any anticompetitive forces at work in this situation, one would expect to see little or no significant difference between the first and second bids. However, in the offshore Louisiana sale of December 1970, there were \$346.4 million left on the table.

This means the winning companies paid 41 percent more than they needed to pay to win the bids. The overpayment amounted to 48 percent for September 1972; 39 percent for December 1972; 37 percent for June 1973; 47 percent for December 1973; and 37 percent for March 1974. In the famous bid of almost \$212 million for the right to explore for petroleum on Block No. 684118 in the MAFLA sale, a part of the well known Destin Dome, the winning bid was almost \$101 million higher than the second bid and the lowest serious bid was only \$504 thousand.

As Dr. LaPorde testified before you the other day, his company was involved in that and so far, it looks like that was the better bid. If there is any decline in competition, if there is any decline in the competitive fervor of the companies as has been suggested in one of the recent studies, it is probably because the Government has not been offering bonus properties recently.

If the Government limits the sales to less attractive areas of the Gulf of Mexico, it will get less attractive competitive bids.

This question of providing information to the public depends on who the public is. If you are talking about USGS as being the repository of the protection of the public because it is the Federal Government's function to protect the public and USGS' function is to receive this information, if that's what you are talking about, that's one thing. But if you are talking about taking this information and making it available to the public which means the man in the street, that's an entirely different circumstance.

These particular pieces of legislation, this idea has manifest itself in the geological and geophysical information. This causes a serious concern because it indicates that the authors of S. 426 have failed to even consider the historic, equitable, and legal concept of the confidentiality of trade secrets or proprietary information and the constitutional prohibition against confiscation without just compensation.

The authors of S. 521, however, seemed to appreciate this situation because section 207 of S. 521 requires the Secretary to maintain the confidentiality of data of this nature until the area is all leased or the competitive position of the permittee is not damaged.

Mr. HARVEY. May I interrupt? In addition to making the information available to USGS, do you think there would be any problem if it was made available to State Government agencies on a confidential basis so that they would have the information they need for their coastal zone planning?

Mr. MATTHEWS. I was going to say, so long as they made the same degree of confidentiality to protect proprietary information and trade secrets, so long as at least they have to pay for the cost—not the cost of producing the data but the physical reproduction of the data, then I think that is something that should be covered.

Mr. HARVEY. Why should that not be made a condition of the permit?

Mr. MATTHEWS. It depends on whose data you are talking about. If you are talking about geophysical contractor, all he is doing is developing data which he thinks has a market value and he is trying to sell it.

Mr. HARVEY. He could only do that with permission of the Government since we are dealing here with federally owned property.

Mr. MATTHEWS. Absolutely. But the cost, just the cost of buying the tape for a 7-month survey is \$50,000. To make a copy of that to give to the State is about a four to one transfer charge. We are talking about 200,000. So before we ever start you are saying that this geophysical contractor should give to the State a quarter of a million dollars just in the supply.

As I point out in here, we are not talking about a Xerox copy or a blueprint. The tape, to make a copy to give to the States, costs a quarter of a million dollars. You want to give it to United States, that's a quarter of a million dollars.

Mr. HARVEY. What we are talking about is a disincentive to doing this as opposed to a constitutional real property or taking issue.

Mr. MATTHEWS. Yes. If it is in the public interest—

Mr. HARVEY. It's the Government's oil and gas.

Mr. MATTHEWS. It's on the OCS, ergo, it is the Government's oil and gas. But it is not worth anything to anybody unless it is taken out of there.

Mr. HARVEY. I understand that.

Mr. MATTHEWS. As a precedent to taking it out of there—

Mr. HARVEY. I am trying to make the record clear that what we are dealing with on this issue that you speak about as a constitutional taking of property issue is, in my opinion, a public policy issue that has no relationship to the constitutional prohibitions against taking private property. I am not arguing the merits of whether the information should be required or anything else.

Mr. MATTHEWS. I have heard the argument made, I will admit that this is a point of view with which I disagree.

Mr. HARVEY. Go ahead.

Mr. MATTHEWS. There are several other sections of the law which concerns us. The oil spill liability has been talked about several times. There is one thing that I have not heard mentioned and that is the suggested provisions of S. 426 and S. 521 say that only an act of war or an action of the damaged party or negligence of the United States is limiting the liability. The provisions of the Federal Water Pollution Control Act amendments cover the same subjects and includes such things as acts of God or an act or omission of a

third party. It seems to me like that is an omission from the sections in 426 and 521. It seems a little bit unfair to me that the company should be liable for an act of God.

Mr. HARVEY. You mentioned, Mr. Matthews, that it is open-ended liability. In both 426 and S. 521, liability to the operator is limited to \$7 million.

Mr. MATTHEWS. Yes, but the fund is limited—

Mr. HARVEY. The fund is limited by 100 million but the fund is paid for by all operators. So it really isn't open-ended liability that is put into the bill on individual operators. In fact, the reason you cite as being a problem is the exact reason why the committee that last year wrote the individual limit in the bill.

Mr. MATTHEWS. Then my compliments to the staff last year. Also section 426 and 521 provides that these bills will not supersede section 311 of the Federal Water Pollution Control Act Amendments. The Federal Water Pollution Control Act Amendments gave admission of the law to the EPA Administrator. These other acts that we are considering now would give the administrator to another agency. I think the conflicts and the overlapping jurisdiction that can result in confusion, concern, and delay.

What I am saying, really, Mr. Harvey, is, as several people have indicated, perhaps we need one fund. This is really what I am trying to say and I am just saying that there are little problems with that that would probably be alleviated if we had one fund that could take care of all of this and there is no question of conflicts and overlapping problems.

Mr. HARVEY. I think you could be helpful to the committee on this point, Mr. Matthews, if your members or through some means you could catalog for us these various State laws that have been referred to. States are beginning to impose certain requirements. I recognize that is a problem of overlapping or double-lapping or what have you. The bill expressly says that if there is inability under some other act and a payment made under that act, that the payment does not have to be made under the bill so there is no double recovery. I think you could be helpful if you got us some kind of compilation.

Mr. MATTHEWS. All right, Mr. Harvey.

Still another area of concern has to do with the unnecessary inclusion of the section on citizen suits. Other laws already give more than adequate protection to the citizen who has an interest who may be adversely affected. On the question of recompensing the coastal States for all or part of the increased burdens which might be placed on them as a result of OCS activity, the fact of onshore impacts, whether good or bad, and the fairness of assisting States with any problems which may be caused, has been recognized by NOIA for some time.

We have suggested that a share of the revenues, whatever it is, be paid directly to the States affected by the advent of new industries and their workforces, to help defray costs for schools, roads, hospitals, and other support facilities which may become necessary.

What has already been said by me and other witnesses before me should indicate the magnitude of concern we have over these bills. We mean no disrespect or insult when we say these bills appear to have been drafted by sincere, well-intentioned planners in the unfortunate vacuum of an ivory tower, rather than by realistic activists who know and understand the nature and complexity of the petroleum industry. In this context, the cogent words of the great former Supreme Court Justice Louis Brandes in *Olmstead v. United States* seems very appropriate. He warned:

Experience should teach us to be most on our guard to protect liberty when the Government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest danger to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding.

We sincerely urge these committees to go slowly in these matters and to reflect on what you are being asked to do. The future supply of energy is the life blood of our industrialized society and our economy is inextricably intertwined with it.

The members of these committees have been invited to come to OTC and I wish you would come. The members of NOIA are pragmatic realists and can adapt to conditions forced upon us. Even though we believe the OCS Lands Act has not been given a fair chance to prove its worth as yet, we can see that some members of the Congress seem intent upon changing it. We accept this attitude and will do everything in our power to work with you and your staffs to devise amendments to the existing body of laws which are positive, constructive, and, in the national interest. We will be happy to arrange for experts on any subject relating to offshore operations to sit down with any of you or your staffs at any time and at any place to discuss in detail these issues and problems.

Thank you and I would be willing to answer any questions.

Mr. HARVEY. Thank you, Mr. Matthews. I have one more question. There have been a number of comments by industry representatives and GAO and so on that it would be helpful perhaps if we leased by entire traps rather than single leasing tracts. It would require a change in the law, probably.

Among other things, if that were done, doesn't that to a large extent remove the concern of the lessees about the disclosure of data?

Mr. MATTHEWS. Yes, because generally we are concerned about the confidentiality of information and as you are evaluating adjacent tracts.

Mr. HARVEY. In this instance, I am assuming there would be no adjacent tracts.

Mr. MATTHEWS. Yes. Thank you very much, Mr. Harvey.

[The prepared statement of Mr. Matthews and attachment follow:]

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Testimony Of

CHARLES D. MATTHEWS
President
NATIONAL OCEAN INDUSTRIES ASSOCIATION

On

Legislation Concerning

OUTER CONTINENTAL SHELF OIL AND GAS DEVELOPMENT
AND ITS
IMPLICATIONS FOR COASTAL ZONE MANAGEMENT

(S. 426, S. 521, S. 586, S. 740, et al)

Before The

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
AND
COMMITTEE ON COMMERCE
UNITED STATES SENATE

Washington, D.C.

April 9, 1975

Mr. Chairman and distinguished members of the committees, my name is Charles D. Matthews. I am President of the National Ocean Industries Association on whose behalf I appear today. NOIA is a Washington - based trade association serving as the legislative and administrative spokesman at the federal level for all facets of the Nation's offshore and ocean-oriented industries. These include: air and marine transportation; contract drilling; manufacture and supply of equipment; gas transmission; geophysical contracting; offshore construction; mineral production; shipyards; service; and others. We appreciate the invitation of Chairmen Henry Jackson and Warren Magnuson to present our views on these important legislative proposals to amend the Outer Continental Shelf Lands Act of 1953.

NOIA represents almost 260 companies from 24 states and the District of Columbia, including most of the coastal states, who have a direct or indirect interest in increasing domestic supplies of energy from the Outer Continental Shelf. Many are small businessmen who do everything from catering for offshore facilities to weather forecasting and who must not be overlooked or disregarded when major national policies or other decisions are made concerning exploration, development, and production of OCS energy resources and the impact these activities will have on local economic conditions.

My letter of invitation from Senators Jackson and Magnuson indicated that the principal bills to be discussed are: S. 521 -- the Energy Supply Act of 1975; S. 426 -- Outer Continental Shelf

Lands Act Amendments of 1975; S. 586 -- Coastal Zone Environment Act of 1975; and Sections 202 and 404 of S. 740 -- National Energy Production Board Act of 1975. Because of the limitations on the Committees' time and the complexities of these many bills, I will not attempt in this statement to evaluate them all on an individual basis. Instead, my aim will be to discuss the broad categories of actions contemplated in the legislation which, in NOIA's opinion, might tend to maintain or accelerate offshore activity for the common good or which would retard or misdirect necessary offshore efforts. With the Committees' approval, I would also propose to submit a supplementary statement for the record at a later date containing specific comments and suggestions on sections of the legislation.

Mr. Chairman, the member companies of NOIA began urging accelerated OCS development long before the Yom Kippur War in the Middle East caused the Arabs to impose their 1973 oil embargo. The Arabs jolted our Nation out of its comfortable energy posture and put us in a predicament which 17 months of study and argument have not moved the country closer to solving. With the perfect vision of hindsight, the government can now see it would have been wise to heed our pleas. Such an accelerated leasing program in conjunction with programs to speed development of nuclear power and other mineral energy resources would have been prudent. Unfortunately, the appropriate time to do those things is past; but let us hope we can learn from that past. It is now more essential than ever to get on with the task of assuring

that the energy resources in the OCS will be found, developed, and produced at the maximum feasible rate consistent with sound environmental and conservation practices.

In a letter, dated January 6, 1975, transmitting the "Energy Supply Act Working Paper" to all members of the Interior Committee, the distinguished Chairman of the Committee, the Honorable Henry M. Jackson (D-Wash.) wrote:

" During the next decade, development of conventional oil and gas from the United States Outer Continental Shelf can be expected (a) to provide the largest single source of increased domestic energy, (b) to supply this energy at a lower average cost to the U.S. economy than any alternative and (c) to supply it with substantially less harm to the environment than almost any other source."

NOIA is pleased to agree with the Chairman, but we must add there is clearly a divergence of opinion on the best route to follow for accomplishing the beneficial utilization of these resources. NOIA is steadfast in its conviction that the best road to travel for proper attainment of greater, if not total, energy self-sufficiency, is to assume that the exploration, development, and production of OCS energy resources will be carried out by the private sector. Direct governmental involvement in these activities is not in the national interest. The proper route for government should be to move ahead and clear the road-blocks, detours, and other obstacles which are holding the private sector back.

In order to put this discussion in its proper perspective, let me quote just a part of the stated purposes of S. 426 and S. 521.

Section 101 (2) of S. 426 says:

" ... preserve, protect, and develop oil and natural gas resources of the Outer Continental Shelf ... in a manner consistent with the Mining and Minerals Policy Act of 1970 ..." (underscore added)

Section 102 (2) of S. 521 says:

" ... make oil and natural gas resources in the Outer Continental Shelf available as rapidly as possible .. consistent with the Mining and Minerals Policy Act of 1970 ..." (underscore added)

Since the basic purposes of these two bills require consistency with the Mining and Minerals Policy Act of 1970, and since the Act is a fundamental statement of national policy as enacted by the Congress, this policy statement should be a part of this statement so we can know what it says. Quoting from the Mining and Minerals Policy Act of 1970 (30 U.S.C. 21a):

" The Congress declares that it is the continuing policy of the federal government in the national interest to foster and encourage private enterprise in (1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, (2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs ...

" For the purpose of this section, 'minerals' shall include all minerals and mineral fuels including oil, gas, coal, oil shale, and uranium." (underscore added)

There it is -- for everybody to see and know -- the Congress emphatically declares that the continuing policy of the federal government is that it is in the national interest to develop economically sound and stable domestic mining, minerals, metal, and mineral reclamation industries through the "private enterprise" system.

In view of some of the proposals contained in the bills which are the subject of these hearings, it might be useful for the public record to indicate clearly what the above-mentioned "continuing policy" really means. What has the Congress declared to be the existing federal policies relative to the exploration, purchase, and development of domestic energy and other mineral resources? They are, in pertinent part, as follows:

1. Mineral Lands Leasing Act of 1920 (30 U.S.C. Sec. 22)

"Except as otherwise provided, all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States, ..." (underscore added)

Offshore exploration and development of mineral resources was not a factor in 1920, but the above statement of policy is clearly applicable today to the "exploration and purchase" of "all valuable mineral deposits in lands belonging to the United States" in the Outer Continental Shelf.

2. Atomic Energy Act of 1974 (42 U.S.C. 2011)

"It is therefore declared to be the policy of the United States that ... the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." (underscore added)

Even though this Act relates only to the development of atomic energy, the basic statement of national policy on energy could just as well apply to development of OCS energy resources.

3. Marine Resources and Engineering Development Act of 1966
(33 U.S.C. 1101)

"Congressional declaration of policy and objectives.

"(a) It is hereby declared to be the policy of the United States to develop, encourage, and maintain a coordinated, comprehensive, and long range national program in marine science for the benefit of mankind to assist in protection of health and property, enhancement of commerce, transportation, and national security, rehabilitation of our commercial fisheries, and increased utilization of these and other resources.

"(b) The marine science activities of the United States should be conducted so as to contribute to the following objectives:

- "(1) The accelerated development of the resources of the marine environment.
- "(2) ***
- "(3) The encouragement of private investment enterprise in exploration, technological development, marine commerce, and economic utilization of the resources of the marine environment.
- "(4) The preservation of the role of the United States as a leader in marine science and resource development.
- "(5) ***
- "(6) The development and improvement of the capabilities, performance, use, and efficiency of vehicles, equipment, and instruments for use in exploration, research, surveys, the recovery of resources, and transmission of energy in the marine environment.
- "(7) The effective utilization of the scientific and engineering resources of the Nation, with close cooperation among all interested agencies, public and private, in order to avoid unnecessary duplication of effort, facilities, and equipment, or waste.
- "(8) ****" (underscore added)

Coming specifically to the geographic areas under discussion today, the above Declaration of Policy in the 1966 Marine Resources Act leaves no doubt the Congress intended that exploration, development, and utilization of the resources of the marine environment -- and this certainly includes the OCS -- shall be accomplished through "private investment enterprise." And now we see the sad spectacle of a few persons who are trying their utmost -- for whatever purposes only they know -- to corrupt this federal policy which has been over half a century developing.

Mr. Chairman, I sometimes feel in this day and age of "Future Shock" that repeating a litany of the virtues of private business enterprise as opposed to the evils of the government going into business has about the same effect as reciting a religious creed. When the words are said too often, they seem to no longer stimulate thought. So instead of bragging on the system, I will say a few brief words on the technological accomplishments of the offshore industry. This is intended as a counterweight to some people's Apollo Project argument which reasons that if the government can put a man on the moon, it can do everything else from eliminating poverty to solving the energy crisis.

In little more than 25 years since offshore drilling began in the Gulf of Mexico, industry progress has been made from relatively primitive drilling units built on piers extending out into fairly shallow waters, through the succession of submersible drilling barges, jack-up rigs, semi-submersible and drillship operations as the need for these new techniques arose. The capability of drilling deeper and deeper kept pace. From the relatively shallow water of the early 1950's, the industry extended its operations to depths of about 300 feet during the early 1960's. The first subsea well completion was also built in the early 1960's. Before the end of that decade, the industry was building production platforms in 350-foot water and drilling in 1300-foot water. Drilling contractors are now capable of drilling in 2,000-foot water and offshore construction

companies are capable of putting platforms in 1000-foot water. These extraordinary achievements were sponsored by private capital and managed by an exceptional breed of men who are risk-takers on a grand scale. Unfortunately however, if legislation such as this is enacted in its present form, they could become an endangered species.

There has been much said in recent weeks, including reports from the General Accounting Office and your own National Ocean Policy Study staff, about the ability of the ocean industries to meet the challenge of significantly accelerated OCS lease sales. I would like to comment briefly on this point.

First, NOIA has never advocated an increase of 10 million acres per year in OCS lease sales. What we have repeatedly said at various hearings before the Congress and government agencies is that the economic health and vigor of the ocean industries requires an acceleration of lease sales on a planned, orderly, and consistent basis in order for the companies to plan for orderly expansion. This 10 million acre straw-man is really no longer a viable proposition. As I understand the current situation, even the Department of the Interior has said it is not wedded to this figure for 1975 and, certainly, not for each year for the next few years.

In fact, the manner and rate at which OCS resources are found, developed, and produced are intertwined so tightly with the economic health of the companies such as those in NOIA that they cannot be dealt with separately. Naturally, NOIA members

prosper or not in direct relation to the pace and manner the federal government permits OCS resources to be explored, developed, and produced. Conversely, such activities can proceed at an accelerated tempo depending upon the companies' economic health and vigor. The up and down business cycle experienced by our members has been crucially contingent upon government leasing policies. Even now, only the leasing schedule in the Gulf of Mexico is being met while there are delays in the schedules for Southern California and the Mid-Atlantic. We understand the reasons for these hesitations, but it is equally important to understand the planning headaches the delays create.

These headaches have been intensified by the unparalleled peace-time inflation America has experienced in the past two years. Economists and, more significantly, bankers seem to be anticipating a resurgence of so-called double digit inflation late next year or in 1977. Uncertainty about the cost and availability of money coupled with uncertainty about what sort of national energy policy, if any, will finally take shape is making the companies very uneasy about making long-term commitments.

Many of our members and their suppliers are in capital-intensive industries with heavy investments in their equipment and productive processes. Inflation and the recent tax changes approved by the Congress have distorted the depreciation of their capital goods as well as their profits, thereby eroding capital formation and hampering their ability to replace plant and

equipment. On the policy side of the dilemma, there is the question of markets. Should offshore equipment manufacturers and constructors produce more "oil country" supplies in anticipation of a demand such as 1974's if there is a moratorium on frontier area OCS leasing and so much uncertainty about what the federal government might do?

Mr. Robert H. Etnyre, President of the National Supply Company, Division of Armco Steel Corporation and currently Vice Chairman of the National Ocean Industries Association, really put this dilemma in focus recently in a speech in Houston, Texas.

Mr. Etnyre said:

" When I go to our Board of Directors to ask for their approval to invest millions of dollars in new equipment ... they want to know what the market will be for the next few years. And you can't blame them. A new pipe mill requires an investment of perhaps \$150 million, and could take as long as five years from engineering stage to get it on stream. So the men who make the decisions on investments want to know what the market for pipe will be in 1980. Nobody today, with the uncertainty we hear out of Washington, is ready to bet that kind of money on an uncertain market. Everybody is saying 'Let's wait and see what the government does.'

" [We need] some assurance from our government that the ground rules will permit free enterprise to function. As long as industry is uncertain about government actions that could fix the price of oil or gas, change the oil depletion allowance, restrict leases on the continental shelf, or tell us that we must sell a significant portion of our tubular goods to the Navy for their Elk Hills Project, we cannot move forward."

Chairman Jackson said in his January 6 letter to the Interior Committee that,

"Because the OCS represents such a large and promising area for oil and gas exploration, the Congress must update the Outer Continental Shelf Lands Act of 1953, which has never been amended, to provide adequate authority and guidelines for the kind of development activity that probably will take place in the next few years. I believe that the law should be revised before any large-scale expansion of OCS leasing." (underscore added)

Gentlemen, we respectfully say to the very distinguished Chairman, what is so wrong with the fact that the law has not been amended in over 20 years? The Constitution of the United States has been changed only 15 times in almost 200 years since the Bill of Rights was approved. And, the Ten Commandments have never been changed since they were handed down to Moses on the mountain thousands of years ago. Perhaps the OCS Lands Act should be reviewed by the Congress periodically to ascertain its effectiveness and that is exactly the purpose of these hearings; but please do not be stampeded into believing that something is basically bad just because there is legislation introduced to change it.

The honorable chairman of the National Ocean Policy Study, Senator Ernest F. Hollings (D-S.C.), spoke to the Third Annual Meeting of our Association recently, and he said in part:

"When we introduce legislation, it is to correct deficiencies or inadequacies in current law, as we see it. This is a process which invites debate, compromise, the give and take necessary to produce laws tempered by those whom it affects. We earnestly seek your views in these hearings, but I want to warn you that simply to come forward in behalf of the status quo as inherently good ... and claim that any change is inherently bad will not be wise." (underscore added)

I sincerely appreciate those words of advice from one whom I respect so deeply. And, I do not come forward in behalf of the

status quo because I agree it is not good. But, the question must be asked as to whether the status quo is bad because of the OCS Lands Act or for some other reason. May I also suggest to the Senator from South Carolina that to believe change just for the sake of change is inherently good will not necessarily be wise either. As one of the truly effective Senatorial leaders of the past was so fond of saying, "Let us reason together."

In reality, it might be somewhat premature at this time to prejudge the adequacy and efficacy of the OCS Lands Act and the Secretary's current administration of that Act given the renewed efforts of the Interior Department to accelerate development. Rather than limiting the administration of this program by legislatively imposed, hidebound standards and criteria as these bills would do, it would be better, we believe, to leave the Secretary with the latitude he needs to put the "flesh on the bones" by implementing the present law following the rules, regulations, and procedures of the Administrative Procedures Act.

Some of the actions being considered by these honorable committees, we believe, would result in acceleration of exploration, development, and production activity on the Shelf and, therefore, we can support them. Some other proposed actions would have the opposite effect resulting in delays and a slowdown of activity. Such delays, in our opinion, are not in the best interest of the Nation, and we must oppose them.

As examples of actions which would have a favorable effect, we believe increased leasing of acreage on a planned, consistent

basis should be accorded the highest national priority. Also, it is essential for the offshore industries to understand clearly the intentions and wishes of the Congress and the Executive Agencies, particularly with regard to the wishes to increase energy supplies relative to the achievement of desirable environmental goals. We are committed to the belief that there does not have to be an either/or relationship between energy and the environment. There must be a balance between having more energy and enjoying and protecting our fragile environment. There may be some trade-offs necessary in certain circumstances, but the goals should always be to maximize the supply of energy consistent with sound environmental practices. However, industry must have a clear and consistent indication of Congressional wishes in this regard. We might paraphrase Isaiah on this point and say, "If the trumpet gives an uncertain sound, who shall know how to proceed with the task before us?"

In our opinion, the foregoing two actions -- high priority for increased leasing and a clear indication of Congressional wishes -- are the most important ones which the Congress can and should take in order to provide for increased indigenous energy supplies. If the Congress unequivocally indicates to the companies that a top priority national goal will be to develop OCS resources at a reasonable, consistent rate, then private enterprise will be able to make firm plans for the necessary allocations of manpower and capital required to accomplish that goal. Furthermore, such a Congressional indication would likely result in the various agencies of the government streamlining their priorities

with attendant salutary efforts.

A specific example of the favorable change would be the provision in Section 202 (b) of S. 426 that the size of an oil and gas lease should be "as large as necessary to comprise a reasonable, economic production unit as determined by the Secretary." This would be a step in the right direction. The limitation of a lease to 5,760 acres as called for in Section 203 (b) of S. 521 has the same difficulties and problems as the provision in the existing law and so we would favor the S. 426 language on this specific point.

What are some of the suggestions in the legislation currently being considered by these committees which NOIA feels would have the unfortunate effect of retarding OCS exploration, development, and production?

Of particular concern are the various provisions which would mandate, rather than authorize, specific actions by the Secretary of the Interior. I have had an opportunity to read the testimony presented on March 17 of Carl H. Savit for the International Association of Geophysical Contractors. Mr. Savit painted an excellent word picture of the uncertainties and unpredictability of exploring and developing the resources in the OCS, and particularly in the so-called frontier areas. The great progress, however, which has been made in this area of activity has come about because of the industries' abilities to respond to unanticipated changes or difficulties rather than being strapped into a rigid, prescribed set of requirements. He was making this point to show

that governmental exploration was not as productive as that of business enterprise, but I think you can carry his example a step further and say the federal government should not force rules upon the Secretary of the Interior which would limit his flexibility to work in this area of uncertainty and unpredictability. NOIA takes the position that the expansion of OCS exploratory, developmental, and production activities can best be accelerated by considering matters on a case-by-case basis. In order to deal more effectively with the unknowns of developing frontier areas, it is desirable for the Secretary to have the degree of discretionary authority which will permit him to take necessary actions quickly in unforeseen situations. Statutory restrictions on the Secretary's authority could delay activity while amendatory legislation was being processed. Further, such restrictions invite lawsuits -- even those of a frivolous nature -- from persons who do not feel the Secretary might be acting in accord with his mandated acts or duties. Such additional legal actions could result in unwarranted delays. The Nation has already seen how long beneficial projects can be delayed in the courts by unwarranted legal suits. Therefore, we urge that limitations to the Secretary's discretionary authority be kept to a minimum.

An area of extreme concern to NOIA and all its members are the proposals which would significantly increase the federal government's involvement in the offshore exploration process. We view these proposals as being the most likely vehicles for the slow destruction of this Nation's dynamic offshore industries that have been devised by the minds of men. Section 19 of S. 426

would require the Secretary of the Interior to set up a federal exploration program and Section 202 of S. 740 would establish a National Energy Production Board to do the exploration of the OCS. It is not necessary for me to belabor this point by a provision-by-provision recitation of our objections to these sections in S. 426 and S. 740. Several other witnesses representing specific parts of the ocean industries have testified in some detail concerning the unwiseness of these suggestions to separate the exploration from the development phases of OCS development. Let me only reiterate for emphasis some of these vital points in an effort to persuade these honorable committees to put such suggestions for federal exploration out of your minds and considerations. These points will not be listed in their declining order of importance, because they are all important.

ITEM: Existing federal laws, as I mentioned earlier, state the Congressional policy that private industry shall explore and develop the mineral resources of the Outer Continental Shelf. Therefore, these sections are inconsistent with existing laws.

ITEM: The policy of leasing federal lands to private citizens for exploration and development has worked well for American taxpayers and consumers. Bonus payments on offshore federal leases through the February, 1975 sales, for example, have added some \$15.1 billion to the U.S. Treasury. If rents and royalties are added, the total goes even higher by some \$2.7 billion. Development of those areas by private industry is now providing 17 percent of all the oil and natural gas

produced in the United States.

ITEM: The over-all competence of American offshore industries is recognized around the world. It has been American technology, equipment, and manpower that has been primarily responsible for finding and developing the energy resources in the offshore areas around the world. Government-only exploration would eliminate competition in gathering and interpreting data, and in risking large sums of money on varying research techniques and interpretation of similar data. The examples of this kind of risk-taking based on different approaches and attitudes, are legion. The discovery of the Alaska North Slope and Gulf of Mexico Bay Marchand fields came about only after earlier exploration had turned up only dry holes. The number of significant fields which were discovered almost accidentally is also large.

ITEM: The high cost of delay in developing and marketing needed petroleum is a high cost which the American people should not have to pay. Delaying tactics -- such as the proposal to grant a state or local political entity veto power over exploration of federal lands -- could seriously impair attainment of our energy goals to the detriment of the American consumer and worker.

ITEM: You find oil and natural gas where nature put them, not where you would like for them to be. And only the drill bit can find that oil and gas. Nature

sometimes has a way of not putting petroleum necessarily where most of the votes are. Technical -- not political -- decisions are needed to discover new petroleum reservoirs, wherever they may be. A government agency -- whose funds are controlled by the Congress -- might well decide where to drill or not to drill on the basis of politics rather than geology, since there is so much uncertainty in the process anyway.

ITEM: Exploring for OCS energy resources is a high-risk gamble involving an incredible amount of expertise, determination, luck and money. Most government officials are not normally inclined to be risk-takers -- which is probably a good thing. High risk-taking should be left to private enterprise staked by private, not public, funds. For example, the Bay Marchand field -- mentioned a moment ago and one of the largest in the Gulf of Mexico -- was found only after a dozen or more wells were drilled. Phillip's Ekofisk field in the North Sea was discovered after 14 dry holes and the drilling contractor could not find another contract. It is unlikely that a government agency -- charged with carefully spending taxpayer monies -- would have persisted in drilling that "one more well" which proved successful.

ITEM: The federal government, not industry, now decides what federal acreage will be leased, how many acres, and on what schedule. Government sets and monitors

regulations relating to exploration, platform construction, drilling, production, and transportation associated with federal leases, including environmental regulations. It also establishes and regulates environmental standards for onshore operations. In addition, states exercise further controls within their jurisdictions. There simply is no need for additional controls, nor for exclusive rights to data gathering.

ITEM: The present system, according to Senator Hollings, has obvious disadvantages. But his prescribed cure could be fatal. For example there is no reason to believe that the government-run venture would be more efficient than the government-operated hydroelectric projects or Amtrak. Nor is there reason to believe that the government could -- or would -- improve on private industry's offshore environmental safety record: substantially more than 18,000 wells drilled offshore since the beginning of this effort and only four major spills have occurred. Witness the current fight over TWA's refusal to implement clean air standards. Government's strong point is not a "practice what you preach" philosophy.

Mr. Chairman, the principal arguments put forward by advocates of federal exploration seem to center around three basic points:

- (1) There is a need for the federal government to improve its knowledge of the value of the resource before it is leased.

- (2) Competition between bidders should be increased.
- (3) The public should be informed about the value of the public resources being offered for lease.

Let us look at these three points separately.

The need for more federal information about the value of the resources: We have already pointed out that there is no absolute way anyone -- including the companies or the government -- can know with certainty the value of the resources in a given lease until there have been several exploratory holes drilled and production continuing for many years. There are some leases in the Gulf of Mexico which have been producing for 25 years and the full extent of the value of the resources is still not known. Therefore, since we cannot have all the necessary information in advance, is the public's interest in the potential value of these resources being protected?

NOIA says yes. The public's interest is being protected better than the companies' interest in making a reasonable profit on their risk-taking. We should all recognize there is actually no value of any given resource until it is extracted and used. Value is a fair market exchange of some medium -- usually money except in a barter situation -- for goods and/or services. The petroleum resources in the OCS have no value, so they must be extracted to be worth anything. The present system of setting this value seems to favor the public.

Before a company decides to bid on a given tract in a lease sale, its various experts have arrived at a consensus potential

worth which the company feels will express its own needs regardless of what other companies' attitudes are. These educated guesses are probably either too high or too low on individual tracts, because statistically there is almost no chance they can be exactly right. This is true because of the uncertainties and unknowns discussed previously. The other companies who participate in the bidding for the tract arrive at their own estimates based on the consensus of their equally qualified experts, who have been using better, worse, or even the same information. So when the sale takes place there is usually a considerable divergence of competent professional opinion as to the worth of any given tract. The assessment of the U.S. Geological Survey is no better or no worse than any individual bidder and can never be, regardless of the amount of additional guesses, estimates, assumptions, or hypotheses they make on basically unknown facts. The belief that the Geological Survey does not have, or is unable to purchase, all the information necessary to make as informed a guess about the potential worth of any OCS tract offered for sale is a myth or a lie. For the Congress to continue this fabrication in the form of this legislation does not serve the best interests of the American people.

A company makes a bid on any lease because it fully expects to win and get the authority to proceed. This is not a Parker Brothers game of "Monopoly" which is still so popular in many houses, but a very serious business where large sums of money have already been spent on manpower and analysis before the bid is made and sealed. Remember too if you will, a bidder must

attach a certified check for twenty percent of his bid to the papers in the sealed envelope. This means, for example, in the March 28, 1974 sale for offshore Louisiana, the box of bids sitting on the table in front of the Bureau of Land Management's (BLM) New Orleans manager contained actual certified checks for \$1,294,800,714. The companies had to pay interest on that money.

It may be generally assumed that a company which places the highest dollar value on a tract in a sealed competitive bid situation does so because it thinks it envisions more reserves there than its competitors do. The company which thinks it can see the greatest potential is likely to win the tract. In this circumstance, the winner tends to be the bidder who most overestimates true tract value. A bidder has a poor chance of winning tracts whose worth he underestimates and has a good chance of winning those whose worth he overestimates. Therefore, it is the public which benefits; because, to date, all the acreage leased has tended to be overpriced. The Journal of Petroleum Technology, June, 1971, carried an interesting article entitled "Competitive Bidding in High-Risk Situations" which was carefully written by three officials of the Atlantic Richfield Company and went into some detail on this kind of analysis. Edgar C. Capen and his fellow authors observed:

"In recent years, several major companies have taken a rather careful look at their records and those of the industry in areas where sealed competitive bidding is the method of acquiring leases. The most notable of these areas, and perhaps the most interesting, is the Gulf of Mexico. Most analysts turn up with the rather shocking result that, while there seems to be a lot of oil and gas in the region, the industry is not making as much return on its

investment there as it intended. In fact, if one ignores the era before 1950, when land was a good deal cheaper, he finds that the Gulf has paid off at something less than the local credit union."

Mr. Chairman, this is such an important point for the Committees to ponder, I would like to append this fine article by Mr. Capen and his colleagues to my testimony and commend it to the attention of the Committees.

Competition among oil and gas producers: The statement in the proposed bills that there is a need for more competition among bidders would seem to assume that adequate competition does not now exist. NOIA believes an unbiased look at the facts will reveal that as an untrue assumption. The official BLM records show OCS lease sales have been intensely competitive, and so-called small operators have been able to participate significantly in the exploration and development of OCS lands. Steady growth has taken place in both the number of companies bidding and those winning acreage. For example, at the 1960 sale, there were 32 companies which entered bids and 29 of these won leasehold interests. By 1972, the number of companies actively participating in OCS sales had more than doubled to about 75 companies, and there were over 80 companies participating in the March 1974 sale. In 1962, the smaller domestic companies won just over one-third of the acreage; in 1972, they won approximately two-thirds; and, at the March 1974 sale, the smaller companies won over 50% of the acreage sold. These results would certainly seem to indicate that OCS lease sales are highly competitive and new entrants can compete successfully.

Another very good indication of the degree of competition present at OCS lease sales is the level of overbids; that is, the difference between the highest and second highest bids since it only takes a very small higher bid to win. Such overbids are generally referred to as "money left on the table." If there were any anti-competitive forces at work in this situation, one would expect to see little or no significant difference between the first and second bids. In the offshore Louisiana sale of December 1970, there were \$346.4 million left on the table. This means the winning companies paid 41 percent more than they needed to pay to win the bids. The overpayment amounted to 48 percent for September 1972; 39 percent for December 1972; 37 percent for June 1973; 47 percent for December 1973; and 37 percent for March 1974. In the famous bid of almost \$212 million for the right to explore for petroleum on Block No. 684118 in the MAFLA sale (a part of the well known Destin Dome), the winning bid was almost \$101 million higher than the second bid and the lowest serious bid was only \$504 thousand. You all know that so far there have been dry holes drilled on this lease so maybe the lowest bid was even too high. Only in an intensely competitive bidding environment would one expect to find such results.

Since all bids are sealed, secret, and may be turned in only moments before the sale starts, no potential bidder knows for sure the number of his competitors or the size of their bids for a tract. There have been some studies recently including one published by the NOPS staff which would seem to indicate a declining competition in OCS sales. We do not believe this is

a valid conclusion if it is intended to show collusion or a "getting together" of companies. If there is any decline in the competitive fervor of the companies, it is probably because the government has not been offering bonus properties recently. If the government limits sales to less attractive areas of the Gulf of Mexico, it will get less attractive competitive bids.

Providing information to the public: This suggestion is implemented in the provisions relative to public disclosure of geological and geophysical information and causes serious concern to NOIA and all its member companies. It indicates that the authors of S. 426 have failed to even consider the historic, equitable, and legal concept of the confidentiality of trade secrets or proprietary information and the Constitutional prohibition against confiscation without just compensation. Many companies in the ocean industries spend millions of dollars each year to gather and analyze geological and geophysical data on undersea conditions and structures in order to estimate more realistically the potential value of resource deposits and to permit more logical bidding and development programs. As such, the data obtained have a significant market value. In addition, many geophysical contracting companies who are not in actual offshore petroleum production are in the specific business of developing information for sale to prospective buyers -- whether they be companies or the government. The object of this data gathering is to provide a product which has a market value. If a petroleum company, or one of the non-petroleum companies engaged in data development, is required to give this information free of charge to the Secretary of the Interior, who may then make

it publicly available, the competitiveness of his position is jeopardized and the product has been effectively confiscated without just compensation. Under such circumstances, it seems highly unlikely that exploratory activities by the private sector would increase rapidly as is the policy desire of the Congress. In fact, several geophysical survey boats have already left domestic areas because of this threat. Surely, when it is clearly evident that greater exploration is essential to meeting our energy goals, it would be self-defeating to force a retrenchment of or withdrawal from domestic exploratory activities in the OCS.

The apparent unwillingness to protect a company's proprietary information is alien to the large body of existing law on this subject. For example, the Clean Air Act and the Federal Water Pollution Control Act contain provisions requiring the Environmental Protection Agency to consider information as being confidential if making it public "would divulge methods or processes entitled to protection as trade secrets." The Federal Insecticide Act also states, "... the Administrator shall not make public information which ... contains or relates to trade secrets or commercial or financial information ..." Even the Freedom of Information Act specifically exempts "geological and geophysical information."

Senator Jackson and the co-sponsors of S. 521 seem to appreciate this situation because Section 207 requires the Secretary to maintain the confidentiality of all data of this nature until the area is all leased or the competitive position of the permittee would not be damaged.

If it is the sincere purpose of these distinguished committees to "increase domestic production of oil and natural gas," protections such as those in S. 521 must be included in any legislation to protect the integrity of proprietary information.

Another area of concern to NOIA relates to the proposal that lessees be held absolutely liable for damage from an oil spill even when such damage results through no fault of the lessee. This open-ended liability and attendant exposure to large financial loss will make it very difficult for smaller operators to justify participating in OCS exploration, development, and production activities. To the extent such organizations feel it prudent to limit their activity, the overall timetable for OCS development will be retarded. Suggested provisions in S. 426 and S. 521 on this subject except only "an act of war," "an action of the damaged party," or "negligence of the United States" as limiting the liability of the lessee. The provisions of the Federal Water Pollution Control Act on oil spill liability excepts, in addition to the three listed above, such things as "an act of God" and "an act or omission of a third party." The FWPCA also places a limit on the liability of the operator of an offshore facility and gives the administration of the law to the EPA Administrator, while S. 426 and S. 521 give the administration of this proposal to the Secretary of the Interior. Even though these bills say they will not supersede Section 311 of the Federal Water Pollution Control Act Amendments of 1972, the conflicts and overlapping jurisdictions just mentioned can only result in confusion, concern, and delay. This is not conducive to accelerating domestic production of energy supplies.

Still another general area of concern for NOIA is the unnecessary inclusion of the section on citizen suits in both S. 426 and S. 521. As I pointed out early in my statement, the difficulties encountered by the offshore industries in developing OCS resources have not been with the OCS Lands Act as much as with the courts. This does not mean NOIA is averse to any legitimate person who has been aggrieved or who realistically might become aggrieved by an offshore activity from having his or her day in court. But, what we do mean is that we do not feel it is fair and proper for companies who are conscientiously trying to carry out their missions in an environmentally safe manner to be harassed or economically damaged by some irate person or group who may or may not be adversely affected by the action or by some non-discretionary act of the Secretary. The Federal Water Pollution Control Act Amendments of 1972 already give more than adequate protection to a citizen who has an interest and who may be adversely affected. We believe it is unnecessary to add this further possible roadblock to accelerated development of domestic energy resources.

Several provisions of legislation pending before these honorable committees address the problem of recompensing coastal states for all or part of the increased burdens which might be placed upon them as a result of accelerated OCS activity. These proposals take various forms from direct revenue sharing to a Coastal State Fund and so forth. The fact of onshore impacts, whether they be good or bad, and the fairness of assisting states with any problems which may be caused, has been recognized by NOIA for some time. Our policy statement on this issue says:

"States and coastal counties and communities adjacent to the OCS lands should receive a share of the revenues received by the federal government from lease operations on the OCS, in recognition that coastal residents may have greater interest in OCS lease operations than inland citizens."

We have suggested that this share of revenues -- whatever it is -- be paid directly to the states affected by the advent of new industries and their workforces, to help defray costs for schools, roads, hospitals, and other support facilities which may become necessary. NOIA has not attempted to estimate how large these sums of money will be, but we think a sound basis for assistance should be developed which would be fair and equitable for the states and the federal government.

Mr. Chairman and gentlemen of these committees, very frankly there are still many, many more provisions of these various bills which NOIA does not believe will be in the national interest because they will delay needed OCS development or they will do serious harm to the offshore companies upon whom we must depend to accomplish that development satisfactorily. However, I will not attempt to elaborate on each of them. What has already been said by me and the many witnesses before me should indicate the magnitude of concern we have over these bills. We mean no disrespect or insult when we say these bills appear to have been drafted by sincere, well-intentioned planners in the unfortunate vacuum of an ivory tower, rather than by realistic activists who know and understand the nature and complexity of the petroleum industry. In this context, the cogent words of the great former Supreme Court Justice Louis Brandes in Olmstead vs. United States seem very appropriate. He

warned:

"Experience should teach us to be most on our guard to protect liberty when the government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding."

As an example of what I mean, it is easy for a sincere, well-intentioned planner to say the public should have the right to know about geophysical data on offshore areas; and, therefore, a geophysical contractor should have to give the data to the federal government. But, gentlemen, this statement shows a lack of understanding of the industry. This is not the same thing as asking the companies to give the government a Xerox copy or a blueprint of something. Just to buy the actual magnetic tape itself for a one-month geophysical survey, the company has to pay about \$50,000 -- and this does not take into account any costs except the actual tape. To transfer the data from the master tape to a copy for the government -- according to my contractor friends -- is about 4 to 1 or about \$200,000. This means, to give the government a copy of the data, the contractor would be out some \$250,000. As I said, this isn't a Xerox or a blueprint and the contractor is not now or will not ever be a bidder on the area surveyed.

Additional examples could be cited all afternoon, but I hope this should be sufficient to make the point. Therefore, we sincerely urge the committees to go slowly in these matters and reflect upon what you are being asked to do. The future supply of energy is the life blood of our industrialized society and our economy is inextricably intertwined with it. These dual problems of energy

supply and economy may very well be the most important issues the Congress will have to face this year. So, the American people deserve thoroughly informed decisions.

The members of the Interior and Insular Affairs Committee and the Commerce Committee have been invited by the 11 sponsoring professional and technical societies to go to Houston on May 4 and 5 to attend the Offshore Technology Conference. This conference and exposition is the greatest aggregation of people, equipment, techniques, and information ever gathered in one place at one time to indicate fully the magnitude of the challenge of offshore exploration and development. NOIA adds its voice to the sincere plea that all of you -- or at least as many of you as possible -- can accept this invitation because you will have a greater understanding and appreciation of the offshore industries when you return.

Gentlemen, the members of NOIA are pragmatic realists and can adapt to conditions forced upon us. Even though we believe the OCS Lands Act has not been given a fair chance to prove its worth as yet, we can see that some members of the Congress seem intent upon changing it. We accept this attitude and will do everything in our power to work with you and your staffs to devise amendments to the existing body of laws which are positive, constructive, and in the national interest. We will be happy to arrange for experts on any subject relating to offshore operations to sit down with any of you or your staffs at any time and at any place to discuss in detail these issues and problems.

The National Ocean Industries Association sincerely appreciates being invited to participate in this hearing and hopes our testimony

will be helpful to you in your deliberations. If it pleases the Chairman and the committees, I will attempt to answer any questions or discuss any of these matters further.

ATTACHMENT

Competitive Bidding in High-Risk Situations

E. C. Capen, Atlantic Richfield Co.

R. V. Clapp, Atlantic Richfield Co.

W. M. Campbell, Atlantic Richfield Co.

Introduction

We would like to share with you our thoughts on the theory of competitive bidding. It is a tough business. We are not sure we understand as much as we ought to about the subject. As in most scientific endeavors, we think there is more knowledge to be gained by talking with others than by keeping quiet.

Our first attempt at actually using a probability model approach to bidding was in 1962. We borrowed heavily from Lawrence Friedman's fine paper on the subject.¹ But the further our studies went, the more problems we noticed for our particular application. We decided to strike out on our own. By 1965 we had our model just as it is today. But having a model and completely understanding its workings are not the same thing. We are still learning.

While we refer to the "model" as though it were some inanimate object, it is not. What we want to describe to you is a system for taking the best judgments of people — properly mixed, of course, with historical evidence — and putting those judgments together in a rational way so they may be used to advantage.

Lest the reader be too casual, thinking that since he is not personally involved in lease sales he need not pay the closest attention, we offer this thought. There is a somewhat subtle interaction between competition and property evaluation, and this phenomenon — this culprit — works quietly within and without the specific lease sale environment. We would

venture that many times when one purchases property it is because someone else has already looked at it and said, "Nix." The sober man must consider, "Was he right? Or am I right?" The *method of analysis* we will describe is strictly for sealed bid competitive lease sales, but the *phenomenon* we will be talking about pervades all competitive situations.

Industry's Record in Competitive Bidding

In recent years, several major companies have taken a rather careful look at their records and those of the industry in areas where sealed competitive bidding is the method of acquiring leases. The most notable of these areas, and perhaps the most interesting, is the Gulf of Mexico. Most analysts turn up with the rather shocking result that, while there seems to be a lot of oil and gas in the region, the industry probably is not making as much return on its investment there as it intended.²⁻⁵ In fact, if one ignores the era before 1950, when land was a good deal cheaper, he finds that the Gulf has paid off at something less than the local credit union.

Why? Have we been poor estimators of hydrocarbon potential? Have our original cost estimates been too conservative? Have we not predicted allowables well? Was our timing off? Or have we just been unlucky?

It is our view that none of the factors these questions suggest has been the major cause of the in-

If it is true, as common sense tells us, that a lease winner tends to be the bidder who most overestimates reserves potential, it follows that the "successful" bidders may not have been so successful after all. Studies of the industry's rate of return support that conclusion. By simulating the bidding game we can increase our understanding and thus decrease our chance for investment error.

dustry's performance, though certainly all may have contributed. Poor luck might affect a few offshore participants. But the whole industry? Not likely. Industry has had enough opportunities in the Gulf to invoke the law of averages — if we may be so loose with mathematics.

We believe that in the competitive bidding environment normal good business sense utterly failed to give people the return they expected. Since many industry folk have not understood the rather complex laws of probability at work in competitive bidding, they have been inclined to make serious errors in arriving at their dollar bid for a particular tract. We are not saying that all of the bids turned out poorly. But enough of them have, throughout the industry, leading to lower rates of return than people planned for.

A new wrinkle appeared in the 1970 Offshore Louisiana wildcat sale (an \$850 million sale). Because of a Federal Power Commission order, some of the gas companies assumed they would be able to include their bonus investment in rate base. If they are correct, then their risk in offshore exploration has been effectively removed. They will make their legal return regardless of how much or how little reserves they find. This most recent sale, then, is very different from the others we have mentioned. The bidding model we would like to describe does not apply if lease bonus can be included in rate base.

We want to emphasize that we are not criticizing competitive bonus bidding as a method for acquiring leases from selling authorities. We believe this method is fair for all concerned. If the industry has not performed as well as it hoped, perhaps it is only because the industry has failed to understand the laws of probability that seem to govern the whole estimation-bidding process.

A "Think" Sale

Let us play a little game. Think of yourself as a manager whose task it is to set bids on parcels in an impending sale. On any one of your parcels you have a consensus property value put together by your experts. (We will not worry for the moment about how you handled risk, what your discount rate is, if you have one, or how you arrived at your reserves and costs.) One thing you can be sure of: Your value is either too high or too low; it has no chance of being exactly the true value.

Not to belabor a simple point, there are people in our business who fall in love with a number and fail to recognize the uncertainty associated with it. If a company's estimate happens to be \$5 million, who knows what the actual worth might be? If the tract is dry, the owner will have a loss — bonus plus exploration costs. If the tract produces — how much? There are fields discovered 50 years ago where we still do not know the reserves. And the uncertainty in field size before drilling is fantastic. So we repeat: Reserve estimates are either high or low — and maybe not even close.

We will assume, however, that on the average your value estimates are correct. (This does not contradict what we have already said. Most people are aware that they are high on some and low on others, but

over the long haul, they ought to come out about right on their value estimates.) You realize that other managers are going through the same agony you are. You ask yourself, "What do my competitors think these tracts are worth?" You know that some of your opponents may have better information than you, some worse. There will be, on sale date, quite a divergence of opinion as to value among the bidders. If you doubt this, look at the published bids by serious competitors at any recent sale. Bid ratios between the highest and lowest serious competitors range to as much as 100 and are commonly 5 or 10. (See Table 1.)

Implications of Divergence

What are the implications of this divergence of opinion? We could certainly argue that some people may have overestimated the true value of the parcel, and others may have underestimated it. Consider a piece of land that has exactly 10 million bbl of recoverable oil. If you let five different people in your own company interpret the seismic data, logs on nearby wells, and other sundry information, you will get five different estimates of reserves — even though they all use the same basic information. The problem becomes more confounding if we look at reserve estimates (before drilling now) of five different companies. They may each have different seismic data and different logs. Isn't it likely that some companies will come up with more than 10 million bbl? And some less? We have already admitted that while our estimates of reserves may be all right on the average, on any one tract we are going to be either high or low.

In Table 1 we saw evidence of this wide variation in value estimates by different competitors. Perhaps the several bidders had somewhat different exploration information. We all know the difference one properly placed seismic line can make in our mapping. Whatever the reasons, it is clear that different information leads to different value estimates.

Let us look at what different competitors can do given the same basic information. In the 1969 Alaska North Slope Sale, we find Atlantic Richfield and

TABLE 1—BIDS BY SERIOUS COMPETITORS
IN RECENT SALES
(All bids in millions of dollars)

Offshore Louisiana, 1967 Tract SS 207	Santa Barbara Channel, 1968 Tract 375	Offshore Texas, 1969 Tract 506	Alaska North Slope, 1969 Tract 059
32.5	43.5	43.5	10.5
17.7	32.1	15.5	5.2
11.1	18.1	11.6	2.1
7.1	10.2	8.5	1.4
5.6	6.3	8.1	0.5
4.1		5.6	0.4
3.3		4.7	
		2.8	
		2.6	
		0.7	
		0.7	
		0.4	
Ratio of Highest to Lowest Bid			
10	7	109	26

Humble bidding independently of each other. Since the two companies are equal partners in much exploration and development, both probably had essentially the same information; but each company took that information and developed its own evaluations without consulting the other. Table 6 shows the ratio of the Humble bid to the Atlantic Richfield bid for 55 tracts on which the companies competed against each other. At one extreme we find Humble making bids of about 0.03 of Atlantic Richfield's bid; at the other, Humble's bid is about 17 times higher than Atlantic Richfield's. And between these two extremes, we find a smooth gradation of ratios.

We have portrayed the same information a bit differently in Fig. 1. Here you will see a cross-plot of Humble's bids and Atlantic Richfield's bids for the same 55 tracts. No one has yet been able to identify any pattern or hint of correlation in these numbers. Clearly, the fact that companies have much the same seismic lines and well logs does not mean that those companies will come up with similar bids or property values.

On seeing such an exhibit, some ask if the wide range might not be due to differing discount rates or differing market conditions. But those items offset all of a company's bids in the same direction. A lower discount rate by one company, for instance, would force all of its evaluations up in dollars. There still would be large differences in bids.

Now more often than not, he who "sees" the most barrels will "see" the most dollar value. (Again, we recognize the effect of risk, cost estimates, production rates, pricing, discount rates and all that. But for the moment, let us focus on concepts and not clutter the picture with all these other items.) Can we not then conclude that he who thinks he sees the most reserves, will tend to win the parcel in competitive bidding? This conclusion leads straightway to another: In competitive bidding, the winner tends to be the player who most overestimates true tract value. And yet

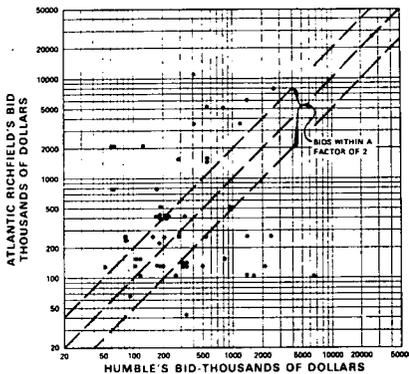


Fig. 1—Atlantic Richfield bids vs Humble bids, 1969 Alaska North Slope Lease Sale.

another: He who bids on a parcel what he thinks it is worth will, in the long run, be taken for a cleaning.

A chorus enters sobbing. "But you told us earlier that our evaluations were correct on the average, albeit high sometimes and low sometimes. Doesn't the law of averages save us from ruin?" First, the so-called law of averages never guaranteed salvation for anyone, though it often gives some courage to act. Second, it is true (or we assume it so) that one's evaluations are correct on the average — but it is not true that one's evaluations on *tracts he wins* are correct on the average. There is a difference. Only in a noncompetitive environment, can one counter his overvalued parcels with his undervalued parcels and expect to do well on average. In bidding, however, he has a poor chance of winning when he has underestimated value and has a good chance of winning when he has overestimated it. So we say the player *tends* to win a *biased set* of tracts — namely, those on which he has overestimated value or reserves.

Note that we are talking now about *trends* and *tendencies* — not about what will happen every time one purchases a tract. It is possible that everyone will underestimate the value of a particular parcel. The winner will, under those circumstances, have a very attractive investment. But that is like winning the Irish Sweepstakes on your first ticket and then going around claiming that buying sweepstakes tickets is going to be a great investment for the future. As we make our investment decisions we must distinguish among the lucky event, the unlucky one, and the average of what occurs year after year.

Some may argue that the industry is smarter now — has new exploration techniques — and will not make the same kind of mistakes in the future. It is certainly true that we are better able to make exploration judgments these days; but it still does not mean we are very good. Anyway, even when technology was not so advanced, we were probably still "about right on average".

For example, before the "new technology" one might have expected a particular reservoir to contain 10 million bbl. If he had examined his uncertainties, he would have said the reservoir, if it exists, might have any amount between 2 million and 50 million bbl. With better information, he might still say he expects 10 million bbl, but his uncertainty has decreased and now ranges from 3 million to 35 million bbl. We claim that the effect of new technology only narrows our uncertainties — and does not necessarily change our expected values — again on average.

Bid Strategy

So what is the best bid strategy? We cannot tell you and will not even try. The only thing we can do is show you one approach to the mathematical modeling of competitive sales. The theory, as we interpret it, agrees well with what we perceive has happened in the real world.

For some competitive environments, in order to reach some specified return on investment, the model suggests a lower bid than one might come up with otherwise. What are these environments? The following rules are not without exceptions; but for the nor-

mal level of competition and the large uncertainties underlying our value estimates, the rules seem to apply.

1. The less information one has compared with what his opponents have, the lower he ought to bid.
2. The more uncertain one is about his value estimate, the lower he should bid.
3. The more bidders (above three) that show up on a given parcel, the lower one should bid.

How do we know these rules? Call it simulation. We modeled the competitive bidding process on a computer as closely as we knew how and then sat back to let the machine churn away. We allowed for such things as different numbers of bidders, different value estimates by the opponents, different information positions for the opponents, different bid levels* by the opponents, and the proper ranges of uncertainty about each of these. We let the computer take our estimates of competition (with the associated uncertainties) and play the lease sale game over and over again. After some thousands of runs the computer tells us, for our various bid levels, the probability of our winning the parcel and its value to us. Looking at the results, we simply choose a bid level that assures us (in a probability sense) of not investing incremental dollars at less than some specified rate of return.

We made all kinds of sensitivity tests to see "what if". We examined the effect of low rate of return criteria for opponents and checked on few opponents vs many. We looked into the influence of an opponent's superior information. We varied every significant variable we could identify.

When it was all over, we concluded that the competitive bidding environment is a good place to lose your shirt.

Previously we listed three reasons for lowering one's bid. The first two are easy enough to understand. But the third takes some work. Most people assume that the tougher the competition (i.e., the more serious bidders there are) the more they must bid to stay with the action. What action are they wanting to stay with? If they are trying to maximize the number of acres they buy, they are right. If they would like to maximize the petroleum they find, they are probably right. But if they are trying to invest money at some given rate of return, our model says they are probably wrong.

Although the concept may not be clear to everyone, we are convinced that if one's mistakes tend to be magnified with an increase in number of opponents, then he must bid at lower levels in the face of this stiffer opposition in order to make a given rate of return. Let us reinforce this with an example.

Assume we have a 10-tract sale. Also, for the sake of simplicity, let us assume that all tracts will be productive and that after exploratory drilling costs, each will be worth \$10 million at a 10 percent discount rate. Each competitor in this sale correctly estimates the total value of the sale acreage but on any one tract he may be too high or too low. (This assumption

merely means that one tends to be unbiased in his estimate of value. He may not be correct on any one parcel, but he does all right on the average.)

As in the real world, let us have the competitors disagree as to the value of the individual tracts — and let that divergence of opinion be about the same as we see in major lease sales. But let the average of all the competitors' value estimates be very close to the true value. (Here we are saying that when they estimate value the competitors are not misled in the same direction.)

Finally, assume that to protect himself from the risks and uncertainties of the estimating procedure, each competitor chooses to bid one-half his value estimate. What we want to do is check the rate of return of the winners as we increase the number of bidders.

Table 2 reflects the sale as if only Company A bids. Remember, he correctly estimates that the 10 tracts are worth \$100 million to him and he bids one-half of his value estimate on each tract. The sum of his 10 bids is then \$50 million. He wins all tracts since there is no competition. Since he pays \$50 million for what is worth \$100 million (at a 10 percent discount rate) his rate of return for the sale will be about 17 percent** after tax. This is his reward even though he has overestimated value on Tracts 2, 6, and 8.

Table 3 examines the consequences of adding one competitor, Company B. Since both companies are unbiased in their estimates, use the same discount rate for calculating value, and bid the same fraction of their respective values, then we would expect each to win half the time. As it turns out, that is exactly what happens. But see what else happens. In Table 1 we saw that Company A won all 10 tracts — on seven of which he had underestimated value and on three of which he had overestimated. Now along comes Company B and wins five of the seven tracts on which Company A had underestimated value. Remember our contention that one tends to lose those tracts on which he has underestimated value? Company A has spent more than 70 percent as much money as he spent when he was the only bidder, but now he gets only half as much acreage. The only thing that saves him is his strategy to bid one-half his value estimates. His rate of return drops to 14 percent. The "industry" consisting of the two companies has about the same return.

Now go to Table 4 and see what happens if we raise the number of bidders to four. More and more of Company A's undervalued tracts have been grabbed off by the competition. Company A is left with only Tract 8, which he evaluated at \$35 million. (It is worth only \$10 million, remember.) The selling authority's take has climbed to about \$52 million — the sum of all the high bids. Company A's return drops to about 5 percent, whereas the industry's return is about 11 percent. Company A turns out to be a little unlucky in that its return is lower than the industry's. Somebody has to be unlucky. That should not detract from our argument. We could pick any

*Bid level is the fraction of his value estimate a player will bid.

**We estimated this return and others in the example from studies of cash flows from typical projects.

of the competitors and see the same trend toward lower returns.

Table 5 shows the results of eight bidders. Company A still retains its Tract 8. Bidders E through H pick up five of the 10 tracts. The seller gets about \$26 million more than he did with the four competitors. Since the tracts did not pick up any more reserves, the additional expenditure must mean a decreased rate of return for the industry. We estimate about 8 percent — even though each bidder is bidding only half his value estimate.

There is no table to show the results for 16 bidders, but the trend continues onward to lower returns. The 16 bidders spent a total of \$162.6 million for a return of about 6 percent.

What if the industry had wanted to make about 10 percent on its investment? What percent of value would each competitor have had to bid to accomplish that goal? Just taking the results of our example, the bid levels would have been something like this:

Number of Bidders	Total Value Estimates for Highest Estimators on Each Tract	Bid Level for 10 Percent Return
1	\$100 million	1.00
2	\$139 million	0.72
4	\$184 million	0.54
8	\$237 million	0.42
16	\$325 million	0.31

(The bid levels that appear in the third column are valid for only the particular example we have just gone through, where everyone uses the same return criterion and everyone uses the same bidding strategy. Companies, in the real world, are not so inclined to play that way. Nevertheless, the phenomenon of decreasing rate of return with increasing numbers of

TABLE 2—CASE 1—ONLY COMPANY A BIDS ON PROPERTY

Tract Number:	1	2	3	4	5	6	7	8	9	10
A's bid*	1.9	5.6	2.6	3.4	3.7	5.2	1.9	17.5	3.9	4.3
						Company A		Industry		
Winning bids*						50		50		
Value of acreage won*						100		100		
Present-worth profit*						50		50		
Investor's rate of return, percent						17		17		

*In millions of dollars.

TABLE 3—CASE 2—ONE COMPETITOR ENTERS SALE WITH COMPANY A

Tract Number:	1	2	3	4	5	6	7	8	9	10
A's bid	1.9	5.6*	2.6	3.4	3.7*	5.2*	1.9	17.5*	3.9*	4.3
B's bid	3.8*	5.1	4.0*	4.9*	0.6	4.2	5.9*	4.5	1.8	15.2*
						Company A		Industry		
Winning bids**						35.9		69.7		
Value of acreage won**						50.0		100.0		
Present-worth profit**						14.1		30.3		
Investor's rate of return, percent						14		14		

*Winning bid.
**Millions of dollars.

bidders appears to us a general rule of sealed bidding.)

It is certainly true that the value of the tracts does not change just because there are more bidders. What does change drastically as the number of bidders increases is the set of tracts one wins. Not only does that set get smaller with increasing competition, but also its quality tends to decrease compared with what the winner thought it would be ahead of time.

The more serious bidders we have, the further from true value we expect the top bidder to be. If one wins a tract against two or three others, he may feel fine about his good fortune. But how should he feel if he won against 50 others? Ill. He would wonder why 50 others thought it was worth less. On the average, one misjudges true value much worse when he comes out high against 50 other bidders than when he beats only two or three. Hence, our bidding model usually tells us to move toward lower bids as competition increases in order to protect ourselves from the winner's curse. True, the probability of purchasing property decreases — but so does the chance of losing that shirt.

Some Mathematics

The theory of competitive bidding obviously involves mathematics. For those so inclined, we will lay out here and in the Appendix analytical procedures for examining the effects we have spoken of. (Then we will say, "But the analytical approach is so difficult from the practical side that we must try a simulation.") What we will try for analytically is the *expected value of the winning bid*. We simply compare that value with

TABLE 4—CASE 3—THREE COMPETITORS ENTER SALE WITH COMPANY A

Tract Number:	1	2	3	4	5	6	7	8	9	10
A's bid	1.9	5.6	2.6	3.4	3.7	5.2	1.9	17.5*	3.9	4.3
B's bid	3.8	5.1	4.0	4.9	0.6	4.2	5.9*	4.5	1.8	15.2*
C's bid	5.7	3.1	2.6	6.5*	9.8*	9.8*	4.0	1.5	3.3	3.7
D's bid	6.5*	8.3*	7.8*	6.4	3.3	2.2	3.3	5.0	4.5*	2.7

	Company A	Industry
Winning bids**	17.5	91.8
Value of acreage won**	10.0	100.0
Present-worth profit**	- 7.5	8.2
Investor's rate of return, percent	5	11

*Winning bid.
**Millions of dollars.

TABLE 5—CASE 4—SEVEN COMPETITORS ENTER SALE WITH COMPANY A

Tract Number:	1	2	3	4	5	6	7	8	9	10
A's bid	—	—	—	—	—	—	—	17.5	—	—
B's bid	—	—	—	—	—	—	5.9	—	—	15.2
C's bid	—	—	—	6.5	—	—	—	—	—	—
D's bid	—	—	7.8	—	—	—	—	—	—	—
E's bid	—	—	10.3	—	—	—	—	—	—	—
F's bid	—	—	—	—	14.3	13.0	—	—	—	—
G's bid	23.3	—	—	—	—	—	—	—	—	4.7
H's bid	—	—	—	—	—	—	—	—	—	—

	Company A	Industry
Winning bids*	17.5	118.5
Value of acreage won*	10.0	100.0
Present-worth profit*	- 7.5	- 18.5
Investor's rate of return, percent	5	8

*Millions of dollars.

true parcel value to see whether a particular bidding strategy can lead to trouble.

Let

$$f_i(x) = \text{probability density function for } i\text{th opponent's bid.}$$

And let

$$F_i(x) = \text{probability that the } i\text{th opponent bids a value less than } x.$$

Therefore,

$$\prod_{i=1}^n F_i(x) = \text{probability that } n \text{ independent opponents all bid a value less than } x.$$

Now let

$$g(x) = \text{probability density function for our bid.}$$

Define

$$h(x) = K_n \left[\prod_{i=1}^n F_i(x) \right] g(x) = \text{probability density function for our winning bid,}$$

where

$$K_n = \text{constant to make the integral of that density} = 1$$

$$K_n = 1 \int_{-\infty}^{\infty} \left[\prod_{i=1}^n F_i(x) \right] g(x) dx.$$

Then it is a simple matter to get the expected value of our winning bid, $E(X_w)$

$$\begin{aligned} E(X_w) &= \int_{-\infty}^{\infty} x h(x) dx \\ &= \int_{-\infty}^{\infty} x K_n \left[\prod_{i=1}^n F_i(x) \right] g(x) dx. \end{aligned}$$

Then under some very simple assumptions (too simple for the real world), we can define some $F_i(x)$ and $g(x)$ in such a way that we can evaluate the integral. In fact, we can show that if $f_i(x)$ and $g(x)$ are uniform on the interval of 0 to 2, and all competitors bid their full value estimate, then:

$$K_n = n + 1$$

$$E(X_w) = 2 \left(\frac{n + 1}{n + 2} \right).$$

These uniform distributions imply a true value of 1 (the mean of each is 1). If there are no opponents ($n = 0$), then:

$$E(X_w) = 2 \left(\frac{1}{2} \right) = 1.$$

That is what we hope if we bid our value estimate against no opposition. On the average, we win tracts at our value. But what if there are five opponents?

$$E(X_w) = 2 \left(\frac{5 + 1}{5 + 2} \right) = \frac{12}{7} \approx 1.71.$$

That means that on the average, we would expect to pay 71 percent more than value on the tracts we won. That is not good.

One might think he could take the reciprocal of 1.71 to get his "break-even" bid level. Not so. The subtleties of competition force the "break-even" bid level to be even lower than that reciprocal, although perhaps not too much lower.

We can set up the mathematics, but for the real world, we cannot solve the equations. Instead, we simulate the whole process. And that is all right, for by simulation, we can do many things we would not even try with strict mathematical analysis.

How Can a Bidding Strategist Win Tracts?

Some will claim he cannot — we believe they are wrong.

An analyst comes in claiming a tract is worth X . The bidding strategist then recommends a bid of, say, $X/2$. A voice from the rear cries, "That bid won't be competitive." The voice is usually forgetting about the large divergence in value estimates by competitors. There is a very good chance some other competitor will see a much larger value than X . We could not be competitive with any bid we would reasonably try. So our chance of winning depends more upon our reserves estimate than upon our particular bid level. The bid level adjustment is primarily for the purpose of achieving a certain profitability criterion.

Some interesting evidence to back up these comments comes from the 1969 Alaska North Slope Sale.⁶ Examine the second-high bids for that sale. The sum of those second-high bids was only \$370 million compared with the winning bid sum of \$900 million. Said another way, the fellow who liked the tract second best was willing to bid, on the average, only 41 percent as much as the winner. In this respect, the sale was not atypical.

If that is not shocking enough, try this one. For 26 percent of the tracts, had the second-high bidder increased his bid by a factor of 4, he still would not have won the tract. A 50-percent increase in bid by the second-high man would not have won 77 percent of the tracts. Turn the idea around. If every tract winner had bid only two-thirds as much as he did, the winners still would have retained 79 percent of the tracts they won. (The apparent discrepancy, 77 percent vs 79 percent, comes from the 15 tracts that drew only one serious bidder.) We therefore conclude, based on historical study, that bid manipulation to achieve desired profitability does not drastically impair one's chances of winning acreage.

TABLE 6—ALASKA LEASE SALE, 1969 —
RATIO OF HUMBLE BID TO ARCO BID
For the 55 tracts on which both companies bid

0.03	0.32	0.50	1.11	2.53
0.03	0.32	0.51	1.13	2.56
0.04	0.33	0.51	1.31	3.82
0.06	0.33	0.60	1.39	5.25
0.08	0.36	0.69	1.39	5.36
0.11	0.36	0.76	1.40	6.14
0.12	0.36	0.77	1.79	7.98
0.16	0.39	0.78	2.02	9.19
0.18	0.41	0.79	2.41	13.32
0.22	0.45	0.82	2.41	15.45
0.24	0.45	1.00	2.50	16.80

How Far Off Might the Winner Be?

We have been saying that the winner of a tract tends to be the one who most overestimates value. You may say, "So, if we win, we wish we hadn't. If we lose, we wish we hadn't. You mathematicians are really saying to stay away from lease sales." That is not what we are saying. The bidding model gives us a bid that we can make with confidence, and be happy with when we win. Yes, we may have overestimated value. But we have bid lower than our value estimate — hedging against expected error. In a probability sense, we "guarantee" that we obtain the rate of return we want.

As to how far off the highest estimator might be, we have resorted to simulation of the estimating process. We perhaps could have got the result through use of extreme value theory, but we chose not to. Also, we want to caution the reader that we are examining what we think will happen on the average — not what will happen on a particular tract. If the wildcat fails, obviously everyone was too high in his value estimate. If the well hits, it is entirely possible everyone was too low. That is not the kind of problem we are talking about. The question is more likely: "If I win 10 parcels at a sale, how many barrels will they all contain compared with my pre-sale estimate?"

Fig. 2 shows the results of our simulations (using log-normal distributions) for various numbers of competitors and degrees of uncertainty. We use the variance of a distribution — measure of its spread — to quantify general uncertainty as to value among competitors. One can get a rough idea of the magnitude of variance by measuring the parameter on sets of bids on tracts in past sales. That variance, however, will be too high since the actual bids contain "noise" items apart from property evaluation — for example, various company discount rates and bid levels. Obviously, there is not so much uncertainty in drainage sales as there is in North Slope-type wildcat sales. We use variance to account for these differences.

Intuition would argue that the greatest potential for large errors in estimating reserves exists on the frontier — Alaska. The simulation agrees wholeheartedly. For 12 serious bidders in an environment of uncertainty such as the North Slope, the one estimating the largest amount of expected reserves can

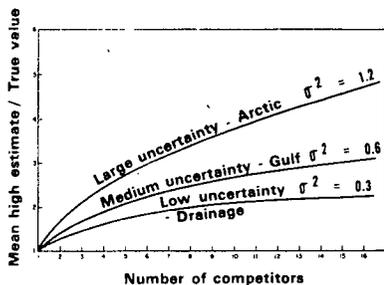


Fig. 2—Relation of mean high estimate to true value under various conditions of uncertainty.

expect to be off by a factor of 4 on average. In the Louisiana Offshore, facing the same kind of competition, he would expect to miss by a factor of only 2.5.

Nature of the Model

We must choose a probability distribution for the value estimates of various companies. The log-normal seems to us the best. Many writers have documented the variables in our business that seem to follow the log-normal. Here is a partial list of them:

1. Reservoir volume
2. Productive area
3. Net pay thickness
4. Recoverable hydrocarbons
5. Bids on a parcel in a lease sale
6. Land value estimates calculated by companies.

The first four items have been ordained by Nature. The last two are man-made. Why should they perform like Nature? There is an amazing theorem in mathematics — the Central Limit Theorem — that says if you take sums of random samples from any distribution with finite mean and variance, the sums will tend toward a normal or Gaussian distribution. The tendency will be stronger the more numbers there are in each sum. If the original numbers come from a normal distribution, the sum is guaranteed to be normal. If we insert the word "product" for "sum" we can then insert the word "log-normal" for "normal." Since we arrive at value through a series of multiplications of uncertain parameters (reservoir length \times reservoir width \times net pay \times recovery \times after-tax value per barrel), it is not surprising that bids and land-value estimates seem to take on this log-normal characteristic.⁷

There are certain problems in applying the theorem. Negative dollars (a loss or lower-than-criterion rate of return) will not fit the log-normal distribution. No one knows how to take the logarithm of a negative number. And we all know that the value calculation involves more than simple multiplication. Even so, the error in our assumption does not appear to be great, and we happily use the log-normal distribution in our computer simulation.

The evaluation of a potential cash flow stream by different investment criteria has been the subject of much study. We believe that methods involving the discounting of the cash flow stream are effective for the decision maker. The criterion we prefer is present worth or present value (PW), using as the discount rate the Internal or Investor's Rate of Return (IRR) expected to be earned by the investor in the future.⁸ The very essence of PW is that it is the value or worth we place on an investment opportunity at the present time. In a situation where the future cash flow is known with certainty, we can discount this cash flow to the present.

We do not know the future cash flow with certainty, however, and resort to using the *expected value* concept. Expected value can mean different things to different people, but we use it in the accepted probabilistic sense: Expected value is the sum of all possible events multiplied by their chance of occurrence. Arithmetic mean is a common term for expected

value. Expected value is *not* necessarily the mode (most probable value), nor the median (the value that is exceeded half the time). We do not specify all the possible events, since this would be an outrageous number. But we do try to specify enough possible events so that the calculations with these relatively few discrete values will yield a good value. The "good" value should be close to that expected from a consideration of *all* possible events.

The tract value plays a much smaller role in our model than one might think. We essentially normalize everything to value = 1.0. The model tells us what *fraction* of our value (bid level) to bid in order to maximize expected present worth for the competition we put in. The bid level can change only if our idea of the competition somehow changes. If we think the degree of competition is independent of tract value, then value need never be discussed. But sometimes there are tracts that, because of their potential, may cause competitors to deviate from past or expected performance. We allow for this by considering the competition the way we think it will be for a given tract. In that sense, then, value gets into the model.

Our model differs from some other models that have been discussed. An earlier philosophy reasoned thus: "Our value may be incorrect on a given tract, but it is correct on the average. So let our value estimate serve as the mean of the distribution from which our opponents draw." We think that tack can lead to trouble. It is inconsistent with the idea that when we win, our estimated value was probably higher than true value. Instead, we let the true value of a tract be 1.0 and simply take our value estimate from a distribution with mean = 1, the same as everyone else. We treat all value estimates as independent random variables. Our model is similar in this respect to Rothkopf's.⁶ The variance of our distribution may be the same or different from our opponents' — depending on the relative quality of our information.

Model Input Data

Some believe that the input requirements for a competitive bidding model are quite severe — that reliable input is impossible to obtain. We do not think so. Unless one successfully engages in espionage, he is not going to know his opponent's bid. But he does not need to. We have found that by studying the behavior of companies in past sales, we can get a fair clue as to what they will do in the future — close enough to make the model results meaningful.

Here is the information we think is necessary to make an intelligent bid. Keep in mind that each bit of input is an uncertain quantity. We treat it as uncertain by using probabilities and probability distributions. That, after all, is the way the world is.

We believe that the input data are best determined by a combination of historical data and the judgment of explorationists. To illustrate the use of our model, we will develop a set of input data for a purely hypothetical example.

What sort of data do we need? Primarily, we need information about the competition we are likely to face. We try to identify companies that are likely to bid on the parcel. This allows us to use any specific

knowledge we have about a competitor or his exploration activities. For each of the potential competitors, we then try to estimate the probability that he will bid. To the competitors specifically named, we can add some "other bidders" in order to make the expected number of bidders consistent with our beliefs:

Company	Probability of Bidding
A	0.8
B	0.7
C	0.5
Other bidder	0.5
Other bidder	0.5
Expected number of bidders	3.0

In this example, we expect three competitors, but we acknowledge that there could be as few as none or as many as five. In the simulation performed by our model, the number of competitors will vary, from trial to trial, from a low of zero to a high of five. The proportion of trials on which a given bidder appears will be approximately equal to the probability we have assigned above.

The next item we require is usually the most difficult to estimate: the bid level of each potential competitor. If he calculates a value of \$X for the property, what fraction of that value is he likely to bid? To further complicate the matter, we need to estimate this fraction as if the \$X value were based on our own rate of return criterion. In other words, the bid level is used to adjust for differences in evaluation criteria and for the fraction of value that a given competitor will bid.

We believe that historical data can be of help in estimating bid levels. We can go back to a previous sale or sales and compare a given competitor's bids with the value estimates we made on the same tracts. At first we were tempted to compute the ratio of a competitor's bid to our value on each tract and then average these ratios over all tracts. We discovered that under the assumptions of our model of the bidding process this gives a biased estimate of the competitor's bid level. We can show that to get an unbiased estimate of his bid level on a tract we need to divide the ratio of his bid to our value by the quantity e^{σ^2} . Here σ^2 is the variance of the natural logarithm of our value estimate on the tract. (Our value estimate, remember, is considered a random variable. Estimates of σ^2 are not easy to come by, but again historical data can be of help.) We can then calculate an average bid level for the competitor from these unbiased estimates on all the tracts. This bid level estimate incorporates differences in evaluation criteria, as well as the fraction of value that the com-

TABLE 7—INPUT DATA FOR COMPETITION

Company	Probability Of Bidding	Bid Level	Variance
A	0.8	0.6	0.6
B	0.7	0.6	0.6
C	0.5	0.4	0.6
Other bidder	0.5	0.3	0.8
Other bidder	0.5	0.3	0.8

petitor bids, on average. We then modify this according to our explorationists' judgment about the current sale and the particular tract in question to add another column to our hypothetical input data:

Company	Bid Level
A	0.6
B	0.6
C	0.4
Other bidder	0.3
Other bidder	0.3

We also need to specify how much variation we think is possible in each competitor's bid. Even if we knew that the bid levels specified above were precisely correct, we still would be uncertain as to the actual bids because we do not know the value that each competitor places on the tract. We must try to estimate the variability in each competitor's value estimate. We do this by specifying the variance of the estimate. (Actually, we specify the variance of the natural logarithm of the estimate. Hereafter, when we mention variance, we will be referring to the variance of the logarithm of a quantity, because this is a useful parameter in the log-normal distribution.)

We can again get some help from data on past sales. On individual tracts about 1.2 has been the average variance of the bids.¹⁰ This includes more than just the variation in value estimates, though. It also includes differences in bid levels and evaluation criteria among competitors. The variance in value estimates for a single company would average something less — we have guessed about 0.6.

Another way to estimate this variance, if we assume it is constant over all tracts, is to compare an individual competitor's bids with our values on the tracts in a given sale. This should eliminate variation due to differences in evaluation criteria, assuming a company uses the same criterion in all of its evaluations. If we measure the variance of the ratio of a competitor's bid to our value, there are three components to this variance:

1. Variance of our value estimate (Y)
2. Variance of the competitor's value estimate (X)
3. Variance of the competitor's bid level (K) from tract to tract.

We can show that these components are additive. The variable whose variance we are measuring is $\log_e(KX/Y)$. We can write

$$\log_e(KX/Y) = \log_e(K) + \log_e(X) - \log_e(Y).$$

If K , X , and Y are independent,

$$\begin{aligned} \text{Var} [\log_e(KX/Y)] &= \text{Var} [\log_e(K)] \\ &+ \text{Var} [\log_e(X)] + \text{Var} [\log_e(Y)]. \end{aligned}$$

By assuming that the last two components are equal and the first is about 0.15, we calculated an average variance for our opponents' value estimates in several sales. The values were not far from the 0.6 estimated above.

We feel free to modify this estimate in accordance with the nature of the sale and the tract in question.

For example, we felt that the 1969 North Slope Sale was characterized by more uncertainty than the typical offshore Louisiana sale. Thus, we generally assigned higher variances to value estimates. In drainage situations, we use lower variances to reflect the fact that the value estimates should be closer to the true values. We also try to differentiate among competitors. Those we feel have better information about a tract are given lower variances and those with poorer information, higher variances. So we shall add another column to our input data:

Company	Variance
A	0.6
B	0.6
C	0.6
Other bidder	0.8
Other bidder	0.8

Table 7 shows a complete set of the input data on competition.

We add another component, $\text{Var} \log_e(K)$ mentioned above (usually about 0.15), to these variances to reflect our uncertainty about our competitors' bid levels. Finally, we estimate the variance in our value estimate by assessing the quality of our information relative to that of our opponents'.

Mechanics of the Model

The parameters for the log-normal distributions assigned to the value estimates of the various bidders (including us) come directly from the data given above. We usually run the model thousands of times to simulate the competitive and evaluation possibilities on a single tract. (See flow chart, Fig. 3.) On each trial, a value is drawn for each random variable, which results in a set of bids by the participating companies. The results of the "sale" are then recorded and the whole process is repeated. After enough trials have been run, the expected results are calculated and printed.

Model Output

The output of the model includes expected results for 15 different bid levels, from 0.1 to 1.5 times our value estimate. Results from our hypothetical example are shown in Table 8. The values in the first column indicate possible bidding levels as fractions of our value estimate. The second column gives the amount of our bid at each level. We have assumed that our estimate of the value of this tract is \$10 million. The next column shows the probability of winning, as calculated by the model, for each bidding level. This is useful in estimating the amount of acreage, reserves, etc., we expect to win. The expected amount of our expenditure is shown in the fourth column. In the next column we have the expected present worth for each bidding level. The last column indicates how high we can expect our value estimate to be if we win. If we bid full value (bid level of 1.0) and win on tracts such as this, our value estimate will, on the average, be 1.35 times the true value. It is again obvious that we have to bid less than full value just to break even.

Optimization of Bids

The expected present worth of the submitted bid we will designate as EPW_{Bid} . Given all our usual information about the tract and other bidders, what bid should we submit? What is our optimum bid for the example above?

We can use a graph of EPW_{Bid} vs bid level to consider this problem (Fig. 4). First, what happens if we do not bid? The bid level is zero. No expenditures will be made, and the EPW_{Bid} is zero. Second, what happens if we bid our estimate of the tract value? For the tracts we win, we tend to overestimate value. Hence, the average value of the tracts we win is less than our original estimates. Thus in the example we have a negative EPW_{Bid} of \$1.9 million. Third, what happens if we bid less than our estimate? This strategy really provides the only chance we have to get a positive EPW_{Bid} . We must bid somewhere between the one extreme of a very low bid (which means very low chance of winning a big positive value) and the other extreme of a very high bid (which means a high chance of winning a big negative value).

What then is the optimum bid? For the single tract illustration above, and for our investment criterion of maximizing the EPW_{Bid} rather than maximizing reserves or some other goal, we would choose a bid level of 0.35. There may not always be a positive value of EPW_{Bid} , in which case we would not bid.

Usually, however, there is a positive maximum value. It is not always at the same bid level. The maximum shifts along the bid level axis with changes in the number of bidders, their bid levels, and the variances of their estimates.

Deviation from the optimum bid level in either direction will decrease the EPW_{Bid} . If someone "feels" we should bid higher or lower, we can show what this feel costs in terms of EPW. Any bid giving a positive EPW_{Bid} will, of course, give an expected IRR greater than the discount rate. Suppose the discount rate used is the marginal acceptable IRR. Going to a larger bid level than that giving maximum EPW gives a lower EPW. Therefore, that marginal increase in bid has a negative EPW associated with it. Look at Table 8. Going from a bid of 0.5 to 0.6 costs \$283 thousand in EPW. Taking an action that decreases the EPW is the same as taking an action that invests money at less than the acceptable IRR. According to the model, then, he who would go above his optimum bid level to gain probability of win advantage can expect to invest part of his money at a return lower than the minimum he said he would accept.

Before leaving the subject of bid optimization, we will comment on another frequently mentioned criterion. Under the existing conditions of uncertainty, there will be "money left on the table" (difference between the winning bid and second-high bid) and rightly so. We can minimize the money left on the

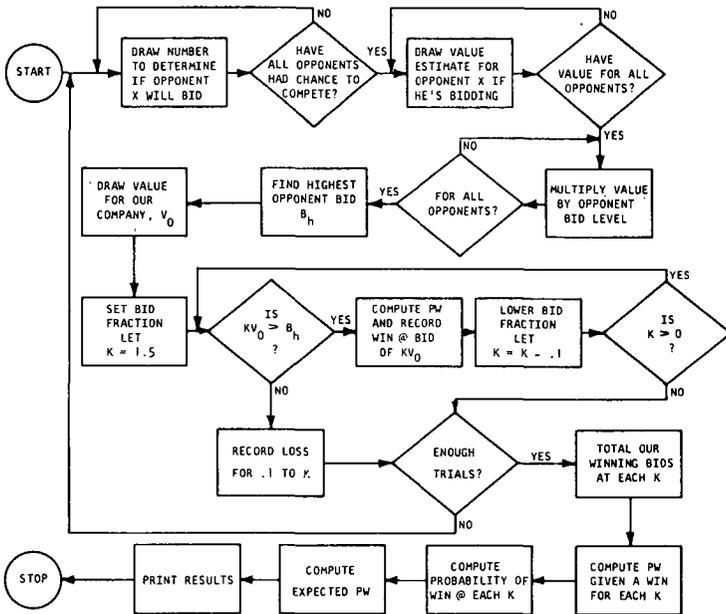


Fig. 3—A bidding model.

TABLE 8—MODEL OUTPUT

Bidding Level	Bid*	Probability of Winning	Expected Bonus Spent*	Expected PW of Bid*	Expected Ratio of Our Estimate To True Value, Given We Win
0.0	0	0	0	0	—
0.1	1,000	0.03	30	232	2.32
0.2	2,000	0.09	180	512	2.16
0.3	3,000	0.16	490	670	1.97
0.4	4,000	0.23	933	664	1.79
0.5	5,000	0.29	1,472	477	1.68
0.6	6,000	0.36	2,136	194	1.58
0.7	7,000	0.41	2,878	-212	1.50
0.8	8,000	0.46	3,675	-707	1.44
0.9	9,000	0.50	4,523	-1,288	1.39
1.0	10,000	0.54	5,407	-1,918	1.35
1.1	11,000	0.57	6,324	-2,607	1.32
1.2	12,000	0.61	7,321	-3,313	1.29
1.3	13,000	0.64	8,342	-4,076	1.26
1.4	14,000	0.67	9,330	-4,868	1.24
1.5	15,000	0.69	10,348	-5,682	1.22

*Thousands of dollars.

table by not bidding at all; or, if we have positive knowledge of others' bids, we can bid one cent more. Obviously both approaches are impractical. The fact is that there will be money left on the table, so we have chosen the objective of maximizing EPW — not minimizing money left on the table.

Possible Weaknesses in the Approach

If we thought there were any serious flaws in our ideas on bidding, we would not want to waste your time. On the other hand, while we have gathered considerable evidence to support our theory, some chance always remains that we have simply been fooled by the data.

The *log-normal distribution* does not look as if it can work very well as a model for describing uncertainty on tracts of small value. People who use discounted cash flows to arrive at present worths can get negative values even though they expect the tracts to make some, though small, positive rate of return. The log-normal probability distribution allows for no negative values. The effects of differences among company discount rates become highly magnified on the less valuable acreage.

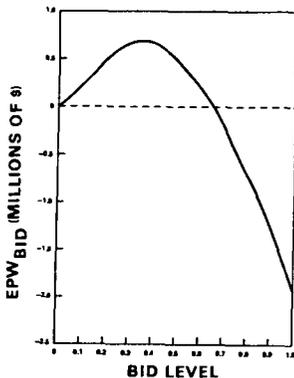


Fig. 4—EPW_{1.4} vs bid level.

The reason our model can suggest such a low bid level as a reasonable strategy is the *magnitude of the uncertainty* that we believe is associated with the reserves-value estimating process. We had occasion to compare our independent reserves estimates with those of a partner and found the disagreement to be quite large, though there was no bias by either party. We were as likely to be high as he. If you look at published bids, you can, indirectly, get the same results.

In Fig. 2 we showed that the highest estimator would be off, on the average, by a factor of 2.5 in his expected reserves estimates if he were competing against 11 other independent estimators. Anyone who feels his own reserves estimates are never off by more than 50 percent will feel severe pains swallowing our factor of 2.5.

Of course the amount of uncertainty is just an input parameter for the model. One can put in whatever he likes.

Another problem is our assumption that reserves and value as reflected in final bid estimates *tend to be unbiased*. If we did not make this assumption we would change our ways. No manager is going to submit a bid based on value estimates that he knows are too high or too low. He will enter a multiplier with the intention of being correct on the average. But that tactic does not necessarily guarantee he will be.

We have recognized another weakness without finding much of a solution. How do we account for the competitor who does not bid at all on a particular lease? Does he think it worthless? Has he no interest? Or has he run out of funds? One might argue forcefully that in a major sale he always faces 15 to 20 competitors, whether all of them bid or not.

Conclusions

It is still said that, after many years of exploration, many barrels of oil found, many cubic feet of gas found, and after much red ink, the outlook for future offshore potential is bright. Maybe it is.

Unexpectedly low rates of return, however, follow the industry into competitive lease sale environments year after year. This must mean that by and large industry is paying more for the property than it ultimately is worth. But each competitor thinks he is play-

ing a reasonable strategy. How can the industry go astray? Our sojourn into competitive bidding theory tells us to expect exactly what has happened. It is, then, a theory not only that is mathematically sound, but also that fits reality. Even though each bidder estimates his values properly on average, he tends to win at the worst times — namely when he most overestimates value. The error is not the fault of the explorationists. They are doing creditable work on a tough job. The problem is simply a quirk of the competitive bidding environment.

Acknowledgment

L. P. (Barney) Whorton, Manager of Atlantic Richfield's Production Research and Development Laboratories and former SPE president, deserves much of the credit for the work that led to this paper. We want to thank him for his unending support, encouragement, and open-minded criticisms of the research effort.

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Mr. HARVEY. Our next witness is Mr. E. H. Clark, Jr., president, Baker Oil Tool Co., and immediate past president, Petroleum Equipment Suppliers, who comes to us today from Los Angeles.

STATEMENT OF E. H. CLARK, JR., PRESIDENT, BAKER OIL TOOL CO. AND IMMEDIATE PAST PRESIDENT, PETROLEUM EQUIPMENT SUPPLIERS, LOS ANGELES, CALIF.

Mr. CLARK. My name is E. H. Clark, Jr. I am president and chairman of the board of Baker Oil Tools, Inc., headquartered in Los Angeles, Calif. I am testifying as the immediate past president of the Petroleum Equipment Suppliers Association represents approximately 140 companies which supply about 85 percent of all equipment and services utilized by the oil- and gas-producing industries. PESA members employ approximately 200,000 people, most of whom are Americans employed in the United States. We are manufacturers, service companies, or distribution companies, or distribution companies domiciled and operating in most of the 50 States of this Nation. With few exceptions, PESA members do not engage in exploration and development of oil and gas properties, act as operators of leases, nor do they buy and sell oil or natural gas. We are a group of small, medium, and some large companies which act as vendors equally to both the independent and major oil companies.

I began my career at Baker Oil Tools, Inc., in 1947 as an engineer and have been with that company continuously. During the 1950's I witnessed an unprecedented boom in the United States, followed in the 1960's by an unprecedented decline in domestic activity as well as producible reserves. I have been fortunate to participate over the years in a number of major study efforts of various PESA committees and more recently with the National Petroleum Council. In addition, my own company has undertaken extensive analyses of the industry which we serve. I am hopeful that my experience will be of some value to this committee and these hearings.

I believe that these hearings, the legislation now under review, and the general national debate about the Outer Continental Shelf are appropriate and timely. We need orderly but accelerated development of the OCS; I see no real alternative.

I understand that a number of legislative proposals are the subject of these joint hearings. Rather than to attempt to speak to a wide number of specific item by item provisions in the legislation, I will concentrate primarily on three major issues which I believe are of great importance to these hearings. First, the role of the U.S. Government versus the role of the private sector on the Outer Continental Shelf; second, the need for timely, orderly development of the Outer Continental Shelf; and third, research and development associated with activities on the Outer Continental Shelf.

I will also briefly comment on four issues relating to specific provisions in the legislation: First, oil-spill funds; second, the lease provisions; third, the National Energy Production Board; and, fourth, the energy facilities program.

To open my testimony, I would like to discuss the role of the Federal Government versus the role of the private sector on the Outer Continental Shelf. I recognize that this is not a new issue, and I feel that national objectives and the Government role has already been well defined primarily through two pieces of legislation—the Outer Continental Shelf Lands Act and the Coastal Zones Management Act. I would like to commend those of you here who had the foresight years ago to propose and pass these milestone pieces of legislation.

Speaking both for PESA and for myself, we believe the U.S. Government does have a major role to play on the Outer Continental Shelf. We believe the OCS resources belong to the American people, not just the mineral rights including oil and natural gas, but also scenic beauty and the biota.

We believe the U.S. Government has responsibility for the preservation and protection of these valuable resources, and an obligation to receive fair value for the development of these resources when such development is necessary for our national well-being. In performing these functions, the Government has a justifiable need for sufficient information as to the extent and value of the resources, the necessity for production of these resources, alternative sources for energy or other needed raw materials, and the impact on the environment and economics of the local communities.

However, as much as we believe the Government has a mandatory role, similarly I believe the private sector has a mandatory role. This belief is not based on a free enterprise bias, but on the principal of division of labor between public and private sectors which allows each to pursue those endeavors for which he is best qualified and can demonstrate greatest efficiency and technical proficiency.

I feel sure I can prove that the U.S. oil industry, backed up by the industry which I represent, the equipment and service industry, is by far the most efficient and experienced in the entire world in developing oil and natural gas reserves. Greater efficiency means lower cost to consumer; it means lower capital for replacement of assets and for expanded activities; with almost a century of experience, it also means safer operations, and less damage to the environment. Additionally, U.S. oil industry with the help of our industry can, within the ground rules set by the Congress, develop these needed resources with virtually no start-up delays. Rapid action will decrease our vulnerability to supply interruption, significantly lessen future inflation, provide needed American jobs soon and provide the energy needed to support a return to full employment without violating the President's Import Limit program.

We would like to make some specific recommendations. We believe that basic geological and geophysical information should be made public before lease bidding. Further, we believe that the Government is entitled to information obtained in operations offshore by the private sector, providing that this information is respected as proprietary. We strongly recommend the survey program in S. 521 as com-

pared to broader programs involving exploratory or developmental drilling.

Mr. HARVEY. Mr. Clark, when you say basic geological and geophysical information should be made public, I assume you mean to the general public, and anyone who wants to look at it.

Mr. CLARK. The work done by the Government should be made public to everyone, anyone who wants to look at it.

Mr. HARVEY. What you are talking about there are the kind of data talked about in the survey program in 521?

Mr. CLARK. Yes.

Mr. HARVEY. As opposed to the kind of information that a company might obtain when it went out to try to evaluate a tract beforehand?

Mr. CLARK. That is correct. I do not believe that the information that the company has developed should be made public. That should be held for the benefit of the Government, within Government circles but not made available to other companies. The survey program properly recognizes what we believe to be a major distinction between information gathering activities as distinguished from exploratory drilling, developmental drilling, and production. But, we believe that any new legislation should contain language that would preclude the U.S. Government from conducting programs for exploratory drilling, developmental drilling or production so that agency directors cannot misconstrue Congress' intent.

I might extemporize a bit at this point. It seems as though the GAO had a difficult time finding its proper role in some of the previous legislation. The legislation sometime needs to say what it shall not do as well as what it shall do. Continuing on now with my testimony, further, we recommend that the Government prepare, and disclose, a long-range plan of OCS leasing with acreages and timetables clearly stated. We believe that greater disclosure of well-defined long-term leasing plans benefits all parties, including both the public and the oil industry. The Government should also determine as soon as possible the minimum fair value for leases disclosing this as part of the long-range leasing plan.

Mr. HARVEY. Why should the Government disclose the minimum fair value?

Mr. CLARK. I think this would help companies decide whether they want to operate or bid in this area. If they know the ground rules. One of the things we find most difficult in the private sector is trying to guess what the ground rules are going to be. Set the ground rules, we may like them or dislike them—

Mr. HARVEY. By ground rules, I would normally take that to be the operating regulations, the things you could or could not do. But I thought you meant here that you wanted to have the Government say that the minimum acceptable bid for tract X will be \$100.

Mr. CLARK. That's what I meant.

Mr. HARVEY. Mr. Matthews just made a very persuasive case that by the Government's present system of not disclosing anything and

letting everybody shoot at whatever number they think, that somehow the public gets a fair return. That certainly is one very good argument that a lot of people make for sealed bidding, for example. But sealed bidding without seeing what it is that the resource owner has in the back of his head as to what it is worth.

It would seem to me that if the Government disclosed that, they would accept a bid for \$100 let's say, then you would get into a guessing game by everyone else as to how much more than 100 they would have to bid to get the tract.

Mr. CLARK. The other side of that coin is that if you have a \$15 million minimum that you have made your mind up to, a company spends a great deal of time and effort against an undisclosed 15 million, that's money wasted. That's human resources down the tube and it does no value to this country nor to the company to waste money that could otherwise be taxable in terms of profits. I see no value to an undisclosed 15 million minimum not being known to the bidder.

Mr. HARVEY. I guess I am misstating, in a sense, by my example what the Government in fact does. They talk about an advance evaluation but they look at the evaluation again in light of what happens in bidding. One of the indications of fair market value is what did the market disclose when you put it up for sale? You really don't know that until you got it up there.

I know of instances personally where evaluation, presale evaluation was put on that was quite high. Take the case that you are concerned with. There seemed to be clear competition for a tract and the bids came in lower than that evaluation. The Government has in those instances accepted those bids because they became convinced that the presale evaluation might have been too high.

Mr. CLARK. Along those basis, what are we going to use all this information we are going to gather for if in the final analysis, the amount of bids made by private companies are going to negotiate out to the final bid? What are you going to use all that information for?

Mr. HARVEY. It is a combination of factors. We could discuss it all day.

Mr. CLARK. You would have to be dealing with the exception more than the generalized case, I think. I was just trying to avoid—

Mr. HARVEY. I understand a company spending a lot of money when in fact they know they would never bid anywhere near what that value was.

Mr. CLARK. Yes, that's a waste of pipe and time and we could be looking at another area and use those resources more to help the American people. That's what I am trying to get up to.

Mr. HARVEY. But how would the company know what it wanted to bid until it went out and looked around a little bit?

Mr. CLARK. Well, there will be a certain amount of looking has to be done, but if you have a basic disagreement on value, you cut it off before you spend a tremendous amount of time.

Mr. HARVEY. Excuse me. Go ahead.

Mr. CLARK. The Government's role in setting and enforcing safety requirements, requirements which directly determine the engineering specifications of much of our equipment, is unquestionable. On the other hand, amortization of such safety equipment must become a basic part of the cost of a barrel of oil and unrealistically cautious specifications can inflate consumer prices unnecessarily.

Before leaving this subject of private versus public oil development, I would strongly recommend that legislators, or their staffs, review key operating statistics of foreign government operating entities versus private entities drilling in the same or similar sectors. Compare the footage drilled per rig per year, the reserves added per foot drilled, or the ultimate recovery percentage from oil in place located. If you do, you will see why the British Government wisely decided to all private companies to continue to develop its North Sea oil, you will see why Indonesia, Nigeria, Canada, and most South American countries depend on U.S. oil company experience, technology, and management skills for the primary development of their resources.

I believe we can document this from my own company's experience. As foreign governments have nationalized exploration and development overseas, sales of our products and services have increased far beyond any increase in production. There is no question that Government-owned-and-operated oil companies consume significantly greater resources per barrel of reserves added or per barrel of production than is required for similar operations by private companies.

Our second major point involves possible delays, or worse a possible moratorium on development of the Outer Continental Shelf. Although significant additions to reserves will occur onshore in the lower 48 as a direct result of the dramatic, and necessary change in oil industry economics, our studies have indicated that much more than half of the remaining potential domestic reserves to be added by new discoveries will be found on the Outer Continental Shelf.

As we study our domestic situation and the broad range of alternatives for providing needed energy resources, I am sure we can agree that a dangerous factor is delay. Whether we are discussing development of nuclear power, increasing our coal production, developing synthetic fuels, or more exotic alternatives, we must certainly recognize that all these programs have seen one delay after another, and we believe will continue to be delayed. Our oil and natural gas resources, and then imports, must fill the gap. Increasing the production of U.S. oil and natural gas is our only opportunity to slow the rise of imports between now and 1980 and possible between now and 1985.

Most of these needed reserves from new discoveries will be found offshore. There is no question that we need the crude oil and natural gas; there is no question where it is; there is no question about the danger in further delays for we are already too far behind.

Why do we exhibit so much concern over delay in developing the Outer Continental Shelf? The answer simply stated is increased imports, heightened balance-of-payment problems, continued erosion of the dollar, worsened inflation, exportation of U.S. jobs, unemployment, further increased risks to our national security and well-being. I would not presume to instruct this body on basic economics. I wish to simply remind you that essentially we have no alternatives, and we had better get on with the job of developing these needed offshore resources as quickly as possible with people experienced at the task and in a way which is compatible with the environment.

We recommend, most strongly, that this Congress never enact a moratorium on exploration and development of the Outer Continental Shelf. We support your efforts to develop a reasonable planning cycle so that all concerned parties can examine the alternatives and risks, and participate in the decision. However, as these planning cycles are instituted, we emphasize that they should proceed concurrently with existing and, hopefully, accelerated lease plans as presently promulgated by the Department of Interior, particularly in developed areas. Further, we recommend that every attempt be made to streamline these planning cycles and to provide accessible, competent review and arbitration authorities. Frankly, time frames in several pieces of legislation currently under consideration, and the apparently endless sequence of Government studies, consultations, hearings, and review are counterproductive. In spite of the political attractiveness, I don't believe we can examine every lease, every coastal mile and every program element to prove to each chamber of commerce of local alderman that each drill site is needed in the light of current and projected national energy needs. This is senseless academic and political exercise. Just as 100,000 single matches can light a football stadium, thousands of individual leases are necessary just to maintain current levels of production.

The skeptic who does not light the match is the same skeptic who wants to argue ceaselessly that no proof exists that the national purpose requires a drill site near him or her. Or worse, he is not skeptical, but selfish. He is the American who turns his back on our energy needs and on our inflation or employment problems because he does not want the necessary drill site, refinery, or powerplant in his backyard. And who does? But we all must participate. For the record, my own home faces directly on the Pacific Ocean. I, too, would not want an offshore rig to clutter my dramatic and enjoyable view; however, if oil lies offshore from my property, I strongly believe that there should and hopefully will be a rig there someday. When it is, I will accept it. If I don't, I must place a disproportionate burden on my neighbor, or worse, run the risk that possibly one of my sons may someday fight in a future war to take by force energy that we could have developed on our OCS but did not do so.

The third issue that I would like to discuss is research and development. I must confess in reading the R. & D. sections in these pieces

of legislation I was dismayed. I must ask why is this being considered? Are you aware of any specific problems, specific inadequacies, the needs for specific equipments or techniques?

I believe there is little, if any, need for equipment and services in the Outer Continental Shelf, or onshore for that matter, that are not presently available. I strongly suggest to you that existing equipment meet the standards set by the U.S. Government; I also can tell you with some confidence that we shall continue to be a world leader in promoting safety and preventing pollution offshore and without public funds. Even the Soviet Union, with its vast governmentally directed research capability comes to PESA member companies for its more sophisticated and complicated completion and safety equipment.

I wish to respectfully remind this committee, that the safety record in producing oil and natural gas offshore has been, I believe, truly spectacular. This has been because of the joint effort of the Federal and State Governments which have set and enforced increasingly stringent, although achievable, standards on offshore activities, as well as the unique ability of the American oil services and supply industries to respond to these requirements. As I am sure you know better than I, and as I am sure has been testified to in similar hearings, offshore production activities contribute very little to oil pollution in the seas, particularly as compared to harbor activities and untreated runoff from our rivers and streams. I am not denying that there are risks, but I do firmly believe that these risks have been and can continue to be minimized, and compare favorably with risks found in almost any sector of our society.

The U.S. oil service industry has the ability, the capital, and the desire to perform the necessary research and development to support any reasonable and practicable standard established by this Government. Our shareholders are willing to join us in providing the capital and sharing our respective risks; our employees are willing to develop, manufacture, distribute and service the necessary equipments and provide the needed services. Under these conditions, I see no need for Federal involvement in research and development for equipments to be utilized on the Outer Continental Shelf. I believe any such program would be a waste of the taxpayers money. Rather, I strongly recommend that the Federal Government continue to set the standards and that the private sector continue to provide the needed equipment and services.

However, on a related issue, I do suggest that the Government may have a valuable role to play in funding and operating a national oil spill cleanup equipment pool. This is a standby or emergency service, and the private sector economics of providing any standby service are not the best. Just as the Government provides emergency fire and rescue services, so a reasonable, and possibly needed, Government role might be to provide these emergency services offshore.

Mr. HARVEY. Could this be done as an expansion of the national oil spill contingency plan?

Mr. CLARK. I think it could well be worked into that and could well be part of the cost of putting it up. It could be chargeable to the company or to the fund, how it worked out. I have looked at several things that have come into our company and I think they are darn good pieces of equipment from an engineering standpoint. Economically, nobody is willing to sit and pay the cost of those standby services. When you really look at it, it is probably going to have to be done out of something like this oil spill fund. It should be something that is made, prepared and packaged to fly and you can fly it anywhere in the world.

Mr. HARVEY. In effect, all the operators would be paying for the cost by some contribution into a fund.

Mr. CLARK. Yes, I think that would work pretty practically in that area.

Mr. HARVEY. Go ahead.

Mr. CLARK. I would like to briefly comment on four specific points.

First, we applaud the intent and general provisions of the proposals for an oil spill cleanup fund. A no fault program, with a practical limit such as \$7 million for the lease operation and sub-contractors, such as proposed in S. 521 fills a glaring void. As you probably know, it is difficult to obtain, or at least afford, sufficient insurance coverage to protect against the remote possibility of a catastrophic accident with its subsequent cleanup costs.

Second, we recommend that this committee seriously consider adoption of provisions such as contained in S. 426, which would provide for leasing offshore tracts with specific work commitments. This system has been utilized by other nations with success. It leaves funds available for exploration and insures production, under an accelerated timetable, if necessary.

Third, I submit that the proposed legislation S. 740, which would create the National Energy Production Board is very confusing to me. Frankly, gentlemen, we can't understand the Federal organization now, and it appears that the Energy Production Board would further confuse the picture. I suspect that there would be significant conflict between the Production Board's general policy authorities and the specific regulatory authorities of the FPC, FEA, and AEC and even EPA. Cannot the Congress and the President, with their broad powers determine relative direction of our energy policy, and cannot the existing organization or a modification of the organization such as the Department of Energy and Natural Resources, provide the most efficient implementation of these policies? We believe the duties of the Board are far too broad, ambiguous and ambitious. The Federal Government cannot hope, in any reasonable period of time, to acquire the necessary expertise to manage such a broad and pervasive program; a program which would undoubtedly result in

significant delays and stifle industry initiative, and lead to higher unemployment and inflation.

Fourth, I am again dismayed when I read the sections in S. 740 describing the proposed Energy Facilities Program. I must query the need for such Government intervention. I have been before this Congress on previous occasions to discuss shortages in tubular goods, rigs and other oilfield equipment and services. As I described then, the tubular goods situation was severe but temporary, and I believe the critical point has passed with the exception of some specialized heat treated types of tubular goods. I know that the U.S. oil service and supply industry is currently producing at record output levels, and currently providing needed equipments and services as fast as they can be utilized. Further, we believe that the industry is capable of increasing its output to meet this nation's needs particularly as it becomes increasingly apparent that this nation recognizes the need for energy self-sufficiency and is willing to make the necessary commitment, including payment of the price necessary to achieve self-sufficiency. We view the Energy Facilities Program as a threat, an unnecessary threat, to an industry which has served this nation well. I can assure you that we would like to work with you now and in the future in determining what shortages exist and in correcting them.

In conclusion, I again would like to express appreciation on behalf of the Petroleum Equipment Suppliers Association for allowing me to discuss these issues with you today. We welcome this open hearing process to discuss one of the most timely energy issues—the Outer Continental Shelf. Further, we believe that credit is due both you as the legislators who have passed the legislation which currently governs activities on the OCS as well as the Government agencies, the Interior Department and the Coast Guard, which have implemented these laws. We caution you to carefully examine any proposed program for greatly increased Government involvement on the Outer Continental Shelf. We can understand your desire for more information and greater safety, but we cannot understand Congress' need for increased direct Government implementation. There is no question in mind that a Government organization to explore, develop, and/or produce oil and natural gas in the Outer Continental Shelf will greatly delay this Nation's achievement of energy self-sufficiency, worsen our position in the world economy, increase consumer energy cost and thus inflation, and increase risks to the environment due to inexperience.

That concludes my prepared testimony. I will be glad to answer any questions.

Mr. HARVEY. Mr. Clark, thank you very much for a very good statement. I have a question that touches on a subject that you did not get into directly but is a subject of these hearings, the business of onshore impact of OCS development.

I am thinking now of the social and economic impacts where an industry, in this case the oil and gas industry, moves into an area

that has not been particularly industrialized or even if it has. I had the good fortune to read recently Mr. and Mrs. Baldwin's book on the North Sea experience with respect to on-shore planning for offshore oil. I don't know if you have seen the book. It is pointed out in there that in a number of instances, the oil industry and other supporting industries have come in and—understandably offered jobs to skilled workmen in the area. They have understandably taken the jobs because they probably paid more than the one they were in. This caused some problems for existing industry. This situation obviously is not limited to OCS development. It could take place when any new industry moves into an area where there is a relatively limited labor force.

Do you think there is anything that the Government can do about that kind of thing to try to cushion that impact or prevent the slowing down of some other industry, for example, because another one, in this case it happened to be the oil and gas industry, is taking their employees or are we just going to have to let economics take their course?

MR. CLARK. You can help the situation by making it attractive for more workers to come into the area. I think you are probably talking about the Aberdeen area. I was just in that area myself last fall. That area has had some rather dramatic changes over the last 3, 4, 5 years. Our company has a plant there. We were one of the first plants to go into the Aberdeen area. We were invited in by the Scottish Council because of the high unemployment, because of the really almost poverty conditions existing in the area. They gave us an incentive to come in at that time.

Actually, in this particular case, our particular case in that area, we were drawn in to solve a poverty problem. Of course, those who came in later were on the back end of that wave. As the wave broke, I think it went much farther up on the beach than anyone had ever anticipated and made some dramatic changes. I think the only thing that Government can do and should do is try to have a workership program that pulls people into the area to supply the jobs and the other things that need to go along with it. I think you have to run a balanced thing because if the oil industry moves in, like in the North Sea, and simply hires away other people without a coordinated program to build a work force as fast as it is needed, then I think the lesser viable industries are going to be destroyed and I think that's a real problem and one in which I think the Government does have a role, particularly in trying to move workers in.

The Scottish Government has done some things in that area. I think they could have taken a considerably stronger hand in moving more workers in, in giving food allowances and other things that could be extremely helpful.

MR. HARVEY. This is the kind of thing it seems to me that makes it very desirable, in fact probably necessary, that the Government, in its planning for leasing and assuming that oil is found, and

allowing the development and production of that oil to look carefully on those onshore impacts so that there is adequate housing, adequate water sewer, the whole public infrastructure that is needed to support workers and their wives and kids and girl friends and everybody else.

Mr. CLARK. You may even decide that you have some limitations on the groupings—

Mr. HARVEY. Mrs. Baldwin reminds me that some of these workers may have husbands rather than wives.

Mr. CLARK. One of the things happening in the Aberdeen area, the Aberdeen area has become so difficult and you are seeing alternate development sites moving upward. Before you overran and overcultured the Aberdeen area, I think a well-planned situation would have set a certain limit of slip spaces and the number of tons to be moved up that specific area. When you reach that saturation plan which would be a geographic kind of saturation, that's as far as you will go in that area and you have to go 50 or a hundred areas up to another port which essentially has been done. They have moved up north to get loading facilities. If that were planned more in advance and the saturation point was set and determined what the community could absorb, then I think you would have a much better control and a much better management of it.

But I would caution you that it is probably impossible for this to be done without dislocations and some people being hurt. I think that is probably not really possible. Whether Government or private industry does it—

Mr. HARVEY. I think the question is doing it better and not doing it perfectly.

Mr. CLARK. Yes. It can be done better and if it is done in conjunction with the early planning, then I think it can work out onshore development and the offshore area and certainly minimize the impact. But you see the thing I was trying to set forth in my testimony as far as the United States is concerned, I feel deeply convinced that this energy question does impinge on our national security and my family personally. I have five sons and I am really concerned that if we don't have an adequate balance to the energy supplies in this world that the stresses and strains on us right now are going to go far beyond this hearing room.

Therefore, I think what we have to do is do this intelligently but get on with it.

Mr. HARVEY. Thank you very much for your testimony and thank you for your patience in waiting through what has been a fairly long afternoon.

[Whereupon, at 5:45 p.m., the hearing was adjourned.]

APPENDIX I

Report submitted by Philip Hughes entitled "Outlook of Federal Goals To Accelerate Leasing of Oil and Gas Resources on the Outer Continental Shelf"



REPORT TO THE CONGRESS

Outlook For Federal Goals To Accelerate Leasing Of Oil And Gas Resources On The Outer Continental Shelf

Department of the Interior
Federal Energy Administration

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

Our report concerns the outlook for accelerating Federal leasing of oil and gas resources on the Outer Continental Shelf.

We made our review pursuant to the Budgeting and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of the Interior; and the Administrator, Federal Energy Administration.

Thomas B. Atkins

Comptroller General
of the United States

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ABBREVIATIONS

BLM	Bureau of Land Management
FEA	Federal Energy Administration
GAO	General Accounting Office
OMB	Office of Management and Budget
PI	Project Independence

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

OUTLOOK FOR FEDERAL GOALS
TO ACCELERATE LEASING OF
OIL AND GAS RESOURCES ON
THE OUTER CONTINENTAL SHELF
Department of the Interior
Federal Energy Administration

D I G E S T

WHY THE REVIEW WAS MADE

Development of oil and gas resources on the Outer Continental Shelf is recognized as one way to lessen U.S. dependence on foreign energy supplies. However, there is considerable controversy over Department of the Interior plans for Shelf leasing.

This report, first of a series on Federal leasing policies and practices, focuses on how Interior determined its goal for accelerating leasing of oil and gas resources on the Shelf, how this goal is related to Project Independence, and constraints which may hinder its accomplishment.

FINDINGS AND CONCLUSIONS

Until 1971 there was little orderly planned development of the Shelf. The Shelf oil and gas leasing program was influenced heavily by industry interest and the desire to generate revenues for the Treasury. (See p. 6.)

Federal leasing goals had changed significantly in less than 4 years. The leasing goal increased from 1 million acres in 1971 to 10 million acres in 1974--only 0.8 million acres less than

the total acreage leased in the 20-year period of the Federal Shelf leasing program. (See p. 6.)

Interior officials indicate a softening in their earlier firm position to lease 10 million acres. At a November 1974 conference of Coastal States Governors, the Secretary of the Interior said that the Administration was "not wedded" to leasing 10 million acres in 1975, but "was wedded" to the idea of beginning leasing in the frontier areas, in addition to the Gulf of Mexico.

The Secretary stated that Interior must proceed expeditiously with the preparatory steps for six proposed offers in 1975. It is unclear at this time what amount of acreage would make up the six offers. No new acreage goals were announced for 1975 or subsequent years. An Interior official told GAO in January 1975 that Interior program personnel were still working toward a 10 million acre leasing goal.

Unrealistic leasing goal

Interior established the accelerated leasing goal of 10 million acres without carefully analyzing and considering several factors and problems affecting the goal's soundness.

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GAO found that the goal was:

- hastily conceived by Interior under pressures exerted by the energy crisis and the newly formed Federal Energy Administration;
- developed with little input by the Interior operating levels and based on overly optimistic assumptions and inadequate data;
- adopted by Interior policy officials despite opposition from program personnel; and
- developed and adopted without adequate consideration of environmental impacts, national-regional supply-and-demand needs, or alternatives to large scale expansion of Shelf leasing. (See p. 4.)

Interior's analysis of production which could be expected from accelerated leasing was limited due to the tight response deadline set by Interior officials. At most, 2 weeks' time was spent drafting the accelerated leasing proposal which was announced by the President in January 1974. (See p. 8.)

Acreage leasing goals not related to Project Independence

Interior's decision to lease 10 million acres was reached before the Project Independence study was initiated in March 1974.

Although the study assumed that accelerated Shelf leasing

would play a key role in providing future oil and gas supplies, the Project Independence production estimates were not tied to Interior's stated goal to lease 10 million acres in 1975 or to any other acreage goal. (See p. 12.)

Also, bases used in estimating production and the production estimates differ.

Interior's January 1974 estimates of production by 1985 were based on leasing 50 million acres during the 5-year period 1975-79, or an average of 10 million acres a year. The Project Independence production estimates were not based on acreage but on drilling estimates for each Shelf area.

GAO's rough calculations show that from 15 to 28 million acres would have to be leased and drilled by 1985 to satisfy the Project Independence assumptions. The total acreage leased would in all likelihood be higher than 15 to 28 million acres because a timelag generally exists between leasing and the start of drilling.

Interior estimated that oil production would reach 7 billion barrels a year by 1985. Compared with this projection, Project Independence crude oil production estimates were about five times lower.

Interior officials told GAO that revised production estimates given to the House Appropriations Subcommittee on Interior and Related Agencies in October 1974 were consistent

with Project Independence projections. These projections, however, were based on a 1-year leasing program of 10 million acres in 1975 and are not comparable to Project Independence estimates which covered a 12-year period and assumed that unlimited acreage would be available for accelerated leasing.

Although lower than Interior's estimates, the Project Independence production estimates are based on optimistic production conditions.

For example, the estimates allow only a 1-year timelag between exploratory drilling and production, compared to industry estimates of 3 to 8 years in the Atlantic.

By changing the leadtime variables alone, GAO estimated that the 1985 production from the Atlantic--under optimistic conditions of 3 years' delay--would be about 126 million barrels, or 53 million barrels a year less than the Project Independence estimate. (See p. 13.)

Under the less optimistic estimate of 8 years' delay, 1985 production from the Atlantic would be 14 million barrels, or 165 million barrels less than the Project Independence estimate.

GAO believes that the Secretary of the Interior should clearly define Shelf leasing goals and specify how these goals will be met and how they relate to national energy goals and plans. (See p. 16.)

GAO believes that the real issue in defining leasing goals concerns the magnitude of a leasing program and not necessarily the number of acres, although traditionally this has been the principal indicator of magnitude. Without clear guidance as to the magnitude of a leasing program, GAO questions whether Government or industry planning can be effectively accomplished. (See p. 16.)

Constraints to expanded production

A number of studies have been made of availability of materials, equipment, manpower, capital, and other related services needed for accelerated exploration of the Shelf. The predicted importance and impact of reported shortages remain questionable.

However, GAO found agreement that existing and predicted shortages will to some degree limit the ability of industry to expand exploration and development of the Shelf. (See p.30.)

Industry representatives told GAO that actions must be taken in several broad policy areas to minimize constraints to production, including:

- Implementation of a national energy policy which will be a focal point and provide guidance for an overall planning approach to leasing oil and gas and other energy resources.
- Removal of leasing uncertainties so that industry

resources (manpower, equipment, materials, and capital) can be planned for and managed properly.

- A decision at an early date regarding the depletion allowance and price controls of oil and natural gas.
- Development of timely, efficient, and effective methods for environmental assessment and realistic assessment of tradeoff between energy needs and environmental hazards.
- Accelerated research to improve technology for exploration and production in deep water and more hostile environments of Alaska and other frontier areas. (See p. 25.)

Quality of Government's valuation program jeopardized by accelerated leasing goal

If projected leasing schedules are maintained, the Government's lease valuation program will be jeopardized.

The lower quality and/or lack of evaluation made necessary by inadequate staffing will mean increased reliance on bid-competition as the only means to insure that fair market value is received for leased resources. The Government's tract selection and valuation practices are inadequate even at much slower leasing rates. (See p. 25.)

Survey officials told GAO that there will be major problems trying to evaluate all the acreage tentatively planned for offer in May 1975 and in-

dicated that their approach probably will be to first evaluate what appears to be the best prospective acreage and, if time is available, to evaluate the lower quality acreage. (See p. 26.)

In December 1974 Survey was experiencing delays in filling the authorized positions necessary for carrying out evaluation aspects for the lease offers. (See p. 25.)

The main alternative to hiring is to contract for assistance to supplement the Government's valuation work. But, according to Survey, qualified contractors are straining to keep up with demand placed on them by industry and their assistance may not be available for some time. (See p. 26.)

Survey has already experienced delays in receiving some data interpretations from contractors for recent offers. Further, by contracting out such interpretive work to companies doing business with industry on a day-to-day basis, objectivity of the results is seriously open to question. (See p. 26.)

The Secretary of the Interior should reconsider the accelerated Shelf leasing schedule in the light of Government and industry capabilities and possible alternatives to leasing in new Shelf areas as addressed in the Project Independence analysis and the President's subsequent national energy and economic proposals. (See p. 31.)

Prospects for industry response to accelerated leasing program

A common view of industry is that new or "virgin" Shelf areas should be leased as soon as possible because of their resource potential.

The prospects that a planned Gulf of Mexico lease offer scheduled for May 1975 will be sought vigorously by industry and contribute significantly to the success of the accelerated lease program are not encouraging because:

- Industry interest in tracts for these offers has been disappointing, according to Interior, and will continue the downward trend.
- The trend in bids per tract by industry for recent offers has also been downward.
- Interior and industry consider the potential resources which are considered to be primarily gas to be marginal. Industry argues this is due partially to the low price of federally controlled gas. (See p. 27.)

Glutting the market with large acreage offerings in the Gulf likely will continue to lower the average bid price an acre. However, these offerings are being scheduled at the present time, apparently because there are no other Shelf areas available for immediate leasing. (See p. 27.)

Industry interest for the initial offerings in the new

frontier Shelf areas cannot be projected on the basis of recent trends in the Gulf of Mexico. (See p. 27.)

The relatively low level of industry interest in the Gulf is the result of over 20 years' exploration during which areas with best potential have been offered and leased. The same trends could develop for the other Shelf areas over a comparable period of time. (See p. 27.)

Regardless of the general quality of tracts offered, industry has shown in recent offers that the most promising prospects will continue to attract high bids. (See p. 28.)

The eight largest petroleum companies are expected to secure a substantial share of the acreage to be leased in the initial offers of frontier acreage of the Atlantic and Alaska.

The smaller petroleum companies are not expected to be major competitors for the frontier Shelf areas because of high risks and costs associated with their exploration and development. (See p. 30.)

RECOMMENDATIONS

The Secretary of the Interior should:

- clearly define Shelf leasing goals and specify how these goals will be met and how they relate to overall national energy goals and plans and
- reconsider the accelerated

Shelf leasing schedule in the light of Government and industry capabilities and possible alternatives to leasing in new Shelf areas as addressed in the Project Independence analysis and the President's subsequent national energy and economic proposals.

AGENCY ACTIONS AND UNRESOLVED ISSUES

GAO reviewed Interior's draft comments and considered them in preparing this report. The Federal Energy Administration did not make their draft comments available for GAO's review. Final agency comments on this report were not re-

ceived in time to be considered.

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report contains information on a critical Federal policy decision regarding leasing of the Outer Continental Shelf, which has far reaching implications on the direction of future energy resources development. Early attention and resolution of the issues discussed in this report is important for the success of any program which may be established for increasing domestic oil and gas production. The Congress now has before it for consideration several major energy proposals related to these issues.

CHAPTER 1INTRODUCTION

The United States is the largest energy-consuming Nation in the world. With only 6 percent of the world's population, the United States consumes about one-third of the energy used. Since the mid 1960's energy consumption in the United States grew at an annual rate of over 4 percent according to available information. Domestic production of the two primary energy sources, oil and natural gas, was not able to meet demand.

United States measured reserves ^{1/} of oil have been declining since 1966. In 1974 the measured reserves had declined to 35 billion barrels. Natural gas reserves peaked in 1967 at 293 trillion cubic feet and declined by 1973 to 250 trillion cubic feet.

Increased exploration and development of oil and gas resources on Federal lands can be one way of increasing the Nation's reserves of these fuels. Interior statistics show that in 1973 63 percent of the oil production and 74 percent of the natural gas production from Federal land came from the Outer Continental Shelf. Production from the Shelf totaled 361 million barrels of oil and 3.2 trillion cubic feet of gas.

The Department of the Interior and the Federal Energy Administration (FEA) both indicate that much of the increase in future U.S. domestic oil and gas production will have to come from the Shelf. The Secretary of the Interior has stated that the Shelf lands offer the best prospects of providing the Nation with major new oil and gas reserves in the next 10 years, with less environmental impact, than any available alternative energy source. Interior estimates that 76 percent of the Federal measured oil and natural gas liquids reserves and over 70 percent of the Federal measured natural gas reserves are on the Shelf. A November 1974 FEA report on the Project Independence (PI) study stated that the accelerated development of the Shelf could add 5.1 million barrels of oil and natural gas liquids a day, or about 25 percent of the total U.S. production by 1985.

^{1/} Identified reserves from which an energy commodity can be economically extracted with existing technology and whose location, quality, and quantity are known from geologic evidence supported by engineering evidence.

The Outer Continental Shelf Lands Act (43 U.S.C. 1332) provides for U.S. jurisdiction over Shelf submerged lands--all submerged lands seaward and outside State waters. Federal jurisdiction of Shelf lands generally begins about 3 miles from the coastline of each State. No seaward limit to the Federal jurisdiction of the Shelf has been defined. (See app. I for maps of the Shelf areas.)

The act authorizes Interior to lease such lands for certain purposes--including the production of oil and gas--and to regulate Shelf oil and gas operations to prevent waste and to conserve natural resources. The act requires that oil and gas leases be issued only on a competitive-bidding basis. Leases are awarded through sealed bids on the basis of the highest (1) cash bonus bid with a fixed royalty or (2) percentage royalty bid with a fixed cash basis. Interior has conducted only one offer where 10 leases were offered on the basis of a royalty bid.

The Interior's Bureau of Land Management (BLM) executes the leases of Shelf lands. The BLM leasing and management goals in leasing the Shelf are (1) orderly and timely resource development, (2) protection of the environment, and (3) receipt of a fair market value return for leased resources.

The Interior's Geological Survey assists BLM in its leasing objectives by providing technical and administrative assistance and services for managing and disposing of Shelf areas. Of particular importance is Survey's responsibility to value tracts before leasing on the basis of engineering and other technical evidence and economic analysis. Survey is also responsible for supervising and regulating exploration, development, and production activities on the leases once they are leased to private industry.

Through 1974, about 10.8 million acres have been leased in the 20 years of the program through competitive lease offers. Cumulatively, this acreage has produced revenues for the Federal Government of over \$18 billion.

The Arab oil embargo imposed in October 1973 called vivid attention to the Nation's growing dependence on foreign oil imports. The economic, political, and national security impact of the embargo set in motion a series of events which led to a decision to more than triple the acreage annually leased on the Shelf. However, long before the embargo, President Nixon, in his April 1973 message to the Congress, directed the Secretary of the Interior to triple (from 1 million acres a year to 3 million a year) Shelf acreage leased.

In January 1974 President Nixon instructed Interior to accelerate the Shelf leasing program from 3 million acres to 10 million acres in 1975, another tripling of the goal in less than 1 year. Under this Presidential mandate, Interior proceeded with plans to lease 10 million acres in 1975, although this was almost as much acreage as Interior leased in the 20-year history of Shelf leasing.

At a November 1974 conference of Coastal States Governors, the Secretary of the Interior said that the Administration was not wedded to leasing 10 million acres in 1975 but was wedded to the idea of beginning leasing in the frontier areas, in addition to the Gulf of Mexico. The Secretary believed that Interior must proceed expeditiously with the preparatory steps for the six proposed offers in 1975. The Secretary noted that while there were advantages to setting an acre figure to facilitate planning the real objective was finding and producing oil and gas safely. No new acreage goals were announced for 1975 or subsequent years. However, as discussed on page , Interior's estimates of production through 1985 assumed that 10 million acres would be leased each calendar year from 1975 through 1979.

In the following chapters we discuss the circumstances under which the 10-million-acre goal was developed, its relationship to PI, and constraints which can be expected to hinder accomplishing an accelerated leasing program. This is the first in a series of reports on Federal mineral-leasing subjects which we expect to issue during calendar year 1975. Closely related Shelf reports will concern the Interior's program for deciding where to lease and at what dollar value and will consider the environmental consequences of Shelf oil and gas development. The scope of the review is discussed on page 32.

CHAPTER 2
FEDERAL OFFSHORE LEASING GOALS
FOR OIL AND GAS PRODUCTION

The far-reaching implications of Interior's 10-million-acre leasing goal with respect to the direction of future energy resources development and potential environmental impact on coastal lands and waterway makes it the most critical policy decision in the 20-year history of Federal Shelf leasing; one which deserved careful analysis and considerations. Yet we found that the proposal was

- hastily conceived by Interior under pressures exerted by the presence of the energy crisis and fears that the newly formed FEA would assume responsibility for the Shelf leasing program;
- developed with little input by the operating levels of BLM and Survey and based on overly optimistic assumptions and inadequate data;
- adopted by Interior policy officials despite opposition from program personnel in BLM and Survey; and
- developed and adopted without considering environmental impacts, national-regional supply-and-demand needs, or alternatives to large-scale expansion of Shelf leasing.

Interior officials now say that Interior no longer has an acreage leasing goal, but that emphasis is on production and opening up frontier areas as quickly as possible by proceeding expeditiously with the preparatory steps for the six proposed offers in 1975. It is unclear at this time what amount of acreage would make up the six offers, although one Interior official told us in January 1975 that program personnel were still working toward a 10-million-acre leasing goal. Even the rationale for holding six offers rather than some other number of offers is unclear.

The decision to lease 10 million acres was made before FEA's PI study was begun. Although FEA's PI study group considered Shelf oil and gas development to be a critical source of domestic energy supplies, the production forecasts were not tied to acreage figures or to a leasing schedule.

This chapter details the circumstances under which the expanded leasing goal was conceived and adopted by Interior officials and how it related to PI.

ACCELERATED LEASING SCHEDULE

President Nixon in his energy message to the Congress on January 23, 1974, directed the Secretary of the Interior to lease 10 million acres in 1975. As discussed earlier, in November 1974 Interior shifted the emphasis of the leasing program from a specified acreage goal to one of accelerated production through rapid exploration of frontier areas. The leasing schedule announced at the Governors' Conference on November 13, 1974, called for six offers a year for calendar years 1975-78; however, no acreage estimates were announced. The chart below shows areas expected to be leased in each of these years.

Interior officials caution that the leasing schedule is very tentative and note that opposition to leasing, both by Coastal States and by environmental groups, may effectively limit leasing to the Gulf of Mexico and Southern California.

<u>Area to be leased</u>	<u>1975 leasing (note a)</u>	<u>Acreage to be offered in 1975 (note b)</u>	<u>1976 leasing</u>	<u>1977 leasing</u>	<u>1978 leasing</u>
(millions)					
South Texas	X	3.0			
Central Gulf of Mexico (East Texas)	X	2.9			
Southern California	X	1.5	X	X	X
Cook Inlet (State and Federal)	X	1.7			
Gulf of Alaska	X	3.5	X		X
Mid-Atlantic	X	3.5		X	
Mississippi-Alabama- Florida (MAFLA and Gulf of Mexico deep)			X	X	
North Atlantic			X	X	
South Atlantic			X		X
Bering Sea			X		X
Beaufort Sea				X	
Outer Bristol Basin				X	
Northern California, Washington, and Oregon					X
Chukchi Sea (Hope Basin)					X

a/ Two 1975 contingency offers were also included: 2.5 million acres in the Bering Sea and 2.5 million acres in the MAFLA area.

b/ 1975 acreage offered figures are tentative and were taken from the Department supplemental budget requests. No estimates were provided for other years.

Historical perspective of the
Shelf leasing policy

Federal leasing of the Shelf began in October 1954. Through 1974, 10.8 million acres had been leased of over 20 million acres offered for sale. Revenues paid the Federal Government during this period totaled about \$18 billion. (See app. II.)

The Federal leasing goals have changed significantly in less than 4 years. Since 1971 the leasing goal has increased from 1 to 10 million acres--only 0.8 million acres less than the total acreage leased in the 20-year history of the Federal Shelf leasing program.

Until 1971 there was little orderly planned development of the Shelf. Industry interest and the needs of the Bureau of Budget (now the Office of Management and Budget) dictated when and where to lease. The Shelf oil- and gas-leasing program was heavily influenced by the desire to generate revenues for the Treasury. A National Science Foundation funded report 1/ points out that Interior pursued a policy of pacing the development of the Shelf at a low rate designed to keep demand for Shelf leases high and therefore keeping bonuses high.

In 1968 BLM contracted with a management consulting firm to study ways for determining the optimum Shelf lease offer size and timing and to determine how BLM could play a more effective role in developing Shelf oil and gas resources. BLM used this study 2/ to help develop a tentative 5-year leasing schedule based on supply-and-demand requirements by regions for the United States. BLM attempted to identify crude oil and natural gas production needs by region so that it would be possible to plan Shelf development to meet the demand in these areas.

This schedule, issued in June 1971, provided for leasing 1 million acres a year in two offers. The size of the offers was administratively set at 300,000 to 600,000 acres an offer. Interior believed that the 1-million-acre goal could be reached with offers within this range, without

1/ "Energy Under the Oceans," The Technology Assessment Group Science and Public Policy Program, University of Oklahoma, June 1973.

2/ "The Timing and Size of OCS Petroleum Lease Sales," Arthur D. Little, Inc., June 1970 (unpublished).

imposing undue administrative burdens on the Interior staff or risking loss of industry competition on bids.

The 5-year schedule was never really implemented as planned, partly because of litigation by an environmental group brought against Interior. The scheduled offer in December 1971 was delayed until September 1972.

During the 1971-72 period, awareness was growing as to national energy supply needs. In June 1971 the President sent a message to the Congress calling for, among other things, increased domestic production of conventional fuels to meet projected energy needs. In April 1972 the Office of Management and Budget (OMB) requested Interior to make a thorough review of the Shelf leasing system according to an Interior official. A task force staffed by representatives of Interior, OMB, and the White House was established to develop Shelf policy including, among other things, whether the Shelf program could be accelerated and still insure return of fair market value.

The task force study report issued in January 1973 did not recommend changes in the Shelf leasing program but did discuss alternatives. The report included an environmental overview of Shelf frontier areas and discussed options available regarding Shelf leasing, such as (1) changing the June 1971 Shelf leasing schedule, (2) requiring diligent effort to accelerate exploration, development, and production, and (3) establishing alternative leasing methods.

According to an Interior official, in March 1973 Interior provided input to a second energy message under preparation at the White House, and worked directly with the White House staff in developing parts of the energy message based on the January 1973 task force study. The official told us that the White House staff decided to adopt one of the options--to accelerate Shelf leasing to 3 million acres a year--discussed in the task force study. On April 18, 1973, President Nixon in his energy message to the Congress directed the Secretary of the Interior to take steps to triple the annual acreage leased on the Shelf beginning in 1974.

On July 10, 1973, Interior announced a tentative 5-year leasing schedule which called for three 1-million-acre lease offers each year beginning December 1973. Offers were scheduled primarily in the Gulf of Mexico, but offers were also planned for Alaska and Southern California Shelf areas.

The events leading to the President's announcement to lease 10 million acres and the assumptions made by Interior in drafting the proposals are detailed in the following paragraphs.

Events leading to accelerated
leasing goal of 10 million acres

Before the first lease offer could be held under the July 1973 leasing schedule, the October 1973 Arab oil embargo focused the Nation's attention on the energy crisis. Interior was asked to provide input into another Presidential energy message. Interior, as well as other Federal agencies, was asked to suggest alternatives to alleviate the immediate energy crisis and lessen dependency on foreign oil.

Interior at this time was under pressure from the newly established FEA to speed up Shelf leasing. According to Interior officials, there was a power struggle between FEA and Interior as to who would administer the Shelf leasing program. Interior reacted by proposing an accelerated Shelf leasing program of 10 million acres each year for 5 years--1975 through 1979.

On January 23, 1974, President Nixon in his energy message to the Congress announced that he was directing the Secretary of the Interior to increase the acreage leased on the Shelf to 10 million acres in 1975. A decision to lease the same number of acres in subsequent years as Interior originally proposed was deferred, pending an evaluation of the 1975 leasing experience.

It is important to note that only 27 calendar days elapsed between the time a Deputy Under Secretary of the Interior requested Interior personnel to develop an accelerated leasing proposal and the date of the President's announcement. At most, 2 weeks was spent drafting the proposal before it was submitted to the Under Secretary. The key events in the proposal development are detailed below.

On December 28, 1973, the Deputy Under Secretary requested that Interior personnel develop a comprehensive program proposal to meet the objective of rapid development of new oil and gas production on the Shelf. The memorandum requested that the proposal be geared to four offers a year covering at least 1.5 million acres an offer. The proposal was to be submitted by January 11, 1974.

In response to the memorandum, BLM prepared a proposal dated January 10, 1974, which favored publishing a 5-year schedule by January 1975 for leasing six million acres each year (four offers a year). The schedule was to include three offers for a total of five million acres in the Gulf of Mexico each year and one offer of one million acres each year in new areas until desirable acreage in the Gulf of Mexico was exhausted, after which all leasing would be in new Shelf areas.

The Acting Deputy Assistant Secretary, Program Development and Budget, also prepared a response dated January 11, 1974, calling for an accelerated leasing program of 10 million acres a year beginning in 1975. The period of the leasing program was not stated. According to Interior officials, both proposals were discussed in a meeting with the Under Secretary on January 11, 1974.

Although we were unable to locate or obtain documentation on this meeting, it is apparent from comments by attendees and subsequent events that the 10-million-acre figure was favored as Interior's leasing policy.

One Survey official told us that Survey vigorously opposed the concept of 10 million acres a year but was unsuccessful in reducing the goal. In commenting on the 10-million-acre proposal, the Director of Survey expressed concern about the management problem created by a 10-million-acre level and said Survey believed it would be better to aim at a leasing rate of 5 to 6 million acres a year.

Another official indicated that the working levels in Survey and BLM, as well as industry itself, were unanimously opposed to the 10-million-acre proposal, but nobody listened. This attitude was especially evident from one high-level BLM official who cautioned us against relying on BLM field personnel views which differed from BLM's official position because he believed they had a limited understanding and parochial view of the leasing goal.

There were differences of understanding among those attending the January 11, 1974, meeting as to what the 10-million-acre goal really meant. BLM officials told us that they came away from the meeting with the understanding that 10 million acres would be offered for lease in 1975 but not necessarily leased. One BLM official told us that it was several weeks before he knew that the goal was to lease 10 million acres. In fact this apparent confusion continued as late as September 18, 1974, when the Deputy Under Secretary, in a memorandum to the Director of BLM, stated that the policy was to actually lease, rather than offer for lease, 10 million acres.

An Interior official who had been involved in preparing the 10-million-acre policy paper told us that it was intended all along to lease 10 million acres in 1975 and not just offer them. There was no consensus as to how much acreage would have to be offered to lease 10 million acres. Interior officials' estimates have ranged from about 16 to 26 million acres offered in order to lease 10 million acres.

On January 19, 1974, a meeting was held among the Secretary of the Interior, the Director of OMB, and the Administrator of FEA. At that meeting Interior's proposal to lease 10 million acres was presented and apparently accepted as the leasing goal. It was included in the President's energy message only 4 days later.

Analysis made and assumptions used in proposal

The January 11, 1974, proposal was based on an analysis of what production could be expected from accelerating leasing by levels of 4, 5, and 10 million acres for each year from 1975 through 1979. An Interior official told us that other levels of leasing between 5 and 10 million would have been considered but a tight response deadline did not allow enough time. The official told us that the 10-million-acre-a-year figure was considered by those preparing the proposal to be the maximum acreage Interior could administer. However, he was not able to document this judgment.

The analysis made two basic assumptions, both of which were considered to be optimistic by those preparing the proposals. These tended to inflate the production estimates.

- Drilling equipment and personnel were assumed to be available, and only customary or normal delays were assumed between lease offer and production.
- The additional acreage leased in each province was assumed to be as productive as the land scheduled to be leased in that province under the July 1973 schedule.

Interior has continued to use these assumptions in supporting its position to accelerate Shelf leasing.

Production estimates assumed leasing of 50 million acres between 1975 and 1979, or 10 million acres each year. On the basis of the production history (production to acreage leased), future Shelf production resulting from the 5-year 50-million-acre program was estimated to be 7 billion barrels of oil a year by 1985. The production history primarily involved experience in the Gulf of Mexico.

The Director of Survey told Interior officials that the charts used in the analysis were too simplistic in their basic assumption regarding the relationship between acreage and production. Also the price of oil and gas were assumed to be constant; an unrealistic and critical assumption, in our opinion, since price levels have a major effect on the oil

and gas production. The analysis acknowledged that the basic assumption might be too high but agreed that, if the expected returns were cut in half, it could still lead to a 4.8-billion-barrel-a-year increase over the expected production of the existing Shelf leases by 1986. According to the analysis, this would be enough for self-sufficiency in oil.

Also, the full implications of the leasing goal was not adequately addressed. Little consideration was given in the analysis to industrial constraints (such as shortages of equipment and manpower), environmental impacts of a 10-million-acre program, or how the accelerated program related to national or regional supply-and-demand needs.

On September 18, 1974, BLM and Survey were asked to prepare a leasing schedule to include (1) 10 million acres actually leased rather than offered in 1975, (2) a sale in 1975 in both Alaska and the Atlantic, and (3) an alternative if number 2 fails to insure leasing of 10 million acres. Survey and BLM both began developing tentative lease schedules to meet these goals.

Survey submitted a leasing schedule to BLM and commented that it felt the only way to meet the 10-million-acre goal was to offer all remaining Shelf areas for lease, require little or no minimum bid, and permit no bid rejections when there was an adequate expression of competitive interest.

A Survey official told us that, although a joint schedule was worked out and signed by Survey and BLM on October 17, 1974, Survey opposed including the Beaufort Sea (Alaska) offer scheduled for 1977 in the proposed lease schedule. They raised objections because, in their opinion, adequate environmental and reserve data was not now available and could not be expected by 1977 and development of the area would not be technologically feasible by 1977. He said that Survey included a comment on the schedule forwarded to the Under Secretary for final approval stating that the Beaufort Sea offer was included over the objections of Survey. The schedule which was approved and released by the Secretary on November 13, 1974, included the Beaufort Sea offer in 1977.

Relationship of leasing goal to Project Independence

The goal of the PI study was to present an action plan to the President containing legislative, administrative, economic, and budget recommendations to reach energy independence. The report issued in November 1974 clearly stated that the report was not an action document and made no

recommendations. The report included analyses of future supply-and-demand alternatives under a variety of assumptions.

The report emphasized the Nation's dependence on oil as the major energy supply. Although other sources are discussed, the report indicated that any significant impact from alternative energy sources would not be possible within the next 10 to 15 years. Increased domestic oil production will have to come from Alaska and increased Shelf leasing, according to the report.

Interior's decision to lease 10 million acres in 1975 was reached before the PI study was initiated in March 1974. There is no apparent relationship between PI's production estimates and Interior's accelerated Shelf leasing program. Also, the bases used in estimating production differ. As previously indicated, Interior estimates of production resulting from Shelf leasing were based on the assumption that 50 million acres would be leased between calendar years 1975 and 1979 (or 10 million for each of these years) and that the historical ratio of acres leased to oil produced would hold true for future leasing.

PI projected possible levels of future oil production on the relationship between exploratory footage drilled and the amount of oil discovered. Target drilling levels were estimated for each Shelf area. It was assumed that the Shelf acreage needed to meet projected exploratory-drilling levels would be available. PI made no estimates of how much acreage would have to be leased to achieve its goals.

It should be recognized that PI's assumptions and calculations, like those of Interior, are very tenuous. For example, the PI report stated that its production calculations could be higher or lower by as much as 55 percent if changes were made in the values and assumptions made in its analysis--such as finding rates, financial cost, discount rates, drilling costs, and effective depletion rates.

To relate the PI production estimates to acreage-leasing requirements, we estimated how much acreage would have to be leased and drilled to sustain the PI drilling rate. This estimate, although admittedly rough, provides a gage of acreage needed to meet PI projections. It showed that about 15 to 28 million acres would have to be leased and drilled by 1985 in the Shelf. The total acreage leased would in all likelihood be higher than 15 to 28 million acres because a time lag generally exists between leasing and the start of drilling. Even if Interior leased 50 million acres, development potential by 1985 would be limited to acreages around 15 to

28 million given PI's assumptions and our drilling/acreage conversion factors.

Our estimate was based on the following factors.

- Number of exploratory wells which would have to be drilled to meet PI targets (PI exploratory footage for each region divided by average depth of well).
- Number of wells drilled per tract (according to a Survey official between two and four exploratory wells are drilled per tract).
- Average 5,000 acres per tract.

PI projected that by 1985 accelerated Shelf development would provide the following crude oil production.

<u>Area</u>	Estimated yearly production (note a)
	(millions of barrels)
Alaska	285
Atlantic	179
Gulf of Mexico	652
Pacific	<u>412</u>
Total	<u>1,528</u>

a/ GAO calculation based on PI daily production projections.

Compared with Interior's January 1974 estimates of 1985 oil production, PI's estimates are about five times lower. Although lower than Interior's estimates, the PI production estimates are based on optimistic production conditions. For example, estimates allow only a 1-year timelag between exploratory drilling and production, compared with industry estimates of 3 to 8 years in the Atlantic.

By changing the leadtime variables alone, GAO estimated on the basis of oil production figures that the 1985 production from the Atlantic under optimistic conditions of 3 years would be about 126 million barrels, or 53 million barrels a year less than PI's estimate. Under the less optimistic estimate of 8 years' delay, 1985 production from the Atlantic would be 14 million barrels, or 165 million barrels less than PI's estimate.

PI also estimated that natural gas produced from these Shelf and Alaskan onshore areas would reach about 11.5 trillion cubic feet a year by 1985--assuming decontrol accelerated development and a direct relationship between the amount of natural gas discovered and the amount of oil exploration. The ratio of oil to gas discovered assumed for each Shelf area is an uncertain figure since the ratio cannot be accurately determined until actual exploratory and development drilling take place in each of the areas. Because gas production estimates for Alaskan Shelf areas alone were not detailed in PI's analysis, we were not able to compare these estimates with those of Interior.

Interior officials told GAO that revised production estimates given to the House Appropriations Subcommittee on Interior and Related Agencies in October 1974 were consistent with Project Independence projects. These projections, however, were based on a 1-year leasing program of 10 million acres in 1975 and are not comparable to Project Independence estimates which covered a 12-year period and assumed that unlimited acreage would be available for accelerated leasing.

Conclusions

Decisions regarding the Shelf leasing have historically been closely associated with industry interest and the need to generate revenues for the Treasury. Changes in the leasing program have occurred in recent years in reaction to a growing concern about the decline of domestic oil production. The Arab oil embargo highlighted the energy crisis and helped bring about Interior's goal to lease 10 million acres. This goal was hurriedly conceived in reaction to the Arab embargo and pressure exerted on Interior by a newly emerging FEA. The goal was based on inadequate information, unrealistic assumptions, and little input from program personnel. Once the goal was established, Interior policymakers appear to have been locked into the goal, although strong opposition exists within Interior and outside groups because of the goal's apparent impracticality.

Since November 1974, Interior officials have publically indicated a softening of their earlier firm position to lease 10 million acres. Interior officials now stress that the principal leasing objective is to increase production of oil and gas and to proceed expeditiously with exploration in the frontier areas. But they are vague as to how this objective will be met except to say that six offers will be held in 1975. Even the rationale for holding six offers rather than some other number is unclear.

Without any clear guidance as to the magnitude of a leasing program, we do not see how Government or industry planning can be effectively accomplished. As indicated in the following chapter (see p. 25), industry representatives we talked with suggested that, to minimize the constraints to accelerated production, leasing uncertainties must be removed so that industry resources (manpower, equipment, materials, and capital) can be properly planned for and managed.

PI evolved after Interior's decision to pursue a 10-million-acre goal. No relationship exists between PI's and Interior's plans. Our rough calculations show that from about 15 to 28 million acres would have to be leased and drilled by 1985 to satisfy PI's assumptions. Interior's production estimates were based on leasing 50 million acres during a 5-year period (1975-79). However, no estimates are available as to how much of this acreage would be drilled by 1985.

The President, by Executive Order 11814 dated October 11, 1974, activated the Energy Resources Council and designated the Secretary of the Interior as its Chairman. The Council is charged with performing such functions as are assigned to it by section 108 of the Energy Reorganization Act of 1974 (Public Law 93-438), developing a single national energy policy and program, and performing such other functions as may be assigned to it, from time to time, by the President.

President Ford in his January 15, 1975, State of the Union message outlined the Nation's energy outlook and set forth national energy objectives. The goal of the President's energy program for the 1975-85 period is to eliminate vulnerability to oil embargo by achieving full energy independence by 1985. A number of legislative and administrative actions were announced which would reduce energy demand, reduce oil imports, increase domestic production, and increase conversion to coal. The proposed actions would

- increase import fees on crude oil and petroleum products to reduce consumption and imports;
- encourage conservation measures to help reduce oil consumption by 1 million barrels a day;
- decontrol oil and gas prices;
- continue aggressive Shelf leasing programs, including offers in the Atlantic, Pacific, and Gulf of Alaska;
- allow exploration, development, and production of Naval Petroleum Reserves Number 1 and 4;

- amend the Clean Air Act and the Energy Supply and Environmental Coordination Act of 1974 to permit a vigorous program to make greater use of domestic coal;
- increase coal production by passage of a surface-mining bill;
- require diligent development of existing coal leases; and
- accelerate growth of nuclear power.

We believe that, in developing a single national energy policy proposal and program, it is important that the Secretary of the Interior clearly define Shelf leasing goals and specify how these goals will be met and how they relate to overall national energy goals and plans.

The real issue in defining leasing goals concerns the magnitude of a leasing program, and not necessarily the number of acres, although traditionally this has been the principal indicator of magnitude. without clear guidance as to the magnitude of a leasing program GAO questions whether Government or industry planning can be effectively accomplished.

Recommendation

We recommend that the Secretary of the Interior clearly define Shelf leasing goals and specify how these goals will be met and how they relate to overall national energy goals and plans.

CHAPTER 3CONSTRAINTS TO AND LIKELY IMPLICATIONS OFFEDERAL GOALS FOR OFFSHORE OIL AND GAS DEVELOPMENT

We examined, from the standpoint of the following three broad questions, some likely constraints to and implications of an expanded Shelf leasing program as best we could from available data.

- What constraints can be expected to impede industries' ability to respond to a large-scale Shelf leasing program?
- What impact could an accelerated leasing goal have on the Government's tract selection and valuation program?
- What prospects for industry response is indicated by trends of past sales?

A fourth major issue area having serious implications for accelerated Shelf leasing involves the environmental impact on marine and coastal areas. This issue is addressed in a separate GAO report to follow.

These are hard questions which must be answered before success can become a reality. In the final analysis the timely and successful development of the Shelf will depend mainly on Interior's major policy decisions and the oil and gas industry's capability to do the task asked of them.

CONSTRAINTS TO EXPANDED PRODUCTION

Government and industry officials made various studies and expressed their opinions concerning the impact of shortages of equipment, material, manpower, and capital on industry's capability to expand Shelf drilling. Studies and opinions do not clearly identify the impact of accelerated Shelf leasing. Although there was little agreement on the severity and impact of anticipated shortages, there was some agreement that predictions were made difficult by the uncertainties and complexities inherent in oil and gas exploration and development and the influences of worldwide conditions.

Despite some optimistic outlooks that existing and predicted shortages could be overcome, other studies indicated that shortages warranted concern and could have a major impact on or could delay accelerated Shelf development.

A specific indication of constraints to accelerated Shelf leasing in 1975 was expressed by 25 oil companies' responses to a BLM request. As illustrated in appendix III, industry identified many constraints. There is common agreement that the constraints involve potential short- and long-range shortages of the resources--equipment, material, manpower, and capital--necessary to the expansion of oil and gas production.

Offshore mobile drilling rigs

According to the PI report, the domestic demand for fixed and mobile offshore drilling rigs is predicted to exceed the most optimistic current forecasts of domestic availability under an accelerated exploration and development program. Even with optimistic assumptions on mobile rigs production and world fleet movement to U.S. waters, requirements are expected to exceed projected availability.

Offshore mobile drilling rigs are used for exploration and development drilling. There are various types (including jackup, semisubmersible, and drillship) designed for different depths and offshore conditions. The world output for offshore mobile drilling rigs is estimated to be 50 a year. During April 1974 there were 134 offshore rigs under construction, worldwide, and scheduled for delivery through 1976 and later.

Most offshore mobile rigs capable of operating in deep water are in foreign offshore areas--over 70 percent are predicted to operate in foreign areas over the next 2 years. It is anticipated, however, that, given the proper incentives, some rigs would be returned to domestic areas.

However, a general consensus among rig owners and oil companies is that tax laws (U.S. Internal Revenue Code Section 956--Upstream Dividend Provision--passed in 1962) are not favorable for moving foreign-registered drilling units now located overseas back to the United States. Under the current tax law, U.S. owners of foreign-registered rigs could be taxed at the rate of 48 percent of the adjusted value of the equipment. Costs of equipment range from \$25 to about \$60 million. Possibly 75 to 85 drilling rigs would be affected by the above tax disadvantage. Some companies indicate that, if Shelf leasing is expanded, they will attempt to hold new rigs built in the United States for drilling on the Shelf rather than return overseas rigs. However, currently 50 to 60 percent of the rigs being built domestically are believed destined for foreign areas.

Also, drilling operators indicated that they could move their U.S.-registered rigs now working overseas to the Shelf if the oil companies to whom the rigs are contracted so desire. It could be reasonably estimated that 10 percent of U.S.-registered rigs would return from overseas in response to an accelerated leasing schedule, according to a May 1974 BLM report. A most optimistic case would be to divert 25 percent of the rigs to U.S. operations.

If 10 percent of the rigs projected for foreign service were made available for U.S. drilling, the U.S. rig count would increase by 26, a projected total of 126 by the end of 1975. If 25 percent were diverted from foreign service, 65 units would be added, bringing the projected total to 165 rigs.

Despite the estimated increase in available rigs, the number of rigs is predicted to fall short of the number needed under an accelerated Shelf leasing program. Even the expansion of manufacturing capacity and the return of foreign-registered rigs (not likely due to tax disadvantages) would not be enough to meet needs, according to the PI report.

Interior officials indicated that, based on an Interior study, compulsory unitization in all frontier areas hold some promise for increasing drilling rig productivity. Unitization of untested tracts located on large geological structures reportedly would greatly reduce the number of wells required to evaluate effectively the prospects for hydrocarbon accumulation.

Tubular goods

Tubular goods, such as drillpipe, casing, and tubing used in exploration and production drilling, are expected to be potentially severe constraints upon an accelerated Shelf development program. Current shortages of these products exist.

The National Petroleum Council estimated that the supply of tubular goods would approach demand by the end of 1975; however, spot shortages are expected particularly in high strength casing needed in deep drilling. The November 1974 PI report indicated that the domestic supply should be in balance with demand by 1976, provided tubular goods manufacturers have access to sufficient quantities of steel, steel pipe, and tubing.

There is some controversy on the causes of the tubular goods shortage. Some oil companies believe that it is not a

true shortage but resulted from hoarding by the major oil companies. Other companies believe that it was due to price controls on steel products. The shortage of tubular steel products is most commonly attributed to

- the large increase in domestic drilling since the Arab oil embargo,
- a drop in U.S. imports of tubular goods as international demand diverted supplies from the U.S. market, and
- a change in the inventory and distribution system by tubular goods manufacturers and supply houses from one of centralized inventories to one held by oil producers.

In December 1973 a joint survey team from the Department of Commerce, the Cost of Living Council, and the Federal Energy Office (now FEA) made a preliminary investigation into the reported shortages. The December 1973 survey revealed that shortages were real to independent operators, in particular, and to some major oil companies as a result of higher-than-normal inventories of tubular goods by certain of the major oil companies. According to the Energy Office, eight of these companies held 74 percent of the inventory.

In April 1974 Commerce updated the December 1973 survey by obtaining information from all major producers of tubular goods, 20 major oil companies, and 24 major distributors. The April survey concluded that the tubular goods inventories of the major oil companies indicated further stockpiling since the December 1973 survey. Inventories on March 30, 1974, were up 70 percent above the November 30, 1973, level; from 163,200 tons to 277,800 tons.

Three major oil company officials told us in October 1974 that they were experiencing delays in obtaining tubular goods. They expected that tubular goods might become a critical constraint if major oil and gas strikes were found in the proposed 10-million-acre lease offer. One official said that drillpipe and casing shortages were a problem because his company did not have a stockpile of those items. Another major oil company official said that over 300 onshore wells would not be drilled by his firm in 1974 due to the shortage of drilling rigs and pipe. A fourth industry official (of a major oil company) we interviewed felt that pipe shortages were causing delays in exploratory activities but that those shortages would work themselves out and should not become a major problem to the expanded lease offer.

Six drilling operators contacted by Interior said that the casing shortage was a severe problem, and several mentioned that they had not been able to obtain the amount necessary to maintain an adequate inventory. To meet the problem, most of these operators adopted economizing procedures and priorities. Offshore drilling is being given priority over onshore drilling, and exploratory drilling is being given priority over developmental drilling.

Manpower

Although specific limitations cannot be readily quantified, experts within the oil and gas industry and Government generally agree that potential shortages of professional and skilled manpower are anticipated in the extraction, drilling, and production of oil and gas in the near future.

A September 1974 National Petroleum Council report on the availability of resources stated that the most critical shortage identified at that time was in personnel for interpretation of geophysical data. These comments were consistent with those of industry officials we interviewed who stated that critical shortages of geophysicists and other professionals cannot be met.

The PI oil task force commented that the accelerated expansion of Shelf operations could further intensify the shortage of manpower. The move to deep water and hostile environments and the accompanying increased complexity of technology could have a major impact in the future on the plans to expand drilling on the Shelf and on requirements for engineers, scientists, geophysicists, and other professionals.

The gap between engineering-manpower demand and supply is wide, according to an article in the September 16, 1974, Oil and Gas Journal. It stated that the continuing engineer shortage is a major factor limiting the oil industry's ability to meet the energy challenges of the future. The article stated further that:

"The supply of technical people is running thin under competition from other industries. And a study by one big engineering firm projects a 3-million-engineer deficit in the U.S., Germany, United Kingdom, France, Belgium, the Netherlands, Italy, Switzerland, and Japan by 1980 - an average of 300,000 engineers per country. The decline in enrollments at engineering schools indicates a continuation of the shortage in the U.S., at least for the short term. * * *

Industry response to a survey, published in the September 16, 1974, Oil and Gas Journal, ranked the following disciplines as the most difficult to obtain.

- | | |
|-------------------------|-------------------------|
| 1. Chemical engineers | 5. Geologists |
| 2. Petroleum engineers | 6. Electrical engineers |
| 3. Mechanical engineers | 7. Accountants |
| 4. Geophysicists | 8. Petroleum landmen |

Oil industry officials we interviewed emphasized the critical shortages of manpower which will be magnified by accelerating exploration on the Shelf. Since most of the exploratory drilling has occurred in foreign countries during recent years, our universities have not been educating the professionals needed by industry for expanded domestic exploration operations. This is especially important because of the long leadtime required for the necessary training in many occupations. Industry officials stated that college enrollments had been low in recent years for engineers, geologists, and geophysicists in particular.

Capital

Projections by industry, financial institutions, and Interior support the contention that needed capital can be obtained to meet accelerated expansion of Shelf leasing activities. Officials of one of the largest banks in the United States told us that capital resources would be available but that certain obstructions to the capital formation process must be eliminated before long-range capital requirements could be met.

One major oil company official we interviewed said that capital would not be a problem; however, three other majors were not as optimistic about the availability of capital.

Financial institution estimates of capital requirements for increased domestic onshore and offshore activity varied. One estimate--for the cost of exploring, developing, manufacturing, transporting, and distributing new domestic production--was as high as \$250 billion for the period between 1975 and 1985.

According to officials of one of the largest banks, obstructions to the capital formation must be eliminated before industry can raise this much capital.

They pointed to obstructions to capital formation including "unenlightened" regulation of the price of interstate natural gas, past administrations' unawareness of the capital formation process, and the tax reform of 1969 which cost the

industry between \$600 and \$700 million in profits which could have been reinvested.

Backup industries

The success of expanded Shelf exploration and development hinges on a large number of widely ranging industries. Segments of these industries which could experience shortages that might affect, and be a constraint to, expanded Shelf operations include, among others, the steel industry (raw materials), shipyard drilling rig construction, and service and supply industries (support drilling and oil production activities). Predicted shortages in the backup industries range from "none anticipated" to "potentially critical shortages."

Rig equipment

A segment of the industry of concern to drilling rig manufacturers are primarily assemblers of subcomponents, such as masts, derricks, drilling bits, and bearings. Rig manufacturers are reported to be experiencing assembly postponements because of delays by the subcontractors and suppliers. Delays for delivery of bearings are 12 to 16 months and delays for mast and derricks are 18 to 24 months. These subcomponent manufacturers, however, depend on steel which has also been in short supply. For rigs to be available to meet the demands of operating companies, supplies must be available to the manufacturer at each step of the construction process.

Steel industry

Steel supplies could be a serious constraint for such primary uses as plate for platform construction and surface handling facilities, as well as secondary steel requirements of manufacturers and subsuppliers. Although the petroleum industry uses only 6 percent of the domestic output of basic steel, most manufacturers of oilfield equipment are highly dependent on adequate steel supplies. Oil equipment manufacturers expressed concern over their ability to continue to obtain currently required supplies and, particularly, the additional steel supplies required for indicated increases in output. Any shortfall of total steel supply would cause a net reduction in the indicated capacities of the various manufactured equipment segments. The steel shortage could become critical if strikes cause a disruption of steel production.

Shipyards

The basic problem is that shipyards, worldwide, are working at or near capacity. They have experienced problems in obtaining the steel for contract orders. In addition to rig construction, there is a demand for merchant ships, particularly oil tankers, and the additional impact of heavy naval construction. According to the Shipbuilders Council of America, the estimated backlog in the United States is \$6.5 billion worth of orders which some shipyards estimate will keep them busy until 1977.

Well servicing equipment and service

The U.S. well servicing industry consists of more than 50 separate functions and supports drilling and producing activities from the time drilling starts until final well abandonment. Well servicing companies perform engineering, manufacturing, and installation services. The rapid increase in demand late in 1973 for services related to new well drilling was in addition to existing strong demand for production maintenance service. The industry is said to have the capacity to expand 25 percent in 1975. Further expansion in 1976 will require major investment decisions before the end of 1974, and critical shortages could result.

Federal price control of interstate gas

According to the petroleum company officials we interviewed, the Federal Power Commission's price control of the sale of interstate gas is a major factor impeding exploration and production. One company official noted that his company had 40 shut-in wells because it was not economical to produce at the present controlled gas price. Another company official said a lease with about 3 billion cubic feet of gas was not being developed because of the controlled price. According to industry officials, removal of price controls is necessary for accelerated development.

Industry's position on the merits of decontrolling gas prices is hotly contested by others, particularly consumer groups, who argue that decontrol of natural gas pricing either will not greatly increase gas supplies or will amount to windfall profits for the companies at the consumers' expense.

INDUSTRY COMMENTS ON ACTIONS
NEEDED TO MINIMIZE CONSTRAINTS

Industry representatives we talked with suggested that, to minimize the constraints, the Congress and the Executive Branch must act on several broad policy issues, as follows:

- Implementation of a national energy policy which will be a focal point and provide guidance for an overall planning approach to leasing oil and gas and other energy resources.
- Removal of leasing uncertainties so that industry resources (manpower, equipment, materials, and capital) can be properly planned for and managed.
- A decision at an early date regarding the depletion allowance and price controls of oil and natural gas.
- Development of timely, efficient, and effective methods for environmental assessment and realistic assessment of tradeoff between energy needs and environment hazards.
- Accelerated research to improve the technology for exploration and production in deep water and more hostile environments of Alaska and other frontier areas.

IMPACT ON GOVERNMENT'S PROGRAM

One of the goals of Interior's Shelf leasing program is to insure a fair return to the public from the distribution of minerals from public lands. Before leasing Shelf acreage, Survey evaluates the oil and gas potential of tracts to establish a value for each tract offered. We found that inadequacies in the Government's tract selection and evaluation practices existed even at a 3-million-acre leasing rate. This subject will be covered in detail in a separate GAO report which will be issued early in 1975. To proceed with the projected leasing schedule will mean that the Government's role of protecting the public interest in Shelf lease offers will potentially be jeopardized. Lower quality and/or the lack of evaluation caused by an accelerated leasing program will mean increased reliance on bid competition as the only means to insure that a fair return is received for leased resources.

As of December 1974, Survey was experiencing delays in filling authorized positions necessary for carrying out the evaluation aspects for lease offers. The major reason for this difficult situation is that the Government is competing with industry for quality personnel at the same time both are staffing for the prospective accelerated leasing program. The demand for petroleum specialists, particularly engineers and geophysicists, greatly exceed the supply; industry is offering these scarce professionals salaries above those offered by the Government.

One Survey official estimated that industry offers college graduates in such fields about \$2,700 more annually than does the Government.

Survey is having a difficult time recruiting new college graduates and an even more difficult time hiring experienced personnel. Survey recognizes that the difficulty in recruiting professionals is a serious problem and that the prospects for obtaining needed personnel are not very promising. In a 10-week period ended December 2, 1974, Survey's Gulf of Mexico office was able to fill only 6 of 62 vacant professional positions--1 geophysicist, 3 geologists, and 2 petroleum engineers. In addition, about 1 year is required before a new inexperienced staff member can make an effective contribution to the program.

The apparent inability to obtain staff for an accelerated program of 10 million acres can only compound already existing problems and reduce the quality of the overall evaluation program.

Survey estimates that it would require twice as many geophysicists as it now has to maintain the 1974 level of tract evaluation work. Shortcuts in evaluation procedures had already been taken for the sale in October 1974. Survey said that there would be major problems in trying to evaluate all the acreage tentatively planned for offer in May 1975. Survey field personnel have indicated that their approach probably will be to first evaluate the best acreage and, if time is available, to evaluate the lower quality acreage.

The main alternative to hiring to supplement the Government's preoffer evaluation is to contract for assistance in interpreting geological data.

According to Survey officials, limited numbers of contractors with geophysical interpretation capability to assist in the evaluation process are available and are straining to keep up with the present demand industry is placing on them. Therefore, the interpretation assistance may not be available for some time to come. Delays in receiving some data from contractors had already been experienced by Survey for recent offers.

Also, the effectiveness of contractor work would be limited because some data now used by Survey could not be incorporated into the work being done by a contractor since Survey considers some data obtained from oil companies to be proprietary. Further, by contracting out such work to companies doing business with the industry on a day-to-day basis, the objectivity of the results is seriously open to question.

PROSPECTS FOR INDUSTRY RESPONSE

Interior's leasing plans for 1975 included offering about 6 million acres--about 2.8 in February 1975 and about 2.9 million in May 1975--in the Gulf of Mexico. These offers were to represent a major part of the Government's accelerated leasing program to offer under the projected schedule 16.1 millions acres in 1975. The Government expected these two offers to contribute greatly to the success of increasing the acres under lease and providing increased production of energy supplies.

Judging from the results of the February 1975 offering and other indicators, the prospects that Gulf of Mexico lease offers will be pursued vigorously by industry and will contribute greatly to the success of the accelerated program are not encouraging. Specifically:

- Industries' response to the call for nominations ^{1/} for these offers has been, according to BLM, disappointing, and continues the downward trend noted for recent sales.
- The average number of bids per tract by industry for recent offers has also been trending downward from 5.3 in 1972 to 2.9 in 1974.
- Government and industry consider the potential resources to be marginal. Industry believes the resources will be primarily gas and economically marginal because of the controlled gas prices.

Glutting the market with large acreage offerings will likely continue to lower the average bid price an acre. Apparently these offers are being scheduled because at the present time there are no other Shelf areas available for immediate leasing.

Prospective industry interest in the new frontier Shelf areas is difficult to assess. The recent Gulf of Mexico experience does not provide an accurate analogy as to what might happen in new areas.

The recent Gulf of Mexico trends which suggest a low level of industry interest are the result of over 20 years

^{1/} An official notice to industry published in the Federal Register to nominate tracts for inclusion in the proposed lease offers.

of exploration in which time most of the structures 1/ with the best potential have been offered and leased. The same trends could develop for the other Shelf areas over a comparable period of time. Industry interest in terms of nominations and bidding trends for the initial offerings in the new frontier Shelf areas cannot be projected on the basis of recent trends in the Gulf of Mexico.

Regardless of the general quality of tracts offered, industry has shown in recent offers that the most promising prospects offered will continue to attract high bids. This attitude may possibly continue under the accelerated leasing program if major structures are offered in new areas. Bids may be high in new areas because the petroleum companies want to insure that their company is represented in the opening of new areas.

A common view of industry is that frontier Shelf areas should be leased as soon as possible because they have the best potential. The representatives of three major companies told us they would agree to a test drilling program to identify the Shelf areas having the best geologic characteristics for petroleum accumulation and followup with a leasing program for the most promising areas. However, officials of another major company said that a test drilling program is not necessary and would delay leasing.

Gulf of Mexico future

Survey and industry concede that few major prospective structures remain unleased in the Gulf of Mexico. According to Survey, after the May 1975 offer all major prospective structures will have been offered/leased except a portion of the Destin Dome. This area was not leased because oil and gas activities would conflict with Department of Defense area operations which include target practice ranges.

According to Survey, most of the prospects which remain in the Gulf of Mexico have high risks and less reserve potential.

For any future offers in the Gulf of Mexico, lower quality acreage will be the rule rather than the exception. The percentage bid on can be expected to fall along with the level of bids. An analysis of acres offered and bid for the past 3 years (1972-74) shows a marked decline in percent of

1/ Structures are underground traps which may contain oil and gas.

offered acres receiving bids and in leased and number of bids per tract.

	<u>1972</u>	<u>1973</u>	<u>1974</u>
Percent of offered acres receiving bids	92	70	52
Percent of offered acres leased	85	68	45
Average number of bids per tract	5.3	4.8	2.9

This trend was continued in the February 1975 offer. Of the total 2.8 million acres offered, only about 800,000 acres, or 29 percent, received bids which totaled \$300 million. Of the 800,000 acres, about 625,000 acres were leased. According to Interior, the principal reason for the low bids and the low percentage of acreage receiving bids in the February 1975 offer are the results of two deep tests wells which industry drilled before the offer. The tests indicated that much of the acreage was not promising.

In an October 29, 1974, memorandum, an Interior official said that low bid levels signal marginal acreage and a possible decline in competition. He said that at some higher leasing rate there would presumably be a drop in the proportion of tracts receiving bids because the higher expected rate of development would lead to forecasts of lower oil and gas prices, higher development costs, or both. The decrease in competition from glutting the market would obviously reduce the dollar value of the bids as well.

An analysis of nomination trends for the 1974 offers and 1975 planned offers in the Gulf of Mexico shows a significant declining trend which buttresses the point of declining interest.

	<u>1973</u>	<u>1974</u>	<u>1975</u>
Average number of nominations per tract	9.4	5.0	3.1
Highest number of nominations per tract	17	17	12

Shelf prospects for smaller petroleum companies

The prospects for independent oil companies participating in the future Shelf development is not known, but judging from past Shelf experience very little participation can be expected. A 1972 Interior study showed that Federal

offshore areas have been explored, developed, and produced primarily by major oil companies. Survey statistics show that in fiscal year 1974, 17 companies accounted for over 90 percent of the oil and 75 percent of the gas production on the Shelf.

According to a Survey official, the eight largest petroleum companies are expected to secure the most promising acreage to be leased in the initial offers of the Atlantic and Alaska frontier areas under the bonus bidding system.

The capital required to win and develop Shelf leases tends to favor the major petroleum companies. Shelf activities require large financial commitments made with a relatively high degree of risk. The risks and costs of Shelf operations are expected to become even greater as development and production activities move into deeper water and more hostile frontier environments.

To enhance the competitive climate in Shelf leasing, Interior has proposed new bidding and data disclosure regulations and is undertaking a review of alternative bidding systems.

Conclusions

A number of studies have been made of the shortages of materials, equipment, manpower, capital, and other related services needed for accelerated exploration of the Shelf. The predicted importance and impact of these reported shortages remain questionable. Nevertheless, there is common agreement that the existing and predicted shortages will to some degree be a constraint on the ability of industry to expand exploration and development of the Shelf, particularly in the short term. The impact of these shortages cannot be ignored if timely accelerated expansion of the Shelf is to be achieved.

How can these predicted shortages be dealt with so that, if and when they do occur, they will have only a minimal impact on the ability of industry to accelerate production?

In the opinion of industry officials, the exploration and development of the Shelf will be achieved. But if it is to be achieved in a more timely, efficient, and effective manner, then major actions will be required by both the Federal Government and industry. According to officials of one major oil company, the oil industry needs a cooperative posture with the Federal Government rather than a wholesale offer of tracts. Timely and effective exploration and

development of the Shelf will require specific policy decisions by Interior and cooperation with the oil industry to use its capabilities.

Industry representatives believe that to minimize constraints to production, the Congress and the Executive Branch must act on several broad policy issues, including:

- Implementation of an overall national energy policy which will be a focal point and provide guidance for overall planning an approach to leasing oil and gas and other energy resources.
- Removal of leasing uncertainties so that industry resources (manpower, equipment, materials, and capital) can be properly planned for and managed.
- A decision at an early date regarding the depletion allowance and price controls of natural gas and oil.
- Development of timely, efficient, and effective methods for environmental assessment and realistic assessment of tradeoff between energy needs and environmental hazards.
- Accelerated research to improve the technology for exploration and production in deep water and more hostile environments of Alaska and other frontier areas.

Interior is proceeding with Shelf leasing at a pace which far exceeds its administrative capacity to insure proper evaluation of leased areas and fair value on the disposition of oil and gas resources. The argument that gains in earlier oil and gas production will occur proportionate to acreages leased is highly questionable because of the constraints industry will face in responding to the greatly accelerated program. In light of the information discussed in this report, we believe that the Secretary of the Interior should reconsider the accelerated Shelf leasing schedule.

RECOMMENDATION

We recommend that the Secretary of the Interior reconsider the accelerated Shelf leasing schedule in the light of Government and industry capabilities and possible alternatives to leasing in new Shelf areas as addressed in the PI analysis and the President's subsequently announced national energy and economic proposals.

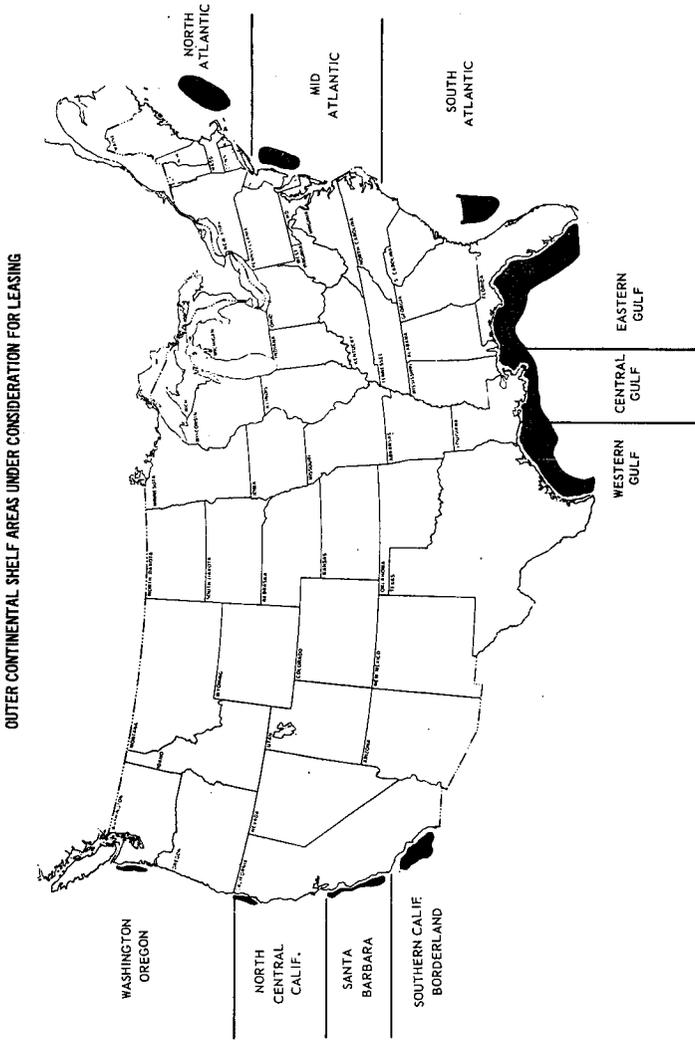
CHAPTER 4SCOPE OF REVIEW

We made our review at Geological Survey's headquarters in Reston, Virginia; the area office in New Orleans, Louisiana; BLM headquarters in Washington, D.C.; and BLM's area office in New Orleans, Louisiana.

We reviewed legislation, regulations, policies, procedures, and practices pertaining to Federal leasing of the Shelf. We interviewed Survey and BLM officials at headquarters, regional, and area offices.

We obtained comments from petroleum industry officials (both major oil companies and independent oil operators) dealing with Federal Shelf leasing and implications of Federal goals for oil and gas development.

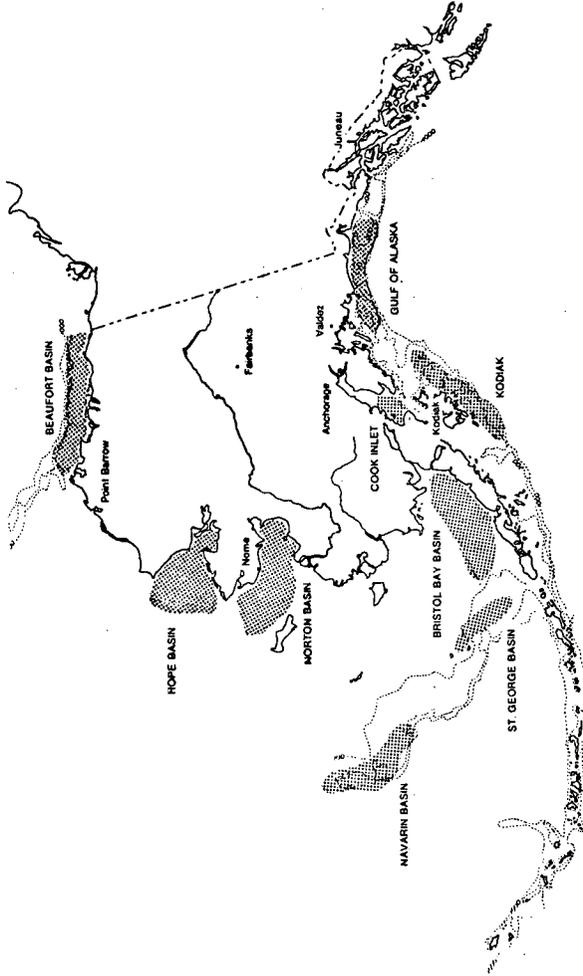
We also obtained comments from a major financial institution regarding the availability of capital for the expanded Federal leasing goals.



Source: Department of Interior, Bureau of Land Management.

APPENDIX I

OUTER CONTINENTAL SHELF AREAS UNDER CONSIDERATION FOR LEASING
ALASKA



Source: Department of Interior, Bureau of Land Management.

APPENDIX II

SUMMARY OF SHELF LEASING 1954-74

<u>Calendar years</u>	<u>Number of tracts leased</u>	<u>Acreage offered</u>	<u>Acreage leased</u>	<u>Total bonuses paid</u>	<u>Average tract value</u>
				(000,000 omitted)	
1954-55	230	1,534,000	865,000	\$ 249	\$ 1,082,000
1956-58	-	(a)	(a)	-	-
1959-60	189	2,151,000	876,000	382	2,021,000
1961	-	(a)	(a)	-	-
1962-64	601	5,507,000	2,852,000	598	995,000
1965	-	(a)	(a)	-	-
1966-70	569	3,410,000	2,520,000	3,120	5,483,000
1971	11	56,000	37,000	96	8,727,000
1972	178	971,000	826,000	2,251	12,646,000
1973	187	1,515,000	1,033,000	3,082	16,481,000
1974	<u>356</u>	<u>5,007,000</u>	<u>1,762,000</u>	<u>5,038</u>	14,152,000
Total	<u>2,321</u>	<u>20,150,000</u>	<u>10,771,000</u>	<u>\$14,816</u>	

a/ No leasing.

APPENDIX III

LIST OF THE 17 SHELF AREAS, TIME TO PRODUCTION
AND CONSTRAINTS AS NOTED BY INDUSTRY

<u>Shelf Area</u>	<u>Years to initial production</u>	<u>Years to peak production</u>	<u>Constraints</u>
North Atlantic	3 to 8	5 to 10 (25)	Drilling equipment, tubular goods, personnel, capital, logistics, platform fabrications, litigation, heavy shipping area, and fog.
Mid-Atlantic	3 to 8	5 to 10 (18 to 25)	Rigs, steel, personnel, capital, platform fabrications, logistics, and litigation.
South Atlantic	3 to 8	5 to 10 (15 to 25)	Rigs, tubular goods, platforms, labor, capital, deepwater technology, and hurricane storms.
Eastern Gulf of Mexico	3 to 4 (5/8)	6 to 8 (4 to 6 min., 15 max.)	Rigs, platforms, labor, capital, DOD warning areas, and possible subsea completion requirements.
Central Gulf of Mexico	2 to 4	4 to 8	General material and possible subsea completion requirements.
Western Gulf of Mexico	2 to 4	5 to 8 (10)	Rigs, platforms, DOD warning areas, labor, and possible subsea completion requirements.
Southern Californian Borderland	3	8 (10 to 15)	Rigs, tubular goods, platforms, seismic activity, and deepwater technology.
Santa Barbara Channel	2 to 4	5 to 8 (12)	Seismic activity, tubular goods, steel, subsea completion testing, and deepwater technology.

APPENDIX III

<u>Shelf Area</u>	<u>Years to initial production</u>	<u>Years to peak production</u>	<u>Constraints</u>
Northern and Central California	3 to 4	5 to 7 (10 to 20)	Tubular goods, rigs, and seismic activity.
Washington-Oregon	3 to 4 (6)	6 to 9 (12 to 20)	Deepwater technology, logistics, tubular goods, weather, and seismic activity.
Cook Inlet	2 to 7	4 to 8 (15 to 20)	Remote supply sources, limited gas mkt., pipelines, shore facilities, litigations, tidal activity, rigs, platforms, steel, personnel, capital, and earthquake/ice.
Southern Aleutian Shelf	3 to 8	6 to 12 (20 to 25)	Rigs, platforms, capital, weather, limited gas mkt., remote supply sources, weather, and earthquakes.
Gulf of Alaska	3 to 8	10.5 (20)	Rigs, platforms, steel, labor, capital, limited gas mkt., weather, sea/seismic, litigation, and remote supply sources.
Bristol Bay	3 to 8	10.5 (23)	Equipment, manpower, capital, remote mkt./supply sources, drilling time, ice, tidal activity, and fog.
Bering Sea	3 to 10	10.7 (25)	Construction season, equipment, labor, remote supply sources, limited gas mkt., weather, ice, winds, and technology.
Beaufort Sea	3 to 10	11.7 (30)	Ice, weather, limited passage, construction season, labor, equipment, remote mkts., transportation costs, and litigation.

APPENDIX III

<u>Shelf Area</u>	<u>Years to ini- tial pro- duction</u>	<u>Years to peak pro- duction</u>	<u>Constraints</u>
Chukchi Sea	3 to 9	7 to 15 (5 to 25)	Labor, equipment, ice, weather, remote supply sources, and construction season.

Source: Department of the Interior, Bureau of Land Management.

PRINCIPAL OFFICIALS
RESPONSIBLE FOR THE ADMINISTRATION OF
ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
<u>DEPARTMENT OF THE INTERIOR</u>		
SECRETARY OF THE INTERIOR:		
Rogers C. B. Morton	Jan. 1971	Present
Fred J. Russell (acting)	Dec. 1970	Jan. 1971
Walter J. Hickel	Jan. 1969	Nov. 1970
ASSISTANT SECRETARY OF THE INTE-		
RIOR--ENERGY AND MINERALS:		
Jack W. Carlson	Aug. 1974	Present
King Mallory (acting)	May 1974	July 1974
Stephen A. Wakefield	Mar. 1973	Apr. 1974
John B. Rigg (note a)	Jan. 1973	Mar. 1973
Hollis M. Dole	Mar. 1969	Jan. 1973
ASSISTANT SECRETARY OF THE INTE-		
RIOR--LAND AND WATER RESOURCES:		
Jack O. Horton	Mar. 1973	Present
ASSISTANT SECRETARY OF THE INTE-		
RIOR--PUBLIC LAND MANAGEMENT		
(note b)		
Harrison B. Loesch	Apr. 1969	Jan. 1973
DIRECTOR GEOLOGICAL SURVEY:		
Vincent E. McKelvey	Dec. 1971	Present
William A. Radlinski (acting)	May 1971	Dec. 1971
William Pecora	Sept. 1965	May 1971
DIRECTOR BUREAU OF LAND MANAGE-		
MENT:		
Curt Berklund	July 1973	Present
Burton W. Silcock	June 1971	July 1973
Boyd S. Rasmussen	Apr. 1966	June 1971

APPENDIX IV

<u>Tenure of office</u>	
<u>From</u>	<u>To</u>

FEDERAL ENERGY ADMINISTRATION (note c)

ADMINISTRATOR OF FEDERAL ENERGY

ADMINISTRATION:

Frank G. Zarb	Dec. 1974	Present
John C. Sawhill	May 1974	Nov. 1974
William E. Simon	Dec. 1973	May 1974

- a/ Deputy Assistant Secretary in charge.
- b/ Became office of Assistant Secretary--Land and Water Resources in March 1973 reorganization.
- c/ Federal Energy Office from December 1973 to May 1974.

APPENDIX II

Statements and Additional Communications for the Record

Statement of Governor James B. Edwards
to Senate Committee on Interior and Insular Affairs
concerning exploration of the Atlantic Outer Continental Shelf

South Carolina is a state traditionally dedicated to promoting a viable balance between environmental quality and healthy economic growth. This goal is one of extreme importance if we in government are to improve the quality of life for the people of our state.

We firmly believe the discovery and development of oil and gas resources on the Atlantic Outer Continental Shelf would substantially accelerate the State's program of economic and industrial expansion.

Private enterprise should be encouraged to move forward immediately to develop the oil and natural gas resources that may be discovered offshore. In our opinion, it is this petroleum potential offshore that offers the best opportunity to meet our state and nation's near-term energy demands.

Economic growth and escalating energy demand go hand-in-hand. We must have adequate supplies of energy to stimulate the economy and thus ensure secure job opportunities for all South Carolinians.

One ever-growing danger is our dependence upon foreign sources for petroleum supplies. We understand that nearly forty percent of our oil and natural gas supply is presently provided by foreigners.

With this in mind, we can no longer afford to delay our search for domestic oil and gas offshore on the Atlantic Outer Continental Shelf. Further delays could have serious consequences for the people of our state who depend upon energy far in excess of the national average.

During the past decade South Carolina's energy consumption rate has been nearly double the national average. Even more impressive is the fact that industrial energy consumption has been increasing at a rate almost three times that of the nation as a whole.

There can be little doubt that South Carolina has a large stake in reliable, adequate energy supplies. We believe that proposals that the federal government explore for petroleum offshore would not only delay new energy supplies, but impose a further drain on the already overburdened taxpayer.

Private companies, we are told, spend nearly one billion dollars each year on geological and geophysical exploration. Let private enterprise continue to finance the expensive search for new oil and gas deposits.

The federal government is not prepared to explore for oil and gas in the Atlantic Outer Continental Shelf. It has neither the expertise nor the trained and experienced personnel, the equipment nor the organization.

Moreover, it would take years to develop an effective government exploration effort. And that would mean more years of delay before South Carolina and the rest of the nation benefited from the critically needed oil and natural gas.

South Carolina does not now produce one drop of petroleum, or one cubic feet of natural gas. A ready access to alternate energy supplies is not available.

A practical solution to the problem of readily available energy for South Carolina and the eastern area of the United States is to rapidly proceed to explore and develop petroleum resources on the Atlantic Outer Continental Shelf.

Even though I strongly feel that offshore oil is needed, I feel equally strong that its development should not harm the environment. In South Carolina our coastal counties depend upon the preservation of the quality of the beaches and estuarine ecosystems for economic and aesthetic reasons. Proper environmental safeguards must be taken by the petroleum industry to protect our fragile coastal wetlands. I am confident that industry will make this commitment.

Potential onshore development such as refineries, petrochemical complexes and service or support industries in South Carolina would be a significant change from existing industrial operations.

Development and operation of such facilities in the state would provide not only new sources of income, jobs, and general economic development for certain areas, but also generate new sources of needed local tax revenue.

Maximum input into federal programs should be allowed from organizations of states such as the Interstate Oil Compact Commission, Coastal States Organization and related bodies with collective knowledge on oil and gas, oceanography, environmental safeguards and the like.

Compensation of the states, especially coastal states directly affected, for the socio-economic impact of offshore drilling and production on the Outer Continental Shelf should be enacted to provide an equitable system of federal revenue sharing from lease payments, bonuses, and royalties.

In closing, let me emphasize that needless political wrangling over leasing new offshore areas threatens to destroy the timetable of our nation's energy program for self sufficiency.

Time is running short, because while we delay, U.S. oil and gas production is still declining. Conservation alone cannot solve the problem, certainly not without heavy economic penalty. Offshore oil could substantially increase domestic supply. The only other option is continuing dependence on growing foreign imports.

In the face of these facts, further delay in leasing has no merit. There is ample time to prepare economic and social programs even if leasing begins immediately. The long lead-time for producing oil and gas will see to that. We can use this normal time-lag to prepare for large-scale development. Delay will magnify future shortages without solving any current problems.

Therefore, I recommend that leasing and exploration proceed as soon as it is practicable.

Finally, I would like to express my appreciation to the Senate Committee on Interior and Insular Affairs for the opportunity to express our position with respect to these very important issues.

Statement from Senator Allen R. Carter, Charleston, concerning petroleum exploration and development of the Atlantic Outer Continental Shelf.

As Chairman of the Oil and Gas Study Committee of the South Carolina General Assembly, I appreciate the opportunity to present my views on the subject of petroleum exploration on the Atlantic Outer Continental Shelf.

South Carolina is totally dependent upon sources beyond its boundaries for all its oil and natural gas supplies. Offshore drilling along the Atlantic Outer Continental Shelf would provide new sources of petroleum to meet our near-term energy needs.

It will also help to strengthen the economic base of the Eastern states, which would provide support facilities for exploration and development.

In the face of continuing declines in oil and gas production here in the United States, efforts to delay development of potential petroleum reserves on the Outer Continental Shelf could have serious consequences.

Proposals to declare a moratorium on drilling as a prelude to further "studies", or to put the government in the exploration business would mean delays in achieving our energy goals.

It disturbs me greatly to hear proposals that government get into the exploration business. We cannot afford the time it would take to create a government agency with the expertise to get the job done.

Furthermore, governmental control of oil and gas exploration would inevitably mean that the taxpayers would be paying for inefficiency and political considerations.

There is no reason to think that an exploration effort run by government would be any more successful than other governmental-run projects such as Amtrak or the Postal Service. When it comes to exploring for energy supplies let private enterprise do the job. The job will be done faster and will cost less for the consumer who has to pay the bill. A government effort would only spend more taxpayers dollars and probably expand the federal deficit.

Our worst problem is delay. In the many months since the Arab oil embargo, the country has not moved one step closer toward energy independence.

In fact, we have moved in the opposite direction. Our dependency on imported oil is greater today than it was a year ago. Further delays in exploring the Outer Continental Shelf would simply accelerate our country's move toward dependency on others for more than half our oil. The people of South Carolina, like our sister states, cannot afford to depend upon foreign suppliers for the majority of our vital energy supplies.

As a State Senator representing some 250,000 citizens of Charleston, my home county, I am deeply concerned with protecting our coastal environment. My many trips to offshore Louisiana, Florida and California have proven to me that the oil industry conducts its operations so as to minimize any adverse environmental effects.

The nation's interests are best served when environmental protection is a vital factor in energy production. The nation's interests are also best served when there are adequate supplies of secure domestic oil and natural gas.

Assuming that oil and natural gas were located quickly in the Atlantic Outer Continental Shelf, it would still take from three to ten years to bring a new offshore field into full production.

This long lead time would provide ample opportunity for our state to develop and put into action sound Coastal Zone Management plans. I see no need for further delay.

The Atlantic Outer Continental Shelf should be speedily developed to find the oil and gas needed to boost our state's economy and ease our nation's dependence upon foreign supplies. I emphasize that offshore drilling should be done by private enterprise and not a government-controlled effort.

Thank you for consideration of this statement.

Coastal States Organization

An alliance of the Coastal States, Commonwealths, and Territories providing an effective voice in the formulation, development, and implementation of national marine and coastal resource programs and policies.

Chairman

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State Senator and Chairman
Texas Coastal and Marine Council
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(512) 476-3561

Vice Chairman and Secretary-Treasurer

Y. R. NAYUDU
Division of Marine and Coastal Zone Management
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JOHN A. BIGGS
Director
Department of Ecology
Olympia, Washington

JOHN P. CRAVEN, PhD
Marine Affairs Coordinator
Governor's Office
Honolulu, Hawaii

WILLIAM J. HARGIS, JR., PhD
Director
Virginia Institute of Marine Science
Gloucester Point, Virginia

BRUCE JOHNSON
Coordinator
Coastal Coordinating Council
Department of Natural Resources
Tallahassee, Florida

WILLIAM D. MARKS
Chief
Water Development Division
Lansing, Michigan

PHILLIP M. SAVAGE
State Planning Director
Office of the Governor
Augusta, Maine

JAMES A. TIMMERMAN, JR., PhD
South Carolina Wildlife and Marine Resources Dept.
Columbia, South Carolina

STATEMENT TO JOINT HEARINGS OF

SENATE INTERIOR & INSULAR AFFAIRS COMMITTEE

AND

SENATE COMMERCE COMMITTEE

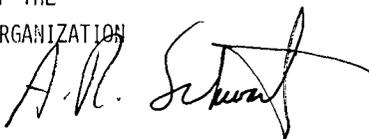
17 MARCH 1975

BY

TEXAS STATE SENATOR A. R. SCHWARTZ

CHAIRMAN OF THE

COASTAL STATES ORGANIZATION



OUTER CONTINENTAL SHELF OIL AND
GAS DEVELOPMENT POLICY*

Mr. Chairman, members of the Committees, I am A. R. Schwartz, a Texas State Senator from Galveston. I am here today representing the Coastal States Organization. The Coastal States Organization is an alliance formed under the auspices of the National Governors' Conference; its stated purpose is to:

Provide a means by which the States may be adequately involved and represented on a continuing basis in the formulation, development, and implementation of national marine and coastal resource programs and policy.

The Coastal States Organization is honored to have been invited to appear at these hearings. I am glad to be here today to provide these views relating to Outer Continental Shelf development policy.

Mr. Chairman, I will not attempt to go into detail on the many specifics contained in the bills referred to in your invitation. (S.426, S.521, S.586, S.740, and others.) Rather, I will:

Briefly summarize the major policy positions of the states as articulated by the Coastal States Organization, the National Governors' Conference, and the National Conference of State Legislatures;**

Respond to the specific questions posed in your letter; and

Provide a few statements reflecting some specific concerns of my home state, Texas, and several other matters.

I. ADOPTED POSITION STATEMENTS

A. Coastal States Organization - The following positions were adopted November 13, 1974.

- . OCS oil and gas resources should be expediently developed by private industry.
- . Coastal States should be substantively involved at an early stage in decisions by the federal government on OCS resource development.

*Statement to joint hearings of Senate Interior and Insular Affairs Committee and Senate Commerce Committee. Washington, D.C., March 17, 1975.

**Full Position Statements of these groups are given as Attachments A, B, and C.

State and local governments should receive a portion of the revenues from OCS operations to offset the costs of providing onshore services needed to support offshore activity.

B. National Governors' Conference - A major topic of the National Governors' Conference at its mid-winter meeting was energy, including OCS development. At that meeting on February 20, the Governors formally adopted--by a 21 to 3 vote--a comprehensive policy position on OCS energy resource development. This included specific policy statements on various topics such as national energy policy, separation of exploration and development, major OCS legislative and administrative reforms, strict liability on operators for clean-up and damages, and financial assistance to affected states. The entire text of that policy position is contained in Attachment B. Principal points of the National Governors' Conference policy positions include:

- . The Governors believe it is in the best public interest to promptly explore the OCS to determine the extent and value of OCS petroleum resources. HOWEVER, the exploration phase must be separated from the decision to develop these resources.
- . All provisions of the National Environmental Policy Act should be strictly observed.
- . Strict liability and no-fault compensation measures are essential.
- . States should be provided a more substantial role in OCS decision making.
- . Federal financial assistance should be provided the states to help them cope with the budgetary impacts of OCS development.
- . New leasing procedures should be adapted to ensure an equitable return to the public as well as efficient development and management of OCS resources.

C. National Conference of State Legislatures - (Formerly known as the National Legislative Conference.) This organization is composed of members of State Legislatures who are appointed by legislative leadership of each state, representing the collective views of the 7600-plus state Legislators in the United States. The Intergovernmental Affairs

Committee met February 28-March 1, and OCS development received considerable attention. A policy position was adopted on OCS which is very similar to that of the National Governors' Conference. Most of the major points--such as increased state input to the OCS decision making process, separation of the exploration and production phases, and sharing of OCS revenues with affected states--are substantially the same. I will not belabor you by repeating these; a full text of that policy position is enclosed as Attachment C.

I think it is important to note that state leadership--as represented by the National Governors' Conference and the National Conference of State Legislatures--appear to nearly unanimously agree on a number of key OCS issues.

II. RESPONSE TO SPECIFIC QUESTIONS

In your letter inviting me to testify here today, you requested views on seven specific issues. I have prepared a response to each of these. Some responses are more detailed than others. In some cases, I will restate a summary of the adopted position of the National Governors' Conference, the National Conference of State Legislatures, the Coastal States Organization, or others, and will then supplement with additional information.

(1) Improved Coordination of Federal OCS Programs with States. This topic is one of the principal "sore spots" with many states. Many states have felt that they have either been not informed of OCS related plans or have not had their views heard by the federal government. This situation is certainly not unique to OCS activities. However, I would like to make several specific suggestions for improving state-federal coordination on OCS matters.

Generally speaking, existing statutes are adequate to provide the necessary coordination--especially if the Coastal Zone Management Act (PL 92-583) is fully utilized.

- . A single "clearinghouse" should be established in each state to handle all OCS related information and to coordinate related activities. This should generally be the state agency charged with principal coastal zone management responsibilities pursuant to PL 92-583.
- . From a state viewpoint, it often seems that the principal coordination problem is not in state-federal information flow, but rather within and between the federal agencies. States often experience much less difficulty in getting something from a particular federal agency than they do in finding out what is going on within and between the federal agencies. Part of this difficulty results from inter-agency rivalries. Some problems stem from a "we-they" mentality, where it is "we" (federal agency) versus "they" (everybody else). This certainly does not seem to be in the best public interest.

It seems that much improvement is possible within existing laws by a little more willingness and work on the part of all concerned.

(2) Increasing Role for States in the Decision-Making Process? This is a complex and controversial issue. First there is a definition problem: "Just what is meant by an 'increased' state role?" Does this mean that a state should have an absolute veto over OCS development off its coast? Or, does it mean that a state only should have a right to make its views known to the responsible federal entities, and then sit by while that agency makes a decision and acts. In most instances, some reasonable middle-ground exists and must be found.

The principle of State's Rights is critical here--but so is the issue of National Interest! As an illustration, let's briefly consider the Deepwater Port situation. I want to extend the thanks of the states to the Congress--and these Senate Committees in particular--for passage of the Deepwater Port Act of 1974. That measure recognizes the appropriate key role that must be provided by the states, including provisions that provide:

- . First preference for public ownership;
- . Broad-based planning and management by the state, through its coastal zone management program, to cope with the ports' impact.
- . A state veto over a facility; and

(5)

A mechanism whereby the impacted state(s) can receive compensation for economic and environmental burdens.

Certain of these principles--such as coastal planning and equitable financial compensation--are also applicable to OCS development. Others--namely the absolute state veto--may not properly apply to OCS development. If significant oil and gas resources are believed to exist off a particular state's coast, then it may be the duty of that state to accept certain risks that are associated with OCS development in order for those resources to be utilized to help meet the nation's energy demand. However, it is unconscionable to require those States to suffer risks without strict adherence to their Coastal Zone Management plans and without the further guaranty of full compensation for adverse impacts. The producer states which have historically borne the financial and environmental risks and burdens are late in asserting their own demand for consideration and compensation but at the same time feel very strongly that other states, who may have reserves of oil and gas off their shores begin to permit development of that resource. I suggest that activities carried out within or adjacent to the state's jurisdiction (coastal waters and uplands) be in accordance with the States Coastal Zone Management program and all other applicable state and local laws, programs and plans, I have no specific recommendations. However, I think success in this area depends relatively little on new legislation and mostly on a willingness by both sides to cooperate. Attachments "B" and "C" tell the story of what Governors and Legislators need and want for the States.

(3) Methods of Separating OCS Oil and Gas Explorations from Decisions to Develop and Produce the Oil and Gas. This is probably the most sensitive and controversial of your seven questions. Just the thought of such action has caused hysteria in the petroleum industry. Yet, both the National Governors' Conference and the National Conference of State Legislatures adopted strong policy positions calling for separation. Part of the National Governors' Conference position reads as follows:

"...it is in the best public interest to promptly explore the OCS to determine the extent of the energy resources that exist. However, the exploration program of an OCS tract must be separated from the decision to develop and commercially produce that tract..."

Regrettably, just because an idea has widespread support does not always mean that such an idea can be brought to fruition in a reasonable time consistent with other goals and objectives.

Conceptually, the separation of exploration and production phases sounds great. After all, it seems logical that the public sector should attempt to gain as much knowledge about the location, extent, and value of resources under public stewardship as possible. Such information is useful for several purposes: (a) insure an equitable economic return to the public; (b) provide improved long-term policy making capability and management of the resource; and (c) to provide better forecasts of related activity levels to help achieve improved planning for environmental protection.

Unfortunately, the operational aspects of how to separate exploration and production are as complex as the idea is conceptually simple. Problems begin as soon as one attempts to define the exploration phase. Does exploration as used in this context mean just the acquisition of geophysical data by the federal government, or does it mean that the federal government will actually drill (or contract for the drilling of) exploratory wells on the OCS? If it is the latter--as called for in certain of the bills being considered in these hearings--then how is the "dividing line" between exploration and production to be determined. Unfortunately there is no clear-cut boundary. One just doesn't go out, drill a few exploratory wells, terminate exploration, and then either start production or cease completely. Exploration continues into the production phase. One person knowledgeable of petroleum operations stated it rather simply: "In any given area, by the time we cease exploration, probably at least 50% of the total production of the field is complete."

This dilemma caused by the technical inability to cleanly and clearly sever the exploration and production phases, raises a very critical question: "If the government, during an exploratory program, makes a significant find, will there not certainly be extreme pressure on the government to move into the next logical step--production?" The

-7- ,

answer to this question is an unqualified, "yes, there would be such pressures." However, such action would be a major step toward the establishment of a Federal Oil and Gas Corporation, or "FOGCO." Furthermore, this would be a definite first step toward de facto nationalization of the U.S. oil industry.

Over the years I have been, and still am, a frequent and vocal critic of the oil industry, but no one can deny their technical efficiency when it comes to finding and producing oil.

This certainly does not mean that I believe the oil industry should be turned loose to exploit the OCS; however, I believe government regulation, not direct governmental competition is the preferable course of action.

In summarizing, my views on the separation of exploration and production I'd like to stress the following points:

- . Conceptually, this sounds like a very good idea that should benefit all concerned.
- . Operational and practically, there are major problems with separating exploration and development.

- . If a government exploration venture is successful, the pressure for government development will be very great.
- . Government should function as a regulatory body, and it would be unwise for the federal government to get directly into the petroleum production business.

(4) Alternative Leasing Systems or Other Methods of Allowing Private Industry to Develop OCS Oil and Gas.

I do agree with others that the current statutes governing leasing procedures are rather restrictive, and additional flexibility is needed. I believe the proposals given in S.426 would provide such additional flexibility.

I find the second option given in S.426, variable royalty bidding based on a percent of production, particularly attractive. First, it reduces the initial capital outlay requirements associated with bonus bids. During exploration and early development, when costs are still great, the government's share is relatively small; however, once the investment is recovered the government's share goes up greatly. This means that government and industry are jointly sharing both the risk and opportunity. If the effort does not produce, then the government does not get revenue. Conversely, if a major find is made, the government will get a lion's share of the economic return. This procedure is certainly not a panacea for all circumstances, but it certainly has merit worth trying. Thus I endorse the legislative action to provide the Department of Interior with additional flexibility on bidding procedures.

(5) Improvements in the Planning and Execution of Environmental Baseline Studies, Monitoring Studies, and Preparation of Environmental Impact Statements.

I am not a scientist and do not feel qualified to speak on the details of this question. However, I will make a few observations:

- . The establishment of the OCS-Research Management Advisory Board consisting of both federal and state representatives is a good first step in improving such studies.
- . I am concerned that such activities produce meaningful information that will be of real use to those of us who must make policy decisions, and that the efforts not become just a "welfare assistance program for marine scientists."

(9)

(6) Improvements in Regulation and Enforcement of OCS Operating Practices for Safety and Environmental Protection. I am not qualified to speak on the technical issues. However from a policy/legal perspective, the solution is simple: LIABILITY. Both the National Governors' Conference and the National Conference of State Legislatures have endorsed this position; in part the National ⁷Governors' Conference position reads as follows:

"...a major oil spill or blow-out can have devastating effects on the coastlines and economies of the coastal states...the oil industry should be strictly liable for all cleanup and consequential damages flowing from a spill and that this liability be unlimited..."

That Mr. Chairman, is a pretty strong statement to be adopted 21-3 by the governors.

(7) The Need for an Appropriate Form of Federal Assistance to Affected Coastal States. This is an action that the Coastal States Organization, and some of you, have been advocating for several years and one that even the Interior Department is beginning to recognize. I recently requested that a study be done by the Office of Information Services in the Governor's Office of Texas to determine just what the projected federal OCS development meant to the State of Texas in hard cold dollars. I have long felt that Texas was getting the "short end of the stick" from OCS development. Texas has long been too permissive in suffering the burdens of oil exploration and development without adequate compensation. The specific dollar values of adverse impact are shocking to me and should awaken other citizens in our Nation as well:

Increased annual revenues to State and local government is estimated to be \$48.9 million. (There is no direct tax or other direct income to the adjacent state from production on federal offshore lands; thus, these revenues are taxes collected on related expenditures that are made within the state.)

Cost of additional services that will have to be provided by State and local government are estimated at \$111 million per year.

Thus, the NET COST to State and local government, in excess of benefits, will be \$62.1 million per year.

These findings are based upon the U. S. Department of the Interior's estimates of increased offshore production. The Texas Input-Output

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Model was used to determine probable revenues and costs to State and local government.* Also, I know a similar study has been done for Governor Edwards of Louisiana and that indicates a cost to that state of approximately \$40 million annually resulting from OCS activities.

The National Governors' Conference recently adopted the following position:

"...The governors believe that any OCS program will have substantial financial impact on affected states... there is a clear federal responsibility to assume the necessary related costs of that development... (including compensation for any net adverse budgetary impacts and for the cost of fulfilling state responsibilities in the regulation of offshore and onshore development..."

I am very glad to see the Congress preparing to act favorably in this fashion. There is ample precedent--namely the Minerals Leasing Act of 1920 which allocates 37.5% of the federal revenues from production on federal uplands to the state in which the lands are located. The dollar amounts involved are staggering. Let's look at a few numbers:

- . Federal OCS petroleum revenue (bonus, royalties, and rentals) for 1972 and 1973 respectively were \$2.6 billion and \$3.4 billion.
- . The 1974 Bonus and Royalty Income ~~is~~ incomplete is \$5.5 billion
- . The cumulative federal revenue since the passage of the Outer Continental Shelf Lands Act in 1953 through 1974 is thus over \$18 billion.

Most of this revenue was from areas offshore Louisiana, Texas and California. Thus, if the same standards had applied to OCS as to inland federal lands, these states would have received approximately \$6.75 billion--but we received not one cent of this.

A look at the future OCS production and revenue potential is even more startling. The projections for recoverable reserves vary greatly ranging from the U.S. Geological Survey's estimate of 400 billion barrels, to the National Academy of Science estimate of 133 billion barrels, to industry projections of less than 100 billion barrels. Even if one takes a very conservative estimate of, say, 100 billion

*Copies of this report are available from the Texas Coastal and Marine Council, P. O. Box 13407, Austin, Texas, 78711, (512/476-3561).

barrels, the state revenue potential is great. Some experts estimate that for future offshore developments the federal revenue is apt to run in the \$3-5 per barrel range. Taking an average value of \$4 per barrel, this would amount to \$400 billion. If the states received 37.5%, this would be \$150 billion. Over a 30 year period this averages \$5 billion per year!

Gentlemen, the coastal states certainly do not realistically expect to come to the Congress and get that kind of funding to cope with OCS development. Of course, as a State legislator, I certainly wouldn't object, because I would not have to vote for a tax bill anytime soon. At this time, we have no firm evidence that OCS development will cost us that much. However, we believe that the \$200 million previously mentioned is inadequate.

In order to get a reasonable estimate of realistic state funding needs, the Coastal States Organization conducted a survey of certain member states and developed a projection of probable state funding needs. Five questions were asked of the states:

- . Does your state need and desire federal financial assistance to help cope with impacts of energy resource development and/or energy facility siting?
- . If so, how much is needed annually?
- . If funds were made available for interstate cooperation (in general, not just energy related), how much does your state need?
- . What level of annual funding do you need for applied research and training?
- . What amount (one time) of funding do you need to provide for the protection of beach access?

The details and results of that survey are given in Attachment D. The principal findings can be summarized as follows:

- . The coastal states, based upon available information, estimate that they need between \$800 million and \$1.2 billion annually to cope with energy resource development and related facility siting.
- . These estimates must be considered preliminary and subject to revision.

- . State projections appear to be well within the conservative estimates of available revenue from OCS development based on much less than the 37.5% state share used in the Mineral Act of 1920 for inland areas.

While we are discussing funding, I would like to speak in favor of several points contained in S.586.

- . There is a real need to amend the existing Coastal Zone Management Act to provide funding for quick turn-around, applied research on coastal problems.
- . The general funding in the Coastal Zone Management Act--both authorizations and appropriations--should be raised to an adequate level to meet even the minimal needs of coastal states.
- . Beach access is also a critical issue, and funds need to be made available soon, before land values escalate any more.
- . I would support altering the funding formula in the Coastal Zone Management Act to provide an 80-20% or a 90-10%. These are the figures being proposed in the new HUD 701 legislation and some new land use proposals.

III. SOME CONCERNS OF THE TEXAS LEGISLATURE

The Texas Legislature is quite concerned over current energy-related developments at the national level. While we, like all deliberative bodies, have some disagreements among ourselves, I would like to take this opportunity to enter certain of our concerns into the record. They are briefly summarized below, and supporting documentation is attached as indicated.

- . Concurrent Resolution Urging Texas Congressional Delegation to Act on Certain Energy Matters. (Attachment E.) This resolution requests, among other things:
 - close examination of all energy related legislation.
 - increased supervision by the Congress of administrative agencies.
 - rejection of excise tax on intrastate sale of natural gas.
 - opposition to import tariffs.
 - rejection of federal authority over intrastate natural gas prices.
 - removal of all price controls on petroleum and petroleum products.

This resolution passed and has been sent to the Texas delegation.

- . Concern over Lack of Public Hearing Opportunity on S.692 by Senate Oil and Gas Production and Distribution Subcommittee of the Commerce Committee. The enclosed letter from Speaker Bill Clayton (Attachment F) reflects the concerns of the Texas House leadership on this matter. Again, I would like to express my appreciation to the joint committees for the extensive hearings you are providing on these matters about which I am testifying here today.
- . Legislation to Keep Texas Petroleum in Texas for Texans. A bill has passed the Texas Senate that would provide for keeping oil and gas produced on Texas public lands in Texas to meet intrastate needs in times of shortages. They could be exported at other times.

IV. CLOSING

Mr. Chairman, members of the Committees, we sincerely appreciate the opportunity of being heard here today. I would hope that the record could be held open for a brief period as some member states of the Coastal States Organization wish to submit supplemental written statements. If we can be of further assistance, please let me know.

Coastal States Organization

Formed in 1969 under the auspices of the National Governors' Conference, the Coastal States Organization is an alliance of the coastal states created to voice common views on marine and coastal resource policy issues.

OFFSHORE OIL AND GAS

Findings. The nation's energy needs require development of additional areas of the Outer Continental Shelf (OCS). Such development will provide the nation with added supplies of domestic oil and gas and appears to be necessary even if strong energy conservation measures are effectively implemented.

Expanded OCS operations, particularly in virgin territory, will have significant land-side impacts on the adjoining coastal states. Adequate coastal area management is necessary to minimize adverse onshore impacts. CSO believes the Coastal Zone Management Act of 1972 (P.L. 92-583) provides the states with an instrument capable of allowing them to cope with OCS impacts. States have to anticipate demands for location of processing facilities, fabrication plants, storage and transmission facilities and will also have to prepare for economic and social alterations.

Under present arrangements, states adjoining federally-directed OCS operations have only a limited role in making lease plans and receive no direct financial benefits from off-shore oil and gas production. States with OCS development off their shores estimate their costs in providing services and facilities to support these operations to far exceed added tax revenues. A

study for the Texas Coastal and Marine Council released in November, 1974, places the total annual cost to that State at \$62.1 million.

Before the federal government embarks on an expanded OCS leasing program, CSO believes the following questions need examination:

- Would a gradual, phased leasing program be more compatible with industry's financial and technical capabilities and likely to produce a more equitable return to the U.S. taxpayer than a crash program attempting to lease in 1975 as many acres (10 million) as have been leased in the past two decades?
- Does the federal government have adequate information about the value of the shelf territory it plans to lease and about possible environmental hazards?

The federal government's planned OCS lease sale program is the subject of controversy which can be reduced if state governments are given adequate time and resources to plan for new and expanded OCS operations and if the states receive direct financial returns from offshore operations off their coasts.

The Coastal States Organization urges:

- Coastal states should be actively involved in the planning process for OCS leases at the outset and should be given the opportunity for substantive consultation on the timing, location and extent of OCS lease sales and the resulting landside facilities associated with such development.
- Recognizing that the major impact of OCS development occurs on shore, and that state and local governments will bear the burden of dealing with the economic, social and environmental consequences, special federal fi-

ancial assistance should be provided. Funds should be made available both for accelerated coastal zone management program development and to help state and local governments provide the services required by offshore operations (such as roads, schools, police and fire protection and navigation facilities).

- States should be given the opportunity for substantive participation in environmental, social and economic studies which must precede firm OCS leasing decisions.

POLICY POSITION ON OUTER CONTINENTAL SHELF ENERGY RESOURCES

Adopted by the
 NATIONAL GOVERNORS' CONFERENCE
 Mid-Winter Meeting, Washington, D. C.
 February 20, 1975*

SUMMARY OF KEY POINTS

- . OCS is a national resource.
- . Prompt exploration of OCS is in the public interest.
- . Exploration of OCS areas should be separated from the decision to produce from individual OCS tracts for oil and gas.
- . A phased production objective should be established relating OCS resources to import substitution, other oil and gas sources, and demand reduction measures.
- . A new leasing schedule should be developed, taking into consideration these production objectives as well as environmental ranking, regional energy needs and economic impacts, transportation and refinery linkages, and material, manpower and capital constraints.
- . New leasing procedures should be adopted to ensure an equitable return to the public as well as efficient development and management of OCS resources.
- . Administrative or legislative reforms should be introduced to provide for a more effective state role in resource management, and more timely availability of necessary data for state planning needs.
- . Federal funding is needed to assist the coastal States in coping with planning needs and adverse impacts of OCS development.
- . Strict liability and no-fault compensation measures are essential.
- . The States should increase their efforts and participation in resource management decision making and regulations.

POSITIONS

1. Proposals for the development of outer continental shelf energy resources must be an integral part and be reviewed in light of a comprehensive, balanced energy policy. The energy policy developed should reflect not merely the proposed uses for offshore oil and gas, but also a consideration of whether such offshore development is necessary in light of prudent conservation measures and alternative sources of energy. The nation's energy policy that finally emerges should be truly national in scope and developed and implemented in partnership with the States. Full and early opportunity for public review and comment should be afforded as new policies are formulated or when changes to existing policy are proposed.

*This was adopted by a 21-3 non-record vote of the Governors

2. The continental shelf is a great public natural resource which should be managed with scrupulous care to insure the long-term productivity of all its resources and a fair economic rate of return to the public.
3. The Governors believe it is in the public interest to promptly explore the OCS to determine the extent of energy resources that exist. However, the exploration program of an OCS tract must be separated from the decision to develop and commercially produce that tract. Therefore, the proposed Department of Interior leasing schedule should be revised to reflect and insure the requirements of equity and efficiency. Specifically, the government should establish, in cooperation with the States, a phased and measurable production objective for offshore oil and gas. This objective should reflect the role of OCS oil and gas in import substitution and its relation to other sources (including production from naval reserves, existing OCS leases, and onshore production).

On the basis of a phased production objective, a revised leasing schedule should be established which would take into account objective environmental rankings, hydrocarbon prospects, regional energy needs and economic impacts, transportation and refinery linkages, costs and productivity of development, material, manpower and capital constraints.

Prior to initiation of OCS production on any OCS tract, the full requirements of the National Environmental Protection Act should be strictly observed.

4. An OCS program must include an evaluation of sometimes conflicting national goals and assumes that in some instances for areas of exceptional non-petroleum resource value, no petroleum producing activities should be permitted if the production will seriously jeopardize those other resources. The Governors believe that it is in the public interest that such total restrictions be imposed in appropriate cases.
5. Development, production, transportation and onshore facility plans should be submitted for approval to the Department of the Interior, but only after the potentially impacted States have reviewed such plans in order to ensure consistency with state coastal zone management plans and other applicable state statutes and regulations. Since the plans should be reviewed for consistency with State coastal zone management programs, the Governors believe that adequate time, as determined by Congress, should be afforded states to develop such coastal zone programs before any OCS production commences.
6. Present leasing procedures should be changed to assure an equitable return to the public and efficient management and development of OCS resources. The Governors recognize that no single leasing method is ideal. However, the present cash bonus bidding plus low fixed royalty system does not adequately balance the need for a fair return to the public with the need to provide industry with reasonable incentives to explore and develop our OCS resources.
7. The Governors further believe that the following administrative or legislative reforms should (ALSO) be implemented:
 - a) An effective institutional mechanism must be established to ensure an ongoing working relationship with the potentially affected state governments. Through this mechanism, the States should have timely access to data necessary for planning to avoid or minimize adverse impacts and chaotic development and have the further opportunity to participate fully in both technical and policy decisions affecting the program.

- b) The States should participate in the decision to permit production of an OCS tract and should also share responsibility for review of the adequacy and implementation of environmental safeguards and OCS regulations.
- c) The Governors will endeavor to coordinate the participation of the various state agencies in this process, with a view to improving the overall efficiency of resource management decision making. Federal funding is required for onshore planning and impact mitigation. With such federal assistance, the States must dedicate sufficient personnel to expansion of their planning and regulatory capabilities with respect to economic, environmental, land use and energy planning aspects of coastal zone management.
8. The Governors believe that any OCS program will have substantial financial impact on affected states. Anticipated onshore development will require States to plan for and eventually finance public facilities to cope with the impact of that development. Since the OCS program is a national one, we believe there is a clear federal responsibility to assume the necessary related costs of that development. Adequate federal funds should be made available now to States to enable them to stay ahead of the program and plan for onshore impact. Once the program commences, provision should be made for federal assistance such as the application of federal royalty revenues to affected coastal and adjacent States in compensation for any net adverse budgetary impacts and for the costs of fulfilling State responsibilities in the regulation of off and onshore development.
9. A major oil spill or blowout can have devastating effects on the coastlines and the economies of the coastal states. Fairness dictates that the oil industry should be strictly liable for all cleanup and consequential damages flowing from a spill and that this liability be unlimited. If the federal government (finds) that it is in the national interest to limit the liability of those who cause the spills, then the full risk should be shared on a national level with insurance to cover the difference between what the oil company pays and what the State is forced to absorb.

POLICY POSITION ON OUTER CONTINENTAL SHELF ENERGY RESOURCES

National Conference of State Legislatures
Intergovernmental Relations Committee
March 1975

BACKGROUND

The nation's energy demands and her vulnerability to foreign sources of supply indicate early development of oil and gas resources in the Outer Continental Shelf. Such development portends significant economic, social, and environmental impacts on affected coastal states, however, and such states will require sufficient additional funds in time to plan for these effects and avert or ameliorate them. Timely planning for these effects also requires that states be afforded a meaningful early partnership role with the federal government in all aspects of OCS exploration and development that could reasonably be expected to impact, directly or indirectly, coastal areas.

Because OCS oil and gas are national resources, the federal government shall take measures in cooperation with affected states to assure that fair market value is received for rights to explore and develop these resources; that development be scheduled and production phased to comport with energy conservation, the development of alternative sources, and other long-term and strategic considerations; that strict liability be imposed for clean-up and adequate compensation arranged for damages from production accidents; and that full and early opportunity be afforded for public comment on both the formulation and revision of public policies.

OCS exploration and development must also be conducted under close state and federal scrutiny to assure compliance with adequate environmental safeguards, including but not limited to strict adherence to the requirements of the National Environmental Policy Act. Where OCS development would irreversibly damage other coastal and marine resource values, or irreconcilably conflict with existing or potential uses of OCS lands, seas, or affected coastal areas, the federal government, considering the national interest, shall restrict oil and gas development.

ACCORDINGLY, THE INTERGOVERNMENTAL RELATIONS COMMITTEE BELIEVES THAT:

1. States impacted by OCS exploration and development should be compensated with sufficient federal revenues from these activities to cover net adverse budgetary impacts and any additional planning and regulatory responsibilities arising from these activities. Participation in revenues generated, such as in the 1920 Mineral Leasing Act, shall be the basis of compensation in the development phase. To assure adequate planning time for states that will be impacted, sufficient federal funds should be made available now.
2. Coastal states that would or might be affected by OCS oil and gas production shall be full participants in the preparation and implementation of federal exploration and development programs. Participation should include but not be limited to the selection of and decision to permit production on OCS tracts, as well as the establishment and enforcement of environmental safeguards. Such states should also have timely access to all federal data accumulated for program decisions, and the federal government should use state-developed data to the maximum extent feasible. Where applicable, however, proprietary information must be kept confidential.
3. The federal government should separate exploration and development of OCS resources into two distinct phases, both articulated in cooperation with affected coastal states.
4. The federal government, in cooperation with affected coastal states, should establish a phased and measurable production objective for offshore oil and gas. This objective should take into account the need for prudent resource conservation, alternative sources of energy, and the role of OCS oil and gas in import substitution.

5. On the basis of such phased production schedule, the federal government in cooperation with the affected coastal states should establish a revised leasing schedule reflecting hydrocarbon prospects, regional energy needs and economic impacts, transportation and refinery linkages, costs and productivity, material, manpower, and capital restraints. Taking these considerations into account, tracts to be leased should be scheduled to the maximum extent possible in inverse order of environmental risk.
6. In concert with affected coastal states, the federal government shall establish environmental standards guaranteed to protect non-petroleum resources and other coastal and marine uses. Where appropriate, offshore oil and gas activities should be restricted to accomplish this objective. States, under federal monitoring, shall be given primary responsibilities for enforcement of these standards within state boundaries. Requirements of the National Environmental Policy Act shall be scrupulously observed.
7. Development, production, transportation, and onshore facility plans shall be submitted to potentially impacted states for review to assure consistency with state coastal zone management programs. Federal OCS activities shall also be certified consistent with such state programs under procedures set forth in the Coastal Zone Management Act.
8. OCS oil-producing firms should be strictly liable for all clean-up and consequential damages flowing from a oilspill, and this liability should be unlimited.

Coastal States Organization

An alliance of the Coastal States, Commonwealths, and Territories providing an effective voice in the formulation, development, and implementation of national marine and coastal resource programs and policies.

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PRELIMINARY ESTIMATES OF STATE NEEDS FOR FINANCIAL ASSISTANCE TO COPE WITH OCS DEVELOPMENT AND RELATED EFFECTS

BACKGROUND

In late February the Coastal States Organization was contacted by NOAA and asked to survey member states and to develop an estimate of the financial assistance these states felt they would need to cope with/mitigate the impact of OCS development and other energy resource/facility-related development. This material was to be used by NOAA in preparing testimony on proposed legislation, and was needed by March 10.

CSO contacted certain member states by telegram and asked them to prepare estimates of financial requirements; specific questions were:

- (1) *Does your state need and desire federal assistance to help cope with impacts of energy resource development and/or energy facility siting?*
- (2) *If so, how much is needed annually?*
- (3) *If funds were made available for interstate cooperation (in general, not just energy related), how much does your state need?*
- (4) *What level of annual funding do you need for applied research and training?*
- (5) *What amount (one time) of funding do you need to provide for the protection of beach access?*

RESULTS

After a brief period, the states were contacted by phone for their estimates. In interpreting the responses, several points must be kept in mind:

- . The estimates are preliminary, and depend on a number of factors/assumptions.
- . Some states were in a much better position to provide more accurate numbers because of previous thought/analysis on the matter.
- . The precise amount of such assistance depends upon the exact language ultimately adopted in future legislation, because this will determine how and what for the funds will be used.

Keeping these points in mind, the results of this preliminary survey-estimate are as follows:

QUESTION 1:

Does a need exist in your state? YES - unanimously

QUESTION 2:

How much is needed annually for overall impact?

Average:	\$46 million
Range:	\$2.7 - 150 million
* N-TOT:	\$1,012 million
** L-TOT:	\$799 million

QUESTION 3:

Annual need for interstate
cooperation?

Average: \$321,000
Range: \$100,000-1,000,000
N-TOT: \$7.06 million
L-TOT: \$6.50 million

QUESTION 4:

Annual need for applied research
and training?

Average: \$850,000
Range: \$450,000-\$1,000,000
N-TOT: \$18.7 million
L-TOT: \$17.2 million

QUESTION 5:

One time funding requirement for
beach access?

Average: \$10.2 million
Range: \$1.7 - 25.0 million
N-TOT: \$224.4 million
L-TOT: \$176.8 million

* N-TOT (Number-based total) was computed by multiplying the average per state response by the number of possibly involved states; excluded were the Great Lake states, Hawaii and the territories.

** L-TOT (Length-based total) was computed by determining a ratio of the total coastline of possibly affected states to the coastline of sampled states (ratio = 2.89/1) and multiplying by sum of values from sampled states. Note: Where a state responded with a range, the mid-point was used.



House of Representatives
Austin

March 7, 1975

Dear Senator Stevenson:

I request the Senate Oil and Gas Production and Distribution Subcommittee of the Commerce Committee to reconsider its position of not accepting public testimony on Senate Bill 692 and other energy-related bills you have scheduled for mark-up March 11.

These bills contain several provisions which would adversely affect the free market system in Texas and other major oil and gas producing states.

Limiting debate by only allowing submission of written testimony on short notice is both undemocratic and irresponsible. It is an abrupt departure from the democratic committee system in Congress. I understand fully the need to act decisively in the areas of energy conservation and development, but I believe railroading legislation through Congress without proper debate and analysis only worsens the problems we now face and creates havoc for future oil and gas production.

As the largest producer of oil and gas in the United States, Texas produces 38 per cent of the nation's natural gas. We are also the largest consumer, using 58 per cent of the natural gas we produce. We are currently producing at capacity and continue to run the risks of capital investment losses and environmental hazards in offshore and inland exploration.

However, it is apparent that Congress has undermined the effort Texas and other large oil and gas-producing states have made in the development of our resources. The bills before your committee would decrease production, drive up the cost of gas and oil drastically and strangle the economies of states that are struggling to support our nation with these needed energy sources.

Bill Clayton
Speaker



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The Honorable Adlai E. Stevenson, III

Texas can no longer afford to stand still and allow her natural resources to be depleted, while northeastern states refuse to develop existing oil reserves off their coast.

The bills for consideration in your committee would include the following detrimental proposals:

1. Set a price ceiling on new natural gas at the wellhead at 75 cents per Mcf. The price of new intrastate gas in Texas is now deregulated and currently selling from one dollar and seventy cents to two dollars per Mcf. The reduced price would curtail production of marginal wells and diminish the incentive for full production. Texas has shown that there is an over-demand for deregulated intrastate gas at higher prices. To control the market would only depress the economy and discourage production at a time when there is a shortage of domestic energy.
2. Prohibit boiler use of natural gas. Many utility companies are now in the process of renegotiating contracts with natural gas suppliers. This provision would not give these companies enough time to convert their energy sources to fuel oil, lignite or coal.
3. Give the Federal Power Commission authority to breach contracts in "emergency" situations. This provision states that the company would be compensated at the same rate as the highest gas sold by the company, plus any additional price the FPC deems necessary. This would encourage companies to go along with Federal attempts to preempt state authority and drive Texas-contracted gas from the state at higher prices than currently being sold.
4. Make all new transportation and gathering facilities common carriers. This would put additional controls on an economy that is already feeling the strangulation of too much regulation. Letting the market system determine its own course seems to be a lesson we have yet to learn.
5. Instigate oil import quotas. This would drastically drive up the price of domestic

Page 3

The Honorable Adlai E. Stevenson, III

oil and put the burden of the increased price on the back of the consumer.

6. Rollback the price of crude oil. This would decrease the incentive to drill and frustrate producers who have made investments within the present price structure. It would also perpetuate the two-tiered price system.

7. Establish a National Energy Supply Corporation. This would place the government in competition with private industry. It is the first step toward complete nationalization of our oil and gas industries. Its presence in a free market system would only serve to further discourage and depress domestic oil production.

I urge you and the members on your subcommittee to reconsider the affects of the legislation before you, and I admonish you to hear the testimony of those who would be most affected. If a clear understanding of the energy problems of this nation can be fully understood at the committee stage, I believe we will come closer to solving the problems sooner.

Thank you.

Sincerely yours,

Bill Clayton
Speaker of the Texas House of Representatives

BC/smc

The Honorable Adlai Stevenson, III
Chairman of the Oil and Gas Production
and Distribution Subcommittee
Rom 456
Old Senate Office Building
Washington, D. C. 20015

By: Newton, HannaH.C.R. No. 35HOUSE CONCURRENT RESOLUTION

Memorializing the Texas Delegation to the 94th Congress of the United States of America regarding energy policy.

WHEREAS, The State of Texas, the third most populous state in the nation, consumes significantly more energy than any other state in the nation and has a resulting social and economic dependence on the availability of energy at reasonable prices; and

WHEREAS, The State of Texas has approximately 200,000 citizens employed directly in the oil and gas producing, refining, and petrochemical industries and has a resulting economic dependence on the health of these industries; and

WHEREAS, The State of Texas has allowed and encourages the development of its natural resources for the benefit of the entire nation so that the state presently accounts for over a third of the nation's domestic production of oil and gas, 40 percent of the nation's petrochemical production, and 27 percent of the nation's refinery capacity and the state has borne the environmental burden of this monumental effort; and

WHEREAS, Present federal policies hamper the energy industries by controlling prices and regulating the supply of crude oil and natural gas and harm the interests of the citizens of Texas by allocating scarce resources to other areas unwilling to accept the environmental burdens of production and refining at the same time that Texas's consumers are unjustly required to subsidize through higher petroleum product prices the continued consumption of artificially high-priced foreign oil by consumers in other regions; and

WHEREAS, All proposals for action on energy matters which discriminate against the people of Texas and its industries and business should be rejected, irrespective of the source thereof; now, therefore, be it

RESOLVED by the House of Representatives of the 64th Legislature of the State of Texas, the Senate concurring, to memorialize the Texas Delegation to the 94th Congress of the United States of America to do the following:

1. To examine fully the impact of all energy-related legislation on the availability, price, and distribution of energy in Texas and on the economy of the state through its employment and taxes;

2. To supervise closely the administrative agencies implementing energy policy through regulation in order to ascertain the benefits and the detriments to the citizens of Texas of those regulatory policies so as to ensure that the citizens of Texas receive equal protection and benefit from these policies and to ensure that the citizens of Texas do not continue to bear more than their fair share of the environmental and economic burden of those policies, as is presently the case;

3. To reject any excise taxes on the intrastate sale of natural gas or on the sale of domestic crude oil or its products;

4. To reject any power of the executive branch to allocate the higher cost and import fees for foreign crude oil and products away from the consumers in other states and onto the people of Texas;

5. To withhold and withdraw any benefits under any energy allocation scheme, be it through pricing, direct rationing, equalization ticketing, or mandatory allocation from supplier to purchaser, from any state that fails to develop its own natural resources, including coal, oil, natural gas, and hydropower, or that fails to develop, wherever appropriate, petroleum refineries and/or electric generating plants, whether powered by nuclear, geothermal, or coal-based energy, and to bar automatically from receiving allocations of domestic energy supplies any state that impedes or denies permission for exploration and drilling for petroleum in state-controlled waters;

6. To reject the extension of federal regulatory authority over the prices for intrastate sales of natural gas and the federal preemption of the states' authority to regulate the maximum efficient rate of production of energy supplies;

7. To examine the orderly transition to a totally deregulated interstate natural gas market in the best long-run interest of the nation;

8. To remove federal regulation of prices of the sale of domestic crude oil, natural gas liquids, and other petroleum products;

9. To work together as a unit in cooperation with Members of Congress from other oil and gas producing states to further our mutual interests as a region;

10. To reject proposals which call for gasoline rationing, as such schemes would strangle our rural economy and our metropolitan and suburban travelers; and

11. To reject any proposals which discriminate against

H.C.R. No. 35

Texas industry through the elimination or reduction in any manner of the domestic percentage depletion allowance for oil and gas wells; and, be it further _____

RESOLVED by the House of Representatives of the 64th Legislature of the State of Texas, the Senate concurring, to respectfully request all state officials to cooperate fully with the Congressional delegation and to supply the members of the delegation with all relevant material regarding the impact on the citizens of Texas of existing and proposed energy policies. _____

W.P. Hobby
President of the Senate

Burr C. Cant
Speaker of the House

I hereby certify that H.C.R. No. 35 was adopted by the House on February 20, 1975, by the following vote: Yeas 93, Nays 35, and 5 present not voting. _____

Dorothy Hallman
Chief Clerk of the House

I hereby certify that H.C.R. No. 35 was adopted by the Senate on March 5, 1975. _____

Harold Schmidt
Secretary of the Senate

APPROVED:

May 13, 1975
Date

Walter D. Diers
Governor

Statement from Mayor John T. Campbell, City of Columbia, S. C.
concerning exploration and development in the Outer
Continental Shelf off the Eastern Seaboard.

I appreciate the opportunity to transmit to your committee my feelings on the offshore petroleum exploration and development on the Outer Continental Shelf. I believe my views are representative of the many Southeastern cities like Columbia, whose economies are dependent on future energy supplies.

A year ago this past October, I spoke at hearings on the Environmental Impact of Potential Oil and Gas Development on the Atlantic Outer Continental Shelf and in the Gulf of Alaska, in Jacksonville, Fla.

Time is a critical factor in providing new sources of energy, and the time for opening new areas for development is now. We have waited much too long already, not only for the petroleum to be found off-shore, but for the states on the Eastern Seaboard to begin pulling their weight in providing energy for the country.

South Carolina is one of 11 of the 17 eastern states which is totally dependent on sources beyond its boundaries for all its oil and natural gas supplies.

Already, almost 13 per cent of our domestic crude oil, and nearly 17 per cent of our domestic natural gas, comes from producing wells in the Gulf of Mexico, off Louisiana and Texas-- but none from off the East Coast!

Off-shore drilling along the Outer Continental Shelf will do more than provide new sources of energy. It will also help to strengthen the economic base of the Eastern states, which will provide support facilities for exploration and development.

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Municipal governments are really feeling the energy crunch, which in the end is paid for by the taxpayer. Each day we hear requests for additional services and improved quality in current services. All of these services mean additional energy.

This year, for example, the City of Columbia's electric bill alone will run more than a million dollars. In addition, we will consume tens of thousands of gallons of gasoline and fuel oil. The need for more fuel has grown rapidly over the past several years. A large portion of our power and fuel bill is the result of our new Metropolitan Wastewater Treatment Facility. Providing power for such recent additions are of grave concern to all municipalities.

In order to continue providing such services, cities need more fuel.

There are, I have learned, proposals aimed at government exploration for oil and gas along the Outer Continental Shelf. We cannot afford the time it would take to create an arm of government with the expertise to get the job done. Rather than spending more tax dollars and probably expanding the federal deficit, let private enterprise do the job. It will get done faster, and will cost less for the consumer. The sooner development comes, the sooner the tax revenues will begin to come in, and another step will have been taken toward making the United States energy self-sufficient.

The U. S. Government already has adequate controls, really complete control, of lease operations. It can, and does, establish standards for every aspect of those operations. Let's have some faith in our free enterprise system. And let us show faith in the already existing regulatory bodies which would supervise

any off-shore development.

Briefly stated, I endorse the following five points in regard to off-shore petroleum exploration and development:

1. We can no longer afford the luxury of delays. Already in South Carolina, certain industries are being forced to lay off workers and curtail plans for expansion because of a limited supply of natural gas. We have learned that these supplies will be decreased in the next several years. Already, one of the largest power companies in the state has stopped taking any new orders, residential or commercial, for natural gas hook-ups.

2. While the government has a role in providing assistance and regulation in the areas of exploration and development, we oppose any effort by the government to directly enter the business of exploration. Direct involvement would be political and economic folly. Private enterprise has the expertise and is willing to take the risks.

3. Existing governmental research programs in cooperation with private enterprise should be continued and expanded, but not expanded to the point where government would be competing with private business.

4. Protection of our environment is a safeguard which must be maintained in any exploration or development in the OCS. Since it would take many years to develop actual drilling programs, there is no need to wait for Coastal Zone Management plans. These plans could be readied well before any drilling took place.

5. Offshore drilling deserves first priority attention. As we have already seen with the relaxation of some of our air and water pollution standards, environmental safeguards are the first to suffer when either high costs or low supply, or a combination of the two becomes a factor in the distribution of petroleum products.



COMMONWEALTH OF PENNSYLVANIA
GOVERNOR'S OFFICE
HARRISBURG

WILLIAM B. HARRAL
EXECUTIVE DIRECTOR
ENERGY COUNCIL

STATEMENT BY
WILLIAM B. HARRAL
EXECUTIVE DIRECTOR, GOVERNOR'S ENERGY COUNCIL
BEFORE
THE U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT HEARINGS
ON PROPOSED INCREASE IN OIL AND GAS LEASING
ON THE OUTER CONTINENTAL SHELF
AT
TRENTON, NEW JERSEY
FEBRUARY 12, 1975

I am William B. Harral, Executive Director of the Governor's Energy Council of Pennsylvania. The Council is composed primarily of the heads of the State agencies most directly involved in energy matters. The Council is chaired by the Lt. Governor of the Commonwealth of Pennsylvania, Ernest P. Kline. In addition to State Officials, members of the Council include representation from Pennsylvania universities and the general public.

One of the primary responsibilities of the Energy Council is to develop and recommend to the Governor, Commonwealth policies in the field of energy. It is in this role that I appear before you: presenting the Commonwealth policy on oil and gas leasing on the outer continental shelf as developed and approved by the Governor's Energy Council and as concurred in by Governor Milton Shapp.

In October of 1973, three representatives of Pennsylvania State Government testified in Philadelphia. Walter Arader then Secretary of the State Department of Commerce stated that:

"We are in concurrence with the concept of exploration of the outer continental shelf to determine its potential for producing oil and gas for domestic consumption. I believe that the probable benefit out-weighs the risk, considering the alternatives, and that good environmental standards can be assured by insisting on the use of the best existing technology in the development of new technology when appropriate."

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Chairman George Bloom of the Public Utility Commission said:

"I strongly urge that the proposal for offshore Atlantic drilling be approved. It is vital to the welfare of our nation --- time is of the essence."

Mr. Eugene Frund of the Department of Environmental Resources stated that:

"Environmental considerations and growing energy shortages dictate the immediate search for oil and natural gas on the Atlantic outer continental shelf and the determination of the size of any reserves which may be present. The Department of Environmental Resources supports the efforts by both industry and the Federal Government in doing all that it can, as soon as it can, in the search for new reserves of oil and natural gas, only if sound environmental controls are used to positively protect the shoreline and all wet line areas of the region."

Since that time, the issues have sharpened and the Commonwealth recognizes the need to sharpen its offshore drilling policy.

As we perceive it, the primary areas of consideration in developing the Commonwealth of Pennsylvania position in this matter are:

- the need for increased fuel supply for the nation, northeastern United States, and Pennsylvania;
- the environmental impact of the exploratory drilling and production which is directly related to our sister coastal states and indirectly related to Pennsylvania;
- the environmental and economic impact of onshore support, transportation, and processing facilities which relates directly to Pennsylvania as well as the coastal states;
- the general economic impact on the nation and particularly Pennsylvania;
- the moral responsibility of government to protect the resources to today's and tomorrow's citizens;

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Addressing each of these, we are rather easily able to develop a Pennsylvania policy.

First, no one in Pennsylvania State Government closely associated with our energy problems over the past several years has any doubt of the need for additional fuel sources. We also feel that everything possible should be done to satisfy these needs quickly. The natural gas crisis in our State for example has had more of an impact in several important ways, including the all important one of employment, than the gasoline shortage ever had.

Because of geography, market considerations, and processing facilities we can assume that development of the outer continental shelf and the Baltimore Canyon in particular will be important to Pennsylvania as a fuel source. In recognition of our State's oil and natural gas problems in the past several years, and in recognition of Pennsylvania industry's role in the American economy and in energy development in particular, the importance of an expanded fuel source to the nation as well as to our State is of great importance. On this basis we encourage outer continental shelf development.

We have sat with our sister Northeast coastal states and share their concern about the environmental impact of the drilling and production operations themselves. Spills and blowouts can be so ruinous in so many ways including the effect on many beaches in New Jersey used by more Pennsylvanians than New Jerseyites, even a very minor chance of an occurrence of one of these tragedies must be considered as an important policy determining factor.

We are convinced that the on-going efforts improving the oil spill prevention and clean-up technology have advanced significantly since Santa Barbara, and given the fact that actual production is unlikely to occur for a period of years, we feel that there is adequate time for oil companies and the government to improve this technology.

Any offshore drilling legislation or administrative policy must guarantee that the efforts to develop the technology to reduce spills be continued at full pace, and must guarantee that adequate resources to spill control agencies be provided. Outer continental shelf development should not be postponed to await perfection, to everyone's satisfaction, of this technology.

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Hubbard

The environmental impact of onshore support and processing facilities is the next important policy determining element to be considered. We recognize the differences between the New Jersey, Delaware, Maryland, and Virginia coast and the coast of Louisiana. We wonder, however, if the immediate onshore impact is not being over-emphasized. While it is true that if the potential of OCS development is to be realized, the onshore effect will be considerable, we wonder if it will be the Ocean Cities, the Rehoboth Beaches or the Virginia Beaches which will bear the brunt of this impact. We submit that the established centers of the industry, places like Philadelphia, will provide the refinery sites, the platform assembling yards, and much of the direct onshore support. These places can handle the impact, and in the case of Philadelphia, welcome it.

Other individuals and organizations will present detailed information on how the development of the Baltimore Basin would impact positively on the City and Port of Philadelphia and southeastern Pennsylvania. We don't intend to elaborate on this other than to say that the Commonwealth agrees that in terms of the existing industrial capacity, labor force, port facilities, and the important consideration of positive environmental regulation programs, Philadelphia stands alone as a potential site for the broad support base of outer continental shelf development in the Atlantic. The economic implications of this alone provide strong reason for Commonwealth support of outer continental shelf development.

Aside from the Southeastern Pennsylvania region, the entire Commonwealth of Pennsylvania, because of its industrial base in steel and steel products, machinery and other heavy industrial goods, would be a primary source for the vast amounts of equipment and goods needed if expectations of outer continental shelf potential are realized. We are the leader among all states in processing industries. Again, another strong reason for Pennsylvania support of outer continental shelf development.

The final consideration in the establishment of our policy is the strong recognition that resources on the outer continental shelf belong to the American public. Since they are now in the public domain, we feel that it is imperative that along with the general consideration that it is in the public interest to develop and provide additional fuel sources as quickly as possible, the development should at the same time protect the public from the possibility that this resource would be relinquished, because of current pressures, without the long-term public good in view.

Perhaps a separation of exploration from leasing with governmental exploration as proposed by the Atlantic coastal states is an answer here. However, because of the many uncertainties which this approach raises, most importantly time lag and governmental costs,

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we wonder if other ways can be devised to protect the interests of the U.S. public. Perhaps on the basis of the non-destructive exploration already being carried on, smaller blocks of acreage could be proposed for leasing over a staggered period and a longer time span. This would mean the exchange of information not currently being exchanged, but perhaps with government supervision of this information exchange the best interests of the companies and the public could be served.

It is important that lease income reflect the real value of this public resource over a period of changing costs, prices, and supplies. A more gradual leasing approach on the basis of current available information could aid in accomplishing this goal.

In summary, it is the Commonwealth of Pennsylvania's policy on offshore drilling, particularly as it relates to the Atlantic outer continental shelf and Baltimore Canyon, to support immediate exploration and development. We believe that with the safeguards mentioned, the environmental and economic impacts can be handled to the point where they should not out-weigh the broader economic and environmental considerations, including that of providing more oil and gas to a nation and a region desperately needing them.

Statement by
Roger W. Johnson, Executive Vice President
Woodbridge Metropolitan Chamber of Commerce
655 Amboy Avenue
Woodbridge, New Jersey
for the
Outer Continental Shelf
Leasing Hearings
before the
U. S. Department of the Interior
held at
Trenton, New Jersey
February 11-13, 1975

My name is Roger W. Johnson. I am Executive Vice President of the Woodbridge Metropolitan Chamber of Commerce. I present today some thoughts concerning proposals to lease Outer Continental Shelf lands.

Position Statement

Increased Leasing, Continental Shelf Lands Act

We support increased leasing for oil and gas exploration and development on the Outer Continental Shelf, including the East Coast of the United States, for the following reasons:

1. Present U. S. production of oil and natural gas now is inadequate to meet demand, and the situation will get worse unless immediate steps are taken to develop new domestic sources by means of exploration and development of the potential of unproven reserves in the Outer Continental Shelf.
2. All types of industries rely heavily on natural gas and oil to meet their energy and raw material requirements. In most cases, there are no readily available substitutes for oil and gas, and domestic sources must be developed to insure their uninterrupted supply.
3. All commercial establishments, industries and private citizens will derive significant economic benefits from increased supplies of oil and natural gas from domestic sources. In addition, the overall National economy will benefit greatly by the reduction of the long-term balance of trade deficit that is projected as the direct result of increased crude oil and LNG imports.
4. Outer Continental Shelf exploration and development of oil and natural gas since 1954 has had no detectable, lasting or detrimental effect on the environment, and there has been negligible loss

Position Statement

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of life and destruction of personal property despite the millions of acres of land involved.

5. There are no alternative sources of energy other than coal which can significantly reduce our dependence on oil and natural gas before 1990.

6. It is essential to our National Security to have ample reserves of oil and gas in case of an unforeseen military conflict. We must take all actions necessary to reduce our dependence on imports of these resources which are vital to our defense in case of war.

Woodbridge Metropolitan Chamber of Commerce, Woodbridge, N. J.

Outline for Position Statement
Increased Leasing, Continental Shelf Lands Act

General Issues to be developed at the Trenton, N. J. Hearings, December 11, 12, 1974.

(a) Domestic and Commercial need for the resource.

Position: Existing U. S. produced supplies of oil and natural gas now are inadequate to meet present demand, and the situation will get worse unless immediate steps are taken to develop new domestic sources from OCS exploration.

Background:

1.0 - Natural Gas

1.1 - Short term conditions - A recent FPC survey¹ indicates curtailment of 737.9 billion SCF of natural gas across the country this winter. This cut-back represents 3.3% of 22.3 trillion SCF of natural gas total consumed in the U.S. in 1973 and is 80% above last winter's curtailment. Sixty-six per cent of the restriction will occur in the Appalachian, Southeast and Gulf Coast regions.

1.2 - Long term conditions - Output from present sources now has peaked and is declining. In order to maintain the present supply in 1985, the country will need to supplement the output of domestic gas wells with 1.5 trillion SCF of SNG (coal derived) and 1.0 trillion SCF of LNG (imported).² To produce the SNG alone, 21 plants, each with a capacity of 250 M SCF/day will have to be built at a cost in excess of five billion dollars.

2.0 - Heating Oil

2.1 - Short term conditions. - The current demand for distillate heating oil is 3,979,000 b/d, (23% of total crude oil consumption) of which 2,265,000 b/d are used for residential and commercial heating. A prolonged coal strike and cold winter can increase demand by 300,000 b/d above forecast and put a severe strain on supply. Crude oil imports will average 4,000,000 b/d during winter months, or 46% of total domestic production.³

Woodbridge Metropolitan Chamber of Commerce, Woodbridge, N. J.

2.2 - Long term conditions - Our demand for liquid petroleum is projected to increase from 17.5 million b/d to 23.3 million b/d in 1985. Net imports of petroleum will increase from 6.2 million b/d in 1973 to 8/4 million b/d in 1985.⁴

(b) Industry's Interest in the Proposal:

Position: All types of industries rely heavily on natural gas and oil to meet their energy and raw material requirements. In most cases, there are no readily available substitutes, and domestic sources must be developed to insure their supply.

Background:

1.0 - Energy requirement by industry type:⁵

	<u>Per Cent of Total Energy Required</u>		
	<u>Natural Gas</u>	<u>Fuel Oil</u>	<u>Other</u>
Petroleum Refining	45%	54%	1%
Chemical & Allied Prod.	66	10	24
Primary Metals	58	10	32
Paper Products	41	33	26
Glass, Stone, Clay	58	14	28
Food	57	21	22

2.0 - Importance to Agriculture - Anhydrous ammonia, the backbone of the fertilizer industry, relies almost entirely on natural gas for the primary raw material. Approximately 0.5 trillion SCF/yr of natural gas (2% of total consumption) are used to produce 15,500,000 tons of anhydrous ammonia. Natural gas shortages in 1973 caused a loss of approximately 1.0 million tons of NH_3 at a time when the supply was extremely tight for fertilizer.⁶

3.0 - Importance to the Chemical Process Industry - The petrochemical industry relies entirely on natural gas and petroleum for feedstocks. Among the many products important to the consumer are nylon, dacron, polyethylene, PVC, polypropylene and many other synthetic organic compounds. No other practical raw material substitutes now are available to replace oil and natural gas.

(c) Economic Benefits from Oil and Gas:

Position: All private citizens, commercial establishments and industries will derive significant economic benefits from increased supplies of oil and natural gas from domestic sources. In addition, the economic health of the country will benefit from a reduction in the long term balance of trade deficit that is projected as the result of crude oil and LNG imports.

Background:1.0 - Natural Gas:

1.1 - The Canadians recently increased the price of natural gas exported to the U. S. from \$0.39 MSCF to \$1.00/MSCF, which amounts to \$191,000,000/year more that U.S. customers must pay. Compared to the average cost of natural gas produced in the U.S.; (\$0.22/MSCF) the Canadian gas costs \$243,000,000/year more.

1.2 - The cost of LNG imported to this country is estimated at \$2.00 to \$2.50/MSCF. Assuming imports of 10 trillion SCF in 1985, the cost will be \$1.57 to \$2.07 billion/year more than the price of "new" natural gas produced in the U. S.

1.3 - Fertilizer: The cost of anhydrous ammonia produced with SNG or LNG will increase approximately \$73/ton over its present cost. This will add approximately \$730 million/yr. to the cost of fertilizer which will be passed on to the consumer.

1.4 - Crude Oil: The 1974 dollar outflow attributable to oil imports will reach \$25 billion in 1974, which accounted for a \$900 million balance of payment deficit during the first half of the year.⁸ By 1985, the dollar outflow for oil imports may reach \$64 billion, with even a higher balance of trade deficit.

1.5 - Gasoline: The increase in gasoline prices since the oil embargo has added approximately \$210 million/yr. to the gasoline cost to the American consumer. The four-fold increase in the price of imported oil has been a significant factor in this increased cost.

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- (d) Geologic Conditions as they affect safety and environmental pollution.

Position: Outer Continental Shelf exploration and production since 1954 has had no detectable, lasting, or detrimental effect on the environment, and there has been negligible loss of life or destruction of personal property as a result.

Background:

1.0 - OCS Leased Acreage. - The acreage leased under the OCS Land Act increased from 481,870 in 1954 to 9,012,310 in 1973. Thirty-three per cent of the leased acreage was producing gas and oil.⁹

1.1 - Production from OCS Acreage. - A total of 394.7 million barrels of crude oil (12% of total U. S. production) and 3.2 trillion SCF of natural gas (14% of total U. S. production) were produced from OCS acreage in 1973. No significant mishaps occurred as a result of this activity which had detrimental effects on the surrounding environment.

- (e) Alternatives to increasing the leasing of OCS acreage.

Position: There are no other alternative sources of energy other than coal which can significantly reduce our dependence on oil and natural gas before 1990.

Background:

1.0 - FEA Operation Independence Study - Highlights of the FEA Operation Independence Study now under government review, confirm that there will be an increase in our total demand through 1985 and that synthetic fuels, geothermal and solar energy will play no major role until after that time.¹⁰

2.0 - Dr. Phillip E. Sorensen, Fla. State University - In a prepared statement for the Region 4, Project Independence hearings in Atlanta, Dr. Sorensen pointed out that energy sources such as solar, shale oil, atomic fusion and coal are unrealistic expectations at this time. He indicated that by 1985, half of the projected U. S. production of oil and gas will come from off-shore areas, mainly the OCS.¹¹

3.0 - Standard Oil of California - Mr. Y. Bonillas, retired executive of the Standard Oil Company of California, states that if the U. S. is to realize its potential in the underscored reserve category, it must speed up dramatically its opening and leasing of new geologic provinces. He states that the U. S. has fallen behind all other regions in leasing off-shore acreage. Ten times more acreage is under lease in the North Sea than off the U. S., despite a much larger shelf area.

(f) - National Defense.

Position: It is essential to our national security to have ample reserves of oil and gas in case of a National Emergency. We must make every effort to further reduce our dependence on imports of these energy sources.

Woodbridge Metropolitan Chamber of Commerce, Woodbridge, N. J.

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Woodbridge Metropolitan Chamber of Commerce, Woodbridge, N. J.

Statement on Behalf
of the
Society of American Florists
and Ornamental Horticulturists

Before
The United States Senate
Committee on
Interior & Insular Affairs

Concerning
National Fuels & Energy Policy Study

April 4, 1975

The Society of American Florists and Ornamental Horticulturists is the national trade association which represents over 92% of commercial floriculture in the United States. Among the Society's members are affiliated associations, retail florists, wholesalers, and growers of flowers, potted plants and environmental green plants.

Commercial floriculture has its roots deeply imbedded in the agricultural industry, and our industry is considered an integral part of agricultural production by virtually every United States government definition or through interpretation by federal government regulatory agencies. In addition, university founded research and definition includes commercial floriculture as an integral part of the total agricultural industry in the United States.

Commercial floriculture is greatly dependent on the availability of all forms of energy-petroleum as well as natural gas in our production process. Enclosed environmental growing centers, which are the basis for nearly all production, require precise controls of light, heat, ambient air quality, fertilizer usage, and constant supervision. Prior to the utilization of atmospherically controlled growing centers, often referred to as greenhouses, floriculture was a seasonal industry which relied on the whim of nature and was at the mercy of weather extremes. Now through the extensive use of modern technology and with the advent of modern energy transmission systems, floriculture is a year-round operation, which can and does produce plants and flowers that make our lives brighter, and adds to the quality of our environment. The science of environmental horticulture has given rise to the utilization of green plants to improve both the aesthetic environment and the air quality within modern work areas as well as other habitats.

The modern greenhouse, as now utilized by our industry, is in reality an extension of the university laboratory where all aspects of the environment are controlled.

Our industry is greatly dependent, at the production level, on all forms of energy. As an energy dependent industry our supplies of both petroleum and natural gas are either extremely costly or are about to be curtailed permanently. As a dependent industry we urge the initiation of an immediate legislation which will authorize the leasing and exploration of America's Outer Continental shelf as a future primary source of our nation's energy supply.

With the advance of modern technology, exploration and later the establishment of producing wells, will prove to have a minimal affect on the environment of the Atlantic Coast States, Bay of Alaska or the Pacific Coastal States. The petroleum industry has proven beyond reasonable doubt its capability of staying within reasonable environmental parameters. The Society advocates that this nation's interests are best served when environmental protection is considered as a vital factor in energy protection. Just as importantly it has been proven that the national interest is best served when there are adequate supplies of secure domestic petroleum and natural gas.

The importance of secure and adequate supplies of petroleum and natural gas has become all too clear in the recent past. Our nation's economy is under severe pressure, and increased costs of these precious commodities places not only our industry, but all Americans, at an economic disadvantage. The results of which are a recession fueled by galloping inflation in the entire energy field.

Curtailement of natural gas by suppliers is most destructive to commercial floriculture. A USDA report prepared during last winter's energy crisis (see attachment) succinctly describes the detrimental affect the lowering of operating temperatures and lighting levels have on our industry. In few other industries is the need for constant control so necessary. For floriculturists cannot simply "turn off the switch" on Friday and expect to find a viable crop on Monday. Within that short period of time two years of work and investment are lost.

Delay is a luxury which our nation can ill-afford. We cite the adverse effects of the delays in developing the trans-Alaska pipeline. Certainly if these were not promulgated, our nation would have been far less vulnerable to foreign petroleum embargoes. At this juncture the positive results, and additional petroleum and natural gas source, are still more than two and one-half years away.

Development of America's offshore storehouse will not produce an immediate cornucopia of energy, but time is required to explore, to drill, to develop, and to produce. This time can be used to determine environmental needs and judge the best means possible for continued development.

Development of the OCS is, indeed, a public trust. Based on the positive results exhibited on the Gulf of Mexico and the West Coast an equitable leasing arrangement carried out by private enterprise would appear to be the approach so necessary in the areas to be explored.

The Society urges the Congress to enact legislation to accelerate the program for development of the OCS resources. For it is our belief that the best opportunity for adding significantly to our domestic and natural gas supplies are in Alaska and under the Outer Continental Shelf.

It is of major concern to the Society that should the Federal Power Commission or other authorized Federal body chart a course of regulation, allocation, or rationing, that the below listed definitions, comments and suggestions be included as an integral part of the proposed legislation.

DEFINITIONS

Section 1

- (1) SNG means synthetic natural gas produced from fossil fuel or any derivative thereof.
- (2) Natural gas for "agricultural production" means all the activities classified under the industry code numbers specified in paragraph (a) below as set forth in the Standard Industrial Classification Manual, 1972 edition, except those industry code numbers listed in paragraph (b) which are excluded:

(a) Activities included. (1) All industry code numbers included in Division A, Agriculture, Forestry and Fishing, except as specified in paragraph (b) of this section.

(2) All industry code numbers included in Major Group 20, Food and Kindred Products, of Division D, Manufacturing, including grain and seed drying, except as specified in paragraph (b) below; and

(3) All the following other industry code numbers:

1474 Potash, Soda and Borate Minerals (Potash mining only);

1475 Phosphate Rock;

2141 Tobacco Stemming and Redrying;

2411 Logging Camps and Logging Contractors;

2421 Sawmills and Planing Mills;

2819 Industrial Inorganic Chemicals, Not Elsewhere Classified

(dicalcium phosphate only);

2873 Nitrogenous Fertilizers;
 2874 Phosphatic Fertilizers;
 2875 Fertilizers, Mixing Only;
 2879 Pesticides and Agricultural Chemicals Not Elsewhere Classified;
 4212 Local Trucking without Storage (Farm to Market hauling and log
 trucking only);
 4971 Irrigation Systems (for Agricultural use); and
 5462 Retail Bakeries, Baking and Selling.

(b) Activities excluded. (1) All the following industry code numbers, otherwise listed under Division A, Agriculture, Forestry and Fishing, are excluded from the definition:

0271 Fur-Bearing Animals and Rabbits (except rabbit farms which are
 included in the definition);
 0279 Animal Specialties, Not Elsewhere Classified, (except apiaries, honey
 production and bee, catfish, fish, frog and trout farms which are
 included in the definition);
 0742 Veterinary Services for Animal Specialties;
 0752 Animal Specialty Services;
 0781 Landscape Counseling and Planning;
 0782 Lawn and Garden Services; and
 0849 Gathering of Forest Products, Not Elsewhere Classified.

(2) All the following industry code numbers, otherwise listed under Major Group 20, Food and Kindred Products, of Division D, Manufacturing, are excluded from the definition:

2047 Dog, Cat and Other Pet Food;
 2067 Chewing Gum; and

2085 Distilled, Rectified and Blended Liquors.

(FEA Mandatory Allocation Regulations 211.51)

(3) Natural gas for agricultural production means sufficient quantities of natural gas for use as a raw material feedstock or process fuel in the production of fertilizer (including materials utilized in the production of fertilizer, such as sulfur), animal feed grade chemicals (including defluorinated phosphates and urea), essential agricultural chemicals, and for use in agricultural crop drying, in existing plants (for present or expanded capacity) and in new plants.

(S. 319, Page 2, lines 10-16)

NATURAL GAS FOR AGRICULTURAL PRODUCTION

Section 2

(1) Notwithstanding any other provision of law or of any natural gas allocation or curtailment plan in effect under existing law, the Federal Power Commission shall, by regulation, prohibit any interruption or curtailment of natural gas and take such other steps as are necessary to assure as soon as practicable the availability in interstate commerce of sufficient quantities of natural gas for use as a raw material feedstock or process fuel, for which there is no substitute except propane or SNG for agricultural production. Except to the extent that natural gas supplies are required to maintain natural gas service to existing residential and small commercial users.

(S. 269, Page 9, lines 5-18 and striking and substituting in its place "or SNG, for agricultural purposes")

(2) As used in this section, 'sufficient quantities of natural gas' means the amounts of natural gas necessary (1) to meet such agricultural production requirements domestically; (2) to meet certain United

States export requirements that are important to maintain, or expand United States imports of materials which are similarly essential to Agricultural production; or (3) to carry out certain humanitarian objectives in friendly countries under the Agricultural Trade Development and Assistance Act of 1954, as amended.

(S. 319, Page 2, lines 23-25 and Page 3, lines 1-7)

(3) Notwithstanding any other provision of law or of any natural gas allocation or curtailment plan in effect under existing law, the Federal Power Commission shall expeditiously consider and grant applications for authority to transport natural gas for use as a raw material feedstock or process fuel for ultimate delivery to anhydrous ammonia manufacturers to maximize fertilizer production from existing plants: Provided, That adequate delivery capacity is currently available to effect such transportation without impairing existing delivery commitments of the transporter.

"Any anhydrous ammonia manufacturer may request the local distributor or other intrastate or interstate transporter to provide transport for such supply.

"All natural gas suppliers or transporters involved shall immediately file applications with appropriate jurisdictions for authority to effectuate the transportation of the volumes requested, including a statement as to the adequacy of existing delivery capacity necessary to effect the transportation.

"Rates and charges for transportation service initiated hereunder shall be made pursuant to appropriate rate schedules of natural gas companies, as may be prescribed by the Federal Power Commission or the respective State or local agencies may prescribe such rates and charges as part of its order upon the subject application, or by supplemental order.

"Nothing contained in this subsection shall be construed to require construction of new transportation facilities or enlargement of existing transportation facilities by any natural gas company to effectuate such transportation, except to mandate the construction of tie-in or metering facilities at the expense of the manufacturer."

(S. 187 page 1, line 7; page 2, lines 1-3; page 3, lines 20-24; page 4, lines 1-3, 6-13, 17-25; and page 5, lines 1-6)

NATURAL GAS CURTAILMENT

Section 3

(1) The Federal Power Commission may, by order in accordance with this subsection, direct any natural gas company to establish a physical interconnection between any specified facility of such company and any specified facility of any other such company, any producer, or any small producer. The Commission may issue such an order upon petition of any natural-gas company, producer, small producer, or user, or on its own motion, after (1) publishing a notice thereof in the Federal Register; (2) allowing interested persons an opportunity to submit written data, views, and arguments and providing an opportunity for a hearing; and (3) finding (and publishing such finding together with the reasons therefor) that the establishment of such interconnection is in the public interest for the purpose of facilitating the transportation or sale of natural gas in the event that a natural gas supply emergency develops within the service area of any natural gas company affected by such order.

(S. 692 page 20, line 12-25 and page 21, line 1-3)

(2) The Federal Power Commission may declare that a natural gas supply emergency exists along the transmission routes or within the service area of a natural gas company which is unable or may be unable to supply

its users with the amounts of natural gas determined by the Commission to be necessary to preserve public health or safety or to avoid extreme economic hardship. Any such declaration shall state the nature and extent of such supply emergency, its likely duration, and the remedial steps proposed or ordered by the Commission to deal with such emergency. Whenever such an emergency is declared, the Commission may, by order, direct any natural gas company or companies which is not itself experiencing such an emergency to make specified deliveries of natural gas, directly or indirectly, to the natural gas company which is experiencing such emergency. The amount of natural gas specified to be delivered pursuant to such order may not exceed the amount which such company can deliver without creating a comparable emergency along its own transmission routes or within its own service area. A company delivering natural gas pursuant to such an order shall be compensated for such gas at a rate equal to the price of the highest cost natural gas sold by such company plus any additional price which the Commission determines is necessary to provide such company with incentives to acquire new natural gas to replace the natural gas ordered to be delivered pursuant to such order."

(S. 692 page 21, lines 4-25 and lines 1-4)

(3) To carry out the provisions of Section 3(1) and 3(2), the Commission may order an intrastate pipeline to transport interstate natural gas. Notwithstanding any other provision of the law, any intrastate pipeline company receiving an order pursuant to Section 3(1) and 3(2) shall not be deemed to be transporting natural gas in interstate commerce.

Our industry relies on the availability of all forms of energy as do thousands of others. Cost, curtailment and dwindling supplies cut across the lifeblood of commercial floriculture. The need is now and in the

immediate future, we urge you to proceed on a course of all deliberate speed to achieve the necessary goal of developing these vast resources, and making those adjustments which will assure commercial floriculture and the remainder of agriculture of an adequate fuel supply.

The Society wishes to thank the Committee for its consideration of this statement and stands ready to meet with the committee as a whole or individually to further our cooperation and willingness to continue to be of service to you.

jcq

GREENHOUSE INDUSTRY IN THE USA

Statements on the definition, energy use, and impact of
lowered temperatures on the growth of plants in greenhouses.

United States Department of Agriculture

February 10, 1974

Greenhouse Industry in USA

1. To remain competitive
2. To maintain economic importance
3. To continue its relevance to the other activities of Agriculture

Priorities:

1. To remain as a viable producer of products for the consumer.
2. To maintain economic growth of the industry.
3. To continue world leadership in the innovation of time, labor, and energy-saving techniques for the year-round production of the most advanced segment of agriculture.

Definition:

A national goal:

Agricultural production clearly has as one of its major objectives to set and maintain environmental standards. Two professional groups work with this segment of agriculture, horticulturists and foresters. If this segment is to remain and to contribute its part, the definition should read:

Additions are underlined

Agricultural production means commercial farming, dairy, poultry, livestock, horticulture, forestry and fishing activities and services related to the planting, cultivation, harvesting, processing, and distribution of fiber, timber, tobacco, plants, and food intended for environmental amelioration, human consumption, and animal feed.

This definition clearly identifies many activities missing in the previous ones:

- . Plants involved in soil erosion and windbreak programs -- trees, shrubs, ground covers
- . Plants involved in turf programs -- grasses, evergreen ground covers
- . Plants involved in greenhouse production: an extremely mixed assembly of plants from the entire plant kingdom.
- . Plants involved in landscaping and renewing our environment.

All of these sectors are normal agricultural operations and fall within the responsibility of the Department of Agriculture. All of these types of plants have been consistently identified by our State and Federal laws, by our courts and governmental agencies, and by citizens as integral parts of agriculture. Unlike many other sectors of agriculture, these plants have never had any support prices imposed by our government, controlled acreages, protection from foreign imports, or ways to carry over inventories or tax losses from one season to the next.

These plants therefore must be given every consideration to maintain a viable industry which contributes:

- . Value: (In 1970) \$484,669 - estimated now to be more than \$600,000 in 1973
- . Number of employees: 100,000 in various levels of management, seasonal, and part time. Average earnings are not available.
- . Land area covered: In 1970: 213,939 square feet of space was covered with greenhouses. This space due to shifts in production should be about the same in 1973.
- . Geographic Division: Floriculture Crop Production

	<u>Percentage Distribution</u>
New England	5.9
Middle Atlantic	16.6
East North Central	20.5
West North Central	7.0
South Atlantic	21.0
East South Central	3.7
West South Central	6.1
Mountain	2.1
Pacific	<u>17.1</u>
	100.0

Number of Growers:

<u>In 1970</u>	<u>Number of Establishments</u>
Ornamental crops	12,000
Nursery crops	3,764

Energy use:

Category 1: 100% of current needs

Schools and residences: 6° Reduction or equivalent

All other uses: 10° Reduction or equivalent

Human beings can be adapted to live in a wide range of temperatures by adjusting clothing, diet, and activities.

Plants can be only what the environment permits them to be. All reactions to light, carbon dioxide, water, and mineral nutrition are regulated by temperature. Most growers in greenhouses have developed equipment to keep a uniform, specific day and night temperature. A differential day/night temperature of 10°F is most commonly maintained. Although plants may be grouped together for convenience, every species or even cultivar of a particular species has an optimum temperature for seed germination, rooting, vegetative growth, flowering and storage. The primary activity of any research program on the culture of the plants is to permit the grower to regulate the time of salability of the crops. All production methods thus are based on an optimum temperature throughout the growing and harvesting procedure:

Examples of major types of plants:

<u>Optimum night temperature in degrees Fahrenheit</u>					
Plant	Selected	Seed	Seedling	Flowering	Storage
	<u>Type</u>	Germination	or		
I. Different	(Primary		Cutting		
Species	Use)		Growth		
Azalea	Pot plant	70	75	62	50
Carnation	cut flower	58	55	58	31
Chrysanthemum	pot plant	65	65	65	36
Ilex	shrub	60	65	70	36
Linden	tree	48	75	85	28
Orchid	cut flower	75	70	68	50
Petunia	bedding plant	70	60	65	31
Philodendron	foliage plant	85	70	68	45
Rose	cut flower	75	70	65	31
Tulip	bulb-cut flower	70	65	62	28
Vinca	ground cover	70	65	55	31
II Cultivars of		<u>Optimum night temperature for flowering in</u>			
<u>Poinsettia</u>		<u>degrees Fahrenheit</u>			
Annette Hegg	Gradual		55		
C-1 (Red)	Adjustment		65		
Mikkel Rochford	to night		58		
Ruff 'n Reddy	temperature as		55		
Trulypink	plants come into flower		62		

Any lowering of the night temperature will alter schedules, thus delay their salability and interrupt the flow of plant material to the market. Sales must be made each day to supply the market and to clear up the highly perishable plant material. Storage of the plant material is used only in the case of high demand holidays -- only a fraction of the production can be held safely for more than 3 days.

Most plants are harvested and moved without interruption to the market.

I. Impact of lowering night temperature on a specific plant:

Greenhouse carnations:

(1970 information)

	Number of Establishments	Wholesale Value
Production of cuttings Cut flowers	83	\$ 3,251,000
Standard	1875	\$49,503,000
Miniature	438	2,758,000
Total		\$55,512,000

Greenhouse carnation: Individual shoot requires 16 to 22 weeks to produce a salable flower. Any interruption in the temperature sequence will delay the flowering time of the particular shoot. It also delays the production and development of the lateral shoots which eventually become the subsequent flowering shoots. Since cropping times are extended, plants are grown for 18 to 24 months to permit the development of the maximum number of flowering shoots.

Impact of lowering night temperatures:

Optimum temperature - typical program in Northeastern States

Season	Night Temperature		Day Temperature		
	Without CO ₂	With CO ₂	Without CO ₂	With CO ₂ (Cloudy day)	With CO ₂ (Sunny day)
Fall	52	54	60	65	70
Winter	50	52	57	63	67
Spring	52	54	60	65	70
Summer	54	--	70	--	--

Note that the addition of carbon dioxide (1000-2000 PPM from propane gas producers) is used to increase the quality of the plants as judged by increased stem diameter, stem length, flower diameter, flower color, keeping quality, and earliness to flower.

Impact of lowering temperature:

-2°F: Shoots will flower 5 to 7 days later, regrowth of vegetative shoots delayed as much as 2 weeks.

Additions of CO₂ to the atmosphere for increased quality of the flower is nullified.

-5°F: Shoots will flower 2 to 3 weeks later. Drying of growing media is so retarded due to lower temperature that maintenance of proper nutrient-balance in the plant is extremely difficult. Grower may go as long as 3 to 4 weeks without watering plants. Development of plant is arrested with poor root development and reduced development of lateral shoots.

-10°F: Shoots formed during winter months - even with supplemental lighting to lengthen the day - length will not flower until the following spring. This means that all of the flowers which should have matured over a 4-month period will flower within a 3-week period. Since all producing areas will be experiencing similar delays in flowering, the value of the harvested flowers will be lowered from an average winter price of 14 to 18¢ to 1 to 5¢; many flowers, regardless of quality will be dumped due to the over supply to the market. According to members of the American Carnation Society, the cost of producing a carnation flower is currently estimated to be 9.5¢ - a viable industry cannot survive very long with such economic circumstances.

-15°F: Plants will remain absolutely in a quiescent state. Total loss of production from the plants.

Alternatives: The previous sections are based on holding the night temperatures at a constant temperature. Tube ventilators are installed in greenhouses to provide automatically draft-free ventilation throughout the greenhouse to reduce the air temperature to the desired temperature. This means that the heating of the greenhouse and the introduction of cold air from outside are balanced to maintain a desired temperature. If the sun comes out, the air temperature rapidly increases in the greenhouse. Ventilators must be opened to introduce cold air from the outside to maintain the desired temperature. Electrically-controlled relays regulate the heating and ventilating systems to create a constant environment. If the temperature rise is not controlled, the alternating temperatures cause the development of flowers with splits on the side of the green sheath which supports the petals. The stems beneath the flowers are weakened from the alternating temperatures. The quality of the cut flowers produced in poorly-controlled greenhouses is much lower than those grown in the properly controlled greenhouses.

Economic impact on industry: Timing of sales and a consistent flow of the number of flowers is absolutely essential to maintain the industry:

Loss of production:

Ability to pay bills on schedule -- without cash flow from sales growers will have great difficulty in paying bills on schedule. Greenhouse operators have been notified in the last weeks that their fuel supply will be turned off immediately due to late payments. Allotments cannot be re-instated at a later date. Total loss of production, bankruptcy of the business.

Loss of consumer acceptance: Unless the flowers are grown and matured at the correct temperature, the resulting cut flowers will not take up water properly. This means that the cut flowers will have reduced keeping life in the hands of the consumer. In time the consumer will learn that the quality of the flowers are so poor that they are not worth buying.

- II. Impact on Bedding Plant Industry: One of the most rapidly growing sectors of the greenhouse industry is the production of bedding plants for quick color, leaf, root, and vegetable in the garden. All kinds of plants are grown together for sale at a specific time during the spring, summer, and fall months. Most crops require only a few weeks of growing time to become salable and can be held only a few weeks before their salability is lost. Most plants are grown in the area where they are sold. The large number of plants and the size of the plants make it difficult to transport them long distances. The plants are thus grown and sold in the same community: Schedules are based on regulation of temperature:

Species	Germination Temperature	% in bloom			
		May 21		June 1	
		50°	60°	50°	60°
Petunia					
Allegro	70°	0	5	10	75
Pink Magic	70°	4	96	100	100
Marigold					
Spry	70-75	100	100	100	100

Snapdragon

Sequoia	65-70	0	15	0	50
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Tomato

Fireball	65-75	0	0	0	70
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Low night temperatures (50°F) depress seed germination, seedling growth, and delay flowering time. Without the presence of visible flower buds, the salability of the plants is greatly lowered.

Seeds are sown at weekly intervals to meet the demands for young plants. There is no way to hold the plants for later sales.

Thus:

. Schedules for planting, transplanting, sales cannot be maintained without temperature control.

. Value of plants is based on appearance: Compact plants in flower have greatest economic value. Plants grown at 50°F develop pale foliage color and flower only with the natural warming of late spring.

. Pest problems of the plants are greatly aggravated at cool temperature. Over-watering and fertilization are common causes of the development of root-rotting organisms. Plants will never revive when planted into the garden.

III. Impact on Nursery Industry:

Greenhouses are used to accelerate the germination and seedling growth of most of the trees and shrubs used in landscaping. Some plants are propagated from a selected form of the species and are propagated by cuttings, layering, or grafting. To get all of these plants through their initial stages of growth, they are most commonly started in greenhouses or temperature controlled frames.

The propagation structure may be extremely complex:

- . Electric heating cables - to maintain correct media temperatures
- . Heating and automatic ventilating systems - to maintain uniform and constant air temperatures.
- . Mist propagation facilities - to maintain maximum moisture in the plants.
- . Supplemental lighting - to maintain growth throughout the first year.

Examples:

Species	Propagation Method	Years to Salability	
		Beginning in: Greenhouse <u>controlled environment</u>	Out of doors
Juniper	Grafting	2	Impossible
Linden-Little			
Leaf	Seedling	2	5
Maple - Silver	Seedling	1	4
Pine, white	Seedling	3	6
Rhododendron	Cutting	1.5	Impossible
Sycamore	Seedling	2	5

Without temperature control of the propagation stage of the growth of woody plants

. Some species of plants would be impossible to produce -- thus certain plants would no longer be available to consumers

. Some species could be started in the out-of-doors -- they would require 2 to 3 more growing time to bring the plants to salability

. Controlled environment studies on propagation of woody plants have been the major development of the nursery industry to help them keep up with the increased demands for plants to be used in landscaping, erosion control, and installation of windbreaks.

OVERVIEW:

The greenhouse industries grow at least 480 major crops -- each with specific requirements for growth and production problems. All of the advances in the technology of the production of 480 crops have been based on temperature regulation. Any lowering of these temperatures to less than the optimum ones will mean a repudiation of more than 50 years of research progress and the disappearance of many highly useful and decorative plants from the consumer. The impact on the lives of at least 100,000 people, located in every community in the USA, cannot be accurately calculated. We currently estimate that the florist, nursery, and related supply and equipment industries generate almost \$6 billion on the consumer level. The greenhouse industry has many energy saving systems to utilize in the production of their plants. They must, however, be considered as vital contributors to agricultural production to meet the needs of the American public and to generate their part of the Gross National Product.

COMMONWEALTH OF VIRGINIA



LESLIE D. CAMPBELL, JR.
4TH SENATORIAL DISTRICT
CHARLES CITY, GLOUCESTER, GOODLAND,
HANOVER, KING AND QUEEN,
KING WILLIAM, LOUISA, MATHEWS,
MIDDLESEX AND NEW KENT
713 HANOVER AVENUE
ASHLAND, VIRGINIA 23005

COMMITTEE ASSIGNMENTS:
TRANSPORTATION, CHAIRMAN
AGRICULTURE, CONSERVATION AND
NATURAL RESOURCES
FINANCE
LOCAL GOVERNMENT

SENATE

March 17, 1975

Senator Henry M. Jackson
United States Senate
Washington, D. C.

Re: Off Shore Oil Exploration

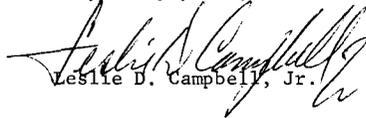
Dear Senator Jackson:

The General Assembly of Virginia has recently passed a resolution urging the immediate leasing of off shore oil fields, giving due regard to environmental protection. In line with this project, the General Assembly also passed standby legislation to permit agencies of the State of Virginia to proceed with the exploration should the oil rights be found to belong to the states in the case pending before the Supreme Court.

I served on the Energy Crisis Commission of Virginia, and our commission concluded that an exploration of oil off the East coast of Virginia should commence as soon as possible, and we further concluded that there would be little or no environmental impact as a result of such operation in view of the experiences of off shore wells in the Gulf of Mexico.

I am writing to urge the appropriate authorities of the United States Government to approve the exploration by the oil industry as soon as possible in order to meet the energy needs of this Country.

Very truly yours,


Leslie D. Campbell, Jr.

LDCJr: sjb

STEVE REYNOLDS
District 48
P.O. Box 303
Lawrenceville, Georgia 30245



J-Rearn
COMMITTEES:
Transportation, Chairman
Rules, Secretary
Human Resources
Public Utilities
SUBCOMMITTEES:
Transportation
Vocational Rehabilitation

The State Senate

Atlanta, Georgia 30334

24 March 1975

Honorable Henry Jackson, Chairman
Senate Interior and Insular Affairs Committee
Dirksen Senate Office Building, Room 3206
Washington, D. C. 20510

Dear Senator Jackson:

Having been in the oil business for more than thirty-seven years, I feel that there are a couple of things about this business that I know quite well. One is that the oil industry has been doing all it can to keep this country supplied with energy at as low a price as possible, and I might add it has succeeded. And, secondly, that the free enterprise system, if it is allowed to work as it was intended-with as little government control as possible-can get the job done.

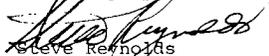
Apparently, my feelings must be wrong. Maybe my years of service in this particular industry haven't shown me the truth. At least that is the feeling I get when I hear of proposals before the Congress to handcuff the oil industry from producing more crude oil and natural gas from the deposits believed to be on the Outer Continental Shelf of the Atlantic Ocean.

If the petroleum industry hadn't been hindered by the government from exploring for and producing more supplies of energy in the past, we probably wouldn't be facing the shortage we are now. Doesn't that make sense? It does to me. Senator, it appears to me that legislation before your committee now will only add to the problems which the petroleum industry is facing. Do you really feel that we need further delay before exploring for new energy sources? Do you really feel that the government can do the job that the oil industry has been doing successfully for more than 100 years? I don't see how you can answer "yes" to either of these questions.

What we need is a return to the free enterprise system letting those who are most qualified to do the job to get on with it as soon as possible. Delays in leasing the OCS and placing more of the exploration in the hands of the government, I feel, will only delay any chances we have of becoming more self-sufficient.

I urge you and your committee to work toward allowing free enterprise to work.

Sincerely yours,


Steve Reynolds
Senator - 48th District

SR:eh

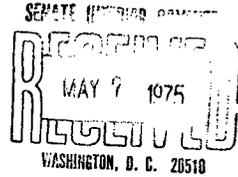


ARCH A. MOORE, JR.
GOVERNOR

STATE OF WEST VIRGINIA
OFFICE OF THE GOVERNOR
CHARLESTON 25305

May 2, 1975

MAY 6 1975



The Honorable Henry M. Jackson
Chairman
Interior and Insular Affairs
United States Senate
3206 Dirksen
Washington, D. C. 20510

Dear Senator Jackson:

Re: Offshore East Coast Oil and Gas Exploration

The Supreme Court of the United States has ruled the continental shelf of the eastern seaboard is the responsibility of the federal government.

Recognizing the increased drilling activities in the continental United States and the decreased production of both oil and gas, it becomes obvious that the exploration of the continental shelf must be expedited.

Every effort must be made to make the transition from hydrocarbon fuel to coal and other energy sources as orderly as possible.

Sincerely yours,

Arch A. Moore, Jr.
Arch A. Moore, Jr.
Governor

AAMJr:mkp

CHAIRMAN
 JOE W. GRAHAM
 ALA. FORESTRY ASSN.
 MONTGOMERY
 APR 11 9 35 AM '75

VICE CHAIRMAN
 JAMES W. HART, JR.
 ALA. PETROLEUM COUNCIL
 MONTGOMERY

SECRETARY-TREASURER
 JAMES I. RITCHIE
 ALA. TRUCKING ASSN.
 MONTGOMERY

Alabama Highway Users Conference

ASSOCIATIONS BUILDING, SUITE 247 • SIX-SIXTY ADAMS AVENUE
 MONTGOMERY, ALABAMA 36104

April 8, 1975

ALA. ASSN. OF INSURANCE AGENTS
 ALA. ASPHALT PAVEMENT ASSN.
 ALA. CHAMBER OF COMMERCE
 ALA. CONCRETE INDUSTRIES ASSN.
 ALA. DAIRY PRODUCTS ASSN.
 ALA. FARM BUREAU FEDERATION
 ALA. FEED ASSN.
 ALA. FORESTRY ASSN.
 ALA. LIQUID PETROLEUM GAS ASSN.
 ALA. MANUFACTURED HOUSING INSTITUTE
 ALA. MOTOR CLUB INC. (NAA)
 ALA. MOTORISTS ASSN. (AAA)
 ALA. PETROLEUM COUNCIL
 ALA. RETAIL ASSN.
 ALA. RURAL LETTER CARRIERS ASSN.
 ALA. SERVICE STATION ASSN.
 ALA. SOFT DRINK ASSN.
 ALA. TEXTILE MANUFACTURERS ASSN.
 ALA. TIRE DLRS. & RETREADERS ASSN.
 ALA. TRAVEL COUNCIL
 ALA. TRUCKING ASSN.
 ALA. WHOLESALE GROCERS ASSN.
 ASSOCIATED INDUSTRIES OF ALA.
 AUTOMOBILE DEALERS ASSN. OF ALA.
 AUTOMOTIVE WHOLESALERS ASSN. OF ALA.
 GREY HOUND LINES - EAST
 INDEPENDENT OILMEN'S ASSN. OF ALA.
 OUTDOOR ADVERTISING ASSN. OF ALA.
 SOUTH CENTRAL BELL TELEPHONE CO.
 UNITED COMMERCIAL TRAVELERS

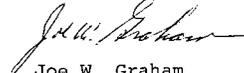
Honorable Henry Jackson
 United States Senate
 Washington, D. C. 20510

Dear Senator Jackson:

Attached is a resolution adopted by the Alabama Highway Users Conference urging the development of our Outer Continental Shelf off the Atlantic Coast of the United States in order to increase the amount of oil and gas available to this country.

Your consideration of this resolution and what it calls for will be greatly appreciated.

Sincerely,


 Joe W. Graham
 Chairman

JWG:se

CHAIRMAN
JOE W. GRAHAM
ALA. FORESTRY ASSN.
MONTGOMERY

VICE CHAIRMAN
JAMES W. HART, JR.
ALA. PETROLEUM COUNCIL
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AUTOMOTIVE WHOLESALERS ASSN. OF ALA.
GREYHOUND LINES - EAST
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UNITED COMMERCIAL TRAVELERS

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U.S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, should help alleviate the energy shortage and ease the economic burden of Alabama and the southeast; now

THEREFORE, be it resolved that the Alabama Highway Users Conference gives full support on the efforts being made to develop offshore exploration on the Outer Continental Shelf off the Atlantic Coast of the United States

BE IT FURTHER RESOLVED, that copies of this resolution be mailed to members of the Alabama Congressional Delegation, the President of the United States and U. S. Senator Henry Jackson.


Chairman

Adopted this 2nd day
of April, 1975, at
Montgomery, Alabama


Secretary

ALLEN'S TAR HEEL OIL CO., INC.
ALLEN'S TIRE SERVICE

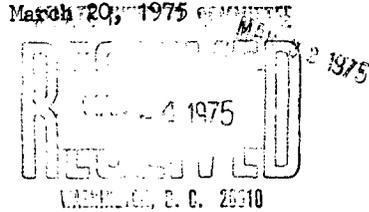
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TAR HEEL, N. C.

Senator Henry M. Jackson
 Room 137
 Senate Office Building
 Washington, D.C. 20510

Dear Senator Jackson;



Re: Development by Private
 Industry of the Outer
 Continental Shelf

I am a strong believer in the free enterprise system. I am an Oil Distributor and the members of my company have a strong feeling that the outer Continental Shelf that lies along the coast of Virginia, North Carolina, South Carolina, Georgia and part of Florida should be developed by private industry not the Federal Government. We feel that the Federal Government has caused quite a bit of confusion from an economic standpoint.

My strong feelings are such that the Oil Industry can do a better job and quicker, than heretofore done by the Federal Government to provide petroleum products so that the United States will not be dependent upon foreign oils at the expense of the American Tax Payers dollars.

With out delay, we desire Development of the outer Continental Shelf by private industry.

Very truly yours,

J. E. Allen
 J.E. Allen



P. O. DRAWER 1988
ALMA, GEORGIA 31510
 TELEPHONE (912) 632-7231

March 13, 1975

Hon. Henry M. Jackson, Chairman
 Senate Interior and Insular Affairs Committee
 Room 3206
 Dirksen Senate Office Building
 Washington, D.C. 20510
 Attention: Mike Harvey

Dear Senator Jackson:

In view of the energy shortage that we are facing in this country today I urge you to please let the Petroleum Industry begin exploring for oil and natural gas off of our Georgia Coast as soon as possible. To me this is the only way for us to keep our oil money in this country instead of sending it to the Arabs for high priced oil which is costing the consumers of this country millions and millions of dollars.

Senator, I think it will be to the interest of every person in the United States that you do whatever you can to permit our oil companies to start offshore drilling at their earliest possible date.

Sincerely yours,

Valene Bennett
 Valene Bennett (L.H.)

VB/lh

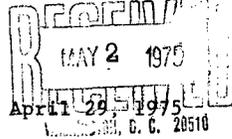
AMERICAN PETROLEUM

1801 K STREET, NORTHWEST

Frank N. Ikard
PRESIDENT**INSTITUTE**

WASHINGTON, D.C. 20006

STATE LICENSE (202) 833-5580



Honorable Henry M. Jackson
Chairman, Interior and Insular
Affairs Committee
U. S. Senate
3106 Dirksen Senate Office Building
Washington, D. C. 20515

MAY 1 1975

Dear Mr. Chairman:

The American Petroleum Institute has been on record for more than two years in favor of a system whereby Federal revenues generated from future Outer Continental Shelf lease sales would be shared with appropriate state and local governments. On two occasions last month, the Institute reiterated this position in statements presented or submitted in connection with Congressional hearings on OCS-related legislation.

The recent Supreme Court ruling affirming the Federal Government's title to Atlantic offshore resources beyond the three-mile limit also served to emphasize the urgency of reaching an accommodation between the Federal Government and the state and local jurisdictions on sharing OCS-generated revenues.

We do not feel it appropriate for the industry to suggest how those revenues might be allocated. We do, however, believe that the sooner the question of revenue sharing can be resolved, the better it will be for all concerned.

I thought it would be worthwhile, with OCS-related legislation still pending before various Committees of Congress, to re-emphasize the Institute's position on revenue sharing. As we stated in our testimony this month, the Institute hopes that the Federal Government will see the wisdom of implementing an equitable revenue-sharing formula.

Sincerely,



Associated Industries of Maine

P. O. Box 960 154 State Street Augusta, Maine 04330 (207) 623-4568

MAR 31 10 15 AM '75

March 26, 1975

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 Saunders Bros., Westbrook

JOHN J. WALL
 Globe Albany Corp., No. Monmouth

Senator Henry Jackson, Chairman
 Interior and Insular Affairs Committee
 Attn: Mike Harvey, Room 3206
 Dirksen Senate Office Building
 Washington, D. C.

Dear Senator Jackson:

Relative to the joint hearings currently being conducted by Interior and Insular Affairs' three subcommittees, our organization would like to advise you of our hope that further delays will not occur in offshore oil leasing activity.

The Associated Industries of Maine, after conducting an energy conference at the University of Maine in November 1973, adopted the following resolution:

"The Board of Directors of Associated Industries of Maine support immediate steps for exploration and development of potential oil and gas reserves on the Outer Continental Shelf in the New England area."

This resolution was further endorsed by the A.I.M. Energy Policy Committee in January 1975.

We feel that every step must be taken to insure adequate supplies of energy for Maine at reasonable costs. No question is more fundamental to the present and future health of the State's economy and those dependent on it than this one. Further delays in searching for supplies that may be near at hand cannot be tolerated.

Sincerely,

Merrill C. Welles, Jr.
 Merrill C. Welles, Jr.
 Executive Director

MCW:lpn



AUTOMOBILE CLUB OF VERMONT, INC.

AFFILIATED WITH THE AMERICAN AUTOMOBILE ASSOCIATION
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March 19, 1975

The Honorable Henry Jackson
 United States Senate
 c/o Mike Harvey
 3206 Dirksen Senate Office Building
 Washington, D. C.

Dear Senator Jackson:

With the recent Supreme Court decision giving the Federal Government jurisdiction over the waters (and submerged lands) beyond the 3-mile limit, it seems appropriate for this nation to proceed immediately with plans to explore for oil and natural gas on our Outer Continental Shelf.

In recognition of the time-frame required if we, as a nation, were to start today in the search for off-shore petroleum deposits while taking into account the imperative nature for getting our economy rolling, I submit that the time for action is now.

Therefore, I respectfully request that you and your colleagues do whatever is necessary to assure the early exploration for oil and natural gas from the O.C.S.

Further, the attempts to create a publically-owned entity for exploratory efforts be abandoned in favor of private enterprise companies who have both the experience and the incentive to help America solve its short and long term energy problems.

Sincerely yours,

Thomas D. Kinley
 Thomas D. Kinley
 Secretary/Manager

cc: Senator Robert T. Stafford, Vermont
 Senator Patrick Leahy, Vermont
 Representative James M. Jeffords, Vermont

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March 18, 1975

Senator Henry M. Jackson
 c/o Mr. Mike Harvey
 Room 3206
 Dirksen Building
 Washington, D. C. 20510

Dear Senator Jackson:

I am writing you because of your interest in helping to solve our Nation's energy problems and also to thank you for your leadership in this time of crisis.

From your public statements I gather that you are well aware of the direct relationship between the Nation's economic strength and the adequacy of its sources of energy.

Here in Virginia, we are all very much interested in the prospects of oil being found off our coasts in the area of the outer continental shelf, and the associated income to be derived from such energy and the refineries built on the shore.

As an engineer, I am convinced that we shall all have to reduce our consumption of energy, and thereby reduce our annual energy growth rate, to say 2% instead of the traditional 4-1/2%. On the other hand, we must increase our supply of domestically produced oil so that we become less dependent on other nations.

BERKNESS CONTROL & EQUIPMENT CORPORATION

Senator Henry M. Jackson

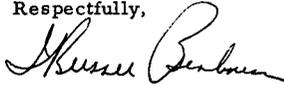
Page 2

March 18, 1975

It appears to me that the outer continental shelf is our best and quickest source of domestic oil to lessen our dependence on imports. Moreover, as one who is directly involved in preserving our states air quality, I am certain that this oil could be processed with suitable environmental constraints imposed so as to protect our water, air and wet lands.

Kindly use your influence to accelerate off-shore drilling in the Atlantic which is in the Nation's best interest in both the short and long run. Also, in view of the Supreme Court ruling, I am hopeful that the drilling proceeds will be shared equally with the coastal states involved.

Respectfully,



I. Russell Berkness
Professional Engineer

IRB:vib

M. V. BURLINGAME
BURLINGAME CONSULTANTS
6008 SHORE ACRES DRIVE N.W.
BRADENTON, FLORIDA 33505

March 18, 1975

Hon. Henry M. Jackson,
United States Senate,
Washington D. C. 20510

Dear Senator Jackson:

Now that the Master in the Supreme Court has ruled that the waters outside the three mile limit along the Atlantic Coast and certain Gulf of Mexico areas are under Federal jurisdiction, it would seem that leasing of these areas for offshore oil exploration should begin at once.

Time is of the essence if we are to meet the energy requirements of this country. We can no longer dally in determining just what are the hydrocarbon resources of the area. Notable geologists are unsure of what the potential really is. The drill bit is the only tool which can give a definitive answer.

While all other sources of energy will have to be utilized to get and keep our economy moving, the Outer Continental Shelf potential reserves of energy need to be known now so that we may have an over all orderly approach in solving the total energy problem. The O. C. S. offers the greatest short term possibility.

The oil industry has proven time and time again that this development can be carried on with a minimum of hazard. If an adverse occurrence should take place it has been demonstrated that corrective measures are available to deal with the problem. Technology has always been good in dealing with the mechanical problems involved. It improves with each new undertaking.

The industry should not only be urged to start this exploration immediately, they should be given the incentive to do so. The Interior and Insular Affairs Committee can and should provide that incentive, now to private industry which has the "know how" to carry out this needed program .

Sincerely,


Mark V. Burlingame

MVB:gz



CENTRAL VERMONT CHAMBER OF COMMERCE

May 9, 1975

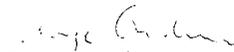
The Honorable Henry Jackson
United States Senate
c/o Mike Harvey
3206 Dirksen Senate Office Building
Washington, D. C.

Dear Senator Jackson:

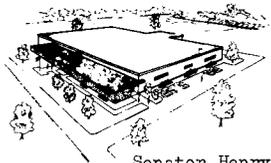
The Central Vermont Chamber of Commerce in this period of economic uncertainty views with concern the over dependence of our country, especially the Northeast on foreign oil. Transportation, economic development and the utilities are areas that are affected to an increasing extent by powers beyond our shores. The status of our balance of payments is tantamount to the wills of Middle Eastern nations with no guarantees that the price and availability of oil will not be used to accomplish political objectives agreeable to them at our expense.

The membership of the Central Vermont Chamber of Commerce therefore, views as imperative an accelerated program for early exploration, development and production of oil and natural gas thought to be existant in areas of our outer continental shelf particularly along the Atlantic Coast area.

Sincerely,


George M. Anderson
President

cc: Senator Robert E. Stafford
Senator Patrick J. Leahy
Congressman James M. Jeffords



church goods mfg. co., inc.

Box 148, Pittsfield, Maine 04967, Tel. (207) 487-5195

APR 5 10 00 AM '75
April 2, 1975

M A

Senator Henry Jackson, Chairman
Interior and Insular Affairs Committee
Room 3206, Dirksen Senate Office Building
Washington, D.C. 20013

Attn: Mike Harvey

Dear Senator Jackson:

I am writing to you relative to your committee hearings as they relate to offshore leasing program. It is fervent hope that the scheduled hearings will not cause further delays in soil exploration lease sales. I am sure you are aware of both the economic recession and energy crunch as it most seriously affects the northeastern part of the Country.

I am member of the Mark Maine Committee which traveled to New Orleans last October to study the impact of the oil industry upon the area as it relates economically and environmentally. Our findings are a matter of record. We found the possibilities of offshore drilling and pumping compatible to a much larger degree to our shores as they are much less delicate than the delta. There is need locally for a refinery industry and its spinoff industries to spur our lagging industrial development, and to a larger degree the urgent need for fuel sources for the Northeast.

The depletion of the Gulf Coast reserves is a matter of great concern with the possibility of serious shortages in five years. The time lag both to explore and develop wells off the Northeast coast and put refineries on line greatly increase the need to avoid further leasing delays.

Your urgent and affirmative consideration would be greatly appreciated by those who wish to see a healthier and stronger State of Maine.

Sincerely,

Ryan D. Fendler, President

cc: Senator Edmund S. Muskie
Senator William D. Hatheway

RDF/rr



subsidiary of o. m. almy & son, inc.

MAR 20 1975

Charles T. Pabian / REGION SALES MANAGER
MARKETING

CITIES SERVICE OIL COMPANY
Atlanta Sales Region
Box 3258
Atlanta, Georgia 30302

March 18, 1975

The Honorable Henry M. Jackson
United States Senate
Washington, D. C.

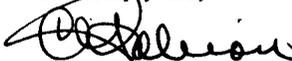
My dear Senator Jackson:

I would like to urge you as Chairman of the Sub-Committee hearing Senate Bills #426, 521 and 586, which involve outer continental shelf exploration, to take into consideration careful guidance for the future of our country in generations to come. These three bills will only add more regulations and restrictions to exploration and development drilling for oil and gas and would be a deterrent to improving our nation's crude oil reserve position.

Presently, the Oil Industry is under many Federal Regulations which were developed with due concern and safeguards for the environment, navigation and energy conservation. Already we have seen the complexity of the Federal Energy Administration in price structuring the market place resulting in the present gasoline retail prices being 4¢ to 6¢ per gallon higher than normal market conditions would dictate. Now further regulations concerning the development of oil reserves would not only hinder exploration but would cause entanglements within the system to handicap our nation in the future energy situation.

As Chairman, I urge you to carefully weigh the impact of the regulations contained in the above mentioned Senate Bills.

Sincerely yours,



C. T. Pabian

CTP:mh

cc: The Honorable Sam Nunn
The Honorable Herman Talmadge

**COASTAL AREA
PLANNING AND
DEVELOPMENT
COMMISSION**

P. O. Box 1316, Brunswick, Georgia 31520 (912-264-6960) Vernon D. Martin, Executive Director

Serving Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long and McIntosh Counties

March 17, 1975

The Honorable Henry M. Jackson, Chairman
Senate Interior and Insular Affairs Committee
Attention: Mike Harvey
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

The Coastal Area Planning and Development Commission is vitally interested in Coastal Zone Management and the establishment of related land use and planning guidelines for the area's natural resources. We are equally as interested in the economic well-being and development of the residents of our region. For these reasons, our commission has taken a position concerning the on-shore developments resulting from oil and gas obtained from the outer continental shelf of the eastern seaboard of the United States.

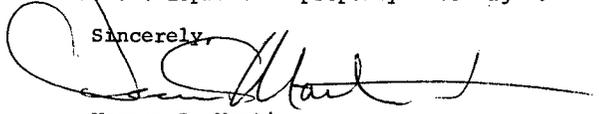
It has come to our attention that legislation has been introduced in the Senate, S-586, S-825, S-826 and S-827, whose intent is to delay the exploration for oil and natural gas deposits off-shore and also to involve the government in this exploration rather than the petroleum industry.

Our commission is gravely concerned over the fuel crisis situation, as I am sure you are, and in 1973, we made a statement at the President's Council on Environmental Quality Public Hearing on the environmental impact of potential oil and gas development on the outer continental shelf of the Atlantic Ocean, in Jacksonville, Florida on October 16 and 17, 1973. Our commission still stands behind this statement. A copy is attached for your review and information.

The Honorable Henry M. Jackson
March 17, 1975
Page 2

Our board is vitally interested in both economic and environmental issues, and wishes to stress its interest in seeing the proper development of off-shore oil and natural gas deposits. In this regard, we urge that the necessary action be taken to see that this development is properly encouraged.

Sincerely,

A handwritten signature in black ink, appearing to read "Vernon D. Martin", written over a horizontal line.

Vernon D. Martin
Executive Director

VDM:mk

Enclosure

cc: Senator Herman E. Talmadge
Senator Sam Nunn

I am Vernon Martin, Executive Director of the Coastal Area Planning and Development Commission with offices in Brunswick and Savannah, Georgia. The Coastal APDC was created under the Georgia Planning Enabling Act of 1957, as amended, and was established in 1963. It is an organization consisting of and established by eight coastal Georgia counties, and its board is composed of two-thirds elected officials who represent a population of nearly 300,000 people.

The Coastal APDC is vitally interested in Coastal Zone Management and the establishment of related land use and planning guidelines for the area's natural resources. We are equally as interested in the economic well-being of the residents of the region. For these reasons, the Commission wishes to make a statement concerning the onshore developments resulting from oil and gas obtained from the outer continental shelf of the eastern seaboard of the USA.

The coast of Georgia is comprised of numerous barrier islands and vast acreages of marshes and estuaries. The region is virtually unspoiled, including, generally the areas around Savannah and Brunswick, which are the location of substantial development. There is a strong local and statewide movement to retain the coastal region in its natural state or to control development so it will be environmentally compatible with the natural resources and aesthetic qualities of the region. These environmental conservation pressures, coupled with increased regulatory authority of federal and state environmental protection agencies, have served to deter and/or block proposed major developments -- particularly industrial development. Brunswick, for example, just in the past few weeks has lost two major port-oriented industries, one being an oil refinery, which had announced planned manufacturing facilities earlier this year. Environmental standards imposed by the state and expressed fears by conservation groups for the integrity of the area were the reasons for their reversal in plant location decisions.

It is evident from the recent trends in environmental quality legislation and public opinion that the location of on-shore processing facilities in conjunction with offshore oil wells will become increasingly difficult. The major environmental impact considerations set forth by conservation groups in the oil refinery for Brunswick were:

1. Water pollution;
 - (a) The risk of oil spills,
 - (b) The destructive and lasting detrimental effects of oil on marine life, and,
 - (c) Demand and effect on the fresh water supply of the region.

COASTAL AREA PLANNING AND DEVELOPMENT COMMISSION
CITY HALL • P. O. BOX 1316 • BRUNSWICK, GEORGIA 31520 • 912-234-2111

Page 2

2. Air pollution;
 - (a) Smoke and fumes,
 - (b) Odor pollution, and,
 - (c) Fire hazards.
3. The effect of increased water borne traffic on other marine and motor vehicle traffic.
4. Potential detrimental economic impact through environmental degradation.

These points need only to be mentioned here because they will undoubtedly be further elaborated upon by environmentally concerned organizations at these public hearings.

Environmental factors are not the only resource consideration in coastal Georgia. Consideration must be given to human resources as well. The counties in the region outside of Glynn (Brunswick) and Chatham (Savannah) Counties are characteristically poor, have a low level of education, low population density, significant out-migration, chronic unemployment, substantial under-employment, low labor participation rates, low wage rates, and one or two dominant employers. The resources of the communities are poorly developed, which, coupled with environmental considerations, makes the attraction of additional industries difficult, thereby perpetuating the existing economic structure.

New high wage and high technology employment opportunities are needed in coastal Georgia to improve the standard of living of its residents. An oil refining operation and the resulting satellite industries established in relation to offshore oil producing areas would offer these kinds of employment opportunities to the region.

The Coastal APDC finds itself in a somewhat paradoxical situation of supporting the establishment of new industrial plants which may result in some detrimental effects to the environment and supporting the conservation, preservation and implementation of environmental controls in the area. There is really no paradox. Our commission believes and is dedicated to the concept that with proper planning developed with the advice of informed experts and the expressed opinions of the public, an acceptable and workable development plan can be established for our environmentally sensitive area.

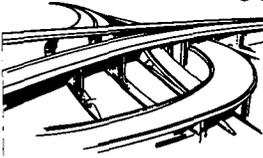
We are very much aware of the energy crisis developing in the United States and the increasing priority being given to solving the problem. We are also aware of the probability that environmental standards may be lowered to encourage increased petroleum production from within the nation.

Page 3

The Coastal APDC recognizes the significance of the energy crisis and the need to find and exploit new sources of oil and gas, as well as the need to protect the environment. We are, therefore, in favor of the exploration and development of oil and gas fields on the Atlantic outer continental shelf, with proviso that stringent environmental standards be continued. In fact, the Coastal APDC requests that the Council on Environmental Quality ask the Congress and the President of the United States to channel whatever resources are required to develop the necessary safeguards through technological advancement which would protect the integrity of environment and permit the development of onshore petro-chemical complexes. We offer our ability to work and plan with environmental groups, governmental agencies and industry to aid the Council in establishing what is acceptable and feasible. We sincerely hope that you will solicit the input of our agency, which represents some 29 units of government and 300,000 people, in commenting on legislation, policies and guidelines that may be developed, before they are finalized.

COASTAL AREA PLANNING AND DEVELOPMENT COMMISSION
CITY HALL • P. O. BOX 1316 • BRUNSWICK, GEORGIA 31520 • 912-264-3121

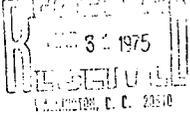
Connecticut Highway Users Conference



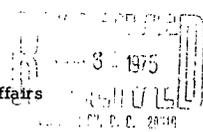
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KINGSLEY H. BEECHER — *Chairman*
FRANK T. HEALEY, JR. — *Vice Chairman*
JOHN F. O'BRIEN — *Secretary/Treasurer*

MAR 27 1975



March 25, 1975



Member Organizations

Armstrong Rubber Company
Automobile Club of Hartford, AAA
Automobile Legal Association
Conn. Association of
Street and Highway Officials
Conn. Automotive Trades Association
Conn. Bakers Association
Conn. Conference of Farm Organizations
Conn. Construction Industries Assn., Inc.
Conn. Farm Bureau Association, Inc.
Conn. Motel Association
Conn. Motor Club, AAA
Conn. Motor Stage Association
Conn. Nurserymen's Association
Conn. Petroleum Association
Conn. Petroleum Council
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Conn. Society of Civil Engineers, Inc.
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Eastern Greyhound Lines
Freight Trailer Company
Greater Hartford Flood Control Commission
Motor Transport Association of Conn., Inc.
New England Mobilehome Association, Inc.
New Haven Trap Rock Company
Rancari Industries, Inc.
Truck Tire Division,
Firestone Tire & Rubber Co.
Ureoyal Tire Co.
Yenhee Mills

The Honorable Henry M. Jackson
United States Senate
Chairman, Committee on Interior & Insular Affairs
Senate Office Building
Washington, D. C. 20510

Attention: Mike Harvey

My dear Senator Jackson:

The Connecticut Highway Users Conference is extremely concerned about the impact on domestic energy supplies if certain legislation now before your committee should be enacted into law.

The Conference itself and its 40 member organizations are strongly opposed to Senate Bills 586, 825, 826 and 827 which we understand will be the subjects of a committee hearing on April 8 and 9. In our opinion all four bills would tend to obstruct or delay the orderly development of oil and natural gas resources believed to lie on the Outer Continental Shelf of the Atlantic Coast.

The Conference members cannot emphasize too strongly the need for the American petroleum industry to utilize its vast experience and capability in seeking and producing undersea energy resources. We further are convinced that permitting the government to undertake offshore exploration or production would be a most serious mistake.

We therefore urge that the committee reject any proposals that would place the government in the private sector and which would further delay United States domestic production of new oil and natural gas resources.

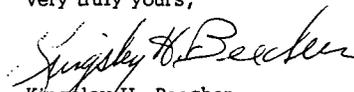
PURPOSE: *To encourage full development of highway transportation in the public interest*

The Honorable Henry M. Jackson - 2

March 25, 1975

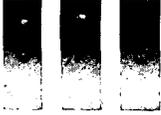
In summary we feel that continuing unrest in the Middle East proves more dramatically the need for American independence in solving its energy shortage. To do this requires immediate action by the companies who for many years have brought the American consumer his energy supplies at the cheapest possible price.

Very truly yours,



Kingsley H. Beecher
Chairman

B:kw



CONNECTICUT PETROLEUM COUNCIL

410 ASYLUM STREET • HARTFORD, CONNECTICUT 06103

Telephone 246-8846

JOHN F. O'BRIEN
EXECUTIVE DIRECTOR

W. RAYD TALCOTT
ASSOCIATE DIRECTOR

RECEIVED
MARCH 12 1975
M.H.

March 12, 1975

The Honorable Henry M. Jackson
The United States Senate
Senate Office Building
Washington, D. C. 20510

Attention: Mike Harvey

My dear Senator Jackson:

In the midst of the controversy surrounding offshore drilling in the New England area, we would like to bring to your attention the fact that two public opinion surveys in the State of Connecticut show an overwhelming support for this activity.

We are enclosing a copy of a survey made by U. S. Representative William R. Cotter of Connecticut's First District in May, 1974 which indicated that 64% of more than 10,000 of the Congressman's constituents favored offshore drilling in New England waters.

A similar poll was taken in the fall of 1974 by Connecticut State Representative Astrid T. Hanzalek which contained the same question. Her replies indicated that 938 constituents favored offshore drilling and 422 were against, which is better than a 2-1 majority.

We also are enclosing a copy of a resolution adopted by the Connecticut Highway Users Conference in December, 1974 which was unanimously approved. Copies of the resolution previously were forwarded to Senators Ribicoff and Weicker and all six House members of the Connecticut delegation. We are enclosing copies of replies from our two senators.

The Honorable Henry M. Jackson - 2

March 12, 1975

We believe that the need for offshore drilling in our part of the country is vital, and we urge your prompt action to end further delays in Outer Continental Shelf exploration.

Thank you very much for any consideration of our position on this matter of such importance to the American people.

Very truly yours,

A handwritten signature in cursive script that reads "John F. O'Brien". The signature is written in dark ink and is positioned to the right of the typed name.

John F. O'Brien
Executive Director

JFOB:kw

Enclosures

cc: Senators A. A. Ribicoff and
Lowell P. Weicker, Jr.

from Washington

Bill Cotter reports

Dear Friends:

May, 1974

Over 10,000 residents of the First Congressional District responded to my questionnaire -- more than twice the response to any previous questionnaire. While I am pleased by this tremendous interest in the issues that confront the Congress, I regret that the sheer volume of responses forces me to resort to this rather impersonal form letter.

Before relating the results of the questionnaire and addressing some of the comments many of you made in addition to answering the questions, I want to acknowledge the criticism of some over content of the questions. While I did not purposely try to "load" the questions in hopes of suggesting a "right" answer, some nevertheless felt the questions were biased. I readily admit that I am not a professional pollster. In the future, I will again attempt to strive for objectivity in the development of questions.

One further criticism I think needs special attention is the notion that I sought your opinions in order to judge how I should vote on these issues. I see nothing inherently wrong with a "representative" trying to ascertain the opinions of the people he represents. Rather, I believe it very important to sample opinion. Nevertheless, I do not need the crutch of a heavy constituent response in order to make up my mind on tough questions. The question on impeachment is a good example: I announced my intention to vote for impeachment over a month before the questionnaire was mailed to you.

ENERGY CRISIS

The first question in this category asked whether the time had come to start gas rationing. By the beginning of March, when most people received the questionnaire, the long gas lines of January and February had become a half-forgotten bad dream. This may have partly explained the overwhelming (82%) opposition to imposing a coupon gas rationing system. From many of your comments I sensed that much of the opposition to rationing also sprang from skepticism over the nature of the oil shortage. "Was it contrived by the oil companies?" was a familiar question.

This skepticism -- and the reality that as a Congressman I had no data on petroleum supplies other than those provided by the oil industry -- prompted me to cosponsor the Energy Information Act to provide the government with independent data on gas, coal and oil supplies and resources.

The next three questions called for a choice between energy and the environment. While the tradeoffs are not actually that stark, I nevertheless wanted to know how far you would be willing to go in pursuit of more energy. The results were interesting. By margins of 64% and 69% respectively, respondents favored drilling for oil off the New England coast and construction of refineries on the Connecticut shore. While this indicated a willingness to expose our shoreline to potential environmental hazards, 60% of the respondents opposed any relaxation of air quality standards in order to permit greater fuel efficiency.

The apparent contradiction may be explained by some of your comments to the effect that technology has developed to the point where oil spills and refinery generated pollution are controllable and fairly localized hazards. Air pollution, on the other hand, is all pervasive. In addition, many of you indicated that the technology is there to produce a clean and fuel efficient engine if only Detroit would stop dragging its feet.

Many of you also pointed out that there were energy alternatives other than dirty air and beaches. I agree. I am very much in favor of encouraging the research and development of alternative energy sources such as solar and geothermal energy. But, it will be some time before these new technology sources come on stream. In the meantime, we must deal with the fact that New England is three times more dependent upon foreign refined (not just crude) petroleum products than the rest of the Nation. We need refineries, as environmentally safe as possible, to be sure, but refineries nevertheless.

Likewise, many of you pointed out the need to develop mass transit alternatives. As a Member of the House Subcommittee on Urban Mass Transportation, I am acutely aware of our needs and shortcomings in this department.

The energy crisis may in fact have been a blessing in disguise -- forcing all of us to re-examine our values and lifestyles in light of short and long term shortages.

ASTRID T. HANZALEK

CONNECTICUT STATE LEGISLATURE
155 S. MAIN ST., SUFFIELD, CONN. 06078

1974 QUESTIONNAIRE

May I have your views?

Questions on a number of different subjects are listed below. Many of these will see some kind of legislative action in the coming session. That's why I'd like to have your opinions.

I won't take the time to acknowledge receipt of each completed questionnaire. Please know, however, that I appreciate your taking the time to answer. In this way, you're helping me to represent your views on these key issues. Your views are important to me.

	His		Hers		Youth			His		Hers		Youth	
	Yes	No	Yes	No	Yes	No		Yes	No	Yes	No	Yes	No
1. Do you favor year 'round Daylight saving time?	259	128	224	318	62	74							
2. Should public employes (including teachers) be permitted to strike?	160	478	72	93	70	72							
3. Are you in favor of expanding Bradley Field?	211	454	152	470	26	112							
4. Would you like to see Gateway Status for Bradley?	236	446	177	468	46	98							
5. Should tax-exempt organizations be asked to pay direct charges for specific property-related community services (sewers, police protection, etc.)?	446												
6. Do you favor public financing of state and local elections?	536	124	500	128	91	37	222	152	295	136	72	30	
7. Do you agree with the recent Supreme Court decision which leaves the question of abortion to a woman and her doctor?	254	321	270	331	42	66							
8. Do you favor a Constitutional Amendment prohibiting abortion?	67	72	59	82	116	13							
9. State employes in Conn. and most other states are now prohibited from taking an active part in partisan politics. (Conn. laws are modeled after the Federal "Hatch Act"). Should these state laws be repealed?	66	63	76	57	76	114							
10. Should the state need additional funds to balance the budget, which method would you favor?	214	457	252	369	58	67							
• Increase the sales tax by 1 or 2 cents?	272	239	226	223	46	64							
• Impose a "new" tax such as an income tax?	62	384	48	361	8	85							
• Peg the rates of a "new" income tax high enough so you can reduce the sales tax by a few cents?	56	377	58	349	16	81							
• Reduce spending?	580	26	526	18	108	19							
11. Would you favor NO increase in tax even if it meant curtailing useful or worthwhile programs?	425	227	373	230	69	62							
12. Do you favor relaxation of some of the stricter environmental standards in order to meet energy needs?	441	196	358	246	43	93							
13. Should I-91 be widened?													
• from Hartford to Rt 75 Windsor as planned by D.O.T.?	276	152	224	198	54	74							
• from Hartford to Mass. border as recently announced?	402	248	220	249	58	65							
14. Assuming the courts rule that the cost of education should be shared more equally by all citizens and towns in the state, which of the following would you favor?													
• Continued use of the property tax—but with a state-wide equalization formula designed to provide additional funds to communities with a low tax base?							222	152	295	136	72	30	
• Institution of a state income tax which should (barring other increased spending) mean some reduction in the property tax?							112	433	111	397	20	77	
15. Do you favor a direct primary for Governor, U.S. Senators and Congressmen?							503	138	441	134	88	34	
16. Do you feel that the Governor should appoint his own cabinet (the Secretary of the State, the Treasurer, the Attorney General and the Comptroller) rather than continuing to have these State officials elected?							251	424	132	482	29	98	
17. Do you favor continued restriction of speed limits (and enforcement of same) as an effort to save fuel?							551	120	604	48	116	18	
18. Should Connecticut attempt to supply some of its own energy requirements by:													
• Permitting off-shore drilling for oil or gas?							496	153	276	194	66	75	
• Allowing construction of an oil refinery?							432	140	444	70	86	42	
19. Would you favor a state law prohibiting billboards?							490	176	478	158	60	60	
20. Should stores in Connecticut be required to close on Sundays — or one out of every seven days?							272	343	279	346	46	97	

Thank you, again, for giving me your opinion on these various subjects. Should you feel strongly about any other issue, please give me the benefit of your advice. I'll respect your views even if you wish to remain anonymous.

Astrid T. Hanzalek

RESOLUTION OF THE
CONNECTICUT HIGHWAY USERS CONFERENCE

December 6, 1974

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U.S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of New England; now

THEREFORE, be it resolved that the Connecticut Highway Users Conference give full support to efforts being made to develop offshore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

RUSSELL B. LONG, LA., CHAIRMAN
 HERMAN E. TALMADGE, GA.
 VANCE HARTKE, IND.
 J. W. FULBRIGHT, ARK.
 ABRAHAM RIBICOFF, CONN.
 HARRY F. BYRD, JR., VA.
 GAYLORD NELSON, WIS.
 WALTER F. MONDALE, MINN.
 MIKE GRAVEL, ALASKA
 LLOYD BENTSEN, TEX.

WALLACE F. BENNETT, UTAH
 CARL T. CURTIS, NEBR.
 PAUL J. FANNIN, ARIZ.
 CLIFFORD P. HANSEN, WYO.
 ROBERT J. DOLE, KANS.
 BOB PACKWOOD, OREG.
 WILLIAM V. ROTH, JR., DEL.

MICHAEL STERN, STAFF DIRECTOR

United States Senate

COMMITTEE ON FINANCE
 WASHINGTON, D.C. 20510

January 7, 1975

Mr. John F. O'Brien
 Connecticut Highway Users Conference
 410 Asylum St.
 Room 320
 Hartford, Conn. 06103

Dear Mr. O'Brien:

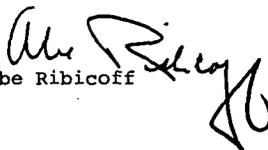
Thank you for sending me a copy of the recently passed resolution of the Connecticut Highway Users Conference.

I am opposed to oil drilling off the Atlantic Coast, except on the Outer Continental Shelf, where, if proper environmental safeguards are maintained, oil exploration will soon begin.

Thank you again for sending me a copy of the resolution.

Sincerely,

Abe Ribicoff



FRANK E. NOSS, UTAH, CHAIRMAN
 WARREN G. MAGNUSON, WASH. BARRY GOLDWATER, ARIZ.
 STUART BYMINGTON, MO. CARL T. CURTIS, NEBR.
 JOHN E. STENNIS, MISS. LOWELL P. WEICKER, JR., CONN.
 HOWARD W. CANNON, NEV. DEWEY F. BARTLETT, OKLA.
 JAMES ABOUREZK, S. DAK. JESSE HELMS, N.C.
 FLOYD K. HASKELL, COLO. PETE V. DOMENICI, N. MEK.

ROBERT F. ALLMUTT, STAFF DIRECTOR

United States Senate

COMMITTEE ON
 AERONAUTICAL AND SPACE SCIENCES
 WASHINGTON, D.C. 20510

January 9, 1975

John F. O'Brien
 419 Asylum Street
 Hartford, Connecticut

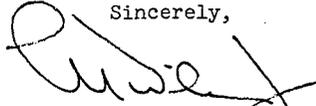
Dear Mr. O'Brien:

Thank you for your letter of December 16, 1974 with the attached resolution.

I will certainly support an accelerated program of exploration and development of oil and gas resources of the outer continental shelf as long as proper environmental standards are met.

With kind regards,

Sincerely,



Lowell Weicker, Jr.
 United States Senator

Connecticut State Grange MH

LECTURER

LOUISE S. CHAPMAN
77 Scotland Road, RFD #4
Norwich, Conn. 06360

TREASURER

CARL F. SVENSON, JR.
73 High Street
Collinsville, Conn. 06022

OFFICE OF THE SECRETARY

769 Hebron Avenue
Glastonbury, Conn. 06033
633-7550

FRANK PRELLI, Master
112 Main Street
Windsor, Conn. 06098
379-2000



EXECUTIVE COMMITTEE

FRANK W. RUFF, *Chairman*
440 Addison Road
Glastonbury, Conn. 06033
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Hampton, Conn. 06247
FRED W. BROOKS
26 Agnes Drive
Manchester, Conn. 06040
SECRETARY
ELLSWORTH L. COVELL
769 Hebron Avenue
Glastonbury, Conn. 06033

April 3, 1975

Honorable Henry M. Jackson
Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

In view of the energy crisis in this country and especially as it affects the Northeast, the Connecticut State Grange Executive and Legislative Committees express their concern with the program for offshore drilling on the Outer Continental Shelf of the Atlantic Ocean.

Speaking in behalf of the Connecticut State Grange, we feel that the U.S. oil industry is the only organization which is capable of exploring for undersea deposits of oil and natural gas. America must be independent of foreign supplies of these resources. Recent events dictate the need for rapid development of our domestic resources by those who are the most capable to handle it.

We oppose Senate Bills 586, 825, 826, and 827 which inhibit offshore exploration in the private sector.

We thank you for your consideration of our views on this matter.

Sincerely yours,

Frank Prelli, Master



74



MAR 28 1975
Consolidated Oil Company

GASOLINE - DIESEL - KEROSENE

3851 N. W. 59TH STREET
MIAMI, FLORIDA 33142

PHONE (305) 635-0806

March 26, 1975

The Honorable
 Senator Henry M. Jackson
 Chairman - Committee on Interior
 and Insular Affairs
 Room 3206 - Dirksen Senate Office
 Building
 Washington, D. C.

Dear Senator Jackson:

It has been proposed by certain United States Congressmen that the exploration of off-shore areas for oil and gas be placed in the hands of the United States Geological Survey or some new federal agency. Speaking as an oil company executive and an elected official of the City of Coral Gables, I would like to register my protest against such a system.

At the present time, there is an urgent need for the leasing of off-shore areas for oil and gas exploration to reduce our dependency on foreign oil. The proposal to place this exploration in the hands of the United States Geological Survey, or some new federal agency, would delay actual off-shore exploration for a period of at least two years, and probably much longer.

We need immediate leasing of the off-shore areas for oil and gas exploration by private enterprise, which system has been successful for more than 100 years in developing the nation's mineral resources. The placing of frontier exploration in the hands of the United States Geological Survey or some other governmental agency, would solve none of the problems that the country is faced with today in our dependency on foreign oil. In fact, if it would do anything, it would complicate the situation. The United States Geological Survey has already admitted that it is not equipped

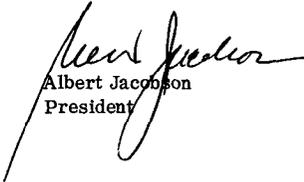
Continued. . . .

Senator Henry M. Jackson
March 26, 1975
Page Two.

at the present time for this type of work. Any new agency created would take precious time to gear up for this gigantic task. Private enterprise would have greater incentive to explore all promising areas and would have available the experts and equipment necessary to gather the data.

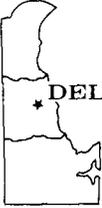
The nation's energy plight is immediate and compelling and now is not the time to put the United States government into the oil business. Our private enterprise system has a history of success and this is no time to experiment with socialism.

Very truly yours,



Albert Jacobson
President

AJ/lav



DELAWARE
OIL MEN'S ASSOCIATION

GEORGE L. FRICK
Executive Director

April 4, 1975

Sen. Henry M. Jackson
Attention: Mr. Mike Harvey
Room 3206
Dirksen Office Building
Washington, D.C. 20510

Dear Senator Jackson,

Enclosed for your information is a resolution passed unanimously by the Delaware Highway Users Conference regarding off-shore exploration and drilling.

Sincerely yours,

A handwritten signature in cursive script that reads "George L. Frick".

George L. Frick
Executive Director

GLF/pMcC

cc: The Hon. William Roth, Jr.
The Hon. Joseph Biden, Jr.
The Hon. Pierre S. duPont IV
Mr. Frederic W. Schermerhorn

437 N. DuPont Highway
Dover, Delaware 19901
(302) 734-7455

A RESOLUTION APPROVED BY THE DELAWARE HIGHWAY USERS CONFERENCE

Frederic W. Schermerhorn, Chairman

Whereas, the State of Delaware and other East Coast states are highly dependent on petroleum products made from crude coming from foreign oil-producing countries which are hampering the United States economy and,

Whereas, the growing reliance of this nation on foreign supplies will place us in a position of increasing economic vulnerability over the next several years, and,

Whereas, development of new domestic sources of oil and natural gas should be an integral part of the national long range energy-use planning, and,

Whereas, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States and, quite probably, off the coast of Delaware; and,

Whereas, development of these resources with proper environmental safeguards would alleviate the energy shortage and the economic burden of Delaware, currently experiencing a 10.2% unemployment rate; and,

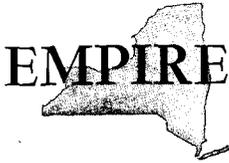
Whereas, the present proven system of exploring for oil and gas through private industry technology and expertise has served the nation well and,

Whereas, the Federal Government lacks many of the aforementioned capabilities and would, in all probability, limit exploratory efforts to areas with the least economic risks, and,

Whereas, further red tape and delays in the search for domestic oil and gas would be unnecessary, unwise, and uneconomical, for our State and our Nation.

Now, therefore, be it resolved that the Delaware Highway Users Conference give full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States under currently existing practices.

J- Record
MH



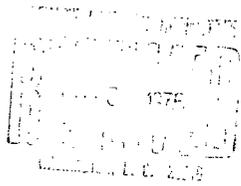
EMPIRE STATE CHAMBER OF COMMERCE
150 STATE STREET • ALBANY, NEW YORK 12207 • 472-9166

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March 24, 1975

Honorable Henry M. Jackson
Room 3206
Dirkson Office Building
Washington, D. C.

Attention: Mr. Michael Harvey



Dear Senator Jackson:

The Empire State Chamber of Commerce supports the exploration and development of natural gas and oil resources on the Outer Continental Shelf by private enterprise. This matter is of high priority and one in which we cannot afford further delays.

The Empire State Chamber of Commerce is a federation of 200 local chambers of commerce and statewide associations with an underlying membership of 80,000 business firms. Our interest in the development of natural gas and oil resources stems from our representation of these member business firms.

There are a number of bills before the Congress to require that the Federal government take over the exploration and, in some cases, the development of natural resources on the Outer Continental Shelf. The Empire State Chamber opposes exploration and development by the Federal government for the following reasons:

(1) The present system of leasing Federal lands to private enterprise has worked well for the taxpayer and consumer. For example, the U. S. Treasury has received more than \$14 billion as a result of off-shore leases. Moreover, petroleum production from off-shore leases is now providing nearly 17 per cent of all domestically produced oil and natural gas!

(2) The government now decides what Federal acreage is to be leased, how many acres and on what schedule. The government establishes and monitors all phases of exploration and production including the regulation of environmental standards for on-shore operations.

(3) Exploring for oil involves a great deal of expertise, determination, some luck and money. Exploration is a high-risk gamble. In 1974, for example, out of an estimated 8,723 exploratory wells drilled in the United States, 6,722 were dry holes. The cost of these dry holes, however, was borne by industry, not by a taxpayer financed government exploration agency.

Accordingly, the Empire State Chamber of Commerce supports the exploration and development of natural gas and oil resources on the Outer Continental Shelf by private enterprise.

Sincerely yours,



Joan J. Roberts
Executive Vice President

JJR:nmk

*Representing —*ROBBINS & MYERS, INC.
HOISTS AND CRANES
MOTOR PUMPSROBBINS & MYERS CO.
OF CANADA, LTD.
ELECTRIC MOTORSDUCT-O-WIRE CO.
CONDUCTOR SYSTEMS FOR
CRANES AND HOISTSR. S. CORCORAN CO.
CUSTOM CENTRIFUGAL PUMPSIN REPLY
REFER TO: Houston Office**G. R. HALEY Co.**
Manufacturers' Representative

March 26, 1975

175

Senator Henry M. Jackson
Room 137 Senate Office Building
Washington, DC 20510

Dear Senator Jackson,

Offshore oil production is no stranger to us in Texas. We have seen private industry do a creditable job in developing significant reserves of oil and gas so far. Finding and developing new reserves is even more important and the proven abilities of the domestic petroleum industry to effectively and expeditiously accomplish this make it the best choice to get the job done.

I trust you will keep this in mind when the subject of offshore development comes to your attention in the Senate Interior Committee. Your leadership can help avoid needless delays in establishing vitally needed offshore energy supplies, both in the Gulf of Mexico and on the Atlantic Coast.

Sincerely,



Norman D. Zuerner
cc: Senator John Tower
Senator Lloyd Bentsen*Representing —*BETTONER MFG. CO.
"PANELBLOC" GAS FIRED
INFRA-RED HEATERSTHE LAU BLOWER CO.
PROPELLAIR FAN DIVISIONOHIO GEAR CO.
SPEED REDUCERS
GEAR SETSRENOLO CROFTS INC.
"CARTER" HYDRAULIC INFINITELY
VARIABLE SPEED DRIVESTELEMOTIVE
RADIO REMOTE CRANE CONTROLSDALLAS, TEXAS 75207
P. O. BOX 10756
2514 IRVING BLVD.
PHONE (214) 631-8430HOUSTON, TEXAS 77019
P. O. BOX 13093
1107 ROSINE
PHONE (713) 526-3975TULSA, OKLAHOMA 74146
4823 S. SHERIDAN
SUITE 306F
PHONE (918) 663-7674MIDLAND, TEXAS 79708
1704 NORTH D ST.
PHONE (915) 682-2652



Georgia Agribusiness Council Inc.

19 HUNTER STREET, S. W. / (404) 656-3698 / ATLANTA, GEORGIA 30334

March 14, 1975

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Geneville Machine Company
Geneville, Georgia 30501

VICE PRESIDENT

FISHER L. BARFOOT
Sales and Advertising
Piggly Wiggly Southern, Inc.
Vidalia, Georgia 30474

VICE PRESIDENT

OLIN W. GINN, Manager
Agricultural Development
Georgia Power Company
Atlanta, Georgia 30302

TREASURER

JOHN T. JENKINS, Editor
Landscape Builder Journal, Inc.
Macon, Georgia 31208

SECRETARY

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Agricultural Public Relations
Kaiser Agricultural Chemicals
Savannah, Georgia 31402

EXECUTIVE DIRECTOR

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Atlanta, Georgia 30334

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Marietta, Georgia 30062

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Woodbury, Georgia 30293

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Executive Vice President
Gold Kist, Inc.
Atlanta, Georgia 30301

BILL L. CAMPBELL, Vice President
Calhoun First National Bank
Calhoun, Georgia 30701

A.B. CARLAN
Dadeco Gun & Peanut Company
Dadeco, Georgia 31743

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Assistant Vice-President
Southern Bell Telephone & Telegraph Co.
Atlanta, Georgia 30308

JOHN P. DUNCAN, Director
Agribusiness Services
Southern Railway System
Washington, D.C. 20513

W.J. (BILL) ESTES
Empire Poultry Seed Company
Hershey, Georgia 30229

FRED GREER, Assistant Vice-President
Citizen and Southern National Bank
Atlanta, Georgia 30330

WALTER HARRISON, Executive Manager
Georgia Electric Membership Corporation
Milledgeville, Georgia 30442

BROOKS PENNINGTON
Pennington Drain and Seed, Inc.
Macon, Georgia 30050

JOHN T. PHILLIPS, JR., President
Lilington Corporation
Albany, Georgia 31702

H. EMMETT REYNOLDS, President
Georgia Farm Bureau Federation
Macon, Georgia 31204

CLEM WHITE, Vice President
Columbia Nitrogen Corporation
Alpharetta, Georgia 30003

L.T. WANSLEY, Vice President
Georgia Power Company
Valdosta, Georgia 31001

CLYDE S. WARE
Sears, Roebuck & Company
Atlanta, Georgia 30308

The Honorable Henry M. Jackson, Chairman
Senate Interior and Insular Affairs Committee
Attention: Mike Harvey
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

The Georgia Agribusiness Council urges that Congress pass the necessary legislation to allow continued offshore drilling for oil and natural gas sources so that the United States can fill its own energy needs in the future. We feel our country must get less dependent on foreign sources and take care of our own needs as soon as possible.

The exploration of the Outer Continental Shelf (OCS) for new oil and natural gas deposits is vital if we are to be less dependent on foreign sources. In addition, we need to let our oil and natural gas deposits remain in the hands of free enterprise as much as possible.

The Georgia Agribusiness Council opposes Senate Bills 586, 825, 826 and 827, which are aimed at delaying exploration offshore drilling and involves the government rather than the petroleum industry. We urge your opposition to these bills.

Delays and inaction are not what we need. We need to let free enterprise get on with its job of supplying this country with energy. This can be done best with less government delay and control.

Sincerely,

Charles E. Crowder
Charles E. Crowder
Executive Director

CEC/lm

cc: Senator Herman Talmadge
Senator Sam Nunn

PROMOTING GEORGIA'S GREATEST INDUSTRY



March 18, 1975

Honorable Henry M. Jackson, Chairman
Senate Interior and Insular Affairs Committee
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

This country urgently needs to develop additional sources of oil and natural gas in order to meet its requirements so that in the future this nation will not be dependent upon foreign countries to supply any of its energy needs.

The exploration of the Outer Continental Shelf of the United States by private enterprise, not the Federal Government, appears to be the best way to insure this country of meeting its energy needs in the future. Private enterprise discovered and developed the two largest petroleum fields on the North American Continent and I hate to imagine the conditions this country would face today without these oil producing fields.

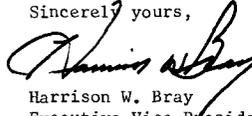
We must permit the free enterprise system to continue supplying this country with energy because history has proven that greater involvement by the Federal Government would create delays and inaction in this effort, which would be disastrous. Four bills which are being considered by your committee at this time, S-586, S-825, S-826 and S-827 call for a delay in offshore exploration with more involvement by the government and I do not believe this would be in the best interest of our country.

The petroleum industry has supplied this country with its energy needs in the past and will continue to do so in the future, unless delayed by governmental intervention. The industry desperately needs authority to explore new offshore areas as soon as possible so that the energy sources we need may be found and developed.

Senator Jackson
March 18, 1975
Page two

I believe very firmly that the free enterprise system is the best and quickest way to insure this country of its energy needs in the future, without dependence upon any foreign sources, and I trust that you agree with this philosophy.

Sincerely yours,



Harrison W. Bray
Executive Vice President

HWB:ew

cc: Senator Herman Talmadge
Senator Sam Nunn

M/H

JOHN C. GRIFFIN
P. O. BOX 12607
CHARLOTTE, NORTH CAROLINA 28208
March 19, 1975

MAR 24 1975

SENATE INTERIOR COMMITTEE
RECEIVED
MAR 24 1975
WASHINGTON, D. C. 20510

Senator Henry M. Jackson
Room 137, Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

As a citizen of North Carolina and the United States, I am most concerned about the orderly development of off-shore petroleum resources on the Eastern Seaboard.

I am sure you are aware that the people on the Eastern Seaboard are suffering due to a shortage. You are familiar with the natural gas cutback we had in this state during the winter of 1974/75, and it is predicted it will be even more drastic this coming year. The unemployment it has caused individuals and the loss of business to businessmen could be avoided in the future if the United States Congress allows the development of these resources by our domestic petroleum industry.

As the subject of off-shore development comes before your Interior Committee, I hope that you will take a reasonable approach and work toward a very prompt implementation of orderly drilling offshore the Eastern Seaboard. I'm certain that you agree with me that conservation isn't sufficient to properly insure that our great country has an ample supply of energy. We need to develop new and alternate sources of oil and gas that are protected from foreign control. If the domestic petroleum industry is allowed to proceed at an early date on this important project, this country will soon recover from its economic and energy problems.

Thank you for your kind attention to this matter.

Sincerely,

John C. Griffin
John C. Griffin

JCG:bw

cc: Senator Jesse A. Helms
Senator Robert Morgan
Representative James Martin

1439

Gulf Oil Company - U.S.

WILMINGTON RETAIL MARKETING DISTRICT

D. M. H. Jones
MARKETING MANAGER

101 South Heald Street
P. O. Box 13888
Wilmington, Del. 19899

March 24, 1975

The Honorable Henry M. Jackson
United States Senator
Attention: Mr. Mike Harvey
Room 3206, Dirksen Office Building
Washington, D. C. 20510

Dear Senator Jackson:

It seems appropriate for me to forward the attached Summary Point Paper, hoping it is beneficial to you regarding your responsibilities in this most important area.

A response, outlining your view and position, would be appreciated.

Very truly yours,

GULF OIL COMPANY - U. S.



D. M. H. Jones
Marketing Manager

DMHJ:ens

Attachment



A DIVISION OF GULF OIL CORPORATION

SUMMARY POINT PAPER
PROPOSALS THAT GOVERNMENT EXPLORE FOR PETROLEUM ON FEDERAL LEASES

A number of bills are currently under consideration in the Congress dealing with exploration and development of the petroleum potential on federal lands. The bills range from simple changes in existing legislation to complex rewrites of present laws and regulations. Unfortunately, they all suffer from the same basic fault: They offer a series of drastic cures for nonexistent ills.

It is important to consider these proposals in the light of their need, their intent, and their impact -- if enacted into law -- on the nation's drive toward energy self-sufficiency.

1. This nation now has a good exploratory system

The present system of leasing federal lands by private enterprise has worked well for the American taxpayer and consumer. Bonus bids and first-year rentals on offshore federal leases, for example, have added some \$14 billion to the U.S. Treasury. Development of those areas by private industry is now providing 17 per cent of all the oil and natural gas produced in the United States.

2. Private industry technology and expertise is proven, worldwide

The U.S. petroleum industry's competence is recognized around the world. It is U.S. technology, equipment and manpower that, for the most part, is developing the petroleum in the North Sea, Arctic Alaska, in Southeast Asian waters, and elsewhere. There is no need to send in an untrained team of government explorers to replace the many experienced private teams. Government-only exploration would eliminate competition in gathering and interpreting data, and in risking large sums of money on varying research techniques and interpretation of similar data. It is this kind of risk-taking, based on different approaches and attitudes, that resulted in the discovery of the Alaska North Slope and Gulf of Mexico Bay Marchand fields, after earlier exploration had turned up only dry holes. This is no time for hit-or-miss, on-the-job training programs for civil servants.

3. We cannot afford further delays

The high cost of delay in developing and marketing needed petroleum was all too evident in the trans-Alaskan pipeline project. For nearly five years construction was delayed by environmental and legal challenges. The result: oil that should have been flowing to consumers, had the original schedule been permitted, would have been on hand to ease the Winter 1973-74 Arab oil embargo. Delaying tactics -- such as the proposal to grant a political entity veto power over exploration of federal lands -- could seriously impair attainment of our energy goals. The American consumer and worker would be the victims.

4. Finding oil and natural gas is not a matter of politics

To find oil and natural gas, you've got to drill where nature put them. And, if you don't drill, you'll never find that petroleum. But petroleum isn't necessarily where most of the votes are. Technical -- not political -- know-how holds the key to discovering new petroleum reservoirs, on land or under the Outer Continental Shelf. But a government agency -- whose funds are controlled by Congress -- might well decide where to drill or not to drill on the basis of politics, rather than geology.

5. Government officials are not likely to take high-cost risks

Exploring for oil is a high-risk gamble. It involves an incredible amount of expertise, determination, luck and money. Most government officials aren't likely to -- and shouldn't -- be risk-takers. That should be left to private enterprise staked by private, not public, funds. For example, the Bay Marchand field -- one of the largest in the Gulf of Mexico -- was found only after a dozen or more wells were drilled. It's unlikely that a government agency -- charged with carefully spending taxpayer monies -- would have persisted in drilling that "one more well" which proved successful.

6. The government already has sufficient controls over exploration and production on federal lands

The government, not industry, now decides what federal acreage will be leased, how many acres, and on what schedule. Government sets and monitors regulations relating to exploration, platform construction, drilling, production and transportation associated with federal leases, including environmental regulations. It also establishes and regulates environmental standards for onshore operations. In addition, states exercise further controls within their jurisdictions. There simply is no need for additional controls, nor for exclusive rights to data gathering.

7. Complaints about the present system simply do not justify the extreme cures proposed

The proposed bills claim that the present system has a "head cold" but prescribe amputation to cure it. In the first place, the diagnosis isn't true; in the second, the treatment could be fatal. For example, there is no reason to believe that the government-run venture would be any more efficient than the government operated Postal Service and Amtrak. Nor is there reason to believe that the government could -- or would -- improve on private industry's offshore environmental safety

record: more than 18,000 wells drilled offshore, and only four major spills. Witness the current fight over TVA's refusal to implement clean air standards. Government's strong point is not a "practice what you preach" philosophy.

8. The proposals avoid the real issue of sufficient and secure oil and natural gas supplies

A number of the bills recognize the need for developing the oil and natural gas potential of onshore and offshore federal lands. But, for the most part, the proposals would delay, not increase, energy supplies. What is needed is a serious and sincere effort to remove the barriers which have delayed development in the past and impeded industry efforts to locate and produce the secure domestic petroleum this nation needs.



GULF OVERSEAS CORPORATION

P. O. BOX 5-2532

OIL & GAS BUILDING 3

LAFAYETTE, LOUISIANA 70501



May 7, 1975

Senator Henry M. Jackson
137 Rayburn Building
Washington, D. C. 20515

Dear Senator Jackson:

Our company, which provides marine transportation and construction services to the domestic offshore oil industry, seeks to make continuing investments to increase our ability to provide these vital services. We are only able to accomplish this expansion in a climate of confidence that our government will act rationally in passing legislation and establishing programs which will allow the orderly development of our nation's potential outer continental shelf oil and gas reserves.

The capability to develop these reserves can not be established without many years of lead time and a major investment of capital by industry. In view of the great need our nation has for these sources of energy, we urge you to consider the effort required by our company and the others in our industry to meet this need for our citizens now and in the years to come.

Sincerely,

MJ

1909 QUAIL RIDGE ROAD
RALEIGH, NORTH CAROLINA 27609

MARCH 20, 1975

SENATOR HENRY JACKSON
SENATE OFFICE BUILDING
WASHINGTON, D. C. 20510

DEAR SENATOR JACKSON:

I AM QUITE CONCERNED TO READ THAT YOU ARE PROPOSING TO ORGANIZE A GOVERNMENT COMPANY TO DEVELOP OFFSHORE PETROLEUM RESOURCES. I BELIEVE PRIVATE INDUSTRY HAS DONE AN EXCELLENT JOB IN THIS COUNTRY AND I CANNOT UNDERSTAND WHY, DURING AN ENERGY CRISIS, YOU WOULD WISH TO ORGANIZE ANOTHER "POST OFFICE TYPE" CORPORATION TO DO A JOB THAT CAN OBVIOUSLY BE DONE BY PRIVATE INDUSTRY.

I FEEL STRONGLY THAT WE NEED TO ENCOURAGE OUR DOMESTIC PETROLEUM INDUSTRY TO DEVELOP NEW OIL BY EVERY MEANS POSSIBLE. I BELIEVE IN CONSERVATION AND FEEL THIS IS LONG OVERDUE IN THIS COUNTRY; HOWEVER, I AM SURE YOU WILL AGREE THAT ALONE WILL NOT SOLVE OUR ENERGY PROBLEM. HOPEFULLY, YOU WILL LEAD IN ELIMINATING THE DELAYS IN POLITICS THAT ARE SLOWING UP A NATIONAL ENERGY PROGRAM AND, AMONG OTHER THINGS, PROMPTLY MAKE IT POSSIBLE FOR PRIVATE ENTERPRISE TO BEGIN DEVELOPING OIL RESOURCES OFF OUR EAST COAST.

SINCERELY,

Robert A. Harling
ROBERT A. HARLING

RAH/vcd

cc: SENATOR ROBERT MORGAN
SENATOR JESSE HELMS

HIGHWAY USERS COUNCIL OF WESTERN NEW YORK

976 DELAWARE AVE., BUFFALO, N. Y. 14240

882-5400

March 21, 1975

Senator Henry M. Jackson
3206 Dirksen Office Building
Washington, DC 20515

ATTN: Michael Harvey

Dear Senator Jackson:

It's our understanding that Senate Committees are holding hearings on offshore oil exploration.

The Highway Users Council of Western New York represents more than 100,000 families, and in this area, our energy sources are very dependent on foreign suppliers. Canada has announced cutoffs of oil and gas by 1977. As a border community, we will be drastically affected since our two (2) refineries are primarily supplied by these sources.

We request that you record our organization as strongly supporting private development of offshore oil and gas resources as soon as possible.

Time is running out for our area and our State. Our local biggest natural gas supplier, National Fuel Gas Company, has been ordered not to take any new customers after April 1. This is a severe handicap for bringing in new business in an area with 13% unemployment.

Sincerely,



Robert J. Johnson
Chairman

RJJ:jmg

HIGHWAY USERS FEDERATION

for Safety and Mobility



OFFICE OF THE PRESIDENT

April 7, 1975

The Honorable Warren G. Magnuson
Chairman, Committee on Commerce
United States Senate
Washington, D. C. 20510

The Honorable Henry M. Jackson
Chairman, Committee on Interior
and Insular Affairs
United States Senate
Washington, D. C. 20510

Dear Senators:

The Highway Users Federation is pleased to submit statements from 22 of its autonomous state and metropolitan affiliates for consideration during the current deliberations on regulations governing oil explorations and development in the Outer Continental Shelf.

The Federation is made up of more than 600 businesses, associations and individuals dedicated to safe and efficient highway transportation. We have affiliates in every state and in 35 major metropolitan areas whose combined membership totals well over 4,000 groups. These groups, in turn, represent millions of Americans.

Among our affiliates are a number in areas that will be directly affected by decisions on the Outer Continental Shelf. Like the rest of America, they have a deep interest in decisions which will increase domestic production of the energy vital to the nation's mobility and economic life.

The 22 whose statements are enclosed have taken positions and passed resolutions on the issues involved. All urge early development of the Outer Continental Shelf as a petroleum source. The membership of these affiliates totals 1,343 state and local organizations, many of which also have passed resolutions similar to those we enclose.

While our state and metropolitan affiliates are autonomous, the Federation strongly endorses these statements. We are entirely sympathetic to environmental considerations and support adequate safeguards. But we believe the current economic situation, plus the need for America to establish and maintain economic independence, demands that domestic petroleum production be increased with all possible speed.

In keeping with this urgency, we also strongly advocate that Outer Continental Shelf exploration and development be

- 2 -

undertaken by private enterprise since it has the experience, expertise, personnel -- and incentive -- to do the job rapidly and well. We would urge that safeguards and regulations be carefully examined to assure that, in fulfilling their purpose, they place no unnecessary restrictions on the early and complete development of this or any potential domestic energy source.

Sincerely,



Peter G. Koltnow

Enclosures

Resolution adopted by California Highway Users Conference Board of Directors by mail ballot, February, 1975:

WHEREAS, the United States is presently importing six million barrels of petroleum per day and this dependency on outside sources for energy needs is seriously damaging the U. S. economy, and

WHEREAS, the national security of the nation is obviously dependent upon a secure domestic petroleum supply, sufficient to guarantee its sovereignty, and

WHEREAS, the geological estimate of potential recoverable petroleum offshore of California is approximately 14 billion barrels, which is greater than the present estimate of the entire Alaska North Slope reserves, and

WHEREAS, without any unusual delay, the first significant production would not be available until 1981, and

WHEREAS, the movement of vehicles and development of adequate highway systems are dependent on petroleum products,

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the California Highway Users Conference approves the concept of offshore exploration and drilling on the Outer Continental Shelf in the Pacific waters off the California Coast under stringent government regulations, rigidly enforced, and that the program proceed without delay.

The membership of the California Highway Users Conference includes:

Aggregates & Concrete Assn. of Northern California	Associated Produce Dealers & Brokers of Los Angeles
Agricultural Council of Calif.	Auto Dismantlers Assn. of Calif.
Allstate Insurance	Automobile Club of So. Calif.
Apricot Producers of Calif.	Automotive Maintenance & Garage Assn.
Asphalt Institute	Beverage Wholesalers of So. Calif.
Associated Farmers of Calif.	Calavo Growers of Calif.
San Diego Chapter, Associated General Contractors	Calif. Agricultural Conference
Associated General Contractors of Calif.	Calif. Ambulance Assn.
Associated Plumbing & Mechanical Contractors Assn.	Calif.-Arizona Citrus League
	Calif. Asphalt Pavement Assn.
	Calif. Assn. of Mutual Insurance Agents

Calif. Auto Body Assn.
 Calif. Automotive Wholesalers Assn.
 Calif. Beer Wholesalers Assn.
 Calif. Brewers Assn.
 Calif. Building Material Dealers Assn.
 Calif. Cattle Feeders Assn.
 Calif. Cattlemen's Assn.
 Calif. Chamber of Commerce
 Calif. Council of Petroleum Retailers
 Calif. Driver Education Assn.
 California Dry Cleaners Assn.
 Calif. Dump Truck Owners Assn.
 Calif. Electric Sign Assn.
 Calif. Farm Bureau Federation
 Calif. Farmers, Inc.
 Calif. Federation of Safety Councils
 Calif. Fertilizer Assn.
 Calif. Fig Institute
 Calif. Forest Protective Assn.
 Calif. Funeral Directors Assn.
 Calif. Grain & Feed Dealers Assn.
 Calif. Grape & Tree Fruit League
 Calif. Grocers Assn.
 Calif. Hotel & Motel Assn.
 Calif. Independent Telephone Assn.
 Calif. Landscape Contractors Assn.
 Calif. Manufacturers Assn.
 Calif. Milk Producers
 Calif. Hotel Assn.
 Calif. Motorcycle Industry Council
 Calif. Moving & Storage Assn.
 Calif.-Nevada Soft Drink Assn.
 Calif. Refuse Removal Council
 Calif. Rental Assn.
 Calif. Retailers Assn.
 Calif. Retail Hardware Assn.
 Calif. Rice Growers Assn.
 Calif. Rural Letter Carriers Assn.
 Calif. State Automobile Assn.
 Calif. State Florist Assn.
 Calif. State Grange
 Calif. State Horsemen's Assn.
 Calif. State Tire Dealers Assn.
 Calif. Stripper Well Assn.
 Calif. Taxicab Owners Assn.
 Calif. Traffic Safety Foundation
 Calif. Trucking Assn.
 Calif. Warehousemen's Assn.
 Calif. Wool Growers Assn.
 Cannery League of Calif.

CATRALA of Calif.
 Construction & Equipment Dealers Assn.
 Council of Calif. Growers
 Dairy Institute of Calif.
 Dried Fruit Assn. of Calif.
 Driving School Assn. of Calif.
 East Bay Automotive Jobbers Assn.
 Engineering & Grading Contractors Assn.
 Farwest Equipment Dealers Assn.
 Greater Sacramento New Car Dealers Assn.
 Grower-Shipper Vegetable Assn. of Central Calif.
 Highway Carriers Assn.
 Independent Automobile Dealers Assn. of Calif.
 Independent Insurance Agents & Brokers Assn. of Los Angeles
 Independent Insurance Agents Assn. of San Francisco
 Independent Oil & Gas Producers Assn.
 Independent Refiners Assn. of Calif., Inc.
 Industrial Caterers & Mobile Lunch Service Assn.
 International Service Station Dealers Assn.
 Long Beach Motor Car Dealers Assn.
 Los Angeles Parking Assn.
 Lumber Assn. of Southern Calif.
 Lumber Merchants Assn. of Northern California
 Motor Car Dealers Assn. of Orange County
 Motor Car Dealers Assn. of San Diego
 Motor Car Dealers Assn. of Southern Calif.
 National Auto & Truck Wreckers Assn.
 National Automobile Club
 National Automobile Dealers Assn.
 North Coast Builders Exchange
 North Coast Grape Growers Assn.
 Northern Calif. Dairy Assn.
 Northern Calif. Grocers Assn.
 Northern Calif. Motor Car Dealers Assn.
 Pacific Egg & Poultry Assn.
 Pacific Southwest Distributors Assn.
 Parking & Highway Improvement Contractors Assn.

Plumbing, Heating & Cooling
 Contractors of Los Angeles
 Portland Cement Assn.
 Randall Motor Club, Inc.
 Recreation Vehicle Industry
 Assn.
 Redwood Empire Assn.
 Retail Furniture Assn. of
 Calif.
 Roofing Contractors Assn.
 of Calif.
 Sacramento Hotel, Restaurant
 & Tavern Assn.
 Sacramento Motel & Apartment
 Training Institute
 San Diego County Rock Producers
 Assn.
 San Diego Highway Development
 Assn., Inc.
 San Diego Lumber & Wood
 Products Assn.
 San Francisco Garage &
 Parking Assn.
 San Francisco Hotel Assn.
 Serve Yourself & Multiple
 Pump Assn.
 So. Calif. Beer Distributors
 Assn.
 So. Calif. Businessmen's
 Assn.
 So. Calif. Ready-Mixed Concrete
 & Rock Products Assn.
 So. Calif. Restaurant Assn.
 So. Calif. Rock Products Assn.
 So. Calif. Tire Dealers &
 Retreaders Assn.
 So. Calif. Trailer Rental
 Yard Assn.
 Sun Maid Raisin Growers of
 Calif.
 Textile Rental Service Assn.
 Trailer Coach Assn.
 Western Council of Private
 Fleet Operators, Inc.
 Western Dairymen's Assn.
 Western Growers Assn.
 Western Highway Institute
 Western Liquid Gas Assn.
 Western Mobilehome Assn.
 Western Oil & Gas Assn.
 Western States Meat Packers
 Assn.
 AMERCO
 American Trucking Assns.
 Armstrong Rubber Co.
 Atlantic Richfield Co.
 Battery Council International
 Calif. Real Estate Assn.
 Central City Assn. of Los
 Angeles
 Chrysler Corporation
 City of Commerce
 Clayton Manufacturing Co.
 Council of State Governments
 A. E. Davis & Co.
 Eaton Corporation
 Farmers Insurance Group
 Firestone Tire & Rubber Co.
 Ford Motor Company
 Fruehauf Corporation
 General Motors Corporation
 GMC Truck & Coach Division
 B. F. Goodrich Tire Co.
 Goodyear Tire & Rubber Co.
 Greater Los Angeles National
 Safety Council
 Greyhound Lines - West
 Hertz Corporation
 Holt Brothers
 Horseless Carriage Club of
 America
 Humble Oil & Refining Co.
 National Safety Council
 Northern American Rockwell
 Motor Vehicle Manufacturers Assn.
 Oliver Tire & Rubber Co.
 Pacific Intermountain Express Co.
 Parker-Seal Co.
 Phillips Petroleum
 So. Calif. Transportation
 Action Committee
 Southwest Portland Cement Co.
 Standard Oil Co. of Calif.
 Sunkist Growers, Inc.
 Sunsweet Growers, Inc.
 Union Oil Co. of Calif.
 Uniroyal
 Western States Auto Body News

Resolution adopted by the Connecticut Highway Users Conference at Connecticut Highway Users Conference meeting, December 6, 1974:

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U.S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of New England; now

THEREFORE, be it resolved that the Connecticut Highway Users Conference give full support to efforts being made to develop offshore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Connecticut Highway Users Conference includes:

Conn. Nurserymen's Association	United Adv. Corp. of Conn.
Conn. Rural Letter Carriers Assn.	Greater Hartford Chamber of Commerce
National Safety Council	Roncari Industries, Inc.
Motor Transport Assoc. of Conn.	United Commercial Travelers
Conn. Motor Club, AAA	Viking Baking Company
Eastern Greyhound Lines	Conn. Automotive Trades Assn.
Conn. Food Stores Assn.	Firestone Tire & Rubber Co.
Conn. State Grange	Moriarty Bros.
Bolte Advertising Co.	Conn. Society of Civil Eng., Inc.
New Haven Trap Rock Co.	Fruehauf Trailer Co.
Conn. Light & Power Co.	Firestone Stores
Conn. Soft Drink Assoc., Inc.	Automobile Club of Hartford
Conn. Petroleum Carriers Assn.	Uniroyal, Inc.
Southern N.E. Telephone Co.	Conn. Bakers Association
Greater Hartford Flood Commission	Conn. Farm Bureau Association
Conn. Construction Industries Assn.	Travelers Insurance Company
Conn. Motel Association	New England Mobilehome Association
Conn. Petroleum Association	Yankee Milk
Conn. Tire Dealers Association	Verkade's Nursery
Conn. Assn. of Street & Highway Officials	Conn. Conference of Farm Organizations
Automobile Legal Association	
Armstrong Rubber Co.	

Resolution adopted as addendum to Florida Highway Users Federation Policy Statement, May, 1974:

Energy -- The Federation recognizes energy as a crucial concern of all Americans. When shortages develop, sacrifices should be equitable. Distribution decisions should take into consideration the reality that economic development often is based on highway travel, especially in Florida where both agriculture and tourism bring billions of dollars into our economy.

Efforts should be continued to discover new sources of petroleum. Offshore exploration should be considered when ecological risks are minimized.

New sources of energy must be developed. If public funds should be considered necessary, the responsibility should fall on all Americans.

The Federation recommends the following be considered as among possible energy conserving measures and urges they be adopted whenever appropriate:

- (1) Improved traffic control.
- (2) Carpooling
- (3) Exclusive lanes on highways at peak traffic periods for high occupancy vehicles.

The membership of the Florida Highway Users Federation includes:

Allied Gasoline Retailers Assn. of Florida	Chase & Company Chase Groves, Inc.
Assoc. General Contractors of America, Fla. State Council	Dade County Citizens Safety Council
Assoc. General Contractors - Central Florida Chapter	Deerfield Groves
Assoc. General Contractors - West Coast Chapter	East Fla. Division - AAA
Assoc. General Contractors - South Florida Chapter	Firestone Tire & Rubber Co.
Associated Industries of Fla.	Florida Agricultural Council
Automotive Boosters Club	Florida Assn. of Insurance Agents
Automotive Service Industries Association	Florida Attractions Assn.
Bal Harbour Shops, Inc.	Florida Automobile Dealers Assn.
Beer Industry of Florida	Fla. Automotive Service Council
Borden's Dairy	Fla. Automotive Wholesalers Assn.
Broward Safety Council	Florida Cannery Assn.
	Florida CATRALA
	Florida Citrus Mutual
	Florida Dairy Products Assn.
	Florida Farm Bureau Federation
	Florida Fresh Citrus Shippers Assn.
	Florida Fruit & Vegetable Assn.

Membership of the Florida Highway Users Federation (cont'd.)

Florida Gift Fruit Shippers Assn.	Growers & Shippers League of Fla.
Florida Hotel & Motor Hotel Assn.	Indian River Citrus League
Fla. Independent Automobile Dealers Association	National Assn. for Stock Car Auto Racing
Florida L-P Gas Association	Orange Blossom Trail Association
Fla. Lumber & Building Material Dealers Assn.	Peninsula Motor Club - AAA
Florida Mobilehome & Recreational Vehicle Assn.	Robbins Manufacturing Co.
Florida Petroleum Council	Seald-Sweet Growers, Inc.
Florida Petroleum Marketers Assn.	State Assn. of County Commissioners of Florida
Florida Poultry Processors Assn.	St. Petersburg Motor Club - AAA
Florida Restaurant Assn.	South Fla. Automobile Dealers Assn.
Florida Rural Letter Carriers Assn.	Southern Bell Telephone & Telegraph Company
Florida Soft Drink Assn.	Uniroyal
Fla. State Chamber of Commerce	United Commercial Travelers
Florida State Grange	Waverly Growers
Fla. Transportation Builders Assn.	
Florida Trucking Association	
Gray Truck Lines	
Greater Jacksonville Safety Council	
Greater Tampa Citizens Safety Council	
Greyhound Lines - East	

* * *

Resolution adopted by the Georgia Highway Users Conference at the Georgia Highway Users Conference meeting January 9, 1975:

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U.S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Georgia and the Southeast;

NOW, THEREFORE, BE IT RESOLVED THAT the GEORGIA HIGHWAY USERS CONFERENCE give full support to efforts being made to develop offshore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Georgia Highway Users Conference includes:

Associated General Contractors of America - Georgia Branch	Ga. Municipal Association
Association of County Commissioners of Georgia	Ga. Oilmen's Association
Atlanta Automobile Association	Ga. Poultry Association
Automotive Boosters Club B-6	Ga. Restaurant Assn.
Firestone Tire & Rubber Co.	Ga. Safety Council, Inc.
Ford Motor Co.	Ga. Rural Letter Carriers Assn.
Fruehauf Trailer Company	Ga. Soft Drink Assn.
Ga. Assn. of Petroleum Retailers	Ga. State Tire Dealers Assn.
Ga. Automobile Dealers Assn.	Ga. Wholesale Grocers Assn.
Ga. Automotive Wholesalers Assn.	Greyhound Lines - East
Ga. Assn. of Independent Insurance Agents	Petroleum Council of Georgia
Ga. Cannery Association	Portland Cement Assn.
Ga. Dairy Association	Southeastern Stages, Inc.
Ga. Farm Bureau Federation	Southern Bell Telephone & Telegraph Co.
Ga. Highway Contractors Assn.	Travelers Protective Assn.
Ga. Hotel-Motel Assn.	Turner Advertising Co.
Ga. Mobile Homes Association	Uniroyal Inc.
Ga. Motor Club - AAA	
Ga. Motor Trucking Assn.	

* * *

Resolution adopted by the Illinois Highway Users Conference at the Illinois Highway Users Conference meeting February 25, 1975:

WHEREAS the State of Illinois is vitally affected in its industry, agriculture and travel by domestic energy shortages and the high cost of imported foreign petroleum, and

WHEREAS approximately one-third of the crude oil used in this country continues to be imported with resultant high costs adversely affecting the economy of the United States and the State of Illinois, and

WHEREAS there is an obvious and vital need for new domestic sources of oil and natural gas in the United States, and especially for sources of oil and natural gas in those areas where shortages have been most pronounced, and

WHEREAS development of these resources should be an integral part of this nation's long-range energy-use planning, and

WHEREAS it is believed there are vast new resources of oil and natural gas off the Atlantic, Pacific and Gulf Coasts of the United States, and

WHEREAS development of these resources with proper environmental safeguards would alleviate the energy shortage, particularly of states along the Atlantic Coast, thus making more of the present inland domestic sources available for use in the midwestern area of the nation including the State of Illinois, now

THEREFORE BE IT RESOLVED that the Illinois Highway Users Conference gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic, Pacific and Gulf Coasts of the United States

The membership of the Illinois Highway Users Conference includes:

Allied Florists Assn. of Illinois	American Warehousemen's Assn.
Allstate Insurance Company	Asphalt Institute
AMERCO	Associated Construction Publications
American Bar Association	Associated Beer Dist. of Illinois
American Farm Bureau Service Co.	Assn. of Electric Cooperatives
American Mutual Insurance Alliance	Associated Equipment Distributors
Amer. Nat'l. Cattlemen's Assn.	Associated Food Retailers of
American Oil Motor Club	Greater Chicago
American Petroleum Institute	Associated General Contractors
Central Region	of Illinois
American Public Works Assn.	Auto Driveway Company
American Trucking Association	Auto Engine Rebuilders Association

The membership of the Illinois Highway Users Conference (cont'd.)

Automatic Car Wash Assn., Int.
 Automotive Affiliated Representatives
 Automobile Boosters Club, Inc.
 Automotive Electric Association
 Automotive Engine Rebuilders
 Automotive Mechanics Society
 Automotive Serv. Councils of
 America, Inc.
 Automotive Service Industry Assn.
 Automotive Wholesalers of Illinois
 Bakers Club of Chicago
 Burlington Truck Lines, Inc.
 Carbonated Beverage Mfgs. of Ill.
 Car Carrier, Inc.
 Wm. J. Cassidy Tire & Auto Supply Co.
 Cast Iron Pipe Research Assn.
 Cartage Exchange of Chicago
 Caterpillar Tractor Co.
 Central Ill. Public Service Co.
 Chicago & Ill. Restaurant Assn.
 Chicago Associates
 Chicago Assn. of Commerce & Industry
 Chicago Automobile Trade Assn.
 Chicago Beer Wholesalers Assn.
 Chicago District Ice Assn.
 Chicago Dry Cleaners Assn.
 Chicago Heights Mfgs. Assn.
 Chicago Motor Club- AAA
 Chicago Suburban Motor Carriers Assn.
 Chicago Tire Dealers Assn.
 Cicero Mfgs. Association
 Coca-Cola Bottling Company
 Continental Air Transport Co.
 Council of State Governments
 Dean Dairy Company
 Deluxe Trailways
 Dodge Construction News
 Dump Truck Owners Assn.
 Du Page County Trucks & Excavators
 Association, Inc.
 East Side Associated Industries
 Engine Manufacturers Association
 Farm Cooperatives
 Farm-To-Market Truckers Association
 Firestone Tire & Rubber Co.
 First National Bank of Chicago
 Ford Motor Company
 Fruehauf Trailer Company
 General Federation of Women's Clubs
 Grain & Feed Association of Illinois
 Greater Chicago Gasoline Marketers Assn.
 Greater Chicago Hotel & Motel Assn.
 Greater Chicago Safety Council, Inc.
 Gasoline Retailers Assn. of
 Northern Illinois, Inc.
 Gray Line of Chicago
 Greyhound Lines
 Goodyear Tire & Rubber Company
 Brighton Engineering Company
 Gustafson Oil Company
 Illinois Agricultural Assn.
 Illinois Asphalt Pavement Assn.
 Illinois Assn. of Plumbing-Heating-
 Cooling Contractors
 Illinois Assn. of Supervisors,
 County Commissioners & County
 Supervisors of Highways
 Illinois Assn. of Tobacco &
 Candy Dist.
 Ill. Assn. of Tobacco Dist.
 Illinois Automotive Trade Assn.
 Illinois Bakers Assn.
 Illinois Bell Telephone Co.
 Illinois Bus Association
 Illinois Cannery Association
 Illinois CATRALA
 Illinois Conference of PTA Assn.
 Illinois Dump Truck Assn.
 Illinois Federation of Women's Clubs
 Illinois Food Retailers Assn.
 Illinois Farmers Union
 Illinois Funeral Dir. Assn.
 Illinois Hotel & Motel Assn.
 Ill. Land Impvt. Contrs. Assn.
 Illinois Laundry Association
 Illinois Livestock Feeders Assn.
 Illinois LP Gas Association
 Illinois Lumber & Material Dealers
 Association, Inc.
 Illinois Manufacturers Association
 Illinois Mobile Home Association
 Illinois Mobile Park Oper. Assn.
 Illinois Motorcycle Dealers Assn.
 Ill. Motor Truck Operators Assn.
 Ill. Movers & Warehouse Assn.
 Illinois Municipal League
 Ill. Petroleum Council
 Ill. Petroleum Marketers Assn.
 Ill. Refuse Disposal Assn.
 Ill. Retail Farm Equip. Assn.
 Ill. Retail Hardware Assn.
 Ill. Retail Merchants Assn.
 Ill. Rural Letter Carriers Assn.
 Ill. Road Builders Assn.

The membership of the Illinois Highway Users Conference (cont'd.)

Ill. Service Station Operators Assn.
 Ill. Society of Professional Engr.
 Ill. State Chamber of Commerce
 Ill. State Grange
 Ill. State Tire Dealers Assn.
 Ill. Telephone Association
 Ill. Terr. Mfgs. Traf. League
 Ill. Trucking Associations, Inc.
 Ill. Trk. Equip. Cont. Assn.
 Indep. Insurance Agents of Illinois
 Inter-Federation of Rec. Veh. Users
 International Harvester Co.
 Inter. Taxicab Association
 Intrastate Motor Carrier
 Kempler Insurance Co.
 Kenosha Auto Transport Corp.
 Kraft Foods Division of National
 Diary Products
 Land Improvement Contractors
 of America
 League of American Wheelman, Inc.
 League of Women Voters
 Lumber Trade Assn. of Greater Chicago
 Mack Truck, Inc.
 Marathon Oil Company
 Market Service Assn.
 Mazda Motors of America
 Midwest Dairy Prod. Ass., Inc.
 Minnesota Mining & Mfg. Co.
 Mobile Home Dealers Nat'l. Assn.
 Mobile Homes Mfg. Assn.
 Montgomery Ward & Co.
 Motor Truck Transportation Assn.
 Motor Vehicle Mfg. Assn.
 NADA
 Natl. Association of School Bus
 Contract Operators
 National Automotive Parts Assn.
 Nat'l. Bus Traffic Assn.
 Nat'l. Corrugated Steel Pipe Assn.
 National Carwash Council
 National Furniture Warehousemen's
 Association
 National L.P. Gas Association
 National Safety Council
 NTDRA
 National Truck Leasing System
 National Society of State Legis.
 Navajo Freight Lines
 Northern Ill. Leasing, Inc.
 Oil Heat Marketers Assn., Inc.
 Piston Ring Mfg. Group
 Portland Cement Association
 Power Transmission Dist. Assn.
 Pure Oil Company Union 76
 Quaker Oats Company
 Rec. Vehicle Dealers of America
 Rec. Vehicle Institute, Inc.
 Road Information Program
 Roger Cartage Company
 Ryder Truck Rental, Inc.
 Sears, Roebuck & Co.
 Shell Oil Company
 Standard Oil Company
 State Farm Mutual Insurance Co.
 Southern Illinois University
 Swift Fresh Meats Co.
 Taxpayers Federation of Illinois
 Travelers Protective Association
 Trk. Trailer Mfg. Assn.
 Uniroyal, Inc.
 United Automobile Dealer Assn.
 United Commercial Travelers
 Wholesale Grocers Assn. of Chicago
 WGN Continental Broadcasting Co.
 Yellow Cab Company
 Yellow Cab & Livery Co.

Resolution adopted at the meeting of Kentucky Highway Users Conference on February 21, 1975.

WHEREAS, our nation is currently experiencing poor economic conditions and high unemployment, and

WHEREAS, significant cause for these conditions can be traced to foreign oil producing countries, and

WHEREAS, our nation is striving to become energy independent to avoid such future predicaments, and

WHEREAS, it is believed that the United States has vast undeveloped sources of oil and gas, and

WHEREAS, these sources could be developed with proper environmental safeguards and contribute toward making us energy independent,

NOW, THEREFORE, LET IT BE RESOLVED, that the Kentucky Highway Users Conference supports efforts for exploration and development of these new sources.

BE IT FURTHER RESOLVED that the Conference favors deregulation of natural gas prices at the wellhead.

The membership of the Kentucky Highway Users Conference includes:

Associated Industries of Ky.	Ky. Rural Letter Carriers Assn.
Blue Grass Automobile Club	Ky. Telephone Assn.
Burley Tobacco Growers Assn.	Ky. Wholesale Grocers Assn.
CATRALA of Ky.	Ky. Wholesale Liquor Dealers
Dairyman, Inc.	Kyana Milk Producers, Inc.
Dairy Products Assn. of Ky.	Louisville Area Chamber of
Greyhound Lines - East	Commerce
Independent Garage Owners of Ky.	Louisville Automobile Club
Independent Insurance Agents of	Louisville Safety Council
Ky.	Mobile Homes Assn. of Ky.
Ky. Auto Association - NAA	Outdoor Advertising Assn. of Ky.
Ky. Automobile Dealers Assn.	Portland Cement Assn.
Ky. Automotive Wholesalers Assn.	Ryder Truck Rental
Ky. Beer Wholesalers Assn.	So. Central Bell Telephone &
Ky. Better Roads Council	Telegraph Co.
Ky. Bottlers of Carbonated	Travelers Protective Assn.,
Beverages	Ky. Division
Ky. Branch, National Star	Uniroyal, Inc.
Route Mail Carriers Assn.	Ky. Independent College Foundation
Ky. Chain Stores Council	Henderson Electric Co.
Ky. Crushed Stone Assn.	Ky. Society of Professional
Ky. Chamber of Commerce	Engineers
Ky. Cooperative Council	Ky. Assn. of Highway Contractors
Ky. Farm Bureau Federation	
Ky. Farm Equipment Dealers Assn.	
Ky. Hotel-Motel Assn.	
Ky. Motel Assn.	
Ky. Motor Transport Assn.	
Ky. Petroleum Council	
Ky. Petroleum Marketers Assn.	
Ky. Restaurant Assn.	
Ky. Retail Federation	
Ky. Retail Lumber Dealers Assn.	

Resolution adopted by the Michigan Highway Users Federation at Michigan Highway Users Federation meeting March 5, 1975:

WHEREAS, the country's energy supplies of oil and natural gas have been deteriorating rapidly, thus causing an unhealthy dependence upon oil and natural gas from the midwest; and

WHEREAS, the dependency on foreign oil has dealt a damaging blow to the economy of the United States through exorbitant prices; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, the development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Michigan and the entire midwest; now

THEREFORE, BE IT RESOLVED that the Highway Users Federation of Michigan gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Michigan Highway Users Federation includes:

Allstate Insurance Company
Associate Petroleum Industries
of Michigan
Automobile Club of Michigan
Central Business District Assn.
Detroit Automobile Dealers Assn.
Earle Equipment Company
East Michigan Tourist Association
The Ford Motor Company
General Motors Corporation
Greater Detroit Chamber of Commerce
Greater Grand Rapids Chamber of
Commerce
Greater Lansing Chamber of Commerce
Independent Insurance Agents of
Michigan, Inc.
Marlette Homes, Inc.
Michigan Asphalt Paving Association
Michigan Hotel & Motor Hotel Assn.
Michigan Licensed Beverage Assn.
Michigan Manufacturers Assn.
Michigan Milk Producers Assn.
Michigan Mobile Home & Recreational
Vehicle Institute
Michigan Motor Bus Association
Michigan Movers & Warehousemen's Assn.

Michigan Petroleum Association
Michigan Soft Drink Association
Michigan State Grange
Michigan Trucking Association
National Automobile Transporters
Association
Outdoor Advertising Assn. of Michigan
Service Station Dealers Assn. of
Michigan
Safety Council of Greater Lansing
Traffic Safety Assn. of Detroit
Traffic Safety Assn. of Macomb County
Traffic Safety for Michigan

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Letter sent to Director of Bureau of Land Management on February 18, 1975, by Minnesota Highway Users Conference.

"We feel it is imperative that every reasonable effort be made to develop off-shore sources of oil and natural gas.

"Production of fuel for the nation's needs can be met from domestic sources only if we develop all resources available as rapidly as possible, with proper environmental safeguards.

"Please make this a part of the record on proposed increase in oil and gas leasing on the outer continental shelf."

The membership of the Minnesota Highway Users Conference includes:

Automobile Club of Minneapolis	Minn. Rural Letter Carriers Assn.
Automobile Club of St. Paul	Minn. State Automobile Assn.
Automotive Service Industry Assn.	Minn. State Grange
Central Livestock Assn., Inc.	Minn. Timber Producers Assn.
Dairy Processors, Inc.	Minn. Transport Service Assn.
American Dairy Assn. of Minn.	Northwest Petroleum Assn.
Farmers Elevator Assn. of Minn.	Red River Valley Potato Growers Assn.
Farmers Union Central Exchange	St. Paul Union Stockyards
Farmers Union Marketing Assn.	Super Valu Stores, Inc.
Firestone Tire & Rubber Co.	United Commercial Travelers of America
Fruehauf Trailer Co.	Uniroyal, Inc.
Greyhound Lines - West	Motor Vehicle Manufacturers Assn.
Independent Garage Owners of Minn., Inc.	Cleaners & Launderers Institute
International Harvester Co.	Consolidated Freightways, Inc.
Jefferson Transportation Co.	Ford Motor Co.
Land O'Lakes, Inc.	General Motors Corp.
Greater Metropolitan Automobile Dealers Assn.	B. F. Goodrich Co.
Mid-America Dairymen, Inc.	Goodyear Tire & Rubber Co.
Midland Cooperatives, Inc.	Minn. Food Retailers Assn.
Minnesota Assn. of Cooperatives	Minn. Private Truck Council
Minn. Automobile Dealers Assn.	Minn. Hotel, Resort & Restaurant Assns.
Minn. Automotive Wholesalers & Manufacturers Assn.	Minn. Turkey Growers Assn., Inc.
Minn. Bakers Assn.	Naegele Outdoor Advertising Co. of Minn., Inc.
Minn. Bear Wholesalers Assn.	Minn. Permit Truckers Assn.
Minn. Bottlers Assn.	Northwest Country Elevator Assn.
Minn. Bus Assn.	Northwestern Bell Telephone Co.
Minn. Canners & Freezers Assn.	Northwestern Lumbermen's Assn.
Minn. Farm Bureau Federation	Outdoor Advertising Assn. of Northern States
Minn. Farmers Union	Raymond Motor Transportation, Inc.
Minn. Mobile Home Assn.	Ruan Transport Corp.
Minn. Motel Assn.	Roadside Business Assn.
Minn. Motor Transport Assn.	W. F. Smith Tire & Battery Co.
Minn. Petroleum Council	Trailmobile, Inc.
Minn. Poultry, Butter & Egg Assn.	Minn. CATRALA 3M Company
International Taxicab Assn.	Retail Farm Equipment Assn.
Natl. Assn. of Women Highway Safety Leaders, Inc.	Dairies Federation of Minn.

Resolution adopted by the New Jersey Highway Users Conference at the New Jersey Highway Users Conference meeting January 22, 1975:

WHEREAS, New Jersey is the most densely populated and most heavily industrialized state in the Union and is suffering acutely from industrial cutbacks and resulting high unemployment rates to a great degree precipitated by domestic energy shortfalls and the high price of foreign petroleum, and

WHEREAS, New Jersey is dependent for more than sixty percent of its crude oil supplies on foreign sources and foreign oil producing countries which are severely damaging the United States economy, and

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, development of these resources should be an integral part of this nation's long range energy-use planning, and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with proper environmental safeguards, would alleviate the energy shortage and ease the economic burden of New Jersey; now

THEREFORE, be it resolved that the New Jersey Highway Users Conference gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the New Jersey Highway Users Conference includes:

American Petroleum Institute	New Jersey Bell
Automobile Club of Southern New Jersey	Firestone Tire & Rubber Company
Allstate Insurance Company	N.J. State Federation of Women's Clubs
New Jersey Manufacturers Assn.	N.J. Chamber of Commerce
Mobile Estates, Inc.	N.J. State Concrete Products Assn.
New Jersey Travel & Resort Assn.	Essex County Automotive Trade Assn.
N.J. Assn. of Chosen Freeholders	N.J. Gasoline Retailers Assn.
Utility Contractors Assn. of N.J., Inc.	N.J. Motor Truck Association
Building Contractors Assn. of New Jersey	Delaware Valley Propane Company
United Commercial Travelers	Tire Exchange Company
The Rubber Manufacturers Assn.	N.J. Citizens Highway Committee
Manhattan Transit Company	N.J. Taxpayers Assn.
General Motors Corporation	P.S. Coordinated Transport
Southern N.J. Development Council	United Milk Producers of N.J.
Gasoline Jobbers Division	

Membership of the New Jersey Highway Users Conference (cont'd)

New Jersey Assn. of Townships
 Greyhound Lines - East
 N.J. State Safety Council
 Outdoor Advertising Assn. of N.J.
 Jersey Fruit Cooperative Assn.
 Woodbridge Area Chamber of Commerce
 National Safety Council
 N.J. Furniture Whsmen's Association
 AFL-CIO Operating Engineers, Local 825
 Edwards and Kelcey
 N.J. Bottlers Association
 N.J. Automotive Jobbers Association
 Transport of N.J.
 North Jersey Auto Club - AAA
 Andy's Automotive Supplies, Inc.
 Automotive Rentals, Inc.
 New Jersey Farm Bureau
 N.J. State League of Municipalities
 N.J. Motor Bus Association
 Somerset Bus Co., Inc.
 Motor Vehicle Manufacturing Assn.
 New Jersey Rural Letter Carriers Assn.
 N.J. Mobile Home Association
 Petry Storage Company
 P. Ballantine & Sons
 P.S. Coordinated Transport
 Auto Club of Central N.J. - AAA
 Porter & Ripa Associates, Inc.
 Bell Telephone Laboratories
 Uniroyal, Inc.
 New Jersey Assn. of Townships
 U. S. Rubber Company
 N. J. State Grange
 Exxon Company, U.S.A.
 West Jersey Auto Club - AAA

N.J. Society of Prof. Engrs.
 Outdoor Advertising Assn. of N.J.
 Atlantic City Market Growers' Coop.
 Merchandise Whse. Association
 Mercer County Freeholders Board
 Chrysler Corporation
 Associated General Contractors
 N.J. Automobile Club - AAA
 Mercer Metro
 Avis Rent-A-Car
 Assn. of Interstate Motor Carriers
 United Fresh Fruit & Veg. Assn.
 Vegetable Growers of New Jersey
 New Jersey Manufacturers Assn.
 New Jersey Conference of Mayors
 United Milk Producers of N.J.

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Resolution adopted as part of policy statement by the New York State Highway Users Conference meeting January 16, 1975:

A continuing supply of motor fuels is critical to a sound economy. The threat of an Arab boycott must be minimized, and the growing dependence on foreign energy sources must be reversed.

WE URGE THE IMMEDIATE DEVELOPMENT OF ENERGY SOURCES OFF THE U.S. CONTINENTAL SHELF.

A program for intensive exploration of marine energies should begin at once, using all possible ecological safeguards.

We favor retention of the present schedule of percentage depletion allowances for extractive industries.

We favor elimination of Federal restrictions on natural gas at the well head.

The membership of the New York State Highway Users Conference includes:

N. Y. State Grange
 N. Y. State Motor Truck Assn.
 N. Y. Farm Bureau
 Greyhound
 Empire State Petroleum Council
 United Commercial Travelers Assn.
 General Motors Corporation
 Ellsworth Ice Cream
 NEDCO
 N. Y. State Department of
 Education
 Mack Trucks, Inc.
 N. Y. State Automotive Whole-
 salers Assn.
 Tri-County Excavators Assn.
 N. Y. Chamber of Commerce
 and Industry
 N. Y. State Rural Letter
 Carriers Assn.
 N. Y. State Petroleum Council
 Ford Motor Company
 Empire State Chamber of Commerce
 N. Y. State Auto Dealers Assn.
 Ice Cream Manufacturers Assn.
 N. Y. State Restaurant Assn.
 MVMA

Letter sent to Director, Bureau of Land Management on February 6, 1975, by North Dakota Highway Users Conference.

"In some parts of Washington, D. C., it seems to be pretty much of a 'business as usual' attitude -- the President striving to do something about our trade balance, the energy crisis, and the economy, and Congress more set on thwarting the President than in getting something done.

"A partial solution to the problem of self-sufficiency in energy is offered by Outer Continental Shelf development, but this will take a great deal of time and money.

"Chairman Roningen and I (Secretary-Treasurer James B. Connolly), in behalf of the Highway Users of North Dakota, urge you to do all in your power to expedite action in this vital undertaking. While the environment is not to be disregarded, the first consideration must be the welfare of the people."

The membership of the North Dakota Highway Users Conference includes:

The Asphalt Institute	N. D. Mobile Home Assn.
Associated General Contractors of N. D.	N. D. Motor Carriers Assn.
Automotive Service Industry Assn.	N. D. Optometric Assn.
Barrett Mobile Home Transport, Inc.	N. D. Petroleum Council
Bismarck Safety Council	Rocky Mountain Oil & Gas Assn.
CATRALA	N. D. Retail Gasoline Dealers Assn.
Central Livestock Assn.	N. D. Retailers Assn.
Farmers Grain Dealers Assn. of N. D.	N. D. Rural Letter Carriers Assn.
Firestone Tire & Rubber Co.	N. D. Stockmen's Assn.
Greater N. D. Association	Northwest Petroleum Assn.
Greyhound Lines - West	Northwestern Bell Telephone Co.
Insurance Federation of N. D.	Outdoor Advertising Assn. of N. D.
International Harvester Co.	Portland Cement Assn.
Cloverdale Foods Co.	Red River Valley Potato Growers Assn.
3M Co.	Uniroyal, Inc.
Minn.-Wis. Pipeline Co.	West Fargo Stockyards
Mont.-Dakota Utilities Co.	United Commercial Travelers of N. D.
N. D. Automobile Club	National Assn. of Women Highway Safety Leaders
N. D. Automobile Dealers Assn.	Motor Vehicle Manufacturers Assn.
N. D. Automotive Wholesalers Assn.	State Bar Assn. of N. D.
N. D. Bakers Assn.	General Motors Corp.
N. D. Bankers Assn.	Ford Motor Co.
N. D. Beer Wholesalers Assn.	Houck Transport
N. D. Beverage Dealers Assn.	
N. D. County Commissioners Assn.	
N. D. County Engineers Assn.	
N. D. Farm Bureau	
N. D. Farmers Union	
N. D. Federation of Labor	
N. D. Food & Lodging Assn.	
N. D. Hotel Assn.	
N. D. League of Cities	
N. D. Lignite Council	
Nodak Insurance	

Adopted as part of policy statement by Oklahoma Highway Users Conference meeting on February 12, 1975.

"Highway transportation mobility is dependent on petroleum products and we in Oklahoma have contributed a large share of this nation's energy needs. We urge the immediate development of off-shore oil and gas production.

"We fully support the necessity of reducing petroleum imports and recognize that highway transportation must bear at least its full share of sacrifices. However, we oppose Federal attempts to convert the entire crude oil import fees into taxes only on motor fuels."

The membership of the Oklahoma Highway Users Conference includes:

Allstate Insurance Co.	Okla. Agricultural Cooperative Council
American Institute of Constructors	Okla. Apartment Owners Assn.
American Trailers, Inc.	Okla. Asphalt Pavement Assn.
APCO Oil Corporation	Okla. Assn. of Electric Cooperatives
Associated Industries of Okla.	Okla. Assn. of Insurance Agents
Associated Milk Producers of Okla.	Okla. Assn. of Women Highway Safety Leaders
Associated Motor Carriers of Okla.	Okla. Automobile Dealers Assn.
Associated Equipment Dealers of Okla.	Okla. Bankers Assn.
Association of Okla. General Contractors	Okla. Bottlers of Carbonated Beverages
Automobile Club of Okla.	Okla. Cattlemen's Assn.
Automotive Wholesalers of Okla.	Okla. City Chamber of Commerce
Bartlesville Chamber of Commerce	Okla. City Motor Car Dealers Assn.
Big Chief Drilling Co.	Okla. Consumer Finance Assn.
CMI Corporation	Okla. Division, AAA
Cities Service Oil Co.	Okla. Driver Education Assn.
Continental Trailways	Okla. Farm Bureau
Dewey Rocky Mountain Cement Co.	Okla. Farmers Union
Farmers Cooperative Grain Dealers Assn. of Okla.	Okla. Federation of Women's Clubs
Firestone Tire & Rubber Co.	Okla. Good Roads & Streets Assn.
General Motors Corporation	Okla. Hardware & Implement Assn.
Greater Okla. City Safety Council	Okla. Hotel & Motel Assn.
Great Plains Mobile Housing Institute	Okla. Independent Petroleum Retailers Assn.
Greyhound Lines - West	Okla. Jaycees
Independent Garage Owners of Okla.	Okla. L-P Gas Assn.
Insurance Women of Okla. City	Okla. Lumbermen's Assn.
International Harvester Co.	Okla. Motorcycle Industry Council
K-G Lines	Okla. Municipal League
Kerr-McGee Corporation	Okla. Oil Marketers Assn.
Matrix Co.	Okla. Optometric Assn.
Metropolitan Tulsa Chamber of Commerce	Okla. Petroleum Council
Mid-Continent Casualty Co.	Okla. Public Expenditures Council
Mid-Continent Oil & Gas Assn.	Okla. Restaurant Assn.
3M Co.	Okla. Retail Merchants Assn.
Mobile Home Assn. of Okla.	Okla. Rural Letter Carriers Assn.
	Okla. Safety Council
	Okla. Society of Professional Engineers
	Okla. Star Route Mail Carriers Assn.
	Okla. State Chamber of Commerce

Okla. State Grange
Okla. Telephone Assn.
Petroleum Motor Transport Assn.
Phillips Petroleum Co.
Portland Cement Assn.
Printing Industry of Okla.
Ryder Truck Rental, Inc.
Silvey Companies
Skelly Oil Company
Southwest Center for Safety
Southwestern Bell Telephone Co.
Southwestern Insurance Information
Service
Standard Industries, Inc.
Travelers Protective Assn.
Tulsa Area Safety Council
Tulsa Automobile Dealers Assn.
U-Haul Truck & Trailer Co.
Union Equity Cooperative Exchange
Unit Parts, Borg-Warner Corp.
United Commercial Travelers
Westinghouse Corporation
Woods Industries, Inc.

Letter sent to Director of the Bureau of Land Management on February 18, 1975, by Oregon Highway Users Federation.

"The Oregon Highway Users Federation in executive session on February 11, 1975, took the following action and recommendations:

"The Oregon Highway Users Federation urges that off-shore continental exploration for oil and gas should be pressed as expeditiously as possible. The national interest requires development of all energy resources at the earliest time consistent with economic and environmental factors. Off-shore impact studies have demonstrated minimal risks in exploration and production of petroleum products, and we urge that impediments to the program of leasing be minimized."

The membership of the Oregon Highway Users Federation includes:

Agricultural Cooperative Council of Ore.	Ore. Rural Letter Carriers Assn.
Asphalt Institute	Ore. Sanitary Service Institute
Associated General Contractors of America, Ore.-Columbia Chapter	Ore. School Bus Contractors Assn.
Association of Ore. Industries	Ore. State Grange
Association of Ore. Counties	Ore. State Motor Assn.
CATRALA of Ore.	Ore. State Pharmaceutical Assn.
Chevron Asphalt Co.	Ore. Sheep Growers Assn.
Farmers Insurance Group	Ore. Soft Drink Assn.
Firestone Tire & Rubber Co.	Ore. Tax Research, Inc.
George Dewey & Associates	Ore. Tire Dealers Assn.
Independent Garage Owners Assn.	Ore. Trucking Assns.
Portland Cement Assn.	Ore. Tire Dealers Assn.
Northwest Cannery & Freezers Assn.	Ore.-Wash. Farmers Union
Ore. Assn. of Insurance Agents	Ore.-Wash. Vegetable & Fruit Growers Assn.
Ore. Auto Truck Dismantlers Assn.	Ore. Wheat Growers League
Ore. Automobile Dealers Assn.	Outdoor Advertising Assn. of Ore.
Ore. Automobile Insurance Co.	Pacific Northwest Bell Telephone Co.
Ore. Automotive Wholesalers Assn.	Pacific Northwest Hardware & Implement Dealers Assn.
Oreg. Bakers Assn.	Pacific Trailways, Inc.
Ore. Beer Distributors Assn.	Portland Automotive Trades Assn.
Ore. Cattlemen's Assn.	Portland Chamber of Commerce
Ore. Coast Assn.	Portland Traffic Safety Commission
Ore. Concrete Pipe Manufacturers Assn.	Star Route Mail Carriers Assn.
Ore. Dairy Industries	Trailer Coach Assn., Ore. Chapter
Ore. Farm Bureau Federation	Travelers Protective Assn. of America
Ore. Food and Seed Dealers Assn.	3M Company
Ore. Gasoline Dealers Assn., Inc.	United Commercial Travelers
Ore. Hotel-Motel Assn.	Western Building Materials Assn.
Ore. Independent Auto Dealers Assn.	Western Greyhound Lines
Ore. L-P Gas Assn.	Western Oil & Gas Assn.
Ore. Logging Conference	Uniroyal, Inc.
Ore. Log Truckers Assn.	Washington County Highway Safety Council
Ore. Milk Producers Assn.	Freightliner, Inc.
Ore. Motor Hotel Assn.	Western Environmental Trades Assn.
Ore. Oil Jobbers Assn.	Recreation & Vacation Vehicle Assn.
Ore. Optometric Assn.	3M Co.
Ore. Optometric Assn.	American Leasing
Ore. Petroleum Industries	

Statement for the record of public hearing of February 11-13, 1975, of Bureau of Land Management on the proposed increase in oil and gas leasing on the outer continental shelf presented by the Pennsylvania Highway Users Conference.

"My name is Edwin W. Parkinson of 1925 North Front Street, Harrisburg, Pa., and I am the Chairman of the Pennsylvania Highway Users Conference.

"As a statewide federation of 40 or more separate organizations united in a common interest in highway transportation, the Conference is deeply concerned over the nation's present energy situation in all its aspects, but especially with regard to future adequate supplies of the fuels required for highway travel and commerce.

"We deplore the combination of circumstances that have contributed to this nation's declining reserves of petroleum, and our resulting dependence upon foreign oil, with all its uncertainties as well as excessive costs.

"We think it imperative now for this nation to work toward reestablishing its position of self-sufficiency in petroleum resources, by proceeding, without delay, to permit the exploration and development of new domestic reserves of oil and gas, wherever they seem most likely to be found.

"For so long as there is the possibility of adding to this nation's reserves the vast oil and gas resources geologists believe to exist within the area of the Atlantic continental shelf, we think this potential should be fully explored, and without further delay.

"Moreover, with all the safeguards that would be imposed by law and assured by today's technology, we think the risk of damage to the marine and coastal environment would be negligible, and the potential advantage to the nation, tremendous."

The membership of the Pennsylvania Highway Users Conference includes:

Associated Pennsylvania Constructors	Pa. Bakers Assn.
Associated Petroleum Industries of Pa.	Pa. Bus & School Bus Assn.
Bell Telephone Co. of Pa.	Pa. Chamber of Commerce
Dairyalea Cooperative, Inc.	Pa. Cooperative Potato Growers
Dela. Valley Tire Dealers Assn.	Pa. Farmers Assn.
Ford Motor Co.	Pa. Farm & Power Equipment Assn.
General Analytics, Inc.	Pa. Grocers Assn.
Greyhound Lines - East	Pa. Highway Information Assn.
Insurance Federation of Pa.	Pa. Hotel-Motor Inn Assn.
Independent Garage Owners of Pa.	Pa. Independent Automobile Dealers Assn.
Malt Beverage Distributors Assn. of Pa.	Pa. Independent Telephone Assn.
Middle Atlantic Lumbermen's Assn.	Pa. Manufactured Housing Assn.
Outdoor Advertising Assn. of Pa.	Pa. Motor Truck Assn.
Pennsylvania AAA Federation	Pa. Petroleum Assn.
Pa. Asphalt Pavement Assn.	Pa. Ready-Mixed Concrete Assn.
Pa. Assn. of Insurance Agents	Pa. Restaurant Assn.
Pa. Association of Milk Dealers	Pa. Recreational Vehicle & Camping Assn.
Pa. Automotive Assn.	Pa. Retailers Assn., Inc.
Pa. Automotive Wholesalers Assn.	Pa. Rural Letter Carriers Assn.
Portland Cement Assn.	Pa. State Grange
	Pa. State Brewer's Assn.

Resolution adopted by Rhode Island Highway Users Conference meeting on December 27, 1974:

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U. S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of New England; now

THEREFORE, be it resolved that the Rhode Island Highway Users Conference give full support to efforts being made to develop off-shore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Rhode Island Highway Users Conference includes:

Automobile Club of R.I.	R. I. State Grange
Automobile Legal Assn.	R. I. Tire Dealers Assn.
Greyhound Lines	R. I. Truck Owners Assn.
Mack Trucks, Inc.	Bonanza Bus Lines, Inc.
New England Bakers Assn.	
New England Telephone Co.	
Petroleum Heat & Power Company of R. I.	
The Greater Providence Chamber of Commerce	
Providence Council United Commerical Travelers	
R. I. Automobile Dealers Assn.	
R. I. Assn., Women Highway Safety Leaders, Inc.	
R. I. Bottlers of Carbonated Beverages	
R. I. Council of Chamber of Commerce	
R. I. Council on Highway Safety	
R. I. Farm Bureau Federation	
R. I. Junior Chamber of Commerce	
R. I. Hotel & Motel Assn.	
R. I. Petroleum Assn.	
R. I. Road Builders Assn.	
R. I. Rural Letter Carriers Assn.	
R. I. League of Cities and Towns	

Resolution adopted by the South Carolina Highway Users Conference meeting February 18, 1975:

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, importation of petroleum from foreign oil producing countries is drastically damaging the U. S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States, and

WHEREAS, development of these resources with necessary environmental safeguards would alleviate the energy shortage and ease the economic burden of South Carolina and the South East;

NOW, THEREFORE, BE IT RESOLVED, that the South Carolina Highway Users Conference gives full support to efforts being made to develop off-shore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the South Carolina Highway Users Conference includes:

Allstate Insurance Company
 Independent Garage Owners of S.C.
 Associated General Contractors
 Carolina Motor Club
 Automotive Parts Wholesalers of
 S.C.
 Motor Transportation Assn. of S.C.
 S. C. Assn. of Launderers &
 Cleaners
 S. C. Soft Drink Assn.
 S. C. Automobile Dealers Assn.
 S. C. Bakers Council
 S. C. Farm Bureau Federation
 S. C. Oil Jobbers Assn.
 S. C. Asphalt Pavement Assn.
 S. C. Retail Council
 S. C. Rural Letter Carriers Assn.
 S. C. State Motor Club (NAA)
 S. C. Textile Manufacturers Assn.
 S. C. State Chamber of Commerce
 S. C. State Grange
 Manufactured Housing Institute
 of S.C.
 Travelers Protective Assn.
 S. C. Beer Assn.
 Brick Assn. of S. C.
 S. C. Safety Council
 Food Retailers Assn. of S. C.

Greyhound Lines - East
 Car and Truck Renting & Leasing
 Association
 S. C. Tire Dealers & Retreaders
 Association
 S. C. Dairy Assn.
 S. C. Innkeepers Assn.
 S. C. Petroleum Council
 S. C. Liquefied Petroleum Gas Assn.
 Veterans of Foreign Wars
 Women Highway Safety Leaders
 Wilbur Smith & Associates
 General Motors Corporation
 Chrysler Corporation
 Ford Motor Company
 Road Information Program
 Motor Vehicle Manufacturers Assn.
 Portland Cement Assn.
 S. C. Federation of Women's Clubs

Letter to Director of Bureau of Land Management on February 14, 1975,
by South Dakota Highway Users Conference:

"Recognizing the need for development of new sources of petroleum, the South Dakota Highway Users Conference urges that additional effort be made in off shore exploration and extraction. We are mindful of the ecological risks and dangers and recommend strict rules and practices to minimize such risks."

The membership of the South Dakota Highway Users Conference includes:

Associated General Contractors of S. D.	South Dakota CATRALA
Black Hills, Badlands & Lakes Assn.	Motor Vehicle Manufacturers Assn.
Firestone Tire & Rubber Co.	S. D. Municipal League
Greater S. D. Assn.	S. D. Telephone Assn.
Greyhound Lines - West	Ford Motor Co.
Independent Insurance Agents of S. D.	Assn. of S. D. Museums
Investor Owned Electric Cos. of S. D.	S. D. Restaurant Assn.
Jack Rabbit Lines, Inc.	Northwest Lakes Assn.
John Morrell and Co.	United Sioux Tribes, Inc.
3M Co.	S. D. Liquor Dealers Assn.
Retail Farm Equipment Assn.	S. D. Fertilizer & Ag Chem. Assn.
Sioux Falls Stockyards	S. D. National Farmers Organization
S. D. Assn. of Cooperatives	S. D. Pork Producers Assn.
S. D. Automobile Club, Inc.	S. D. Assn. of Soil & Water Conservation
S. D. Automobile Dealers Assn.	S. D. Federation of Dairy Farmers
S. D. Bottlers Assn.	S. D. Dairy Assn.
S. D. Private Campground Owners Assn.	
S. D. Farm Bureau Federation .	
S. D. Farmers Union	
S. D. Independent Oilmen's Assn.	
S. D. Mobile Homes Assn.	
S. D. Innkeepers Assn.	
S. D. Livestock Feeders Assn.	
S. D. Motor Carriers Assn.	
S. D. Petroleum Council	
S. D. Retailers Assn.	
S. D. Petroleum Transporters Assn.	
S. D. Rural Electric Assn.	
S. D. Rural Letter Carriers Assn.	
S. D. State Grange	
S. D. Stockgrowers Assn.	
S. D. United Commercial Travelers	
S. D. Warehousemen's & Movers Assn.	
S. D. Assn. of Women Highway Safety Leaders	
Greater Lakes of S. D. Assn.	
Portland Cement Assn.	
Greater Sioux Falls Safety Council	

Resolution adopted by the Tennessee Highway Users Conference February 19, 1975:

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, imports of foreign oil are drastically damaging the economy of the United States; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Tennessee and the southeast;

NOW, THEREFORE, BE IT RESOLVED that the Tennessee Highway Users Conference give full support to efforts being made to develop off-shore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Tennessee Highway Users Conference includes:

Arrow Trailers, Inc.	Mid-South Farm Equipment Assn.
Automatic Car Wash Assn.	Mid-South Automobile Club
International	Nashville Area Chamber of
Automotive Service Industry	Commerce
Assn.	National Independent Automobile
3M Company	Dealers Assn.
Automotive Wholesalers	National Star Route Carriers
Assn. of Tenn.	Assn. Tennessee Branch
Car & Truck Renting &	National Tire Dealers & Re-
Leasing Assn. (CATRALA)	treaders Assn.
Car & Truck Renting &	Tennessee Automotive Assn.
Leasing Assn.	Tennessee Automotive Salvage
Central Parking System	Dealers Assn., Inc.
Chattanooga Automobile Club	Tennessee Bakers Assn.
Country Music Assn., Inc.	Tennessee Building Material Assn.
East Tennessee Automobile	Tennessee Dairy Products Assn.
Club (AAA)	Tennessee Farm Bureau Federation
Ford Motor Company	Tennessee Farmers Cooperative
Grayline Sightseeing Tours	Tennessee Funeral Directors &
Greyhound Lines - East	Embalmers Assn.
Independent Garage Owners	Tennessee Hotel & Motel Assn.
of Tennessee	Tennessee Independent Gasoline
Insurers of Tennessee	Marketers Assn.
Memphis Area Chamber	Tennessee Independent Meat
of Commerce	Packers Assn.
Memphis-Shelby County	Tennessee Malt Beverage Assn.
Safety Council	Tennessee Mobile Housing
	Institute

Tennessee
Page 2

**Tennessee Motor Transport
Assn., Inc.**
Tennessee Oilmen's Assn.
**Tennessee Retail Merchants
Assn.**
**Tennessee Soft Drink
Assn.**
Tennessee State Grange
Tennessee Telephone Assn.
**Tennessee Valley Milk
Producers Corporation**
**Tennessee Wholesale Grocers
Assn.**
**The American Dairy Assn. of
Tennessee**
Travelers Protective Assn.
**Volunteer Automotive
Boosters Club**
Volunteer State Oil Committee
United Commerical Travelers

Mailgram sent to Director, Bureau of Land Management, on February 21, 1975, by the Southern California Transportation Action Committee.

"The Southern California Transportation Action Committee urges prompt development of domestic energy resources such as the oil thought to be off the California coast.

"97 per cent of California residents depend upon the auto for transportation. 40 per cent of the nation's petroleum usage goes for highway transportation. California's 2,390 new car and truck dealers employ 85,000 persons and pay out 872 millions in wages and salaries each year. Dealers in automotive products including gasoline account for nearly 22 per cent of all retail trade in the State. Nearly 2/3 or the 4.1 billion spent in the state by tourists annually for transportation, lodging, food, entertainment, gifts and incidentals come from people traveling by highway vehicles.

"In the face of self sufficiency and reduced oil imports, it is absolutely necessary to proceed with off-shore development of oil and gas. Our entire transportation system involving autos, buses, trucks, rail, ships and aircraft are completely dependent upon petroleum products. It is our belief that with the application of our present technology the development of these valuable natural resources can be accomplished without significant adverse environmental consequences.

"Environmental requirements must be balanced with national energy needs.

"One additional solution to petroleum consumption that you might consider is that you allocate all of the gas produced from the outer continental shelf to electric utilities to reduce their dependence upon foreign low sulphur oil. This approach may even have the effect of reducing utility bills and consequently the cost of living index which effects so many labor management contracts and which accelerates the inflationary spiral in the United States.

"We therefore respectfully submit this mailgram for inclusion into the record regarding hearings on the proposed increase in oil and gas leasing on the outer continental shelf."

The membership of the Southern California Transportation Action Committee includes:

Challenge Cook Bros. Co.
Irvine Co.
Southern Pacific Transportation Co.
Consolidated Rock Products
General Motors
Schmid Ranches
Vernon Asphalt Company
Beckman Instruments
Newbery Electrical
California Asphalt Pavement
Safeway Stores
Industrial Asphalt
O'Melveny & Myers
Air of Calif.
Johnson Western Gunitite Co.

Ben F. Smith, Inc.
Dan J. Peterson Co.
Owl Enterprises
Griffith Co.
Watson Industrial Properties
Livingston Graham Co.
Corona Clay Co.
Albert Martin & Associates
Adams & Ellis Associates
E. L. Yeager Construction
Koebig & Koebig
Century City, Inc.
Los Angeles Building & Construction Trade Council
Motor Car Dealers Assn.
Valley Wide Transportation Committee

Hollywood Chamber of Commerce
Port of Long Beach
Los Angeles Harbor
Foot Hill Freeway Assn.
Calif. Trucking Assn.
Engineering and Grading
Contractors Assn.
Los Angeles Federation of
Labor
So. Calif. Aviation Council
Hollywood Palladium
Alcorn Fence Co.
Los Angeles Dept. of Public
Works
Santa Monica Bank
Automobile Club of So. Calif.
City of Industry Industrial
Council
Barker Enterprises
UCLA
Route 2 Transportation Assn.
Interstate 15 Freeway Assn.
Highway Users Federation

Resolution of the Metropolitan Detroit Highway Users Conference adopted by the Board of Directors on February 27, 1975:

WHEREAS, the country's energy supplies on oil and natural gas have been deteriorating rapidly, thus causing an unhealthy dependence upon oil and natural gas from the mideast; and

WHEREAS, the dependency on foreign oil has dealt a damaging blow to the economy of the United States through exhorbitant prices; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, the development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Michigan and the entire midwest; now

THEREFORE, BE IT RESOLVED that the Metropolitan Detroit Highway Users Conference gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Metropolitan Detroit Highway Users Conference includes:

Detroit Auto Dealers Association
 Traffic Safety Assn. of Detroit
 Michigan Contractors & Builder
 Eaton Corp.
 Troy Chamber of Commerce
 Spaulding, DeDecker & Assoc.
 Ayres, Lewis, Norris & May
 Carl Walker & Assoc. Inc.
 Cook Ford, Inc.
 Johnson & Anderson, Inc.
 North American Rockwell
 Stroughton Body, Inc.
 Traffic Safety Assoc. of
 Macomb County
 Ford Motor Company
 General Motors Corporation

Detroit Insurance Agents Assn.
 Allstate Insurance Co.
 Reid, Cool & Michalski
 Central Business District Assoc.
 Farmington Chamber of Commerce
 National Auto Transporters Assn.
 American Motors Corp.
 Chrysler Corporation
 North Oakland Chamber of Commerce
 Retail Gasoline Dealers Assn.
 of Michigan, Inc.
 Michigan Petroleum Association
 Motor Vehicle Manufacturers Assn.
 Earl Equipment Company
 The Civic Searchlight, Inc.

* * *

Resolution of the Tri-County Area Highway Users Conference (Michigan)
adopted by the Board of Directors on February 28, 1975:

WHEREAS, the country's energy supplies on oil and natural gas have been deteriorating rapidly, thus causing an unhealthy dependence upon oil and natural gas from the midwest; and

WHEREAS, the dependency on foreign oil has dealt a damaging blow to the economy of the United States through exhorbitant prices, and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, the development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Michigan and the entire midwest; now

THEREFORE, BE IT RESOLVED that the Tri-County Area Highway Users Conference (Michigan) gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States.

The membership of the Tri-County Area Highway Users Conference (Michigan) includes:

Eastern Michigan Tourist Assn.	Chevrolet-Saginaw Mfg.
Frankenmuth Mutual Insurance Co.	Central Foundry Division
Bituminous Materials Co. & Assoc.	Second National Bank
Gase Baking Co.	Saginaw Valley College
Saginaw Steering Gear	Saginaw Travel Service
Chev-Sag Grey Iron Casting Plant	Nodular Iron
Stevens Van Lines	Saginaw Office Supply
Shear Tool, Inc.	Bierlein Bldg. Movers
Chevrolet Sag. Grey Iron Foundry	Dow Chemical
Eaton, Yale & Towne	Dow Corning Corp.
Consumers Power Co.	American Automobile Association
Meyer Alexander	Midland County Safety Council
Helfrect Machine Co.	
Haines & Marti	
Sugar Beet Products	
Kelly & Associates	

* * *

Excerpts from a letter to the President of the United States on January 21, 1975, from the Highway Users Council of Western New York.

"Some months ago the Committee on Environmental Quality held hearings on offshore development of fuel sources on the U. S. Continental Shelf, and the Council sent the Committee a strong recommendation supporting the immediate exploration of these new fuel sources using all possible ecological safeguards.

"Conditions today demand that no further delays take place; if we are to achieve your goal of independence from foreign fuel sources we must begin at once on the development of these new resources."

The membership of the Highway Users Council of Western New York includes:

Downing & Sons
 Bob Johnson Motors
 Western Division, New York
 State Motor Truck Assn.
 Buffalo Area Chamber of Commerce
 New York State Petroleum Council
 Molin-Taylor
 Buffalo Slag Company
 Western New York Traffic Safety
 Council
 Niagara Frontier Automobile
 Dealers Assn.
 Merchants Mutual Insurance Co.
 Lakes Area Emergency Medical
 Services
 Allstate Insurance Co.
 Automobile Club of Western N. Y.
 Construction Industry Employers
 Assn.
 Dunlop Tire & Rubber Corp.
 National Fuel Gas
 Marong Chrysler-Plymouth, Inc.
 Institute of Transportation,
 Travel and Tourism
 Syracuse Supply Company
 Whitmier & Ferris Co.
 Frey The Wheelman, Inc.
 Harrison Radiator Division
 Bell Tire & Battery Service
 Dow & Company
 Youth Advisory Council on Traffic
 Safety
 Carrow Chevrolet
 Western New York Division,
 Associated General Contractors



Hospitality Associates of Maine

EXECUTIVE VICE PRESIDENT IRA D. TURNER

105 SIMMONS ROAD
SOUTH PORTLAND, MAINE 04106
TELEPHONE (207) 799-8712



March 17, 1975

Senator Henry Jackson, Chairman
Interior and Insular Affairs Committee
Attn: Mike Harvey, Room 3206
Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Jackson:

It has come to my attention that a number of subcommittees of your Committee on Interior and Insular Affairs are presently conducting hearings relative to coastal zone management, Outer Continental Shelf liability, and OCS environmental impact statements.

Nothing could be more important to the Maine vacation-travel industry, our restaurants, motels and hotels than a continued clean coastal environment. By the same token, we cannot maintain a viable economy without sufficient and secure domestic supplies of fuel oil and gasoline.

My paramount concern at this point in time is that government expedite activity that will provide fuels that will keep visitors traveling and accommodations heated.

On January 6, 1975, the Governor's Council on Vacation-Travel adopted the attached resolution and I forward it and underscore the fourth paragraph which states:

"... that such development of natural resources and industrial sites (specifically those concerning offshore oil exploration and refinery location) that are deemed essential to the health of the tourist economy and Maine's economy as a whole be researched and explored fully and aggressively with the support of the Office of The Governor."

I would simply add to this: It's time now for government to get the show on the road. Let there be no more delays in lease sales for offshore oil exploration.

Very truly yours,

Ira D. Turner

cc: Senator Edmund S. Muskie
Senator William D. Hathaway

IAPD

INTERNATIONAL ASSOCIATION OF PROFESSIONAL DIVERS, INC.

AFFILIATED WITH DISTRICT 2 • MARINE ENGINEERS BENEFICIAL ASSOCIATION • AFL-CIO

Mailing Address: P. O. BOX 1323 • GRETTA, LOUISIANA 70053

PHONE: (504) 367-6172

Offices

#16 Westbank Expwy., Suite 205-B
Gretta, La. 70053

630 Jackson Avenue
New Orleans, La. 70130

1524 Highway 90 East
Morgan City, La. 70380

April 2, 1975

The Honorable Henry M. Jackson
Chairman
Interior & Insular Affairs Committee
United States Senate
Washington, D.C. 20510

Dear Senator Jackson:

The International Association of Professional Divers affiliated with the Marine Engineers Beneficial Association, AFL-CIO represents 1,000 or more commercial divers and tenders employed by the diving contractors located in the Gulf area.

The I.A.P.D. is actively seeking legislation that will provide commercial oil field divers with the greatest job and equipment safety, and with diving physiological research.

We understand that you will submit Senate Bill 521 to the Senate soon. We ask that Section 21-C of Senate Bill 521, calling for research and development remain intact, in its entirety.

We hope that vitally needed and long awaited safety standards and procedures will develop from the quote, "studies of underwater diving techniques and equipment suitable for protection of human safety", called for in Section 21-C.

"DEDICATED TO DIVING SAFETY"

Page 2

The I.A.P.D. cannot stress enough the necessity of such studies and the implementing of knowledge gained from such studies. This information will aid us in our goal of eliminating the maiming and killing injuries incurred in our trade.

Thank you for your attention in this important matter.

Respectfully yours,

INTERNATIONAL ASSOCIATION OF PROFESSIONAL
DIVERS


PAUL W. WOODHALL
President

PWW/dd



INDEPENDENT
OIL MEN'S ASSOCIATION
OF NEW ENGLAND

March 28, 1975

Senator Henry M. Jackson, Chairman
 Senate Committee on Interior and Insular Affairs
 Dirksen Office Building
 Room 3206
 Washington, D. C.

Attention of: Mike Harvey

Dear Senator Jackson:

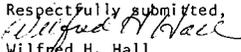
This association has the clear policy of supporting offshore petroleum exploration and production - as one means of alleviating our balance of payments problem, and, in the interests of national security. We understand you will be holding hearings in April on several bills which bear on certain states' rights to veto these developments. We would like to comment on these relationships as we see them.

First, our association represents independent branded and private branded gasoline wholesalers operating in the six New England states. We, like many other New England citizens, recognize the need to expand our regional reserves and refining capacity. The recent Supreme Court decision regarding federal rights beyond the three mile limit is clear. We feel that the Department of Interior should have specific parameters within which exploration and production can be undertaken. Environmental considerations dictate this necessity. However, in these areas (beyond the three mile limit) the states should have no jurisdiction. To allow them to variously design regulations and/or have veto powers negates the orderly and timely development of these reserves.

The states should have adequate control of activities within the three mile limit which pertain to pipelines, terminals, etc. It is proper that those involved with contiguous inshore activities should have a reasonable opportunity to review factors pertaining to these plans. It could even be that federal guidelines could be drawn to help states form regulations which are consistent and legal, and which could fit with those of the federal government's activities beyond the three mile limit.

We would urge this separation between federal and state control at the three mile limit in order to preclude endless hearings and squabbles between states. It is in the best interest of the entire United States to develop all its energy reserves without delay.

cc: NOJC
 IOMA Directors
 N. E. Congressmen

Respectfully submitted,

 Wilfred H. Hall
 Executive Director

WORTH PLAZA · 10 VAUGHAN MALL · PORTSMOUTH, N.H. 03801 · TEL. 603-436-8424



Department of Agriculture

AGRICULTURE BUILDING CAPITOL SQUARE
ATLANTA, GEORGIA 30334

APR 7 9 34 AM '75

THI

Thomas T. Irvin
Commissioner

April 3, 1975

COMMUNICATIONS SECTION
APR 7 1975
10 10 AM '75
U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

The Honorable Henry M. Jackson
United States Senator
137 Senate Office Building
Washington, D.C. 20510

Dear Senator Jackson:

The speech before the members of the National Democratic Agricultural Policy Group was informative and certainly emphasized some of the problems facing agriculture. I am greatly alarmed at the adverse impact which the President's energy tariff, tax and pricing policies will have on the economy and American agriculture. It is even more important in the future that State and Federal Governments have a better line of communication and an improved working atmosphere. This need for closer cooperation has been emphasized by the energy and environmental problems which face our nation today.

The suggestion that we comment on legislation referred to by the memorandum attached to your letter of March 21, 1975, is another step in the right direction.

The exploration and development of the Outer Continental Shelf have been discussed and studied for several years. The present energy situation and the projections for the future make it important that we arrive at an immediate decision.

It is my opinion that exploration and development of the Outer Continental Shelf should take place under a policy devised by Federal and State Governments and we must have a high priority on environmental protection. We must have the best available technology from commercial sources and this technology must be used to minimize environmental risks. Prior to exploration and development of the Outer Continental Shelf, state and federal regulatory authorities must be in full agreement as to requirements so that misunderstandings will be minimized.

The Honorable Henry M. Jackson
Page 2
April 3, 1975

It would be appropriate that leasing decisions be a joint effort between Federal and State Governments and communities which may be affected by these decisions. The public should be given opportunities to participate. It is important that states be permitted to share in revenues which might become available. There must be areas of decision making implemented which are acceptable to state, federal, and local jurisdictions. This is possible and we can then take advantage of energy which may be located off of our shores.

The energy problem is national in scope and it is basic that one region must use the resources of another. Each region affected should, of course, have the right to express views and I believe if we had a definitive national energy program, we would not have difficulties regarding the siting of nuclear and fossil fuel power plants, refineries and strip mines. The public needs to be informed on all types of energy and, more specifically, the impact on the economy and the environmental hazards. It is probable that most of the reluctance on the part of the public is based on lack of information.

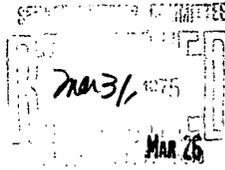
Nuclear energy must play an increasingly growing role in the Nation's energy supply. Therefore, the siting of a nuclear power plant can be well received by most of the public if they are properly informed.

Thank you very much for your invitation to express my views and if I can be of assistance at anytime, please do not hesitate to call on me.

Sincerely,


Thomas T. Ervin

/mc



KENAN TRANSPORT COMPANY . A NORTH CAROLINA CORPORATION

P. O. BOX 2729 • CHAPEL HILL, NORTH CAROLINA 27514
(919) 967-8221

March 21, 1975

Senator Henry M. Jackson
Room 137 Senate Office Bldg.
Washington, DC 20510

Dear Senator Jackson:

Because of your position as Chairman of the Senate Interior Committee and your large national and international reputation, I am taking the liberty of writing to urge your support of the prompt development of domestic crude oil sources, especially offshore crude oil resources.

As the largest common carrier of petroleum products serving the Virginia, North Carolina and South Carolina markets, I can testify to the tremendous needs for adequate supplies of petroleum products to this fast growing area.

I would urge you to place your full support behind such an endeavor and it could only result in continued economic growth, continued high standards of living, and a hearty thank you from us to Senator Jackson.

Respectfully yours,

KENAN TRANSPORT COMPANY

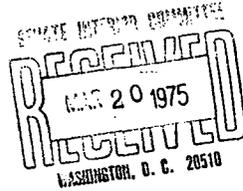
Lee P. Shaffer
Lee P. Shaffer
Executive Vice President

sc

cc: Senator Jesse Helms
Senator Robert Morgan

MAR 19 1975

March 17, 1975



The Honorable Henry Jackson
 United States Senate
 Senate Office Building
 Washington, D.C. 20510

Dear Senator Jackson:

I am not one of your constituents. My purpose in writing you is to establish the fact that citizens of this country in places other than the State of Washington are also interested in expediting the development of the coastal waters in the production of crude oil. This letter is to suggest to you that the matter should be expedited. It should be done through the mechanism of private enterprise. There is already a vast system of efficient capability standing ready if the federal government will simply get off center and allow it to function. I urge you, Senator, to exercise every caution to guarantee the best interest of the citizens of this country.

Bear in mind, the best interest for over 200 years has been served through the private enterprise system. It has only been in the last 30 years that the size of the federal bureaucracy has brought the heavy burden of excessive taxes and inefficiency to the American people. We don't need the federal government competing with private industry.

Respectfully yours,

R. A. Kurland
 3122 Belingham Drive, NE
 Atlanta, GA 30345

CLYDE M. DANGERFIELD
Chairman

EDWARD JACK SMITH
First Vice-Chairman
HERBERT C. GRANGER
Second Vice-Chairman

JOSEPH F. RONEY
Staff Counsel
MRS. JEANIE I. CORLEY
Administrative Assistant

Labor, Commerce and Industry Committee

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MARVIN B. COLLINS
B. J. GORDON, JR.
H. RAY HAM
J. B. HARVEY
RICHARD TOWILL HINES
JOE S. HOLLAND
S. HUNTER HOWARD, JR.



RICHARD M. KENAN
ROBERT A. KOHN
EARL M. MIDDLETON
JOSEPH R. MURRAY
WILLIAM A. REEL, JR.
HAROLD E. TAYLOR
H. KEITH VANDERFORD

House of Representatives

P. O. BOX 11867 TELEPHONE: 758-8466

Columbia, S. C. 29211

April 4, 1975

Senator Henry M. Jackson, Chairman
The Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

South Carolina is facing serious problems of business recession and shortages of energy. Our State needs secure and adequate supplies of energy to generate the jobs necessary to keep us economically sound.

As a member of the State's Oil and Gas Study Committee, I feel that the solution to our energy problems may lie not too many miles offshore. Studies have revealed that large deposits of oil and natural gas may be beneath our Atlantic Outer Continental Shelf.

If this is true, not only could the discovery of such petroleum and natural gas provide the energy so vital to South Carolina's industrial and residential needs, but also the search for these potential resources could provide jobs and tax revenues.

I am in favor of moving forward immediately to develop these resources. Unfortunately, so far, we have only seen delaying actions by the federal government. Further delays will seriously affect consumers and workers of our State, and our nation will suffer.

Certainly our country cannot afford a repetition of legal and environmental delays similar to those which blocked the start of construction of the trans-Alaska Pipeline. A fate similar to that of the trans-Alaska Pipeline could face development of our Atlantic offshore oil potential if those who oppose exploration of the OCS have their way.

If we continue to delay development of our own offshore oil potential, this country will become more and more dependent on foreign

Senator Henry M. Jackson, Chairman
 Page Two
 April 4, 1975

oil and natural gas. I understand that nearly 40 per cent of our petroleum is now imported. We are a long way from energy independence, so we must start now with positive steps to produce more oil and gas from domestic sources.

Many people seem to think we have all the time we want to drill offshore. We don't have this time because there are men and women in South Carolina who are facing unemployment because our industry does not have a secure supply of natural gas and other petroleum products.

Some are in favor of the federal government's exploring the OCS instead of private industry. I certainly can't see the logic in this proposal. We already have all the expertise we need in private industry.

I personally have joined others on trips to California and Louisiana to study their offshore oil operations, and the oil industry has convinced me that they are determined to conduct their offshore oil drilling operations safely and with proper environmental safeguards. This is very important to me as a native of Charleston and a representative of the citizens who live there.

South Carolina's coast is a great natural resource. Its beauty, as well as its potential oil reserves, is essential not only to coastal residents but to all citizens of our fine State.

I believe that private industry has the ability, knowledge and technology to develop the petroleum potential of the Atlantic OCS. I urge you and other responsible governmental officials to support immediate offshore exploration by private enterprise.

Our state and nation urgently need this oil and gas to supply our energy needs for the immediate future.

Thank you for your consideration of this statement.

Yours very sincerely,

Clyde M. Dangerfield
 Clyde M. Dangerfield
 Chairman

CMD:jc

CC: Senator J. Strom Thurmond
 Senate Office Building
 Washington, D. C. 20510

Senator Ernest F. Hollings
 Senate Office Building
 Washington, D. C. 20510

Robert H. Lutz
President

L. & R. OIL COMPANY, INC.



APR 1 9 16 AM '75

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Shelby, N. C.

Forest City, N. C.

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Lineberger Street Box 66
Shelby - 482-2422

West End
Forest City - 245-0116

March 29, 1975

The Honorable Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

I have enclosed a copy of the letter to Mr. D. Michael Harvey for your review and evaluation. Please use your influence in this matter by reversing the Federal Government's participation and intervention in our private enterprise. I would suggest the environmental agencies be advised to make their plans to coincide with private businesses ability to develop any future oil drilling.

Thank you for your consideration in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Robert H. Lutz".
Robert H. Lutz

RHL/dr

Enclosure

cc: Senator Robert Morgan
Senator Jesse A. Helms

Robert H. Lutz
President

L. & R. OIL COMPANY, INC.

DISTRIBUTORS



Shelby, N. C.

Forest City, N. C.

... Quality Products Friendly Service ...

Lineberger Street Box 66
Shelby - 482-2422

West End
Forest City - 245-0116

March 29, 1975

Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Mr. D. Michael Harvey

Dear Mr. Harvey:

I am thoroughly disgusted to learn from our news media that the Federal Government is trying to delay private enterprise by at least two years in exploring offshore oil drilling. There is no justifiable reason for the government to become involved with private companies who have the knowledge and competitive motivation to make an assessment of our offshore resources. The barriers that have been raised should be removed and leasing made available for private companies.

It is true that environmental controls over offshore work must be adequate but it is also urgent that we do not delay our efforts toward solving our fuel shortage. You must agree that if the Federal Government would reverse their position, the job could be done much quicker and more efficiently under the present leasing system by private companies who already are equipped and ready to start next week.

I would encourage you to let the private businesses continue to operate as they have through the years and without government disincentives.

Sincerely,

Robert H. Lutz

RHL/dr

cc: Senator Henry M. Jackson
Senator Robert Morgan
Senator Jesse A. Helms

J - Record



Lindsay Oil Company, Inc.

m ll

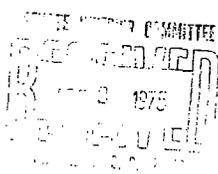
DIAL 422-2280 17 AM '75

SENECA, SOUTH CAROLINA 29678

P. O. BOX 753

March 28, 1975

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D. C. 20510



Dear Senator Jackson:

The purpose of this letter to lend my voice to those petroleum distributors throughout the country who urge upon the Senate of the United States and upon all governmental agencies to expedite development of offshore drilling for petroleum. We feel that such exploration for oil and gas should be accomplished by private enterprise rather than by a governmental agency.

Fully realizing the environmental ramifications which must be considered in such a program, we weigh such considerations against the needs of our customers whom we see every day. The failure of this Country to become self-sufficient in fulfilling its energy needs leaves only one of two alternatives: a drastic cutback in our way of life, or subjecting oueawlvwa ro the Ababian peninsula.

In urging that this development of self-sufficiency in energy be accomplished by private enterprise, we feel that the alternative to such a course would be nationalization of our energy program and another step toward the dâstruction of the system of government and of business which has made this country as great as it now is.

Certainly, the exploration of the continental shelf of this country should be done in an orderly manner, but it must be done quickly in order that our citizens who are, at least in part, our customers are not put in the position of having to choose between a loss of livelihood and status or a loss in national pride. These two are the only alternatives if we fail to act now.

Yours very truly

M. S. Lindsay
M. S. Lindsay, President
Lindsay Oil Company
Seneca, South Carolina 29678

cc/ Senator Strom Thurmond
Senator Ernest F. Hollings

April 3, 1975

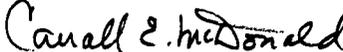
Senator Henry Jackson, Chairman
Interior and Insular Affairs Committee
Attn: Mike Harvey, Room 3206
Dirkson Senate Office Building
Washington, D. C.

Dear Senator Jackson:

The Maine Rural Letter Carriers Association feels strongly that offshore oil exploration should be conducted as expeditiously as possible. No group is more dependent upon adequate fuel supplies for mobility than ours and we believe it is time to get our country moving toward greater energy independence.

We call your attention to the enclosed resolution and recommend that every possible step be taken to encourage leasing activity in the Outer Continental Shelf waters.

Sincerely,



Carroll E. McDonald
President

Maine Rural Letter Carriers Assn
67 High Street
South Windham, Maine 04082

Enclosure

cc: Senator Edmund S. Muskie
Senator William D. Hathaway

R E S O L U T I O N

WHEREAS, Maine, New England and the United States of America are dependent to a great extent on petroleum supplies from foreign lands; and

WHEREAS, this energy dependence results in an insecure supply of high cost oil, to the detriment of highway-using citizens such as rural letter carriers;

NOW THEREFORE BE IT RESOLVED that the Maine Rural Letter Carriers Association supports action at the federal level to expedite exploration for petroleum energy in Atlantic waters of the Outer Continental Shelf.

Samuel E. McDonald
President

Maine Rural Letter Carriers Assn.

4/9/75
Date

Kenneth L. Roberts
~~XXXXXXXXXXXX~~
 CHAIRMAN

APR 7 1975

MAINE HIGHWAY USERS CONFERENCE

283 WATER STREET, AUGUSTA, MAINE 04330

April 2, 1975



Associated Industries of Maine
 Brunswick Transportation Company
 Continental Trailways of N. E.
 Greater Portland Chamber of Commerce
 Greyhound Lines
 Maine Automobile Association
 Maine Automobile Dealers Association
 Maine Bottlers of Carbonated Beverages
 Maine Cannery & Freezers Association
 Maine Farm Bureau Association
 Maine Good Roads Association
 Maine Hotel-Motel Association
 Maine Knights of the Road
 Maine Milk Dealers Association
 Maine Oil & Heating Equipment
 Dealers Association
 Maine Petroleum Association
 Maine Publicity Bureau
 Maine Restaurant Association
 Maine Rural Letter Carriers
 Association
 Maine State Chamber of Commerce
 Maine State Grange
 Maine State Grocers Association
 Maine Truck Owners Association
 New England Bakers Association
 New England Ice Cream Manufacturers
 Maine Area
 New England Mobilehome Association
 New England Telephone - Maine Area
 New England Tire Dealers Association
 Outdoor Advertising Association
 of Maine
 Paper Industry Information Office
 Portland Junior Chamber of Commerce
 Truck Drivers Union, Local No. 340
 Uniroyal Inc. - Maine Area
 United Commercial Travelers of America
 Portland Council

Senator Henry Jackson, Chairman
 Interior and Insular Affairs Committee
 Atten: Mike Harvey, Room 3206
 Dirksen Senate Office Building
 Washington, D.C.

Dear Senator Jackson:

Enclosed is a copy of a resolution adopted April 1
 at a meeting of the Maine Highway Users Conference.

Along the lines expressed in the resolution, it is
 our sincere hope that legislation now pending before your
 committee will not result in unnecessary delay in getting
 the OCS exploratory effort on the road.

The various organizations represented in the Maine
 Highway Users Conference have a wide diversity of interests,
 but adequate fuel supplies for continued mobility is one
 thing we all have in common.

Thank you for your kind attention.

Sincerely,

Kenneth L. Roberts
 Kenneth L. Roberts

KLR/cmf .
 encl.

RESOLUTION OF THE
MAINE HIGHWAY USERS CONFERENCE

APRIL 1, 1975

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, foreign oil-producing countries are drastically damaging the U. S. economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with complete environmental safeguards, would alleviate the energy shortage and ease the economic burden of Maine and New England; now

THEREFORE, be it resolved that the Maine Highway Users Conference give full support to efforts being made to develop offshore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.



March 20, 1975

Senator Henry Jackson, Chairman
Interior and Insular Affairs Committee
Att: Mike Harvey, Room 3206
Dirkson Senate Office Building
Washington, D. C.

Dear Senator Jackson:

The Maine Oil Dealers Association represents some 500 jobbers doing business in Maine who are dependent on secure supplies of petroleum. I'm sure you are fully aware of the necessity of increasing lower cost domestic supplies so I won't dwell on that.

We are concerned, however, that hearings on S. 586, the Coastal Zone Environment Act of 1975, on S. 825, the OCS liability bill, S. 826, the Coastal Zone Management Moratorium, and S. 827, the new Environmental Impact Statement for OCS leases, may result in further unreasonable delays in scheduling offshore oil lease activity.

Time is no longer on our side, and we respectfully urge your Committee and the three subcommittees hearing these measures to take into account the importance of avoiding any further slow downs in exploration for secure, cheaper, domestic oil.

Thank you for your kind attention.

Very truly yours,



Robert A. Flynn
Managing Director

RAF:gm
cc: Senator Muskie
Senator Hathaway



MAINE STATE CHAMBER OF COMMERCE

417 CONGRESS STREET, PORTLAND, MAINE 04101 TEL: 774-9771

April 11, 1975

Honorable Henry M. Jackson
Chairman
Interior and Insular Affairs
Dirksen Senate Office Building
Washington, DC 20013

ATT: Mike Harvey, Room 3206

Dear Senator Jackson:

This is to advise you that the Commerce and Industry Council of the State of Maine has adopted the enclosed resolution supporting offshore oil exploration by private industry, and urges that such activity be encouraged without further delay.

Thank you for your kind consideration.

Cordially yours,

Paul C. Emerson
Chairman
Commerce and Industry Council

PCE/m
enc.

cc: Senator Edmund S. Muskie
Senator William D. Hathaway



R E S O L U T I O N

WHEREAS, potentially large deposits of petroleum are believed to exist under the Atlantic waters of the Outer Continental Shelf; and

WHEREAS, discovery of nearby energy reserves would be of benefit to Maine and the Northeast region which is now overwhelmingly dependent upon high cost of foreign oil; and

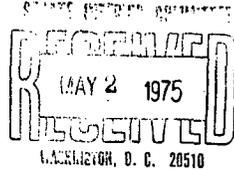
WHEREAS, the exploration and development of domestic petroleum resources would serve to buy the nation important time to develop alternate sources of energy; and

WHEREAS, delay of exploration activity could result in a return of gasoline lines, closed factories and cold homes,

NOW THEREFORE BE IT RESOLVED that the Commerce and Industry Council of the State of Maine recognize the importance of offshore oil exploratory efforts by private industry and urge that such activity be encouraged without further delay with a system of revenue sharing between the Federal Government and State Governments.

Hand Over
 25 East 62nd Street
 Savannah, Georgia
 April 29, 1975

Hon. Henry M. Jackson, Chairman
 Senate Interior and Insular Affairs Committee
 Dirksen Senate Office Building
 Washington, D. C. 20510



ATTENTION: MIKE HARVEY, Room 3206

Dear Sir:

Since the automobile industry plays such an important role in the economy of our Nation, I am vitally interested in the shortage of petroleum oil in this country.

I sincerely feel that exploring and drilling for oil on the Outer Continental Shelf is the real answer to this problem and request that you do all in your power to get this started immediately.

Since several bills are before your committee, which will delay this exploring and drilling, I ask that you please not allow this to be dragged out in the manner similar to the delay of almost seven (7) years in permitting the Alaskan Pipe Line to be built.

Off shore drilling is entirely safe as has been proven by the producing of 1½ million barrels of oil daily, plus 10.6 billion cubic feet of natural gas daily by the existing wells in the Gulf of Mexico and off the Pacific Coast.

Free enterprise has made our Country as great as it is. Free enterprise on the part of our Petroleum Industry will certainly prevent delays and inaction that will surely come about if we involve the United States Government.

Drilling off our South East Coast will develop thousands of new jobs in this area, when unemployment is at it's record height.

I would appreciate anything that you can do to get this most important project moving immediately.

Very truly yours,
Mark J. Mamalakis Sr
 Mark J. Mamalakis, Sr.

CC: Hon. Herman Talmadge, Room 109, Old Senate Office Building
 Washington, D. C. 20510

Hon. Sam Nunn, 3327 New Senate Office Building
 Washington, D. C. 20510

MASSACHUSETTS HIGHWAY USERS CONFERENCE

Milo E. Jordan, *Chairman*
128 East Elm Avenue
Wollaston, Mass. 02170
Telephone 773-2716

11 BEACON STREET
BOSTON, MASSACHUSETTS 02108
Established 1935

John F. Battles, *Secretary*
11 Beacon Street
Boston, Mass. 02108
Telephone 227-4227

March 14, 1975

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
Dirksen Office Building
Room 3206
Washington, D. C.

Dear Senator Jackson:

As Chairman of the Massachusetts Highway Users Conference, I wish to express our deep concern over the possibility that proposed legislation now pending before the Senate Committee on Interior and Insular Affairs would impede and further delay the search for oil and natural gas in the offshore waters of the East Coast.

It is my information that Senate Bills 586, 825, 826 and 827 would all, in one way or another, inhibit the attempts to press on with such offshore exploration. These bills, as I understand it, are being heard by your Committee for several days during this month and in April.

I cannot stress enough the great importance to the members of our Conference of an adequate supply of oil and natural gas. Our very economic future depends on such supplies and we simply cannot afford further delays.

Here in Massachusetts, we take seriously the programs to conserve energy and ours is one of the few states where the 55-mile an hour speed limit is being vigorously enforced on state highways. But we all know that is hardly the complete answer to our energy problem.

We hear constantly of the threat of many factory closings, more job layoffs and our people are worried sick. Those who wilfully advocate delay in the search and development of the oil and natural gas reserves that qualified experts believe lie in abundance off the Atlantic Outer Continental Shelf are blind to the enormity of our problem.

We urge you, Senator Jackson, and we urge all your Committee members to clear the way for the development of our offshore reserves. We feel there is nothing of greater importance to our nation right now than positive action in this direction.

Sincerely,

MASSACHUSETTS HIGHWAY USERS CONFERENCE


Milo E. Jordan
Chairman

MEJ;ejm

JOSEPH A. SULLIVAN
President

DANIEL F. MURRAY
Executive Vice President

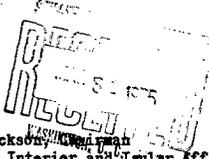
JOSEPH D. McLAUGHLIN
Executive Vice President

J. - Record
J. - Record
Secretary-Treasurer



MASSACHUSETTS STATE LABOR COUNCIL, AFL-CIO

65 COMMERCIAL STREET (Suite 720) • BOSTON, MASSACHUSETTS 02108



March 25, 1975

Senator Henry M. Jackson
Senate Committee on Interior and Insular Affairs
Dirksen Office Building
Room 3206
Washington, D. C.

Dear Senator Jackson:

As spokesman for a labor organization representing more than a half million trade unionists in the Commonwealth of Massachusetts, I would like to express the concern of the people of this state over the possibility that legislation currently before your Committee could delay the search for oil and natural gas in the offshore waters of the East Coast, which includes the entire eastern coast of Massachusetts.

The bills before your Committee, Senate bills 586, 825, 826 and 827, would if enacted prevent or postpone the exploration necessary to find and to develop any source of oil or natural gas that may lie off our shores.

Surely, there should be no doubt in the mind of any lawmaker that the search for new sources of energy within the boundaries of the United States is an undertaking that should have top priority at this time in view of the blackmail we have just recently experienced from the major oil producing nations.

We urge you and all the members of your Committee not to be swayed by narrow interests but to act only for the benefit of the entire nation.

Sincerely,

James F. Loughlin
JAMES F. LOUGHLIN
Secretary-Treasurer

5576

WILLIAM A. CASHMAN
Legislative Director

JOHN A. CALLAHAN
COPE Director

GERARD KABLE
Public Relations Director

ALBERT G. CLIFTON
Legislative Consultant

**MOTOR
TRANSPORTATION ASSOCIATION
OF SOUTH CAROLINA, INC.**

JH
RECEIVED
APR 17 1975
1. March 15, 1975



2425 Devine Street
Columbia, S. C. 29205
Phone 803-799-4306

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Bldg.
Washington, D. C. 20510

Subject: Statement regarding off shore
exploration and development..

Dear Senator Jackson:

A statement of our Association regarding off shore
development and exploration of oil and gas resources is
enclosed for your information.

We will appreciate your careful consideration of
our recommendations.

Yours very truly,

Samuel L. Boylston
Samuel L. Boylston,
General Manager.

SLB/mcw

COPY

MOTOR TRANSPORTATION ASSOCIATION OF SOUTH CAROLINA
 2425 DEVINE STREET
 COLUMBIA, SOUTH CAROLINA 29205

March 13, 1975

Senate Committee on Interior and Insular Affairs
 Attn: Mr. D. Michael Harvey
 3206 Dirksen Senate Office Bldg.
 Washington, D. C. 20510

Subject: Motor Transportation Association of South Carolina's
 Statement regarding offshore petroleum exploration
 and development.

Our association represents 500 for hire, private and allied
 industry companies operating trucks in South Carolina.

As you probably know trucking is the only mode of transportation that complements all other modes including the pipeline. We will not dwell on the merits of trucking's roll to the economy of this nation. We do point out that about one half of all populated communities depend on trucks for all their transportation needs. Today trucks haul 51 % of all manufactured goods.

We hope that in the future we will be able to continue this service. We are becoming extremely concerned that time may be running out. One gets the opinion that we have surrounded ourselves with government regulation and red tape to the extent that it retards our growth, increases business costs and prolongs necessary development of valuable resources.

We believe that it is time to re-evaluate our position and get our priorities in order. In some instances we have moved to far to fast. We can not afford repetition of legal and environmental delays that blocked the Alaska pipeline. This project is four years behind schedule during a period of extreme crises.

Fuel is part of trucking's lifeline. The availability of fuel and high fuel costs concern us. We operate in an area that is dependent upon foreign nations and other states for its supply

(continued)

Mr. D. Michael Harvey

- 2 -

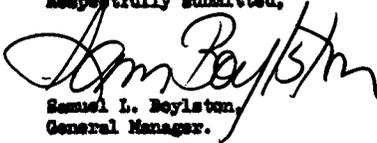
March 13, 1975

of oil products and natural gas. It is necessary that the congress authorize the exploration and development of resources located along the outer continental shelf.

It is reasonable that exploration begin immediately to determine if these deposits actually exist. Development can be worked out later.

The future of this nation may hang in the balance. Your favorable action is requested.

Respectfully submitted,



Samuel L. Boylston,
General Manager.

SLS/mcw



OCS Record
M H

North Carolina Oil Jobbers Association

DON M. WARD, *Executive Director*

P. O. Box 30519 • 7300 Glenwood Avenue • Raleigh, N. C. 27612 • Telephone 919/782-4411

March 18, 1975

L. W. LOCKE
President Entfield

H. C. TURNER
Vice-President Salisbury

SHELTON CASTLEBERRY
Vice-President - Fuel Oil Smithfield

F. C. ROBERTS, JR.
Treasurer Gastonia

JAMES C. LITTLE
Legal Counsel Raleigh

DIRECTORS
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Valdese

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Wilmington

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Sanford

FRANK A. McNEILL
Aberdeen

CECIL WORSLEY
Wallace

Senator Henry M. Jackson
Room 137, Old Senate Office Bldg.
Washington, D. C. 20510

Dear Senator Jackson:

Our nation is facing a critical shortage of domestic petroleum products and you are one of the leading spokesmen on energy matters. In addition, we know you are Chairman of a vital committee that is dealing with energy legislation. For this reason, we are taking the liberty to write you on behalf of the 800 members of our trade association.

Our Association takes cognizance of the Supreme Court ruling this week that the federal government has exclusive rights to any oil and gas resources on the Atlantic outer continental shelf beyond the three mile limit. Whether we agree or disagree, we are glad to see a final ruling. We beseech you to lend your great influence to follow through with the development of these essential resources so that our nation can achieve a semblance of so-called "self sufficiency" within the next decade.

Modern technology has been developed to the extent that drilling for oil and the recovery of same on the outer continental shelf can be ecologically feasible. The danger of spills has practically been eliminated by modern engineering and for this reason we urge the federal government to expedite the leasing procedure relative to coastal waters for oil exploration. Certainly there have been sufficient numbers of hearings by the President's Council on Environmental Quality, Congress, and other bodies. We now need action because it will still take 4-5 years to bring in oil once the leases are executed.

Indeed, there is no shortage of petroleum at present (due to mounting imports), but there is a shortage of domestic oil and there is a balance of payments problem if governmental economists are correct. In any case, we need to develop our own resources at an accelerated pace so that we will not be at the mercy of foreign nations that can disrupt our economic activity by a mere whim.

Hopefully, the federal government will cooperate with the states as there needs to be an all out effort by industry and government to provide this nation the security and international respect it deserves and should command. Energy self-sufficiency is indeed a realistic goal - at least to the point we would not, could not be crippled by means of embargoes

NORTH CAROLINA OIL JOBBERS ASSOCIATION

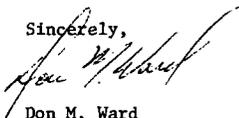
Senator Henry M. Jackson
March 18, 1975

page 2

Further, we contend that the nation's oil industry can better solve the energy problem in this nation rather than a government operated and subsidized entity. Proper incentive for the oil industry is as essential today as it has been for the past 50 years. Decontrol of old oil prices and natural gas would be a tremendous boost.

We appreciate your consideration of our views and we hope you can use your energy to add to our nation's energy through prompt action.

Sincerely,



Don M. Ward
Executive Director

DMW/df

cc: Michael D. Harvey
Senate Interior Subcommittee
on Minerals

MAR 25 1975

March 24, 1975



Honorable Henry M. Jackson
3206 Dirksen Office Building
Washington, D. C. 20510

Attention: Mr. Michael Harvey

Dear Sir:

NEDCO, (Northeast Dairy Cooperative Federation, Inc.), represents the dairy industry and speaks for the some 20,000 dairy farmers in the Northeast. Therefore, we will contain our comments regarding a series of hearings on offshore exploration to the direct and enormous negative economic impact on the dairy industry of the Northeast and the United States as a whole.

First, continued dependence on foreign oil sources can only mean higher fuel costs for dairy farmers. Farmers already in a tight cost-price squeeze will be forced to face even higher production costs the longer we delay exploration of new fuel sources off the Continental Shelf. Speaking from the cooperative vantage point, there are hundreds of milk trucks, milk tankers traversing our Nation's highways nearly every hour of every day. The consumption of fuel is enormous - the cost to run these trucks has become astronomical. We must not waste a moment on our path to eventual energy independence. Our dependence on foreign supply can only further inflate our economy and curb any growth we might hope to experience in the coming years. In New York State alone the estimated expense last year of motor fuel to operate farm machinery trucks and automobiles used in their farm businesses was \$2200 per farm at 52¢ per gallon of gasoline (tank truck price) and .386¢ per gallon of diesel fuel. Because of our dependence on foreign fuel sources, an increase of 10¢ per gallon has been proposed at the Federal level. This would be a cost of \$484 per farm or \$8,591,000 for all 17,750 dairy farms in New York State.

In addition, President Ford's Import Tariff of \$3.00 per barrel of foreign crude oil would be an additional boost of 7.5¢ per gallon of imported fuel. With one-third of our oil being imported at 2.5¢ per gallon, there would be an additional farm cost of \$121 per farm or \$2,147,751, for all New York dairymen.

As you can plainly see, the longer we put off positive steps toward energy independence the weaker becomes our own agricultural economy

(more)

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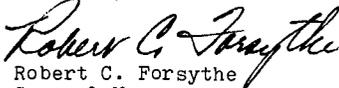
Honorable Henry M. Jackson

which must forever bend to the financial impositions of others. If we must persist in our present trend of dependence for supplies of oil and gas then we must pay the consequences for decreased production at a higher cost and less availability of food. As you know, President Ford is calling for 100% production.

Yes, we admit offshore drilling costs will be initially high, but in the long run, we deeply feel that this can only better serve the producer as well as the consumer of our country and can only better serve to strengthen our economic position. We understand that some of the proposals to be considered at the hearings advocate the establishment of governmentally operated exploration and development programs. As you well know, our previous experience of bureaucratic interference in what have been areas of private domain, should clearly demonstrate that exploration and development of the Outer Continental Shelf remain within private control.

We are well aware too of the total impact of procrastinating on offshore drilling. And we know that dairy is but one part of the total consideration to justify this domestic oil exploration. If we continue to accede to usurious prices for imported oil, then we can only hope for partial accomplishment of the all-out production efforts encouraged by the President. We cannot expect our farmers to maintain their current output with no cost relief in sight. Therefore, we urge that all further dilatory actions on offshore oil exploration be ceased immediately and we urge that the billions of oil dollars we are currently pouring into the middle east be rather directed toward the exploration of our own domestic supplies.

Sincerely,



Robert C. Forsythe
General Manager

RCF/ac



New England Natural Resources Center
506 Statler Building, Boston, Massachusetts 02116

OCS Record Tel. (617) 542-9370

April 17, 1975

Honorable Henry M. Jackson, Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D.C. 20510

Dear Senator Jackson:

At the joint Interior-Commerce Committee hearings on Outer Continental Shelf policies, one of the important points made by New England representatives is that the coastal states must be provided an opportunity to participate in decisions on OCS development that will have a direct impact on them. One way of providing such an opportunity, and one that was suggested by Governor Michael Dukakis of Massachusetts at the April 9, 1975 hearings before the Committee on Interior and Insular Affairs and Committee on Commerce, is to establish a joint federal-state commission modeled on the Joint Federal-State Land Use Planning Commission for Alaska.

As you will recall, the Joint Federal-State Land Use Planning Commission for Alaska was established in Section 24 of the Alaska Native Claims Act. It was created as a temporary five-year commission with fourteen members as follows: the Governor of Alaska (or his designate), six members who shall be appointed by the Governor, one member appointed by the President of the United States, and six members to be appointed by the Secretaries of the Interior, Agriculture, Housing and Urban Development, Transportation, Commerce, and Defense. The Governor of Alaska and the member appointed by the President serve as co-chairmen.

The Alaska Commission was set up to provide a mechanism for joint decisions of land allocations pursuant to the Alaska Statehood Act and the Alaska Native Claims Act. Among the policy purposes it serves are to insure that "...economic growth and development is orderly, planned, and compatible with national environmental objectives, the public interest in the public lands, parks, forests, and wildlife refuges in Alaska, and the economic and social well-being of the native people and other residents of Alaska;...to improve coordination and consultation between the state and federal government in making resource allocations and land use decisions;...[and] to furnish the state an opportunity to review, comment upon, and make recommendations with respect to the management of and proposed additions to federally reserved lands in Alaska..." These policy purposes are similar in nature to those objectives sought by the New England states in their plea for an opportunity to participate in decisions on OCA development off their coasts. Present means of involving the coastal states in these decisions are inadequate and have no binding power on decisions of the Department of the Interior.

I believe the Congress should carefully consider the establishment of one or more joint federal-state planning commissions for the development

of Outer Continental Shelf oil and gas resources. Such a commission, or commissions, should:

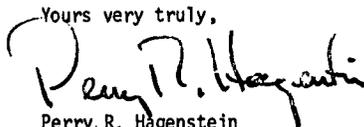
- a) be limited in functions to matters directly involving exploration for and development of oil and gas on the Outer Continental Shelf and the construction of facilities, such as pipelines, refineries and onshore support facilities, directly related to such exploration and development; this would include at a minimum jointly-made decisions on the timing and rate of development, regulations to guide and control exploration and development activities, and tracts to be offered for leasing;
- b) be guided by legislatively established policy objectives including the promotion of both national and regional economic stability, protection of the environment and natural values, protection of the public's interest as owners of Outer Continental Shelf oil and gas resources, efficient utilization and conservation of natural resources of the Outer Continental Shelf, the oceans above it, and the contiguous land and coastal waters, promotion of social well-being of the coastal states and the nation as a whole, and the development of improved technology for utilization and conservation of natural resources;
- c) have equal state and federal representation, have equal representation from each coastal state represented on the commission, and have procedures that will assure that decisions represent at least a majority view;
- d) have a limited life span;
- e) be required to make annual reports to the Congress, the President, the member states, and the public; and
- f) be assigned responsibility for developing procedures for allocating a portion of oil and gas leasing revenues to the coastal states to cover costs incurred by the states in planning for and mitigating the impacts on them of such leasing.

Because there are significant differences in both offshore and onshore conditions along the major sectors of the Atlantic, Gulf of Mexico, and Pacific coasts, it would be advisable to establish a separate joint federal-state planning commission for the development of Outer Continental Shelf oil and gas resources for each major sector of the coast. New England, and to an extent New York, has had a historic relation to the Georges Bank portion of the North Atlantic. Therefore, one logical joint federal-state commission would encompass the New England states and perhaps the State of New York.

There may be a variety of other approaches for directly involving the coastal states in Outer Continental Shelf decisions that affect their vital interests. The model provided by the Joint Federal-State Land Use Planning Commission for Alaska has the advantage of being familiar to the Congress. Whatever criticisms there may be regarding the operation of that particular

Commission appear not to be a matter of basic function or organization. A joint federal-state commission established specifically for OCS decisions would not duplicate existing regional organizations such as the New England River Basins Commission, but could make good use of the information that they collect and organize. I believe the above proposal warrants your attention.

Yours very truly,



Perry R. Hagenstein
Executive Director

PRH:jes

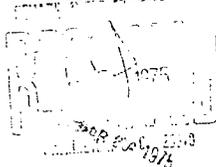
(Identical letter to
Senator Ernest F. Hollings,
Committee on Commerce,
United States Senate)

NEW HAMPSHIRE**FARM BUREAU FEDERATION**

Box 238, 191 North Main Street
Concord, New Hampshire 03301

Phone 603 224-1934

March 24, 1975



Honorable Henry Jackson, United States Senator
Attention: Mr. Michael Harvey
Room 3206, Dirksen Building
Washington, D. C. 20510

Dear Senator:

Agriculture is recognized as the largest user of petroleum products in our country. It naturally follows that farmers are vitally concerned about an adequate supply at a price that is tolerable and not too disruptive to the economy.

Now that the United States Supreme Court has ruled that the Federal Government has jurisdiction beyond the three-mile limit, it is our hope that exploration in the several favorable areas can proceed as rapidly as possible. I would like to quote in part from our 1975 policy on "Energy: "We favor developing our offshore oil and natural gas potential as rapidly as possible consistent with sound environmental safeguards."

It is our further belief that private enterprise with a minimum of governmental supervision and regulation will get the exploration started at the earliest possible date and at the least cost. Speed is of the essence and this emergency cannot wait upon the cumbersome governmental decision making process. Furthermore, we can see no justification for the government becoming actually involved in the drilling for and extraction of the crude oil and gas.

Sincerely,

Richard G. Kelley

Richard G. Kelley
Executive Secretary

RGK:g

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NEW JERSEY HIGHWAY USERS CONFERENCE

212 West State Street

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Trenton, N. J. 08608

March 18, 1975

Senator Henry M. Jackson, Chairman
Interior and Insular Affairs Committee
c/o Mike Harvey
Room 3206
Dirkson Senate Office Building
Washington, D. C. 20515

Dear Senator Jackson:

The hearings scheduled by the Interior and Insular Affairs Committee on April 8 and 9 are of great interest and import to our own group and to many others in a state which, in 1974, suffered severely from the oil embargo and suffers gravely again today with more than 10 per cent unemployment as a result of our economic problems.

We feel, most strongly, that development of the Outer Continental Shelf is absolutely essential to U. S. energy needs and to give this nation some semblance of energy independence from the OPEC countries. It is our position that there are sufficient environmental safeguards available at this time to guarantee a very high degree of environmental purity as a result of this type of progress. In addition, the state of the art, insofar as the development of control devices at drill sites is concerned, is improving virtually every day. The redundant controls on undersea wellheads, for all practical intents, preclude any major environmental shock as the result of accidental discharge.

Our Highway Users Conference is comprised of eighty-eight member organizations representing a large segment of the state's population, as you will note from the enclosed roster. Our feelings on the subject of the development of the Outer Continental Shelf for exploration and production of oil and natural gas are set forth in the enclosed resolution, which was unanimously adopted by our group on January 22, 1975.

As you are aware, New Jersey is, even now, dependent for 67 per cent of its fossil energy needs on foreign sources. Although the supplies of foreign crude oil are at the present readily available (albeit at high prices), an even more pressing need is for natural gas

-continued-

Senator Henry M. Jackson
Page Two

to fuel New Jersey industries. In this area, those industries which are particularly hard hit are the glass manufacturing firms of South Jersey as well as certain petrochemical plants which must have natural gas for their processes.

We would, therefore, urge you most strongly to support our resolution in concept at your forthcoming hearings on this subject. In particular, we find that Senate Bills 825, 826 and 827 are anachronistic and inimical to the needs and desires, both environmental and economic, of a majority of the citizens of the Northeast in general and New Jersey in particular.

We urge that your committee not lose sight of the need for immediate action on development of our energy resources. We cannot afford protracted delay, which many provisions of the afore-mentioned bills would cause.

Thank you for your time and consideration.

Sincerely,



Arthur D. McTigue
Chairman

ADM/emh
Enclosures

RESOLUTION OF THE
NEW JERSEY HIGHWAY USERS CONFERENCE

January 22, 1975

WHEREAS, New Jersey is the most densely populated and most heavily industrialized state in the Union and is suffering acutely from industrial cutbacks and resulting high unemployment rates to a great degree precipitated by domestic energy shortfalls and the high price of foreign petroleum, and

WHEREAS, New Jersey is dependent for more than sixty per cent of its crude oil supplies on foreign sources and foreign oil producing countries which are severely damaging the United States economy, and

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, development of these resources should be an integral part of this nation's long range energy-use planning, and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with proper environmental safeguards, would alleviate the energy shortage and ease the economic burden of New Jersey; now

THEREFORE, be it resolved that the New Jersey Highway Users Conference gives full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States.

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April 16, 1975

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Chairman
Senate Interior and Insular Affairs Committee
3106 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Jackson:

It is my pleasure to forward to you the attached statement dealing with the current Joint hearings on Senate bills 81, 130, 426, 470, 521, 586, 740, 825 and 826. This statement has been developed by our Committee on Energy Resources and it is based on a policy approved by the Board of Directors of the New York Chamber of Commerce and Industry. The Chamber would appreciate having this statement incorporated in the official transcript of the Joint Hearings of the Senate Interior and Insular Affairs Subcommittee, the Senate State Commerce Committee on Oceans and Atmosphere and the Senate National Ocean Policy Study and National Fuel and Energy Policy Study Committee.

Under separate cover I am sending extra copies to Mr. Michael Harvey for distribution to members of the three committees.

Please be advised that we will be happy to answer any inquiries you or other committee members might have on the attached report.

Sincerely,

Thomas N. Stainback
President

Attachment

New York Chamber of Commerce & Industry
 65 Liberty Street New York, N.Y. 10005

Statement of
 The Committee on Energy Resources
 for
 Senate Interior & Insular Affairs Subcommittee on Minerals, Materials and Fuels
 Senate State Commerce Committee on Oceans and Atmosphere
 Senate National Ocean Policy Study and National Fuel and
 Energy Policy Study Committee
 in connection with
 Hearings on the Exploration and Development of
 The Outer Continental Shelf

The New York Chamber of Commerce & Industry is honored and pleased to submit a statement for the record of the joint hearings of the Senate Commerce and Interior Committees. The New York Chamber membership of approximately 3,000 includes a great number of this nation's major corporate enterprises. New York is the headquarters for many of our largest national and international companies, the center of our nation's industrial, commercial, financial and investment firms and historically it has also been the focal point of international trade and commerce. Accordingly, our membership is broadly representative of these vital areas of the private business community.

For some time, the New York Chamber of Commerce and Industry has been extremely interested in the earliest possible exploration of the Atlantic Outer Continental Shelf to verify the existence of available gas and oil deposits which have been indicated by preliminary geological surveys. In March 1973, seven months before the oil embargo of October 1973 the Chamber's Board of Directors approved the following three step policy for the development of the Outer Continental Shelf:

1. Proper safeguards be established to assure safety and guarantee full protection from pollution.
2. The Department of Interior proceed immediately with steps to assure early exploration of this promising area.
3. The national policy on energy then includes judicious development of these resources to assure maximum benefit from this strategic area.

This Chamber policy was again endorsed on March 4, 1974, when the Chamber's Board of Directors unanimously approved the following recommendation developed by the Chamber's Committee on Energy Resources:

The Chamber believes that on the East Coast off-shore drilling to locate new oil and gas reserves should proceed and that deep water ports, refineries, and related on-shore facilities should be developed to facilitate fuel deliveries, with suitable environmental protection.

Over the years the Northeast and especially the New York area has suffered from the absence of a close-at-hand, reliable and continuous source of oil and gas resources and from a complete dependence for our supply of these necessary resources coming from thousands of miles across the United States or from foreign overseas suppliers. More recently our area has felt most keenly first from the petroleum embargo and then from the impact of skyrocketing energy costs which followed the embargo. The double-edged threat of reduced supplies, such as a cut back in natural gas pipe line deliveries, and further price increases casts a continuous cloud over the economic viability of the area. Exploration and development of the Outer Continental Shelf oil and gas resources can do much for economy of New York City, New York State and

- 2 -

the entire Northeast Region. It will mean:

-- A reliable close-at-hand source of energy supply, and relief from dependence on resources coming from thousands of miles away.

-- An end to the continuing threats of fuel shortages and the monopolistic pricing of fuel by foreign suppliers.

-- Encouragement for new industry to locate here and to expand existing plants served by a new, nearby and secure source of energy. New York City and the region are in desperate need of a revitalization of their economic base which has deteriorated over the years with an accompanying drop in employment and a shrinking tax base. A reversal of these trends can be achieved by the injection into our economy of a safe, continuous and competitively priced source of energy. Development of the Outer Continental Shelf offers the opportunity to revitalize our area. The creation and expansion of job opportunities in industries directly dependent on energy for their operations will further create other jobs in the ancillary services required to serve the basic industries.

The New York Chamber of Commerce & Industry believes that there have been too many delays already in the exploration and development of the federally-owned resources on the Outer Continental Shelf. Exploration and drilling by England and the Scandinavian countries in the North Sea has been proceeding most successfully while adhering to rigid environmental safeguards. We are in a more favorable position as far as visual pollution is concerned for any rigs set up at the Atlantic shelf will be well out of sight of land.

The legislation now under review at these hearings if enacted will only further delay the exploration and development of the Outer Continental Shelf for at least two more years and put the Government in the exploration business. In the face of an economic recession and double-digit inflation part of which is the result of the high cost of energy, further delays in the leasing of offshore tracts for exploration by private developers is unthinkable. Every day we delay in this undertaking further undermines the hoped-for goal of energy independence and further makes our economy vulnerable to the politically motivated decisions of foreign oil suppliers.

The exploration of the Outer Continental Shelf can best be done by private firms who have the equipment, expertise and experience in this very intricate science. Just as energy is a scarce resource so is the know-how in gas and oil exploration. At present the Government does not have the equipment or skilled personnel who can do this exploratory drilling and would have to purchase the equipment and hire the personnel, all of which would further delay the development of the Outer Shelf resources.

The Federal leasing program has been successful in the past and there is no need to change the format at this time. Billions of dollars have accrued to the Treasury in the form of royalties from Federally owned land which has been leased out to private firms for exploration and development. The risk is borne by private business and the rewards in the form of increased royalties and tax payments to the Federal Government plus the addition to our energy supplies is shared by all the people.

The New York Chamber of Commerce and Industry therefore disapproves of the legislation now under consideration by this Joint Committee because its provisions will further delay the leasing, exploration and development of the resources in the Outer Continental Shelf at a time when the Nation desperately needs these resources. The Department of Interior's Bureau of Land Management should continue to lease these offshore tracts for private exploration under acceptable safeguards that will guarantee the maintenance of satisfactory environmental standards.

April 16, 1975



New York State

Bituminous Concrete

Producers Association, Inc.

March 21, 1975

DeWitt Clinton Hotel
Albany, New York 12207
Phone 518 - [REDACTED]

463-1249

Honorable H. M. Jackson
Senate Office Building
Washington, D. C.

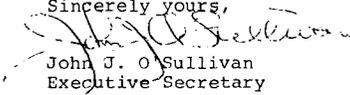
Dear Senator Jackson:

Enclosed for consideration at the hearings on April 8 and 9 is our statement with regard to the Exploration and Development, Petroleum Resources Outer Continental Shelf.

We trust our views will be taken into account when a decision is reached on this subject.

Thank you.

Sincerely yours,


John J. O'Sullivan
Executive Secretary

JJO'S/mab
Enclosure



New York State

Bituminous Concrete

Producers Association, Inc.

March 21, 1975

DeWitt Clinton Hotel
Albany, New York 12207
Phone 518 - [REDACTED]

463-1249

TO MEMBERS: U.S. Senate Interior Subcommittee on
Minerals, Materials and Fuels.
Senate Commerce Committee on Oceans and Atmosphere.
National Ocean Policy Study and National Fuel and
Energy Policy Study Committee.

FROM: John J. O'Sullivan, Executive Secretary
New York State Bituminous Concrete
Producers Association, Inc.

RE: United States Senate Hearings, April 8-9, Exploration
and Development, Petroleum Resources Outer Continental
Shelf.

Our members are responsible for producing the asphalt concrete, often referred to as blacktop or macadam, which is used in the construction of our very fine highways, streets, roads, airports, parking lots, sidewalks and recreation areas.

During 1975 it is estimated that over \$60 million will be budgeted for the building, repair and preservation of the New York State Highway System and an additional \$65 million will be required for other governmental agencies and private work. It is patently evident that an adequate supply of our basic material, asphalt, a petroleum derivative, be available to insure the very existence, not only of our industry, but the contribution it makes to the building and maintenance of the state's most important communication link--the state highway system. Asphalt, the residual of the distillation process is at the bottom of the refining process of crude oil and uniquely is the only petroleum derivative that is not consumed in the process of producing energy. As such, it is not thought of as being in short supply. It is precisely this view that alarms us in that unlike other petroleum products used in producing energy, (for which alternatives exist) there are no comparable substitutes for asphalt.

The long run view is that energy substitutes will be developed given technological lead time but alternatives to asphalt are not foreseen.

Given these facts, we are vitally concerned that our industry be assured a continuing flow of crude petroleum -- the source of asphalt cement. Accordingly, we have followed the OCS issue with great interest in the belief that exploration and development of this resource is in our vital interest. We have examined and closely followed most of the pros and cons that have confronted us in recent years on available solutions to our energy dilemma. We are familiar with the arguments of both antagonists as well as supporters of offshore drilling but have never been influenced in such a manner to regard any other alternative as the best possible approach towards an accelerated solution of our problem. We previously made our position known in a public statement at the Mineola hearings of the President's Conference on Environmental Quality.

In this, our first opportunity to express our views to the Congress on this crucial issue, we would like to stress the immediate need for the exploration and development of the Outer Continental Shelf with the least possible delay.



OHIO STATE GRANGE

JAMES ROSS, Master • 1031 E. Broad St., Columbus, Ohio 43205 • 614-258-9569

March 26, 1975

Honorable Henry Jackson
United States Senate
Washington, D. C.

Dear Senator:

I am sure that I don't have to remind you that every American is deeply concerned about our energy situation and about the reluctance of having our total economy tied to foreign oil suppliers.

Here in Ohio we have a state that not only is rich in agriculture but also well supplied with industry and we are very deeply concerned about ways of finding new energy as rapidly as possible. We feel that the time is now and that steps should be taken immediately rather than the delays we have experienced in worrying so much about our environment that we find ourselves short of the fuel necessary to generate and raise the type of food that America is accustomed to.

For that reason, I am writing you in regard to your hearings that are going on now regarding the offshore drilling. The Grange in Ohio of nearly sixty thousand members is in complete agreement with the resolution passed by the National Grange in November at Sacramento, California. The resolution is as follows:

WHEREAS, there is great need for increased food production in this country and throughout the world; and

WHEREAS, such production increases will require additional quantities of petroleum products for fuel and fertilizer; and

WHEREAS, there is currently a shortage of domestically-produced oil and natural gas which forces our country to become more and more dependent upon foreign countries for supplies of energy sources necessary for industry, agriculture and our private lives; therefore be it

RESOLVED, that the National Grange go on record as favoring the development of offshore oil and gas potential, de-regulation of well head prices of natural gas, and sound energy conservation measures to assist attempting to make ourselves self-sufficient and in bridging the energy gap for the short term. For the long term we recommend stepped-up research in solar energy, wind potential, coal gasification, oil shale, geothermal steam and other possibilities. In carrying out these proposals, due regard should be given to the protection of the environment.

Honorable Henry Jackson

-2-

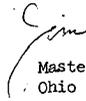
March 26, 1975

I am sure that we don't need another eight or ten years delay in building pipe lines and offshore drilling, nuclear power stations, and so forth, and I would urge you and your colleagues to consider immediate steps about our energy shortage and worry later about our total environment.

I am sure all of us are deeply concerned about our environment but what good is a good environment if we are not able to raise good food and have a prosperous economy.

I want to thank you for allowing me to write the concerns of the people in Ohio and offer my assistance in any way in moving ourselves ever closer to independence in the energy field.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim", with a large flourish underneath.

Master
Ohio State Grange

JR:bm

CC: Robert Taft
John Glenn

S. H. RIGBY, PRESIDENT

J. Reasor
TELEPHONE 803-435-2224

MAR 28 10 42 AM '75

S. H. Rigby Oil Co., Inc.

MAR 28 10 42 AM '75

POST OFFICE BOX 337

MANNING, SOUTH CAROLINA 29102

Manning, S. C.
March 25, 1975

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Office Building
Washington, D. C. 20510

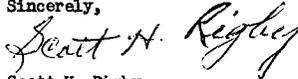
Dear Senator Jackson:

Attached you will find copy of letter that I have written in regard to offshore drilling along our Atlantic and Pacific Outer Continental Shelf to The Senate Committee on Interior and Insular Affairs of which you are Chairman.

Senator Jackson, I urge you to use your influence with the committee to obtain their compliance with my request in this matter. Time is no longer on our side. To me it seems a must that leases be granted to The Petroleum Industry so that work can begin at once in the search for offshore oil. To place the responsibility for drilling for this oil in the hands of some government agency or commission would be very costly to the American People and would further deteriorate our free-enterprise system.

I know that you are a staunch believer in The Free-Enterprise System which has made The United States the great industrial nation that it is today. I want to thank you for the support you can give to my request.

Sincerely,



Scott H. Rigby

S. H. Rigby Oil Co., Inc.

POST OFFICE BOX 337
MANNING, SOUTH CAROLINA 29102

Manning, S. C.

March 24, 1975

Senate Committee on Interior and Insular Affairs
Attention Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Gentlemen:

It is my understanding that The Senate Committee on Interior and Insular Affairs is now holding meetings and that the matter of offshore drilling along our Atlantic and Pacific Outer Continental Shelf is under discussion.

Having been in the oil business for over forty years I would like to make the following statement to be placed before this Committee reflecting my opinion on a matter that I consider most vital to our Energy Crisis and the economy of our nation. The opinion expressed by me is held also by many of my fellow-citizens.

I have seen the Petroleum Industry grow from sidewalk pumps in front of hardware stores, garages, and country stores with little demand for petroleum products to the modern Petroleum Industry of today on which demands are endless.

This growth in the Petroleum Industry over the past years would have to be attributed to our free-enterprise system which not only made it possible for the Petroleum Industry to meet the demands of the modern day's needs but has worked the same in all of the nation's other industrial progress. This progress can continue and our growing demands be met if we let the free-enterprise system continue to work as it has for the past hundred years.

There is a lot said today about Big Business. This term I believe to be a misnomer, for there is no such thing as Big Business. We do have large corporations and they are sometimes called Big Business, but large corporations are made up of small corporations and individuals. The larger the corporation the more individuals are involved. Since the initiation of The Machine Age the large corporations have been the backbone of The American Economy. The success of the large corporations is due to the fact that they are not closed corporations but have been open to the participation of the individual stock-holder who can be a part of its policy-making and profit-sharing which brings us back to the individual and the concept of private enterprise.

I strongly urge that Senator Jackson as Chairman and the members of the Senate Committee on Interior and Insular Affairs give every consideration to speedy development of offshore drilling to find the necessary oil and gas to meet our nation's needs in the Energy Crisis.

S. H. Rigby Oil Co., Inc.

POST OFFICE BOX 337

MANNING, SOUTH CAROLINA 29102

I strongly urge The Committee to place the responsibility for this needed off-shore drilling in the hands of The Petroleum Industry which over the past years has proved its ability to accomplish this undertaking. Not only does the private oil industry have the technical know-how and equipment to get this job done but also they have the experience needed to accomplish the job without unnecessary delay.

I can see no advantage in having the U. S. Government become an active participant in the project. I realize that there is legitimate need for Environmental control and for Revenue Sharing for those States involved which will be affected by off-shore drilling, but such provisions can be made and should not delay immediate action's being taken.

Our present Energy Crisis and the seriousness of this crisis during the winter of 1973 and 1974 due to the Arab Embargo could have been avoided if we had not let various commissions and well-meaning individuals delay the construction of The Trans-Alaska pipeline for over six years.

Now that the work is in progress on The Trans-Alaska pipeline I strongly urge that The Senate Committee on Interior and Insular Affairs recommend to Congress that they make leases available to private Oil Companies for the immediate beginning of a search for off-shore oil. I feel that any delay in granting such leases to The Petroleum Industry would be gambling with our nation's economic future. The sooner such action is taken the further removed we will be from dependence on foreign imports of crude oil for meeting the demands of our nation's energy needs. Never again should the American people be put in a position of such dependence on a foreign country because of the lack on the part of some of our elected officials of faith in the free-enterprise system.

Sincerely,

Scott H. Rigby

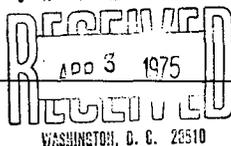
Scott H. Rigby



SERVICE OIL COMPANY, INC
 PHILLIPS 66 GASOLINE • MOTOR OILS
 HEATING OILS • GREASES • SOLVENTS

DIAL 583-3688 or 583-3689
 1107 UNION STREET — P. O. BOX 3255
 SPARTANBURG, S. C. 29302

SENATE INTERIOR COMMITTEE



March 29, 1975

Senator Henry M. Jackson, Chairman
 Senate Committee on Interior and Insular Affairs
 3106 Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Senator Jackson,

Enclosed is a copy of a letter sent to Mr. D. Michael Harvey who is on the Senate Committee on Interior and Insular Affairs.

This letter expresses our opinion about off shore drilling on the East Coast and our resentment about the possibility that the U. S. Government is considering going into the oil business. We feel that government has enough to do right now without competing with private enterprise. Perhaps more of your time should be spent trying to balance the budget and solving the unemployment problem instead of getting involved with something you know nothing about.

The American people are getting tired of government efforts to control everything. The government is supposed to represent the people to their best interests, but someone must have forgotten this. This country wasn't built by government, but was built by people who were willing to put their time, efforts and money into something they believed in. Government just cannot compete with private enterprise. They have no worries about making or losing money, no stockholders to answer to, and most government employees just don't give a damn as long as they get their paycheck.

Sincerely,

T. R. Fuller

T. R. Fuller

cc: Senator Henry M. Jackson



SERVICE OIL COMPANY, INC

PHILLIPS 66 GASOLINE • MOTOR OILS
HEATING OILS • GREASES • SOLVENTS

DIAL 583-3688 or 583-3689
1107 UNION STREET — P. O. BOX 3255
SPARTANBURG, S. C. 29302

March 29, 1975

Mr. D. Michael Harvey
Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Sir,

I would like to express our concern about the energy situation and the efforts of our Senators and Congressmen, along with the horde of beaucrats, to try and solve the problem by talking with each other.

We see no reason why efforts cannot be made to explore the off shore drilling possibilities along the East Coast of the United States. If oil or gas could be discovered in this part of the country, and refineries could be built in this section to process the crude oil, it would greatly alleviate the dependence of the East Coast on other sections of the country for their oil products.

We hope that every thing possible to be done will be done to expediate this drilling program. If people hadn't dragged their feet on the Alaska project, we would have been able to override the Arab embargo through the use of the Alaskan oil. If we don't go ahead and explore the off shore areas of the East Coast, we may find ourselves right back in the same boat should we have another embargo.

We also would like to express our opinion about who will do the exploratory drilling. We see no reason why the government should get involved. The oil industry has the personnel, the equipment, and the know-how to proceed with the drilling. The government doesn't have any knowledge of the oil business, and any efforts on their part will probably result in the same problems we now have with other government run operations, such as the post office. Past history will show that government cannot compete with private enterprise on any level. We in the oil industry are overloaded now with government directives and regulations, with the multitude of forms and surveys that are requested by some bureaucrat who is trying to justify his position. About all we can see that the government is doing now is trying to become a wealth redistribution system for the American people.

We urge your consideration for immediate off shore exploratory drilling by private enterprise.

Sincerely,
J. R. Fuller
T. R. Fuller

SEED
 Society for Environmental,
 Economic Development
 Suite 1022, Holiday Inn Building
 240 West State Street, Trenton, New Jersey 08608
 (609) 695-7007

SENATE INTERIOR COMMITTEE
 RECEIVED
 APR 9 1975
 WASHINGTON, D. C. 20510

Handwritten initials

APR 8 11 16 AM '75

April 4, 1975

Honorable Henry M. Jackson
 United States Senate
 Chairman of the Committee on Interior and Insular Affairs
 Room 137, Russell Senate Office Building
 Washington, D.C. 20510

Dear Senator Jackson:

The Society for Environmental, Economic Development, known as SEED, is a coalition of labor and industry organizations whose purpose it is to promote the balanced and mature consideration of both environmental and economic concerns for the ultimate welfare of the people of New Jersey. The New Jersey State AFL/CIO and the New Jersey State Chamber of Commerce, for instance, are among SEED's more than 50 institutional members.

We write to you in your capacity as Chairman of the Committee on Interior and Insular Affairs on the eve of further hearings on bills pertaining to oil and gas leasing on the Outer Continental Shelf. We wish to communicate our strongly-held convictions in this matter to which we have devoted considerable thought and research.

The protection and enhancement of our environment is a major objective of SEED, but we also are aware of the need today to develop an adequate and secure energy base which will stimulate employment and economic growth at a time when such stimulation is vital to the welfare of the people of this state and nation. We are solidly behind "PROJECT INDEPENDENCE", the movement to make this country independent of foreign energy sources.

We wish to point out that "PROJECT INDEPENDENCE" consists of more than research and development of dramatic new energy sources, the conservation of resources, and the increasing of efficiency in the generation and distribution of energy. We also must seek out and utilize additional supplies of conventional energy sources.

Honorable Henry M. Jackson
United States Senate

-2-

April 4, 1975

Oil and natural gas constitute the major energy sources for this state and nation and, despite the most vigorous efforts to develop new energy sources, will remain so for many years to come. We see the well-being of all of us involved in our efforts both to assess and tap our domestic potential.

It is with this basic attitude that SEED urges all deliberate speed in the search for oil and natural gas deposits under our Outer Continental Shelf. In particular, we encourage the exploration of the Baltimore Canyon off the coast of New Jersey and nearby states.

Not only SEED but most New Jerseyans take this stand. A recent poll by the highly-respected Eagleton Institute of Politics of Rutgers, New Jersey's State University, finds that 60 percent favor exploratory drilling off the New Jersey shore as a crucial step in increasing domestic supplies of energy. According to the poll, only 32 percent opposed such drilling while 8 percent were undecided.

SEED recognizes that significant questions of a political, legal, economic, and technological nature are raised by the prospect of exploration for, and possible production of, oil and natural gas off our shores. SEED also recognizes that it is the proper role of Congress to carefully examine all possible action in the light of the best interests of the people of the United States.

We urge only that the merits of any proposals which could effectively delay or obstruct exploratory operations be subjected to the most rigorous scrutiny. Time is one resource that none of us can afford to waste and we call upon all involved -- local, state, and federal officials, along with private interests -- to engage each other in ways that will bring forth equitable resolutions quickly.

Consider SEED at your service should you desire further comment or information on this subject.

Sincerely yours,



Lewis R. Applegate
Secretary

LRA:am



SOUTH CAROLINA FARM BUREAU

March 13, 1975

RECEIVED
MAR 15 1975
U.S. SENATE

P. O. BOX 754 / COLUMBIA, SOUTH CAROLINA 29202 / 803 796-6700

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

Enclosed find a copy of our statement to the Senate Committee on Interior and Insular Affairs as regards offshore petroleum exploration and development.

This is a very vital and basic issue as concerns American agriculture; and on behalf of our membership, I sincerely urge your most diligent efforts toward speedy action in getting this project underway.

Thank you for your cooperation.

Sincerely,

Harry S. Bell
Harry S. Bell
President

HSB:twd

CC: Senator J. Strom Thurmond
Senator Ernest F. Hollings

STATEMENT OF SOUTH CAROLINA FARM BUREAU
BEFORE
SENATE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
REGARDING
OFFSHORE PETROLEUM EXPLORATION AND DEVELOPMENT

Presented by Harry S. Bell, President

March 13, 1975

Mr. Chairman, on behalf of the 42,000 member families of South Carolina Farm Bureau, I wish to place in the record the following statement in regards to the development of offshore drilling to find the oil and gas necessary to meet our nation's growing energy needs.

I am sure that this committee is aware that farming relies heavily on petroleum products, and if they are to meet the increasing demands for greater production of food and fiber, adequate petroleum products are a basic necessity. Any energy crisis will have a far-reaching effect on the farmer's ability to supply the basic needs of our society.

To better understand the impact of an energy crisis on agriculture, we must first try to visualize what petroleum contributes to farming. The agricultural industry - from seed to table - accounts for 13 percent of America's energy use. Each acre that is cultivated and harvested requires 22 gallons of petroleum; or to be more specific, in 1973, farmers used 4 billion gallons of gasoline, 2.5 billion of diesel fuel, and 1.3 billion gallons of liquid propane gas. Aerial crop dusters and seeders used over 40 million gallons of gasoline and jet fuel, and nitrogen fertilizers accounted for 452 billion cubic feet of natural gas. In addition, agriculture consumes large amounts of energy indirectly. For example, fuel used to transport farm products to market exceeded 4 billion gallons in 1973.

In the past 10 years, energy consumption on the farm has increased steadily, because of technological advances and labor substitutes necessary for our age. This will, of necessity, require continued increased consumption in the future since many of these advances are energy intensive.

-2-

Let me add that although energy consumption in agriculture has increased, so has productivity. A decade ago it took 3.8 man-hours of labor to grow one acre of wheat; today it takes 2.9 hours. We are at a point where few farmers, fewer acres under cultivation, and fewer man-hours of labor, combined with improved use of technology and greater use of energy, are producing more food.

In the final analysis, availability of fuels, chemicals and fertilizers will determine whether farmers will be able to meet the needs for agricultural products now and in the future.

With the above mentioned facts in mind, our voting delegates have adopted the following policy concerning the development of energy supplies: "Large supplies of oil and gas exist under the outer continental shelves of both the East and West coasts, as well as the Gulf of Mexico. We support steps that are being taken to allow the development of these oil supplies. This development, along with the reopening of the Santa Barbara Channel field, should include technological requirements designed to minimize the possibility of oil spills and seepage. The potential for coal gasification for the development of heavy oil from coal supplies, and for further development of hydro, atomic, geothermal, oil shale, solar, and wind sources of energy also should be explored."

"We believe that our future energy needs will be met largely through research and development of new technology. While government has a role in providing assistance in this area, we oppose establishment of a new government corporation to explore, develop, and produce new energy sources. We support government assistance in basic research in cooperation with private enterprise."

In closing, let me urge you to seriously consider the need for speedy development of offshore drilling to find the oil and gas necessary to meet our nation's near-term energy needs; and again emphasize our belief that such exploration should be done by private enterprise.

Thank you for your kind consideration.

Ack

SOUTH CAROLINA

HIGHWAY USERS CONFERENCE

hu

716 PALMETTO STATE LIFE BUILDING

Telephone 803-252-9311

COLUMBIA, S.C. 29201

MAR 29 10 32 AM '75

March 26, 1975

M

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Senator Jackson:

Enclosed you will find a copy of our statement to the Senate Committee on Interior and Insular Affairs as regards offshore petroleum exploration and development.

This is a very vital and basic issue as concerns South Carolina Highway Users; and on behalf of our membership, I sincerely urge your most diligent efforts toward speedy action in getting this project underway.

Thank you for your cooperation.

Sincerely,

Ernest A. Sessions

Ernest A. Sessions
Chairman

EAS/vj

Enclosure

cc: Senator Strom Thurmond
Senator Ernest F. Hollings



March 26, 1975

Senate Committee on Interior and Insular Affairs
Attention Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey:

The South Carolina Highway Users Conference recently passed a resolution giving full support to efforts being made to develop offshore oil and gas exploration in the Atlantic Outer Continental Shelf. A copy of the resolution is attached for your information.

The Highway Users Conference is a non-profit organization of some twenty (20) businesses and associations dedicated to improving highway transportation. The SCHUC strongly supports immediate action to develop our potential offshore oil and gas resources.

Offshore drilling along the OCS will do more than provide new sources of energy, it will also help to strengthen the economy of our state and nation. Our members represent thousands of highway users in South Carolina who are dependent upon adequate and reliable supplies of energy. Offshore lands could supply that energy if the oil industry is permitted to explore there.

And we think, exploration and development of the offshore should be done by private enterprise rather than by government. Private enterprise has the expertise and is willing to take the necessary risk to find vital energy supplies.

As an organization in a coastal state, we are certainly concerned with protecting our delicate environment. Protection of our environment is a safeguard which must be maintained in any exploration or development of the OCS. We believe that Coastal Zone Management plans can be formulated during the time span needed to develop actual drilling programs.

Surely we should have learned a lesson from the six-year battle of the trans-Alaska pipeline which is only now beginning construction. Had we been receiving oil from Alaska during the Arab embargo of the Winter of 1973-74, we would have been able to offset its effect. We cannot afford for offshore drilling to suffer a similar delay.



Mr. D. Michael Harvey
March 26, 1975
Page 2

In closing, we emphasize the need for speedy development of offshore drilling to meet our nation's near-term energy needs. We strongly believe that such exploration should be done by private enterprise, because we can not afford to have a government effort further delaying the search for petroleum.

Sincerely,

A handwritten signature in cursive script that reads "Ernest A. Sessions".

Ernest A. Sessions
Chairman

EAS/vj

Attachment

RESOLUTION
OF THE
SOUTH CAROLINA HIGHWAY USERS CONFERENCE

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, importation of petroleum from foreign oil producing countries is drastically damaging the United States economy; and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with necessary environmental safeguards, would alleviate the energy shortage and ease the economic burden of South Carolina and the Southeast; now

THEREFORE, be it resolved that the South Carolina Highway Users Conference gives full support to efforts being made to develop offshore exploration on the Outer Continental Shelf of the Atlantic Coast of the United States.

southern
new jersey
development
council

Hon. Henry M. Jackson
United States Senate
Senate Building
Washington, D. C. 20510

March 27, 1975
MAR 31 1975
U.S. SENATE
WASHINGTON, D. C. 20540

Dear Senator Jackson:

The Southern New Jersey Development Council is a non-profit corporation which has been in existence over 23 years. We are comprised of approximately 1,000 members which employ 355,000 persons of which 126,000 are employed in manufacturing. Our area of operation is the southern six counties of the State of New Jersey. This takes in Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem Counties -- over 3,000 square miles.

A great deal of our effort is devoted to attracting new industries to the area, and as a result, over the past ten years we have located some 150 major industries representing 20,000 new jobs, contributing over 125 million dollars in new payrolls -- and I would note that a payroll dollar has about a five time rollover -- so that we are very much involved in the economic development of our area and in the process of doing so we are in constant contact with industries, the major industries.

This council went on record over a year ago to support leasing on the outer continental shelf. I am writing this letter in reference to the following bills: S81, S426, S521, S586, and S40. While we can agree with the concept of these bills, we feel at this time they deter the nominations to the Department of the Interior in getting the outer continental shelf leased.

It certainly is not a healthy condition when we are dependent on foreign countries for almost 36% of our oil needs. The import of these fuels absolutely destroys the balance of trade, and we must act on ways to keep our dollars here.

All of the difficulties in gas supply are not necessarily related to environmental questions nor are they specifically related, totally, to an urgent need to develop the supplies believed off the Atlantic Coast. However, it is our belief that the energy requirements of the U.S. and the immediate problems of the gas industry require decisions to be made at all levels of both the private and public sectors. We believe that all of the sources of future energy supplies are essential to the country's growth.

We urge you to do everything in your power not to place any more undue burden on the developing of the OCS.

Sincerely,
Louis J. Dalberth, Jr.
Louis J. Dalberth, Director

ljd:brs
cc: Sen. Case one new york avenue atlantic city, new jersey 08401 609/344-4163



SPORT FISHING INSTITUTE

APR 4 10 11 AM '75
 608 THIRTEENTH STREET, N.W. (SUITE 801) WASHINGTON, D. C. 20005 (202) 737-0668
 April 2, 1975

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Senator Henry M. Jackson, Interior Committee Chairman
 Senator Warren G. Magnuson, Commerce Committee Chairman
 Russell Senate Office Building
 Washington, DC 20510

Dear Senators Jackson and Magnuson:

The Sport Fishing Institute is acutely aware of the many environmental problems associated with the production, refining, transportation, and combustion of petroleum products. We are equally aware of the indispensability of these products in today's society and of the continuing increase in their consumption. Accordingly, the Institute offers the following testimony with respect to the proposed amendments to the Outer Continental Shelf Lands Act (S.426, S.521) and similar measures dealing with this subject. We respectfully request that our testimony be included in the official record(s) of hearing.

The volume of petroleum products annually entering the marine environment is the subject of much research and record-keeping. Though estimates differ, even the most conservative figures are quite large. Lloyd' Register of Shipping, Statistical Tables report 266 tanker accidents for the years 1969 and 1970 with approximately 0.43 million tons of oil spilled into the marine environment. The Dillingham Corporation, in an analyses of major worldwide oil spills (2,000 barrels or more) reports approximately 0.11 million metric tons spilled in 13 major incidents in 1968 and approximately 0.10 million metric tons in eleven 1969 incidents. The U.S. Coast Guard records indicate that at least 0.07 million metric tons of petroleum products were discharged into U.S. marine waters in 1970. A 1973 report by Darrel Charter and Joseph Porricelli (Ocean Affairs Board Natural Academy of Sciences, Natural Resource Council) estimates that 5 million metric tons of petroleum from all sources entered the world marine environment in 1970. Charter and Porricelli's figures included 1.43 million metric tons from tanker accidents and 2.5 million metric tons from non-marine sources.

According to the 1970 Report of the Study of Critical Environmental Problems (SCEP) sponsored by the Massachusetts Institute of Technology, entitled, "Man's Impact on the Global Environment" (The MIT Press, Cambridge Mass.), an estimated 2.1 million metric tons of oil are introduced into the oceans every year through the agency of man (CF. page 139 of the SCEP Report). This vast quantity includes accidental spills (less than 10%) "normal operations" of oil-carrying tankers and other ships, oil refineries and related processing plants, and under-sea oil wells (at least 90%).

Man-spilled oil in the ocean now exceeds 0.1% of world crude oil production. By 1980, world crude oil production is predicted at 4 billion tons per year, with the consequence that an estimated 4 million tons of it will then enter the ocean annually. These figures omit the possibility that fallout of airborne hydrocarbons on the sea surface may raise total contamination by oil and oil products to a level about five times the direct influx. (CF. page 141 of SCEP Report.)

The National Non-Profit Fish Conservation Organization

These amounts of oil, great as they are, would have small effect upon the marine environment if spread evenly throughout the oceans of the world and if spaced evenly over a twelve-month period. Unfortunately, oil spills do not conform to such uniform patterns of dispersal.

In July, 1962, a tanker went aground near Guayamilla Harbor on the south coast of Puerto Rico. Twenty-eight thousand barrels of oil, pumped into the sea to lighten the ship, rapidly contaminated 15 miles of residential and recreational beach. There was substantial mortality of marine organisms, almost complete destruction of mangrove swamp habitats, and heavy erosion of beaches due to seaward movement of the oil-sand mixture.

In September, 1967, about 140,000 gallons of aviation and general fuels were lost from a vessel that grounded 700 feet off the shore of Wake Island. There was a heavy fish kill and extensive damage to reef marine life.

On January 28, 1969, some 100,000 or more barrels of crude oil were lost in a drilling accident seven miles from the port of Santa Barbara. Forty miles of residential and recreational coastline were contaminated, with substantial bird mortality resulting.

In March, 1957, at least 60,000 barrels of diesel oil escaped a grounded tanker off Tampico, Mexico, and caused widespread destruction of marine life in a 2 to 3 mile wide cove.

On March 18, 1967, the full cargo of 700,000 barrels of crude oil were lost from the Torrey Canyon Tanker when it grounded 15 miles off England. A total of 242 miles of shoreline were contaminated in England and France. A large kill of birds resulted.

On March 3, 1968, approximately 83,400 barrels of crude oil were lost from a tanker that grounded a mile offshore near San Juan, Puerto Rico. The entire San Juan harbor and 16 miles of nearby recreational and commercial beaches were contaminated, causing heavy destruction of marine life in the affected littoral zone.

On the other hand, 322,000 barrels of crude oil were lost 40 miles off South Africa on June 13, 1968, when the tanker, World Glory, broke apart in a storm. The resulting oil slick, 60 miles long by 1 mile wide, never reached shore and no marine or bird life mortality was documented.

In general, the lighter (more volatile) the petroleum product, the more harmful it is to marine life due to the higher solubility and toxicity of its lighter fractions. Adult finfish generally appear to be unaffected by crude oil, their mobility permitting them to avoid areas of concentration. Finfish eggs, larvae, and juveniles which are seasonally found concentrated near the surface may not be so fortunate. Shellfish, including mollusks such as clams, oysters, and scallops along with crustaceans such as crabs, lobsters, and shrimp are more directly affected by coastal zone oil spillage than other forms of marine life. Shellfish have also shown great vulnerability to a majority of the chemicals used experimentally to disperse spilled oil. Oceanic birds, and shorebirds, can be severely affected by oil spills, often with great loss of life.

The Sport Fishing Institute is reluctantly persuaded, despite the fearful threat of increased oil spills inherent in offshore oil production, that the extraction of OCS oil resources is a national necessity. We are also persuaded that such extraction, if accomplished under extremely stringent controls, can be done with acceptable environmental risks. The Board of Directors of the Sport Fishing Institute has adopted the following resolution which directly pertains to this subject:

NATIONAL POLICY FOR OUTER CONTINENTAL SHELF OIL DEVELOPMENT

WHEREAS, the sedimentary rock formations under many areas of the Outer Continental Shelf bordering the United States are thought to contain vast reserves of extractable crude oil, and any near-term solution of energy shortages affecting the United States will evidently require the extraction and utilization of these petroleum reserves from the Outer Continental Shelf; and

WHEREAS, estuarine, coastal, and Outer Continental Shelf (OCS) waters support irreplaceable biological and recreational resources which, being perpetually renewable if properly managed, are of far greater public value than the finite supplies of petroleum in the OCS, and these precious biological and recreational resources could be seriously damaged or destroyed by mismanaged OCS oil exploration and production; and

WHEREAS, the OCS petroleum reserves as well as the OCS biological and recreational resources are public property to be shared and enjoyed by every citizen rather than by a privileged few;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Sport Fishing Institute, assembled in regular Annual Meeting, May 16, 1974, at Corpus Christi, Texas, do herewith declare that a national policy for the leasing and development of the petroleum reserves of the Outer Continental Shelf should be established, and that this policy should be formulated in the context of the following cardinal principles:

1. The development of Outer Continental Shelf petroleum resources shall be planned, accomplished, and regulated in a manner that will best assure the maximum possible safeguards against environmental pollution and ecological degradation both at sea and on adjacent land areas.
2. The leasing and development of Outer Continental Shelf petroleum resources shall be accomplished in a manner that will guarantee the maximum dollar income to the public treasury that is consistent with maximum environmental protection.
3. A substantial portion of the public income from Outer Continental Shelf developments should be dedicated to mitigating damage from inevitable accidental oil spills and to help fund land and water conservation activities throughout the nation;

BE IT FURTHER RESOLVED, that the United States Congress is herewith urged to establish and implement such a policy at its earliest opportunity, well in advance of petroleum development in Outer Continental Shelf frontier areas.

Senate Bills S.426 and S.521 appear to be environmentally responsible and we highly commend the obvious care with which they were drafted. We do, however, have a few specific comments concerning certain provisions of the bills and a few suggestions for improvement.

"Liability for Oilspills"

We completely agree with the concept (expressed in both S426 and S.521) that the holder of the lease or right-of-way, without regard to fault, is strictly liable

for any damage resulting from discharges of oil or gas. We like the concept of the Offshore Oil Pollution Settlements Fund to be established under both bills. Funding through a "reclamation fee" of 2 and 1/2 cents per barrel seems especially appropriate.

"Environmental Impact Assessment and Monitoring"

We believe that the environmental impact assessment provisions contained in S. 426 are much more comprehensive and desirable than those proposed in S. 521. In the preparation of environmental impact statements, we concur with the need for careful evaluation of negative and adverse environmental effects but we ask also that positive impacts and opportunities receive attention, ie.

In the erection and operation of offshore drilling or production platforms; in the laying of pipelines, in the construction of sea walls or the development of access areas and launching sites there will be many opportunities to simulate the beneficial ecological effects of artificial fishing reefs or to provide public recreational access to offshore waters. The opportunities should be identified, studied, and where possible developed, in close cooperation with appropriate State and Federal agencies. Accordingly, we ask that Sec. 21 (c) on page 29 of S. 426 be amended to add a number (10) to read as follows:

- (10) information concerning any public recreational benefits which may result from proposed developments, plus details of any public recreational opportunities which will be presented;

"Coastal State Fund"

Despite the best intentions and the most painstaking precautions, offshore oil development will result in some oil spills and other adverse environmental effects. We believe it is important both to protect against such developments and to mitigate for any resulting damages. Furthermore, we believe that such work should be accomplished under provisions of the Coastal Zone Management Act of 1972, which was established for just such a purpose.

It is our belief that offshore oil developments will generally be less environmentally hazardous and less esthetically repugnant than land-based oil developments, strip-mining for coal, open-pit quarrying for copper or iron ore, placer-mining for gold, clear-cutting of timber and a variety of other resource exploiting processes. Such activities have created and continue to create monumental social and environmental problems.

In fairness to all of the people of the nation, whom the courts have declared to be the owners of OCS resources, we strongly endorse the concept of using a percentage of offshore petroleum revenues to achieve social and environmental gains for everyone regardless of coastal state residency. We submit that these goals can best be accomplished by amending the Land and Water Conservation Fund Act to provide for substantially increased funding from OCS resource-exploitation revenues.

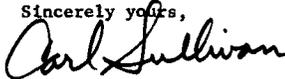
The dedication of \$0.40 (forty cents) per barrel of oil revenues to social and environmental benefits is fully justified by the countless examples of shortsighted environmental policy failures of the past. The Land and Water Conservation Fund is

the perfect vehicle for achieving such benefits and, fortunately, its mechanics are already fully established. Several bills for greatly expanding this fund have been introduced into the past and present Congress. A \$0.40 (forty cents) per barrel fee from offshore oil dedicated to the Land and Water Conservation Fund would be strongly in the public interest.

In summary, I repeat the thrust of the Sport Fishing Institute's policy for the development of the nation's OCS petroleum resources. We are reluctantly persuaded that the extraction of these resources is acceptable as a national necessity, provided it is accomplished as follows:

1. Imposition of maximum possible safeguards against environmental degradation at sea or on the shore.
2. Generation of maximum dollar income to the public treasury.
3. Dedication of a substantial portion of the public income to funding land and water conservation activities throughout the nation (The latter to be accomplished by earmarking forty cents per barrel of OCS oil revenues for use through the Land and Water Conservation Fund).

Sincerely yours,



Carl R. Sullivan
Executive Secretary

CRS:has

Senator Ernest F. Hollings
CC: Senator J. Bennett Johnston, Jr.
Senator Edward M. Kennedy
Senator McC. Mathias, Jr.
Senator Lee Metcalf
Senator Jennings Randolph
Senator John V. Tunney



STATE OF WEST VIRGINIA
OIL AND GAS CONSERVATION COMMISSION
CHARLESTON 25305

ARCH A. MOORE, Jr.
Governor

March 25, 1975

THOMAS E. HUZZEY
Commissioner

OGC File 43

Honorable Henry M. Jackson, Chairman
Interior and Insular Affairs Committee
United States Senate
Dirksen Office Building, Room 3206
Washington, D. C.

Attention: Mr. Mike Harvey

Re: Offshore East Coast Oil and Gas Exploration

Dear Senator Jackson:

Drilling for oil and gas in the United States is now at a rate 20 per cent higher than for comparable date in 1974, yet the production of oil and gas is from 5 to 10 per cent less than during a comparable time frame of 1974.

Obviously the quality of the prospective hydrocarbon sources remaining is substantially less than we have exploited in years past. To further illustrate this decline in quality, one needs only to compare the new gas discovery rate of 662 MCF per foot drilled in 1966 to the 104 MCF per foot drilled in 1973.

For this reason, I urge that you expedite the exploration for oil and gas offshore of the East Coast, so that we may make an orderly transition from oil and gas to coal and other fuels.

Very truly yours,

A handwritten signature in cursive script that reads "Thomas E. Huzzey".

Thomas E. Huzzey,
Commissioner

TEH/gl

THE BARRE GRANITE ASSOCIATION

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March 18, 1975

The Honorable Henry Jackson
United States Senate
c/o Mike Harvey
3206 Dirkson Senate Office Building
Washington, D. C.

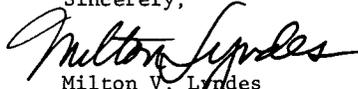
Dear Senator Jackson:

The member-companies in our Association feel that it is urgent that some kind of program be immediately implemented in order to find out how much oil and natural gas exists on our outer continental shelf along the Atlantic Coast.

I hope that any bills that will hurry along this program will be viewed favorably by the Senate, and any bills that would tend to impede this progress be not encouraged.

I am sure that the Senate, in its wisdom, sees the importance of early exploration of our oil and natural gas along the continental shelf and will do whatever possible to see that this is carried out.

Sincerely,



Milton V. Lyndes
General Manager

MVL:AG

cc Senator Robert T. Stafford
Senator Patrick Leahy
Representative James M. Jeffords

THE GEORGIA PLANT FOOD EDUCATIONAL SOCIETY inc.

JOHN L. COPE
Secretary Treasurer
68 BLUFF DRIVE
SAVANNAH, GEORGIA 31408

P. J. BERGEAUX
Educational Adviser
125 SHARON CIRCLE
ATHENS, GEORGIA 30601



May 11, 1975

WILLIAM J. COOK
President
P.O. BOX 1483
AUGUSTA, GEORGIA 30903

JOHN D. ELLIOTT
Vice President (Membership)
P.O. BOX 188
VALDOSTA, GEORGIA 31601

Honorable Henry M. Jackson, Chairman
Senate Interior and Insular Affairs Committee
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510



Attention: Mike Harvey

Dear Sirs:

Do you like to eat when you are hungry? Most people do but in order to feed hungry people farmers need to have an available supply of nitrogen to satisfy his plants cravings. You perhaps know better than anyone that the energy resources of this country, especially natural gas, is rapidly diminishing to the point of no return. We believe the natural gas situation has reached an alarming point. Since such tremendous volumes are needed to produce the required nitrogen fertilizers, a sufficient quantity must be made available. Agriculture must have this vital necessity to produce a sufficient supply of food. Considerable producing fields of additional sources of supply are absolutely essential. The most promising area for this supply lies in the Continental Shelf of the Atlantic Ocean.

Having been a United States Senator for many years, with a first hand knowledge of what takes place when government becomes involved, it is difficult to see how you cannot believe that private enterprise is the best method to immediately begin the search for, find, develop, and bring to fruition the vast store of potential oil and gas lying under the ocean.

Honorable Henry M. Jackson, Chairman
 Senate Interior and Insular Affairs Committee
 Page 2
 May 11, 1975

Therefore, we urge you to sincerely consider tabling or killing the Bills, numbers S. 586, S. 825, S. 826, and S. 827. These Bills will prohibit, as we understand it, American Industry from proceeding to develop the potential energy resources on the East Coast.

Your consideration to these suggestions will be appreciated.

Sincerely,



W. J. Cook, President

WJC:sw

cc: Senator Herman E. Talmadge
 United States Senate
 109 Russell Building
 Washington, D. C. 20510

Senator Sam Nunn
 United States Senate
 109 Russell Building
 Washington, D. C. 20510

Mr. Eric Holmes, Jr.
 Petroleum Council of Georgia
 161 Peachtree Street, N. E.
 Atlanta, Georgia 30303

Mr. W. P. Copenhagen
 President and Chairman
 Columbia Nitrogen Corporation
 P. O. Box 1483
 Augusta, Georgia 30903

Mr. D. B. Bolander
 Vice President Sales and Marketing
 Columbia Nitrogen Corporation
 P. O. Box 1483
 Augusta, Georgia 30903

Mr. Blair Davis
 Chairman Educational Committee
 Georgia Plant Food Educational Society
 530 East 45th Street
 Savannah, Georgia 31402

Attachments

OFFSHORE DRILLING - CAN WE AFFORD NOT TO?

It seems ironic that the Federal government is saying on one hand that this nation needs more energy and yet is delaying any efforts to attempt to secure these needed supplies from a new source - the Outer Continental Shelf of the Atlantic Ocean. We don't need to delay, we need to start looking now!

Every day's delay in exploration is a day's delay further down the line in determining just how much oil and natural gas lies offshore. And it means a corresponding delay in the production of any petroleum found. With natural gas already in critical short supply, delay is wrong.

The technology for safely exploring for and producing offshore oil and natural gas has been proven in the more than 18,000 wells drilled to date in U.S. waters. Only four significant spills have occurred in these drilling operations, and not one of these spills - even the much-publicized spill at Santa Barbara in 1969 - resulted in permanent environmental damage.

The need to develop new petroleum sources is particularly acute along the Eastern Seaboard. In 1973, the East Coast consumed an estimated 2,500 million barrels of oil products. These same states, during that year, produced only 40 million barrels of crude - 2% of the amount they used. And, in 1973, consumers on the East Coast used 4,100 billion cubic feet of natural gas. Yet only 8% of that amount was produced on the East Coast. In fact, 11 of the 17 East Coast States (including Georgia) were 100% dependent on sources beyond their boundaries for all of their oil and natural gas supplies. Where does the oil and natural gas come from? Roughly one-third of the natural gas consumed on the East Coast - by business and homeowners - comes from wells in the Gulf of Mexico. And one out of every six gallons of gasoline consumed on the East Coast, in all likelihood, comes from offshore Louisiana and Texas wells. But many of those wells are being depleted faster than new Gulf reservoirs can be found.

Offshore Drilling

- 2

Thus, every day, or month, or year that exploration of potential offshore East Coast areas is delayed - for whatever the reason or the excuse - a corresponding delay will result in the time that oil and natural gas, if found, can be produced and marketed.

Development of offshore operations would not - and could not - take place overnight. There is a long lead time involved in the process. For example, it takes many months for a proposed lease sale to move from the conceptual stage through programming, impact studies, public hearings and the actual lease approvals, and into the exploration phase.

And, assuming that oil and natural gas were located quickly, it would still take from three to ten years to bring an offshore field into full production. What's the likelihood of finding petroleum on the first try? Historically, only one out of 50 wells drilled in frontier areas in search of petroleum has located commercially significant quantities of oil or natural gas (that is, a field of a million barrels or more of crude oil, or six billion cubic feet of natural gas). Of course, if the petroleum isn't there in the first place, no number of wells can produce it. But, in order to find out if the petroleum is there, exploratory wells must be drilled.

The long lead time - from concept to production - would provide ample opportunity for the states to develop and place into operation sound coastal zone management plans. Thus, there is no reason to delay the exploration phase until such plans are established, since exploratory operations would have a very minimal impact on adjacent shore areas. Moreover, exploration would determine if petroleum actually was present. This would, in turn, help provide data for developing sound coastal management plans.

Unfortunately, not all public officials appear to recognize the need to drill offshore. However, the general public seems increasingly aware of this need. In two surveys conducted last year, a significant majority of those questioned

Offshore Drilling

- 3

avored offshore drilling. A survey, by the firm of Oxtoby-Smith, of 500 community leaders in eight U.S. Gulf Coast and East Coast cities, revealed that nearly three-quarters of those interviewed either "strongly" or "somewhat" favored offshore drilling. About seven in ten agreed that "on balance, the benefits to the U.S. of offshore drilling outweigh the disadvantages." And 56% of those interviewed indicated that they were "very concerned" about U.S. dependence on imported oil. The second survey, by Opinion Research Corporation, covered a representative nationwide sampling of over 600 households, and revealed that 74% of U.S. adults favored more offshore drilling.

Two more recent surveys - one taken by a New York Assemblyman on Long Island, and the other by the Eagleton Institute of Politics (at Rutgers) in New Jersey - show considerable support for offshore drilling, with 61% and 67%, respectively, of the respondents indicating they favor it.

Unfortunately, the present discussion of offshore leasing along the Atlantic is being conducted in an inflamed atmosphere of political and environmental emotion. Under such circumstances, the real issues of critical energy shortages are frequently lost in the outcries against offshore development.

One of the main questions concerning the development of the Outer Continental Shelf for oil and natural gas involves the dangers of oil spills and well blowouts where drilling would take place.

Contrary to popular belief, any drilling would not take place close to shore. The likely offshore areas for petroleum exploration and development lies 50 miles or more from the coast in the Georges Bank (New England) area, 30 miles or more seaward in the Baltimore Canyon (Mid-Atlantic states) area, and 100 miles or more off the coast in the Blake Plateau (Georgia-Florida) area which would concern Georgians the most. The distance from shore, tidal and current movements, and the winds would serve to disperse any oil spilled before it reached shore areas. However, the chance of a spill itself, while present, is remote.

As noted earlier, over 18,000 wells have been drilled in U.S. waters, some 15,200 in the Gulf of Mexico. Only four significant oil spills have occurred as a result of drilling operations. And none of these caused permanent environmental damage.

It should be noted that exploration and production operations are monitored by the Federal government in the CCS, and are subject to stringent environmental protection regulations.

Surely, the six-year battle over the trans-Alaska pipeline is proof enough of the high cost of delaying energy production. Had the pipeline been built as originally scheduled, crude oil in an amount almost equal to the Arab embargoed oil would have been enroute to the U.S.

The wells offshore Louisiana and Texas are being depleted to serve East Coast consumers. When that oil and natural gas runs out, will the potential Atlantic Coast petroleum have been explored for and in production? Not if the delays continue.

Petroleum Council of Georgia
161 Peachtree Street, N.E.
Atlanta, Georgia 30303
Phone: 404-525-0452

94TH CONGRESS
1ST SESSION

S. 586-

IN THE SENATE OF THE UNITED STATES

FEBRUARY 5, 1975

Mr. HOLLINGS (for himself, Mr. KENNEDY, Mr. MATTHIAS, Mr. TUNNEY, and Mr. WILLIAMS) introduced the following bill; which was read twice and referred to the Committee on Commerce

A BILL

To amend the Coastal Zone Management Act of 1972 to authorize and assist the coastal States to study, plan for, manage, and control the impact of energy resource development and production which affects the coastal zone, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act may be cited as the "Coastal Zone Environ-
4 ment Act of 1975".

5 SEC. 2. Section 302 of the Coastal Zone Management
6 Act of 1972 (16 U.S.C. 1451) is amended by (1) deleting
7 "and" immediately after the semicolon in subsection (g)
8 thereof; (2) deleting the period at the end thereof and in-

2

1 serting in lieu thereof “; and ”; and (3) inserting at the end
2 thereof the following new subsection:

3 “(i) The national interest in adequate energy supplies
4 requires that adequate assistance be provided to the coastal
5 States to enable them to (1) study, plan for, manage, and
6 ameliorate any adverse consequences of energy facilities
7 siting and of energy resource development or production
8 which affects, directly or indirectly, the coastal zone and to
9 provide for needed public facilities and services associated
10 with such activity; (2) coordinate coastal zone planning,
11 policies, and programs in interstate and regional areas; and
12 (3) develop short-term research, study, and training capa-
13 bilities for the management of the coastal resources of the
14 States.”

15 SEC. 3. (a) Section 307 (c) (3) of the Coastal Zone
16 Management Act of 1972 (16 U.S.C. 1455 (c) (3)) is
17 amended by (1) deleting “license or permit” in the first sen-
18 tence thereof and inserting in lieu thereof “license, lease, or
19 permit”; (2) deleting “licensing or permitting” in the first
20 sentence thereof and inserting in lieu thereof “licensing, leas-
21 ing, or permitting”; and (3) deleting “license or permit” in
22 the last sentence thereof and inserting in lieu thereof “license,
23 lease, or permit”.

24 (b) Section 307 (c) of such Act is amended by adding
25 at the end thereof the following new paragraph:

3

1 “(4) Any applicant for a required license, lease, or
2 permit for development or production of energy resources or
3 for the siting of energy facilities to be located in or which
4 would directly or indirectly affect the coastal zone shall certify
5 that the proposed activity complies with, and will be con-
6 ducted in a manner consistent with any approved State
7 management program and in accordance with the procedures
8 for assuring the consistency of Federal activities with ap-
9 proved State management programs pursuant to paragraph
10 (3) of this section.”

11 SEC. 4. The Coastal Zone Management Act of 1972
12 (16 U.S.C. 1451 et seq.) is amended by (1) redesignating
13 sections 308 through 315 thereof as sections 311 through
14 318 thereof, respectively; and (2) inserting therein the
15 following three new sections:

16 “COASTAL IMPACT FUND

17 “SEC. 308. (a) There is established in the Treasury of
18 the United States the Coastal Impact Fund (hereinafter
19 referred to as the ‘Fund’). The Fund shall be administered
20 by the Secretary. The Secretary is authorized to make 100
21 per centum annual grants from the Fund to those coastal
22 States which the Secretary determines are likely to be sig-
23 nificantly and adversely impacted by the development or
24 production of energy resources or by the siting of energy
25 facilities to be located in or which would affect, directly or

4

1 indirectly, the coastal zone and which have complied with
2 the eligibility requirements established in subsection (b) of
3 this section. Such grants may be made for the purpose of
4 (1) studying, planning for, managing, controlling, and
5 ameliorating economic, environmental, and social conse-
6 quences likely to result from such development, production,
7 or siting; and (2) constructing public facilities and providing
8 public services made necessary by such development, produc-
9 tion, or siting and activities related thereto.

10 “(b) The Secretary shall, by regulations, in accordance
11 with section 553 of title 5, United States Code, establish
12 requirements for grant eligibility. Such regulations shall pro-
13 vide that a State is eligible for such grant upon a finding
14 by the Secretary that such State—

15 “(1) is receiving a program development grant
16 under section 305 of this Act and is making satisfactory
17 progress, as determined by the Secretary, toward the
18 development of a coastal zone management program
19 under section 306 of this Act, or is receiving an admin-
20 istrative grant under section 306 of this Act; and

21 “(2) has demonstrated, to the satisfaction of the
22 Secretary that such grants will be used for purposes
23 directly related to those specified in subsection (a) of
24 this section.

25 “(c) The Secretary shall coordinate grants made pur-

1 suant to this section with the coastal zone management pro-
2 gram developed or being developed by the coastal State re-
3 questing such grant, pursuant to section 305 or 306 of this
4 Act.

5 “(d) Such grants shall be allocated to the coastal States
6 in proportion to the anticipated or actual impacts upon such
7 States resulting from development or production of energy
8 resources or the siting of energy facilities to be located in or
9 which would affect, directly or indirectly, the coastal zone.

10 “(e) A coastal State may, for the purpose of carrying
11 out the provisions of this section and with the approval of the
12 Secretary, allocate a portion of any grant received under this
13 section to (1) any political subdivision of such State; (2)
14 an areawide agency designated under section 204 of the
15 Demonstration Cities and Metropolitan Development Act
16 of 1966; (3) a regional agency; or (4) an interstate agency.

17 “INTERSTATE COORDINATION GRANTS TO STATES

18 “SEC. 309. (a) The States are encouraged to give high
19 priority to coordinating State coastal zone planning, policies,
20 and programs in contiguous interstate areas and to study,
21 plan, or implement unified coastal zone policies in such areas.
22 The States may conduct such coordination, study, planning,
23 or implementation through interstate agreement or com-
24 pacts. The authorization of Congress is hereby given to two
25 or more States to negotiate and enter into interstate agree-

1 ments or compacts, not in conflict with any law or treaty
2 of the United States, upon such terms and conditions, includ-
3 ing the establishment of such public agencies, entities, or au-
4 thorities as are reasonable or appropriate, for the purpose of
5 said coordination, study, planning, or implementation: *Pro-*
6 *vided*, That such agreements or compacts shall provide an
7 opportunity for participation, for coordination purposes,
8 by Federal and local governments and agencies as well as
9 property owners, users of the land, and the public. Such
10 agreement or compact shall be binding or obligatory upon
11 any State or party thereto without further approval by
12 Congress.

13 “(b) The Secretary is authorized to make annual grants
14 to the coastal States, not to exceed 90 per centum of the
15 cost of such coordination, study, planning, or implementa-
16 tion, if the Secretary finds that each coastal State receiving
17 a grant under this section will use such grants for purposes
18 consistent with the provisions of sections 305 and 306 of this
19 Act.

20 “COASTAL RESEARCH ASSISTANCE

21 “SEC. 310. The Secretary is authorized to provide as-
22 sistance to enable the coastal States to develop a capability
23 for carrying out short-term research, studies, and training
24 required in support of coastal zone management. Such assist-
25 ance may be provided through (1) the payment of funds to

1 appropriate departments and agencies of the Federal Gov-
2 ernment as he shall determine; (2) the employment of pri-
3 vate individuals, partnerships, firms, corporations, or other
4 suitable institutions, under contracts entered into for such
5 purposes; or (3) annual grants to the coastal States not to
6 exceed 66 $\frac{2}{3}$ per centum of the costs of such assistance. As-
7 sistance under this section is for the purpose of conducting or
8 encouraging research and studies into the problems of coastal
9 zone management and to provide for the training of persons
10 to carry on further research or to obtain employment in
11 private or public organizations which are concerned with
12 coastal zone management.”.

13 SEC. 5. Section 316 of the Coastal Zone Management
14 Act of 1972 (16 U.S.C. 1462), as redesignated by this Act,
15 is amended by (1) deleting “and” at the end of paragraph
16 (8) thereof immediately after the semicolon; (2) renumber-
17 ing paragraph “(9)” thereof as paragraph “(11)” thereof;
18 and (3) inserting the following two new paragraphs:

19 “(9) a general description of the economic, environ-
20 mental, and social impacts of the development or pro-
21 duction of energy resources or the siting of energy facili-
22 ties affecting the coastal zone;

23 “(10) a description and evaluation of interstate and
24 regional planning mechanisms developed by the coastal
25 States; and”.

1 SEC. 6. (a) Section 305 (h) of the Coastal Zone Man-
2 agement Act of 1972 (16 U.S.C. 1454 (h)) is amended by
3 deleting "1977" and by inserting in lieu thereof "1980".

4 (b) Section 318 (a) of such Act (16 U.S.C. 1464 (a)),
5 as redesignated by this Act, is amended by (1) deleting
6 "three" in paragraph (1) thereof and inserting in lieu there-
7 of "four"; (2) deleting "1977" in paragraph (2) thereof
8 and inserting in lieu thereof "1980"; (3) deleting "and"
9 after the semicolon in paragraph (2) thereof; (4) redesignig-
10 nating paragraph "(3)" thereof as paragraph (6) thereof;
11 (5) deleting "312" therein and inserting in lieu thereof
12 "315"; and (6) inserting therein the following three new
13 paragraphs:

14 "(3) a sum not to exceed \$200,000,000 for the
15 fiscal year ending June 30, 1976, and for each of the
16 four succeeding fiscal years, to the Coastal Impact
17 Fund for grants pursuant to the provisions of section
18 308, to remain available until expended;

19 "(4) such sums, not to exceed \$5,000,000 for the
20 fiscal year ending September 30, 1976, and for each of
21 the three succeeding fiscal years, as may be necessary
22 for grants under section 309, to remain available until
23 expended;

24 "(5) such sums, not to exceed \$5,000,000 for the
25 fiscal year ending September 30, 1976, and for each of

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1 the three succeeding fiscal years, as may be necessary,
2 for assistance under section 310, to remain available until
3 expended; and”.

4 (c) Section 318 (b) of such Act is amended by deleting
5 “four” and inserting in lieu thereof “seven”.

6 SEC. 7. (a) Section 302 (e) of the Coastal Zone Man-
7 agement Act of 1972 (16 U.S.C. 1451 (e)) is amended by
8 inserting “ecological,” immediately after “recreational.”

9 (b) Section 304 of such Act (16 U.S.C. 1453) is
10 amended by (1) inserting in subsection (a) thereof “islands”
11 immediately after “and includes”; (2) deleting in subsection
12 (e) thereof “and” after “transitional areas,” and inserting
13 “and islands” after “uplands,”; and (3) adding at the end
14 thereof the following new subsection:

15 “(j) ‘Beach’ means the area defined by the coastal State
16 under paragraph (7) of subsection (b) of section 305.”

17 (c) Section 305 (b) of such Act (16 U.S.C. 1454 (b))
18 is amended (1) by deleting the period at the end thereof
19 and inserting in lieu thereof a semicolon; and by adding at
20 the end thereof the following new paragraph:

21 “(7) a general plan for the protection of access to
22 public beaches and other coastal areas of environmental,
23 recreational, historical, esthetic, ecological, and cultural
24 value. Such plan shall include a definition of the term
25 ‘beach’.”

10

1 (d) Section 306 (c) (9) of such Act (16 U.S.C. 1461),
2 as redesignated by this Act, is amended by (1) inserting
3 after “, Beaches and Islands” after “Estuarine Sanctuaries”
4 in the title thereof; (2) deleting the period at the end of the
5 first sentence thereof and inserting in lieu thereof “, and
6 grants of up to 50 per centum of the costs of acquisition of
7 lands to provide for protection of and access to public beaches
8 and preservation of islands.”.

9 SEC. 8. Section 318 (a) (6) of such Act (16 U.S.C.
10 1464 (a) (6)), as redesignated by this Act, is amended by
11 inserting “and \$50,000,000 for each of the fiscal years 1975
12 through 1980,” after “June 30, 1974,” and before “as may
13 be necessary,”.

14 DEFINITIONS

15 SEC. 9. Section 304 of the Coastal Zone Management
16 Act of 1972 (16 U.S.C. 1451) is amended by inserting
17 after existing subsection (1) the following four new
18 subsections:

19 “(j) ‘energy resources’ means petroleum crude oil,
20 petroleum products, coal, natural gas, or any other
21 substance used primarily for its energy content;

22 “(k) ‘development and production’ means the leas-
23 ing of, exploration for, drilling for, removal, extraction,
24 exploitation, or treatment, transportation and storage
25 of, energy resources;

11

1 “(l) ‘energy facilities’ means electric generating
2 plants, including hydroelectric facilities licensed by the
3 Federal Power Commission; petroleum refineries or
4 petrochemical plants; synthetic gasification plants,
5 liquefaction and gasification plants, and liquefied nat-
6 ural gas conversion facilities providing fuel for interstate
7 use; petroleum loading or transfer facilities; and all
8 transmission, pipeline, and storage facilities associated
9 with the above facilities;

10 “(m) ‘public services and facilities’ means those
11 services or facilities financed in part or in whole by local
12 or State governments which may be required either
13 directly or indirectly by the development or production
14 of energy resources or the siting of energy facilities.
15 Such services and facilities include, but are not limited
16 to, highways, secondary roads, sewer and water facili-
17 ties, schools, hospitals, fire and police protection and
18 related facilities, and such other social and governmental
19 services as necessary to support increased population
20 and industrial development.”

94TH CONGRESS
1ST SESSION

S. 825

IN THE SENATE OF THE UNITED STATES

FEBRUARY 25 (legislative day, FEBRUARY 21), 1975

Mr. CASE introduced the following bill; which was read twice and referred to the Committee on Interior and Insular Affairs

A BILL

To amend the Outer Continental Shelf Lands Act to provide for strict liability in the case of damage caused by oil spills, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That the Outer Continental Shelf Lands Act (43 U.S.C.
4 1331-1343) is amended as follows.

5 (1) The first sentence of section 5 of that Act (43
6 U.S.C. 1334) is amended by striking out "shall prescribe
7 such rules" and inserting in lieu thereof "shall, with the con-
8 currence of the Secretary of Commerce, and the Secretary
9 of Transportation".

1 (2) The second sentence of such section 5 is amended
2 by inserting “, in accordance with the preceding sentence,”
3 immediately after “Secretary”.

4 (3) Such section 5 is further amended by inserting after
5 the second sentence the following: “Such rules and regula-
6 tions shall include a provision requiring the removal by the
7 leasee of all structures sited in or on the Outer Continental
8 Shelf which have been declared by the Secretary to be non-
9 functional.”

10 (4) Such section 5 is further amended by adding at the
11 end thereof the following: “The Secretary annually shall,
12 after an opportunity for public hearings, review the rules and
13 regulations prescribed by him under this section. In addition,
14 the Secretary shall take action he deems necessary to ensure
15 that each offshore drilling site operating under a lease issued
16 under this Act be inspected at least once every sixty days to
17 determine whether such site is being operated according to
18 such rules and regulations and the terms of the lease issued
19 for its operation.”

20 (5) Section 9 of that Act (43 U.S.C. 1338) is amended
21 by striking out “deposited in the Treasury of the United
22 States and credited to miscellaneous receipts.” and inserting
23 in lieu thereof “paid by the Secretary to those States which
24 are placed in an adverse fiscal position because of activities
25 in or on the Outer Continental Shelf conducted under a lease

1 issued under this Act. Payments to any one adversely af-
2 fected State shall be equal to the difference between the
3 increase in tax revenues amounts received by such State (and
4 its political subdivisions) as a result of such activities and
5 the amounts expended by such State (and its political sub-
6 divisions) on governmental services required as a result of
7 such activities. Any sums collected by the Secretary and not
8 paid to any State under this section shall be deposited in the
9 Treasury of the United States and credited to miscellaneous
10 receipts.”.

11 (6) Sections 16 and 17 of that Act are redesignated
12 sections 18 and 19, respectively.

13 (7) Such Act is amended by inserting immediately after
14 section 15 the following:

15 “SEC. 16. STRICT LIABILITY.—(a) Notwithstanding
16 any other provision of law, each lessee, and the Outer Con-
17 tinental Shelf Liability Fund (hereinafter in this section re-
18 ferred to as the ‘Fund’) shall be strictly liable without regard
19 to fault, in accordance with the succeeding provisions of this
20 section, for all damages, including cleanup costs, sustained by
21 any person or entity (public or private) as a result of opera-
22 tions or activities at, related to, or in the vicinity of, any
23 offshore drilling site operated by the lessee.

24 “(b) Notwithstanding any other provision of law, the
25 owner or operator of any vessel (jointly or severally) and

1 the Fund shall be strictly liable without regard to fault, in
2 accordance with the succeeding provisions of this section,
3 for all damages sustained by any person or entity (public
4 or private) within the United States or within the coastal
5 waters of the United States within two hundred nautical
6 miles of the shoreline of the United States, which result from
7 any discharge of oil from the operation of any offshore drill-
8 ing site, including the transportation of oil from the drilling
9 site to an onshore storage site.

10 “(c) Strict liability shall not be imposed under this
11 section—

12 “(1) if the lessee, owner, or operator of any vessel
13 or transport, as the case may be, or the Fund, can show
14 that the damages concerned were caused by an act of
15 war, or negligence of the United States, or other gov-
16 ernmental entity; or

17 “(2) with respect to the claim of a damaged party,
18 if the lessee, owner, or operator of any vessel or trans-
19 port, as the case may be, or the Fund, can show that
20 the damage was caused by the negligence of the party
21 sustaining such damage.

22 “(d) Strict liability for all claims arising out of any
23 one incident shall not exceed \$500,000,000, and the Fund
24 shall be liable for all such claims not exceeding \$500,000,000.
25 If the total claims exceed \$500,000,000, they shall be re-

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1 duced proportionately. The unpaid portion of any claim
2 may be asserted and adjudicated under other applicable pro-
3 visions of Federal or State law. The liability of any lessee
4 or owner or operator of any vessel or transport for damages
5 in excess of \$500,000,000 arising out of any one incident
6 shall be determined in accordance with the ordinarily appli-
7 cable rules of evidence.

8 “(e) The Fund is hereby established as a nonprofit cor-
9 porate entity which may sue and be sued in its own name.
10 The Fund shall be administered by the Secretary. The Fund
11 shall be audited annually by the Comptroller General of the
12 United States, and a copy of each such audit shall be sub-
13 mitted to the Congress.

14 “(f) (1) The Fund shall consist of moneys transferred
15 into the Fund as follows:

16 “(A) Twenty per centum of all money paid as bids
17 on leases issued under section 8 shall be paid by the Sec-
18 retary into the Fund.

19 “(B) The Fund shall collect from each lessee a fee
20 of 10 cents per barrel of oil produced at any site leased
21 under this Act.

22 “(2) Collections and contributions made under par-
23 agraphs (1) (B) and (1) (C) shall cease when the
24 amount in the Fund reaches \$500,000,000, and shall
25 be resumed when the amount in the Fund falls below

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1 \$500,000,000. The cost of administering the Fund shall
2 be paid out of money in the Fund, and all sums not re-
3 quired for either administration or for the satisfaction
4 of claims may be prudently invested by the Secretary in
5 securities approved by him. Interest from such invest-
6 ments shall be paid into the Fund.

7 “(g) The strict liability applied under this section shall
8 cease to apply to oil which has been brought ashore and re-
9 moved from the shore storage facility.

10 “(h) In any case where liability without regard to fault
11 is imposed pursuant to this section and the damages involved
12 were caused by the unseaworthiness of the vessel or by
13 negligence, the owner or operator of the vessel, or the Fund,
14 as the case may be, shall be subrogated under applicable
15 State and Federal laws to the rights under such laws of any
16 person entitled to recovery hereunder. If any subrogee brings
17 an action on unseaworthiness of the vessel or negligence of
18 its owner or operator, it may recover from any affiliate of the
19 owner or operator if the respective owner or operator fails
20 to satisfy any claim by the subrogee allowed under this sub-
21 section.

22 “(i) This section shall not be interpreted to preempt
23 the field of strict liability or to preclude any State from
24 imposing additional requirements.

25 “(j) If the Fund is unable to satisfy a claim asserted and

1 finally determined under this section, the Fund may bor-
2 row the money needed to satisfy the claim from any com-
3 mercial credit source, at the lowest available rate of in-
4 terest, subject to approval of the Secretary.

5 “(k) For purposes of this section the term ‘affiliate’
6 includes—

7 “(1) Any person owned or effectively controlled
8 by the vessel owner or operator;

9 “(2) any person that effectively controls or has
10 the power effectively to control the vessel owner or oper-
11 ator by—

12 “(A) stock interest,

13 “(B) representation on a board of directors or
14 similar body,

15 “(C) contract or other agreement with other
16 stockholders,

17 “(D) otherwise; or

18 “(3) any person which is under common owner-
19 ship or control with the vessel owner or operator.

20 “SEC. 17. RESEARCH FUND.—(a) There is hereby
21 established the Outer Continental Shelf Research Fund
22 (hereinafter in this section referred to as the ‘Research
23 Fund’) which shall be administered jointly by the Secre-
24 tary, the Secretary of Commerce, and the Secretary of Trans-
25 portation. Amounts in the Research Fund shall be available,

1 in a manner to be prescribed jointly by the Secretaries named
2 in the preceding sentence, to—

3 “(1) improve the technology related to the ex-
4 ploration and development of the oil and gas resources
5 of the Outer Continental Shelf;

6 “(2) develop baseline data relating to the marine
7 environment on the Outer Continental Shelf; and

8 “(3) develop data regarding the impact of develop-
9 ing the oil and gas resources of the Outer Continental
10 Shelf on the marine and associated onshore environment.

11 “(b) The research conducted or funded, as the case
12 may be, under paragraph (1) of subsection (a) may include
13 downhole safety devices, methods of controlling blowing
14 out or burning wells, methods for containing and cleaning up
15 oil spills, improved drilling bits, improved flaw detection
16 systems for undersea pipelines, new and improved methods
17 of development in water depths of over six hundred meters,
18 deepsea diving systems, and subsea production systems.”.

94TH CONGRESS
1ST SESSION

S. 826✓

IN THE SENATE OF THE UNITED STATES

FEBRUARY 25 (legislative day, FEBRUARY 21), 1975

Mr. CASE introduced the following bill; which was read twice and referred to the Committee on Commerce

A BILL

To amend the Coastal Zone Management Act of 1972 in order to authorize assistance to coastal States to enable them to study, assess, and plan effectively with respect to the impact within their coastal zones of off-shore energy-related facilities and activities and to assure the maximum effectiveness of the coastal zone management plans of such States; and for other purposes.

- 1 *Be it enacted by the Senate and House of Representa-*
 2 *tives of the United States of America in Congress assembled,*
 3 That section 302 of the Coastal Zone Management Act of
 4 1972 (16 U.S.C. 1451) is amended—
 5 (1) by striking out “and” at the end of clause (g) ;
 6 (2) by striking out the period at the end of clause
 7 (h) and inserting in lieu thereof “; and”; and

1 (3) by adding at the end thereof the following new
2 clause:

3 “(i) The Nation’s coastal zone is significantly affected
4 by activities on or in the Outer Continental Shelf, such as the
5 siting of energy producing facilities and the exploration, pro-
6 duction, and development of oil and gas on the Outer Con-
7 tinental Shelf.”.

8 SEC. 2. Section 304 of the Coastal Zone Management
9 Act of 1972 (16 U.S.C. 1453) is amended by adding at
10 the end thereof the following new subsection:

11 “(j) ‘Affected coastal State’ means any State bordering
12 on the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico,
13 or the Long Island Sound.”.

14 SEC. 3. The Coastal Zone Management Act of 1972
15 (16 U.S.C. 1451-1464) is further amended by adding at
16 the end thereof the following new section:

17 “SEC. 316. (a) For purposes of this section—

18 “(1) The term ‘offshore energy facility’ means any
19 facility of any kind the purpose of which is the produc-
20 tion or generation of energy from the resources of the
21 Outer Continental Shelf, and which is located on or
22 above such shelf.

23 “(2) The term ‘related onshore facility’ means any
24 facility located within, or adjacent to, the coastal zone
25 of any affected coastal State which is required to support

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1 the development (including exploration) or operation,
2 or both, of any offshore energy facility.

3 “(b) (1) Notwithstanding any other provision of this
4 title or any other provision of law, no Federal agency may
5 take any action which authorizes the commencing of, or the
6 carrying out of, any preproduction exploration (except geo-
7 physical exploration) with respect to any offshore energy
8 facility within any area of the Outer Continental Shelf
9 before the affected coastal State—

10 “(A) develops pursuant to section 306 (h) and the
11 Secretary approves, a segment of the State coastal zone
12 management program concerning the impact on the
13 coastal zone of such State of activities related to the
14 development and operation of offshore energy facilities
15 in such area; or

16 “(B) certifies to the Secretary that the prohibition
17 on such Federal agency action set forth in this paragraph
18 shall not apply with respect to such area of the Outer
19 Continental Shelf.

20 “(2) Within thirty days after the date on which—

21 “(A) the Secretary approves the coastal zone
22 management plan segment referred to in paragraph (1)
23 (A) of any affected coastal State, or

24 “(B) any affected coastal State certifies pursuant to
25 paragraph (1) (B) to the Secretary that the prohibition

1 on Federal agency action is waived with respect to such
2 State;
3 any other affected coastal State (the coastal zone manage-
4 ment plan of which has not been approved by the Secretary
5 and which has not so certified such a waiver) which con-
6 siders that such Federal agency action in such area of the
7 Outer Continental Shelf will, or may, have an impact on its
8 coastal zone may petition the Secretary to suspend, or to
9 prohibit, any such Federal agency action in that area. If
10 the Secretary determines on the record after opportunity
11 for agency hearing that any such Federal action in such area
12 will, or may, adversely affect the coastal zone of the coastal
13 State submitting such petition, he may suspend, or prohibit,
14 any such Federal agency action in such area for such time as
15 he determines appropriate.

16 “(3) The prohibition on Federal agency action set forth
17 in paragraph (1) of this subsection shall cease to apply after
18 the close of the one-year period which begins on the effective
19 date of this paragraph. The Secretary may not, pursuant to
20 paragraph (2) of this subsection, suspend or prohibit any
21 such Federal agency action for any period of time after the
22 close of such one-year period.

23 “(c) (1) Notwithstanding any other provision of this
24 title or any other provision of law, no Federal agency may
25 take any action which authorizes the commencing of, or the

1 carrying out of, any production from, or any production
2 development of, any offshore energy facility within any area
3 of the Outer Continental Shelf before the affected coastal
4 State—

5 “(A) develops, and the Secretary approves, the
6 coastal zone management program of each State pursuant
7 to section 306; or

8 “(B) certifies to the Secretary that the prohibition
9 on Federal agency action set forth in this paragraph
10 shall not apply with respect to such area of the Outer
11 Continental Shelf.

12 “(2) Within thirty days after the date on which—

13 “(A) the Secretary approves the coastal zone man-
14 agement plan of any affected coastal State, or

15 “(B) any affected coastal State certifies pursuant to
16 paragraph (1) (B) to the Secretary that the prohibition
17 on Federal agency action is waived with respect to such
18 State;

19 any other affected coastal State (the coastal zone manage-
20 ment plan of which has not been approved by the Secretary
21 and which has not so certified such a waiver) which con-
22 siders that such Federal agency action in such area of the
23 Outer Continental Shelf will, or may, have an impact on its
24 coastal zone may petition the Secretary to suspend, or to

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1 prohibit, any such Federal agency action in that area. If
2 the Secretary determines on the record after opportunity
3 for agency hearing that any such Federal agency action in
4 such area will, or may, adversely affect the coastal zone of
5 the coastal State submitting the petition, he may suspend,
6 or prohibit, any Federal agency action in such area for such
7 time as he determines appropriate.

8 “(3) The prohibition on Federal agency action set forth
9 in paragraph (1) of this subsection shall cease to apply after
10 the close of June 30, 1977. The Secretary may not, pursuant
11 to paragraph (2) of this subsection, suspend or prohibit any
12 such Federal agency action for any period of time after
13 June 30, 1977.

14 “(d) (1) Each appropriate Federal agency shall in-
15 form, on a continuing basis, all affected coastal States of the
16 nature, location, and magnitude of potential resources in or
17 on the Outer Continental Shelf. Any lessee of any area of
18 the Outer Continental Shelf shall, upon obtaining any infor-
19 mation described in the preceding sentence, transmit it to
20 the appropriate Federal agency within thirty days, and such
21 agency shall, within fifteen days after receipt of such infor-
22 mation, transmit it to the appropriate affected coastal States.

23 “(2) Each Federal agency which has authority to grant
24 licenses, leases, or permits for, or otherwise authorize, the
25 exploration or development of resources in or on the Outer

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1 Continental Shelf shall make available to the appropriate
2 affected coastal States all information relating to the timing,
3 location, and magnitude of any authorizing activity including
4 any proposed long-term plans, in which that agency is
5 planning to engage.

6 “(3) In the process of granting licenses, leases, or per-
7 mits for, or otherwise authorizing, the exploration or devel-
8 opment of resources in or on the Outer Continental Shelf,
9 each appropriate Federal agency shall coordinate and con-
10 sult with all affected coastal States likely to be impacted by
11 such exploration or development and shall utilize, to the
12 maximum extent practical, any data developed by any af-
13 fected coastal State pursuant to subsection (e). Such co-
14 ordination, consultation, and utilization shall be made an
15 integral part of such agency authorizing process as soon as
16 possible to enable each affected coastal State to plan for, and
17 ameliorate, the effects of explanation and development on the
18 Outer Continental Shelf.

19 “(e) (1) The Secretary may, subject to such terms and
20 conditions as he deems appropriate, make grants pursuant
21 to this subsection to any affected coastal State for the pur-
22 poses of providing to such State financial assistance to carry
23 out one or more of the following activities—

24 “(A) The collection and assessment of the eco-
25 nomic, environmental, and social data which is neces-

1 sary to enable such State to identify and designate those
2 sites within or adjacent to its coastal zone which are
3 suitable or unsuitable for the location of related on-shore
4 facilities.

5 “(B) The development of a process for the selection
6 and designation of such sites within, or adjacent to, its
7 coastal zone.

8 “(C) The construction of such public facilities and
9 works, and the provision of such public services, as may
10 be necessary and appropriate to provide for the integra-
11 tion of any related on-shore facility into the community
12 where sited.

13 “(2) No affected coastal State may receive any grants
14 under this subsection unless such State—

15 “(A) is receiving a program development grant
16 under section 305 and is making satisfactory progress
17 (as determined by the Secretary) toward the develop-
18 ment of a coastal zone management program under sec-
19 tion 306, or is receiving an administrative grant under
20 section 306;

21 “(B) demonstrates, to the satisfaction of the Sec-
22 retary that any such grant will be used solely to carry
23 out one or more of the purposes set forth in paragraph
24 (1) of the subsection; and

25 “(C) in the case of a grant which will be used to

9

1 develop a site selection process, demonstrates, to the
2 satisfaction of the Secretary that the process so developed
3 will be incorporated into the management program of
4 the State developed under section 306.

5 “(3) (A) There is established in the Treasury of the
6 United States an Affected Coastal States Fund (hereafter
7 referred to in this paragraph as the ‘fund’). The Secretary
8 shall make grants pursuant to this subsection from the fund.

9 “(B) No affected coastal State may receive grants in
10 any one fiscal year the aggregate amount of which exceeds
11 15 per centum of the total amount which is available for
12 disbursement by the Secretary during that fiscal year to
13 all impacted coastal States pursuant to this subsection.

14 “(C) There is authorized to be appropriated to the
15 fund (i) \$100,000,000 for each of fiscal years 1976 and
16 1977; and (ii) for fiscal years after fiscal year 1977 such
17 sums as may be necessary to carry out the purposes of this
18 subsection. Any appropriations made to the fund shall re-
19 main available until expended.”.



March 17, 1975.

Senator Henry Jackson, Chairman
Interior and Insular Affairs Committee
Attn: Mike Harvey, Room 3206
Dirksen Senate Office Building
Washington, D. C.

Dear Senator Jackson:

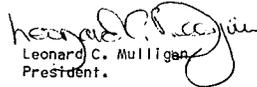
Last October I participated, along with fifty-five other Mainers, in a four day tour of offshore oil production facilities in the Gulf of Mexico and refinery petroleum production and handling activities in the New Orleans-Louisiana Area.

This self-paid tour assured me that offshore operations could certainly be conducted in the New England Area provided that our environmental standards have the teeth to safeguard our air and waters.

Right now Canada has a drilling rig to be set in place twenty-eight miles from Eastport, Maine. There is further exploration taking place off the coast of Labrador where a twenty-one billion barrel potential exists.

I certainly hope that your Subcommittees of Interior and Insular Affairs will quickly finish their work and move on to a more important level of developing the existing supplies off our shores.

i Very truly yours,


Leonard C. Mulligan
President.

Vermont

STATE CHAMBER OF COMMERCE



Mailing Address: Box 37 Montpelier, Vt. 05602

802/223-3443 229-0154

Office: Intersection I-89 Access Rd. & Airport Rd., Berlin, Vt.

March 19, 1975

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The Honorable Henry Jackson
United States Senate
c/o Mike Harvey
3206 Dirkson Senate Office Building
Washington, D.C.

Dear Senator Jackson;

The Vermont State Chamber of Commerce is concerned about the increasing dependency of the United States on foreign supplies of oil and petroleum products, with the resultant worsening of our balance of payments deficit. In addition we have no guarantees that Mid-East nations will not use oil as a source of pressure to accomplish their political goals.

The Vermont Chamber therefore feels that it is imperative that an accelerated program be instituted for the exploration and production of oil and natural gas thought to exist on the outer continental shelf of the Atlantic Coast. Such a program could be especially beneficial to Northeast states which are far more dependent on foreign oil than the nation as a whole.

Sincerely,

Phidias Dantos

Phidias Dantos
President

PD/t

cc/ Senator Robert T. Stafford, Vermont
Senator Patrick Leahy, Vermont
Representative James M. Jeffords, Vermont

Serving Vermont for 25 Years

A MEMBER STATE OF AMERICAN FARM BUREAU

M H J-Rosen

VERMONT STATE FARM BUREAU, INC.

AN ORGANIZATION TO PROMOTE FARM INTERESTS

141 Main Street

Montpelier, Vermont 05602

RECEIVED
TO PROVIDE FACILITIES FOR ADULT STUDY
APR 1 1975
TO PROVIDE FARM PEOPLE INSURANCE AT SELECTED RISK RATE

TO COOPERATE WITH THE EXTENSION SERVICE IN MAKING AGRICULTURE MORE PROSPEROUS

TO WORK FOR FARM LEGISLATION

TO SERVE FARMERS AS AN ACTION ORGANIZATION

TELEPHONE 223-3636

TO MAKE EFFECTIVE USE OF GROUP PURCHASE POWER

Senator Henry M. Jackson
3206 Dirkson Office Building
Washington, D.C. 20510

March 28, 1975

Dear Senator Jackson,

As a general agriculture organization in a state heavily dependent upon agriculture, we are deeply concerned over our present energy situation. The high level of production of food and fiber cannot be continued if farmers are faced with shortages of fuel for farm tractors, shortages of tires for farm equipment due to the petroleum products necessary, and of course shortages of fertilizers, again directly related to the natural gas situation.

The annual meeting of our state Farm Bureau in November of 1974 voted as follows: "We urge speeding up the process that will allow for off shore exploration for oil shale development, wind and solar energy. We endorse the construction of oil refineries in the New England area. In the interim, we urge strict conservation of our energy resources."

We would urge that every possible effort would be made by the Senate to support these necessary actions.

Sincerely yours,

Deacy F. Leonard
Deacy F. Leonard
Executive-Secretary

cc: Senator Robert T. Stafford
Senator Patrick Leahy
Representative James M. Jeffords



HMJ - OCS Record

VERMONT SKI AREAS ASSOCIATION INC.

April 29, 1975

The Honorable Henry Jackson
 United States Senate
 c/o Mike Harvey
 3206 Dirksen Senate Office Building
 Washington, D.C. 20510

Dear Senator Jackson:

Vermont's economy has often been equated to a three-legged stool with recreation-tourism comprising one leg, agri-business and small manufacturing the other two. The Vermont Ski Areas Association is very much involved in the recreation business, Vermont's second largest industry, accounting for 16% of the state's total gross product.

As I'm sure you can understand, our industry is very much dependent upon a mobile populous. In addition, we use petroleum products for many facets of ski area operations, including the making of artificial snow. The 1974/75 winter season, while not over as yet, has been one of the best in recent history. Not only was there a generous snow cover, but also sufficient supplies of gasoline to permit skiers to reach their favorite resort.

Last year was something else: less than normal snow cover, combined with inadequate supplies of gasoline resulted in an overall industry level of activity of approximately 25 percentage points below the average for the last five years.

Unfortunately, there's no assurance that another Arab embargo will not occur and Vermont, once again, will be squeezed as to the amount of gasoline available for those people patronizing recreation facilities in our state. It has been a year since the Arab embargo was lifted and yet nothing in the way of a significant new energy policy has been developed by the Congress. In fact, several measures have been introduced, particularly in the Senate which would do nothing but impede the development of new energy resources. (Here I refer primarily to petroleum deposits thought to exist along the Atlantic coast area of the Outer Continental Shelf.)

26 STATE STREET, MONTPELIER, VT. 05602 (802) 243-2100
 JOSEPH A. PARKINSON, EXECUTIVE DIRECTOR

The Honorable Henry Jackson
April 29, 1975
Page 2

Two particular pieces of legislation presently before the Congress would do nothing but impede the development of the OCS. One, S.826, apparently requires a coastal zone management program to be approved prior to exploratory and production drilling offshore. Another, S. 426, proposed that the federal government take over control of offshore oil and gas exploration in the Atlantic.

In regard to the first measure, S.826, any significant delay resulting from the formulation of the coastal zone management program would be costly. Figuring an estimated 6 million barrels of oil each day that we import from foreign sources at an average cost of \$12 a barrel, the cost alone is \$72 million a day. And I submit, much of this money might well be spent right here for development of the OCS and other ancillary services and products which would be required for offshore oil development.

As far as the federal government taking over control of offshore oil and gas exploration, the whole idea of the government going into the oil business leaves me aghast. This nation has come farther than any other nation on earth in its system of private business and labor working together under the free enterprise system. Isn't the true function of government to govern? Aren't there ample examples in other countries where government-run industries have not provided the necessary level of services that can demonstratedly be performed by private enterprise? It is perfectly obvious that the recently issued financial reports of major oil companies for the first quarter of 1975 indicate a trend which, unless reversed, is going to result not only in more expensive petroleum but also a greater reliance on foreign sources. While the repeal of the mineral depletion allowance for oil and natural gas -- with systematic phase-out for the smaller independent producers -- may be looked upon as a positive step in revising our internal revenue code, aren't we really denying those companies the needed capital required to do the job that I'm sure you and your associates in the Congress want done, i.e., providing sufficient sources of energy while at the same time providing jobs for Americans.

We in Vermont have always been thought to be a highly independent citizenry. However, when it comes to petroleum we are totally dependent and, as many have said, at the end of the pipeline. May I suggest to you that the economy of this state, if not the nation, is highly dependent upon the adequate supplies of energy. And delays which are apparently inextricably tied with the pending legislation referred to can only prolong the critical dilemma this country is experiencing.

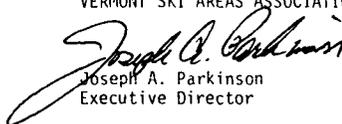
1592

The Honorable Henry Jackson
April 29, 1975
Page 3

Action is needed now! Your efforts and those of your colleagues are earnestly solicited in creating the proper means by which the private enterprise energy companies can fulfill obligations entrusted to them.

Sincerely,

VERMONT SKI AREAS ASSOCIATION, INC.



Joseph A. Parkinson
Executive Director

JAP:mmm

March 28, 1975



Honorable Henry Jackson
 United States Senate
 c/o Mike Harvey
 3206 Dirkson Senate Office Building
 Washington, D. C. 20510

Dear Senator Jackson:

On behalf of the Virginia Agribusiness Council, I urge your support in committee hearing of action that would permit reasonable exploration and drilling for offshore oil.

An adequate supply of fuels obtained from oil is absolutely essential to agriculture. Production of needed food stuffs for our people is dependent upon it.

Of critical importance to agriculture now is the availability of natural gas for nitrogen fertilizer production. We have already experienced curtailments. Further curtailments could significantly diminish our food producing ability at the very time American agriculture is being called on to meet the challenge of greater food demands at reasonable prices.

Certainly offshore drilling would help relieve this situation. Not only would there be the potential for new natural gas production, but the oil produced might be used as a replacement fuel for natural gas in nonessential uses, releasing for nitrogen production gas now being used for fuel.

We will appreciate your consideration of our concerns.

Respectfully yours,


 J. Paul Williams
 Executive Director

JPW/dh

The Organized Voice of Virginia's Industry of Agriculture
 Suite 914, Heritage Building, Richmond, Virginia 23219 Phone: (804) 643-3555

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DISTRIBUTOR GULF OIL PRODUCTS

TELEPHONE 803-662-4311
POST OFFICE BOX 1030
FLORENCE, S. C. 29501

March 25, 1975

TELEPHONE 803-393-2896
POST OFFICE BOX 158
DARLINGTON, S. C. 29532

Senator Henry M. Jackson, Chairman
Senate Committee on Interior and Insular Affairs
3106 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Jackson:

Attached is a copy of a letter we are sending today, to the Senate Committee on Interior and Insular Affairs requesting support for a program that will permit oil companies to engage in exploration and drilling in off-shore areas without further delay.

We hope we can count on your help to get such a program enacted as soon as possible.

Thank you.

Very truly yours,



W. H. Bristow, Jr.

WHB:ea

March 25, 1975

Senate Committee on Interior and Insular Affairs
Attention: Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

Please allow us to give our reasons for opposing any proposal that Government take over the pre-leasing petroleum exploration of frontier off-shore areas. In our opinion, no Government Agency is equipped or suited for this work. Furthermore, even if the new agency had the technical knowledge, it would take several years to gear up for the job and several more years for explorations.

Congress has been fiddling around for more than a year trying to agree on an energy program, while our domestic petroleum supply has been dwindling. Most oil people agree that the best chance for oil and gas discoveries is in off-shore exploration. Time is of the essence if we are to reduce our reliance on foreign oil in the near future, and the oil companies are ready and able to begin explorations immediately.

We believe that, because of price controls and regulation of the oil industry, the Government is largely responsible for the present energy shortage. For the Government to continue to control the oil industry, especially in this time of energy shortages, is self-defeating. This industry has done a remarkable job of supplying our country with an abundance of petroleum products far cheaper than any other country in the world, until Government interference made it unprofitable to continue.

The liberals in Congress and the liberal media are always harping on the large profits of the oil companies. Research shows that during the same period of time that eleven major oil companies had a return on their equity of less than 12 percent, the return of the New York Times and the Washington Post was more than 16 percent and the ABC Network's was 17 percent. We believe profit is necessary in all businesses, for it is nothing more than interest on capital investment. Without profits, we will eventually move into a communist slave system without freedom and opportunity.

We beseech you to support a program that will insure the oil companies an incentive to explore and produce more domestic oil and gas in the shortest possible time.

Thank you.

Yours very truly,

W. H. Bristow, Jr.

WHB:ea

HMS OCS Pen

West Virginia Highway Users Conference

Suite 714 Atlas Building
Charleston, West Virginia 25301

EUGENE H. BROWN
Vice Chairman

FRANK VIGNEAULT
Chairman

ROBERT R. BOWERS
Secretary-Treasurer

April 24, 1975

The Honorable Henry Jackson
Chairman of the Interior &
Insular Affairs Committee
Room 3206
Dirksen Office Building
Washington, D. C. 20510

Attention: Mike Harvey

Dear Senator Jackson:

The attached resolution, approved April 18, 1975, expresses the profound interest of 117 West Virginia Highway User affiliated groups in the urgent need to tap offshore oil reserves.

We hope you will make this resolution part of the committee's record.

Sincerely,


Frank Vigneault
Chairman

FV:sah
Attachment

cc: Governor Arch A. Moore, Jr.
Senator Robert C. Byrd
Senator Jennings Randolph
Congressman Harley Staggers
Congressman Robert Mollohan
Congressman Ken Hechler
Congressman John Slack
Senator William Brotherton
Delegate Lewis McManus

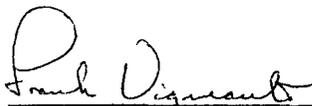
WEST VIRGINIA HIGHWAY USERS CONFERENCER E S O L U T I O NToward the Full Development of Offshore Oil

- WHEREAS, the West Virginia Highway Users Conference, consisting of 117 business, agricultural, professional and civic groups, recognizes that oil drilling technology for ocean fields has been demonstrated to be efficient and capable of tapping deep water oil resources with virtually no damage to the environment; and
- WHEREAS, the chance of oil spills is far outweighed by the urgent need for the billions of barrels of offshore oil to help West Virginia and America provide new jobs and improved living standards for all its citizens; and
- WHEREAS, the Conference believes that the nation needs a yearly growth rate of from four to seven per cent in its gross national product to keep a healthy economy for its almost 100 million job holders; and
- WHEREAS, Highway Users believe that to keep the nation's place as a world leader and as a strong and prosperous nation, and to meet the nation's pressing energy needs, offshore oil must be tapped in conjunction with the continued development other domestic energy sources and the deregulation of natural gas at the wellhead:
- Therefore be it
- RESOLVED, that members of the West Virginia Highway Users Conference urge the United States Congress to get on with the job of finding new sources of domestic energy, chief among these oil from the continental shelf off both the nation's Atlantic and Pacific coasts; and be it further

RESOLVED, that the Conference present this resolution to the members of the West Virginia delegation, to the United States Congress, and to the National Highway Users Federation for Safety and Mobility for recording along with resolutions already passed by 23 other Highway Users Conferences across the nation.

ADOPTED: April 18, 1975

SIGNED:


Frank Vigneault, Chairman

AtlanticRichfieldCompany 2025 Connecticut Avenue, N.W.
Washington, D.C. 20036
Telephone 202 296 5700

Phil D. Helmig
Washington Representative



April 23, 1975

Honorable Lee Metcalf, Chairman
Subcommittee on Minerals, Materials and Fuels
Committee on Interior and Insular Affairs
United States Senate
3106 New Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

This letter is submitted in behalf of Atlantic Richfield Company in connection with the joint hearings held by your Subcommittee, the Senate Commerce Subcommittee on Oceans and Atmosphere, the Senate's National Ocean Policies Study and the Senate's National Fuels and Energy Policy Study on March 14, 17 and 18 and April 8 and 9, 1975. Our comments refer to the proposed legislation on OCS matters being considered by these Senate groups including S-130, S-426, S-521 and Sections 202 and 404 of S-740. We request that this letter be made a part of the hearing record.

The stated findings and purposes of the proposed legislation show that Congress clearly recognizes the necessity of taking steps to achieve a greater degree of domestic energy self-sufficiency. We wholeheartedly endorse this position. We are in agreement with many of the objectives of the legislation but strongly oppose those findings indicating a need for direct Federal involvement in exploration and production programs. We submit that the stated purposes of the legislation are not well served by the proposals they contain. Only the provisions pertaining to state sharing of revenue from Federal OCS leasing and development provide additional benefit to the public. We endorse the state revenue sharing concept.

Aside from state revenue sharing, no new OCS legislation is needed to accomplish the objectives expressed in the proposed legislation. Existing laws and regulations pertaining to OCS exploration, leasing, development and production are entirely adequate to ensure maximum resource development and protection of the public interest. There are steps, however, that Congress could take to provide conditions which

Honorable Lee Metcalf
April 23, 1975
Page Two

would stimulate the development of domestic energy supplies. The conditions most needed are free market prices for all oil and gas, early availability of leases in all OCS areas, a mechanism for prompt resolution of environmental delays and stability in laws and regulations governing oil industry activities.

Many provisions of the currently proposed legislation would make major changes in the business environment of OCS exploration and development and cause lengthy delays in the availability of OCS leases. Some of the features that would adversely affect the basic structure of industry activities include Federal involvement and in some cases exclusive direction of exploration and production programs; disclosure to the public without compensation to the owner of confidential proprietary data; removal of select areas of the OCS from private industry availability through a National Strategic Energy Reserves Program; and a requirement to purchase Federal royalty oil at a price that may be higher than the lessee could recover in the market place.

There are other provisions of the legislation that would primarily delay OCS acreage availability for exploration and development. These provisions include a leasing moratorium on frontier areas until Federal exploration is conducted; preparation of a ten-year leasing program with related studies and special requirements; preparation of leasing and development plans with Congressional review and approval; granting of authority for adjacent states to request delays; provisions for citizen suits, and a total review and repromulgation of safety regulations. The combined effects of the provisions briefly summarized above are very difficult to measure but even at best they would cause more delay than the nation can tolerate if any real progress is to be made toward achieving a greater degree of energy self-sufficiency in the next decade.

Comments concerning the major provisions of the proposed legislation are given in some detail in the following paragraphs.

Federal Exploration Programs

Proposed Federal Exploration Programs contained in Senate Bill S-426, Section 202 of S-740 and to a lesser degree in S-521 are excellent examples of features in the legislation being considered by the Senate Subcommittees that would significantly alter the basic structure of industry activities in OCS areas. The stated purposes of these exploratory programs are

Honorable Lee Metcalf
April 23, 1975
Page Three

to locate commercial quantities of hydrocarbons, define field limits, determine the amount of reserves present and make detailed information available to the public before a lease sale. However, the overriding impact of the programs would be to essentially exclude private industry from OCS exploration and reduce oil companies to little more than contract operators. This approach to OCS exploration greatly underestimates and oversimplifies the tedious task of exploration and to a large extent sets aside the strong national asset of highly skilled exploration staffs employed by industry. We see no reason to believe that such a Federal program would in any way lead to more rapid exploration and development of OCS reserves. Rather than move in this direction, Congress should, in our opinion, direct its efforts toward motivating industry to undertake the most vigorous and imaginative program of exploration possible.

The practice of making data from a Federal Exploration Program available to the public prior to a lease sale would drastically reduce the incentive for individual company presale exploration activities. The reduction in multiplicity of exploratory surveys (i.e. individual surveys conducted by different companies) would likely lead to a reduced level of reserves being discovered and consequently a reduction or delay in domestic production and Federal royalty payments. Our belief that a multiplicity of surveys will lead to the discovery of more reserves than an exploratory program conducted by a single company (or the Government) is supported by numerous examples of one company's exploratory efforts leading to a discovery in an area that another company has found to be totally unattractive.

Public disclosure of information on field locations and size prior to leasing would also focus interest on the known productive tracts, thus increasing competition on a smaller amount of prospective acreage. Although this information would make some tracts more valuable at the time of leasing, it would also reduce the value that would be bid on other tracts. In effect what we believe would happen is that evaluations based on publicly available data from Federal Exploration Programs would change the bids on each tract, but would not necessarily increase the total bids.

Honorable Lee Metcalf
April 23, 1975
Page Four

Federal Production Program

The Federal Oil and Gas Production Program proposed in Section 404 of Senate Bill S-740 goes beyond the exploratory programs discussed above and calls for a plan to develop an organization that would be similar to a Federal Oil and Gas Company. This plan would not be implemented without further legislation by Congress, but we take little comfort in the requirement for additional legislative action. In our opinion, Congress would not be likely to call for such a plan unless it had a reasonable expectation of implementing it. The plan would establish a Federal organization with instructions to enter into joint ventures with private companies, giving preferential treatment and incentives to new businesses, new entities and independent oil producers. This would deprive the leaders of the industry of the opportunity to compete for public lands, a very punitive, unjust and discriminatory measure. Such a step would be a serious threat to the free enterprise system and the future of major oil companies.

In carrying out a Federal Production Program, obviously the Government would select the choice OCS areas for exploration and development by itself and with its partners, leaving the poorer areas to the major oil companies. This would weaken the major companies' investment opportunities and undoubtedly reduce their interest in OCS areas. In our opinion, the program would ultimately slow the rate of OCS exploration and development, retard technological advancement related to offshore operations and delay production from OCS areas.

Confidential Data

There has been a steady increase in the demands placed on the oil industry for submittal of confidential proprietary data by numerous Federal agencies and Congressional committees. Atlantic Richfield Company recognizes the need for the Government to have raw data (excluding interpretations) on which to base its own evaluations and design appropriate energy policies. We have been fully cooperative in submitting the data requested. The primary concerns we have expressed with regard to such programs were (1) there have been inadequate assurances for protection of confidential data which was acquired at great cost to the individual companies and (2) there have been a multiplicity of requests for the same data in slightly different forms. These multiple requests create unusual and unnecessary manpower requirements on the industry.

Honorable Lee Metcalf
April 23, 1975
Page Five

Industry is already required to submit the type of exploratory data specified in S-521 and S-426 to the U. S. Geological Survey, but the current regulations provide confidentiality of this data for ten years. S-521 would not assure the same protection of proprietary data and would place its disclosure at the discretion of the Secretary of the Interior. The provisions of S-426 are much more detrimental to the industry with regard to confidentiality of data in that this legislation would entirely delete any assurance of protection. The added risk of loss of confidential data would tend to promote a waiting game in which private companies would likely acquire less proprietary information prior to a sale. They would depend more on data acquired by the Government or on participation in data acquisition programs with large groups of companies. As previously expressed, with fewer individual surveys we believe many prospects would be overlooked or their discoveries greatly delayed.

National Strategic Energy Reserves

Under the provisions of S-521 the Secretary of Interior is required to set aside new areas for National Strategic Energy Reserves. S-426 also has provisions for National Strategic Energy Reserves, but it requires only the preparation of a study and the submission of a report to Congress. Undoubtedly it is intended that submission of a plan to Congress would be followed by legislation which would implement the program. The provision to set aside select areas for National Strategic Energy Reserves would reduce the availability of prime prospects in the OCS areas to private industry decreasing investment opportunities and interest in the Outer Continental Shelf.

It appears unlikely that reserves set aside in this manner could be developed and placed in a market-ready state by the Federal Government as promptly as by private industry. Even if the Government did develop these areas and install the needed production and transportation facilities to be ready for emergencies, shut-in production would not help to alleviate the nation's balance of payments problems.

Royalty Oil

The provisions of both S-521 and S-426 require the Secretary of Interior to offer the Federal share of oil to the public by competitive bidding and to limit participation in such sales if necessary to ensure adequate supplies to independent refiners. In the event adequate bids are not

Honorable Lee Metcalf
April 23, 1975
Page Six

received for all of the Federal oil, the lessee is required to take the unsold portion and pay no less than the "highest bid." Under this provision an independent refiner might purchase a small portion of the Federal oil at a price greater than the lessee could get for the remaining portion in the market place. This would place an added burden on the lessee's net revenue from the lease and, if the burden continued, it could adversely affect the economic limit with a resultant loss in rate and recovery from the property.

Delaying Features

There are several features of the proposed legislation being considered by the Subcommittees that would not make major changes in the structure of industry activities, but would greatly delay the availability of OCS areas for exploration and development. The ten-year leasing programs set out in both S-521 and S-426 are replete with provisions that would delay leasing. S-426 has provisions not only for preparing a leasing program, but also requires a moratorium on all frontier areas until Federal exploration is conducted. It further requires the development of a complete leasing and development plan which must be submitted to Congress for review and approval before any lease can be granted.

Provisions in both S-426 and S-521 grant authority to the Governor of an adjacent state to request a delay of three years in OCS leasing off his state's coast. Authority is also granted for citizens to file suits against any party, including the U.S. Government, for alleged violations of the Act. Our concern is not that adjacent states nor private citizens have a means of being involved in decisions regarding OCS exploration and development, but we feel that there are already adequate provisions for their involvement. These new mechanisms would simply add to delays that would otherwise be experienced.

Further delay mechanisms are seen in the proposals for reviewing and repromulgating safety requirements for OCS activities. Existing regulations and enforcement provisions are fully adequate to protect life, property and the environment with regard to OCS exploration and development activities. These provisions could be expected to cause unnecessary changes in existing regulations which would likely require costly modifications to facilities and loss of production through down time required during modifications to achieve compliance.

Honorable Lee Metcalf
April 23, 1975
Page Seven

The proposed legislation appears to reflect an attitude that there are gaps in present OCS laws that need to be filled. We submit that this is not the case. To the contrary, existing laws regarding OCS activities are entirely adequate. A careful review of the new legislation reveals that every major element of these proposals is contained in existing statutes or OCS regulations and orders. Existing laws provide adequate authority for settlement of disputed boundaries. Very effective safety and environmental protection regulations and enforcement mechanisms have already been implemented. There are adequate provisions for penalizing lessees engaged in an oil spill and requiring oil spill cleanup and contingency planning. Environmental impact analyses and base line studies are already being conducted under existing laws. There is adequate authority for deferring leasing or development if a Coastal State can demonstrate an adverse impact on the environment. The Secretary of Interior can require permits, include new terms and conditions of future leases, and terminate leases for noncompliance of conditions. He can purchase geological and geophysical information and prepare maps. There are adequate existing provisions to prevent restraint of competition. The Secretary is authorized to establish a development plan and require performance, dispose of royalty oil at fair market value and conduct reviews of shut-in or flaring wells. The new provisions of the proposed legislation would primarily add to the number of agencies that must agree with activities in the OCS areas. This would tend to further fragment the procedure, complicate approval of any action, and in short, cause unnecessary delays.

State Revenue Sharing

In our opinion, the only feature of the currently proposed legislation that would be beneficial to the public and help bring about early OCS exploration and development is a coastal states' revenue sharing program. State revenue sharing, in our opinion, is basically just and it appears to be a key issue in winning coastal states' acceptance of OCS development. We strongly urge the adoption of a plan which would provide adjacent states with a share of the revenue from OCS lands while not requiring the states to meet restrictive conditions to qualify for these funds. Any such legislation should be carefully drafted to avoid additional delays in exploration and development.

Honorable Lee Metcalf
April 23, 1975
Page Eight

Conclusion

In conclusion, Atlantic Richfield Company submits that the development of the OCS resource potential is vital to domestic energy self-sufficiency. In order to accomplish this goal, it is necessary that leases be made available in all OCS areas. In addition to supporting accelerated OCS leasing, we urge the Congress to establish conditions for maximum exploration and development of these areas. The conditions most needed are free market prices for oil and gas, means for promptly balancing energy and environmental considerations, and stability of the regulatory environment in which the industry must plan its investments.

In our opinion, no new OCS laws, leasing practices or regulations are needed for proper development of OCS resources and protection of the environment. During the past 25 years the industry has demonstrated its ability and determination to operate safely in OCS areas with a minimum environmental impact on the adjacent states. Our relationship with other industries in offshore areas and with adjacent states has been excellent. We would strongly urge Government and industry cooperation rather than punitive legislation that would cause delay and prevent prompt action in meeting the nation's energy needs.

Respectfully submitted,



Phil D. Helmig



New England Natural Resources Center
506 Statler Building, Boston, Massachusetts 02116

Tel. (617) 542-9370

For hearing record

April 17, 1975

Honorable Ernest F. Hollings
Committee on Commerce
United States Senate
Washington, D.C. 20510

APR 22 1975

Dear Senator Hollings:

At the joint Interior-Commerce Committee hearings on Outer Continental Shelf policies, one of the important points made by New England representatives is that the coastal states must be provided an opportunity to participate in decisions on OCS development that will have a direct impact on them. One way of providing such an opportunity, and one that was suggested by Governor Michael Dukakis of Massachusetts at the April 9, 1975 hearings before the Committee on Interior and Insular Affairs and Committee on Commerce, is to establish a joint federal-state commission modeled on the Joint Federal-State Land Use Planning Commission for Alaska.

As you will recall, the Joint Federal-State Land Use Planning Commission for Alaska was established in Section 24 of the Alaska Native Claims Act. It was created as a temporary five-year commission with fourteen members as follows: the Governor of Alaska (or his designate), six members who shall be appointed by the Governor, one member appointed by the President of the United States, and six members to be appointed by the Secretaries of the Interior, Agriculture, Housing and Urban Development, Transportation, Commerce, and Defense. The Governor of Alaska and the member appointed by the President serve as co-chairmen.

The Alaska Commission was set up to provide a mechanism for joint decisions on land allocations pursuant to the Alaska Statehood Act and the Alaska Native Claims Act. Among the policy purposes it serves are to insure that "...economic growth and development is orderly, planned, and compatible with national environmental objectives, the public interest in the public lands, parks, forests, and wildlife refuges in Alaska, and the economic and social well-being of the native people and other residents of Alaska;...to improve coordination and consultation between the state and federal government in making resource allocations and land use decisions;...[and] to furnish the state an opportunity to review, comment upon, and make recommendations with respect to the management of and proposed additions to federally reserved lands in Alaska..." These policy purposes are similar in nature to those objectives sought by the New England states in their plea for an opportunity to participate in decisions on OCA development off their coasts. Present means of involving the coastal states in these decisions are inadequate and have no binding power on decisions of the Department of the Interior.

I believe the Congress should carefully consider the establishment of one or more joint federal-state planning commissions for the development

of Outer Continental Shelf oil and gas resources. Such a commission, or commissions, should:

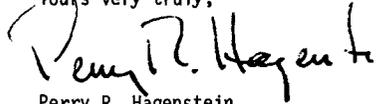
- a) be limited in functions to matters directly involving exploration for and development of oil and gas on the Outer Continental Shelf and the construction of facilities, such as pipelines, refineries and onshore support facilities, directly related to such exploration and development; this would include at a minimum jointly-made decisions on the timing and rate of development, regulations to guide and control exploration and development activities, and tracts to be offered for leasing;
- b) be guided by legislatively established policy objectives including the promotion of both national and regional economic stability, protection of the environment and natural values, protection of the public's interest as owners of Outer Continental Shelf oil and gas resources, efficient utilization and conservation of natural resources of the Outer Continental Shelf, the oceans above it, and the contiguous land and coastal waters, promotion of social well-being of the coastal states and the nation as a whole, and the development of improved technology for utilization and conservation of natural resources;
- c) have equal state and federal representation, have equal representation from each coastal state represented on the commission, and have procedures that will assure that decisions represent at least a majority view;
- d) have a limited life span;
- e) be required to make annual reports to the Congress, the President, the member states, and the public and
- f) be assigned responsibility for developing procedures for allocating a portion of oil and gas leasing revenues to the coastal states to cover costs incurred by the states in planning for and mitigating the impacts on them of such leasing.

Because there are significant differences in both offshore and onshore conditions along the major sectors of the Atlantic, Gulf of Mexico, and Pacific coasts, it would be advisable to establish a separate joint federal-state planning commission for the development of Outer Continental Shelf oil and gas resources for each major sector of the coast. New England, and to an extent New York, has had a historic relation to the Georges Bank portion of the North Atlantic. Therefore, one logical joint federal-state commission would encompass the New England states and perhaps the State of New York.

There may be a variety of other approaches for directly involving the coastal states in Outer Continental Shelf decisions that affect their vital interests. The model provided by the Joint Federal-State Land Use Planning Commission for Alaska has the advantage of being familiar to the Congress. Whatever criticisms there may be regarding the operation of that particular

Commission appear not to be a matter of basic function or organization. A joint federal-state commission established specifically for OCS decisions would not duplicate existing regional organizations such as the New England River Basins Commission, but could make good use of the information that they collect and organize. I believe the above proposal warrants your attention.

Yours very truly,



Perry R. Hagenstein
Executive Director

PRH:jcs
(Identical letter to
Senator Henry M. Jackson,
Committee on Interior and Insular Affairs
United States Senate)



~~SHARON FORBES~~
Secretary

Evelyn F. Murphy

Pamela
held to put
in the
...

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
18 Tremont Street
Boston, Massachusetts 02108

APR 1 1975

Honorable Earnest F. Hollings
U. S. Senate, Rm. 437
Russell Senate Office Building
Washington, D. C. 20510

Dear Senator Hollings:

The purpose of this letter is to request your assistance in obtaining 100% Federally financed planning grants to states for dealing with impacts induced by development of outer continental shelf resources. The coastal states of New York and New England are very much concerned with the level and terms of funding to be made available to States under the Coastal Zone Management Act for the purpose of planning for impacts resulting from the development of oil and gas resources on the outer continental shelf.

At a meeting on March 24, 1975, state officials designated by the Governors of the states of Connecticut, Maine, Massachusetts, New Hampshire, New York and Rhode Island, pursuant to Section 305 of the Coastal Zone Management Act of 1972, sitting as a New England-New York Coastal Zone Task Force, reached a consensus requesting the consideration and appropriate action of the Congress in enacting legislation to provide 100% federal funds to states for planning for impacts arising out of the development of Georges Bank. This action was taken in response to pending congressional action for distribution of planning funds for dealing with impacts resulting from OCS developments. In this regard, we note that the Budget of the United States Government Fiscal Year 1976 includes a \$3 million FY 1975 supplemental request to provide for state coastal zone program development, consistent with the timetables of Federal plans to sell leases for oil and gas development in frontier areas and \$3 million for follow on activities in FY 1976. This creates a link between Section 305 program development grants and OCS impact planning activities that the Task Force suggests ought to be broken in order to meet our objectives of providing OCS impact planning funds on a 100% federal basis.

As you know, we have been concerned over the consequences that might occur to this part of the country as a result of the development of Georges Bank. Recent studies which have concluded that OCS development results in net costs to the taxpayers of Texas and Louisiana of \$67 million and \$ 38 million respectively have served to deepen this concern. The report North Sea Oil and Gas: Impact of Development on the Coastal Zone, produced as a result of your laudatory work on the National Ocean Policy Study which found that OCS development in the North Sea resulted in a displacement of

Honorable Earnest F. Hollings
United States Senate

April 1, 1975
Page two

of much of the fishing fleet from several traditional fishing ports in Scotland has served to sharpen our understanding of the need for the kind of planning inherent in the Coastal Zone Management Act in advance of actual OCS activities.

The Coastal Zone Management Act serves as an essential mechanism for developing a management system to deal with these concerns; 305 funds provide an essential financial base for states to prepare their own broad coastal zone management programs; 306 funds will help fund the administration and implementation of these State management programs.

However, the presence of the OCS activity, its relative importance and the magnitude of the potential impacts were unforeseen in 1972 when the Act was passed. The impact of the energy crisis and the importance of OCS development as it relates to a national energy policy were simply not fully understood at that time. The recent ruling by the Supreme Court in favor of the Federal Government in U. S. vs. Maine et al., the declaration by the Federal Government of their intentions to greatly increase the quantity of OCS lands to be leased in each of the next four years--most of which will be in frontier areas--and the fact that the adjacent coastal states are going to bear the greatest burden of these Federal decisions all suggest that programs instituted to assist the states in dealing with on and near shore impacts should be looked upon as special and not simply as an incremental addition to existing Coastal Zone Programs.

It is the consensus of the six member states of the New England-New York Coastal Zone Task Force that : 1) essential planning funds be made available to states at a level sufficient to do the kind of advanced planning necessary to ameliorate the negative social, environmental and economic impacts and to maximize the economic effects of the development of OCS oil and gas reserves, and 2) because these additional planning responsibilities stem from unilateral federal action, the Federal Government should provide to the coastal states, 100% of the funds required to accomplish the necessary planning. Your bill, S 586 could be the vehicle for meeting our objectives.

With respect to funding level, the Task Force is not in a position to suggest the amount of planning money that might be needed nationally to deal with the accelerated development of OCS resources. However, it has been estimated that each of our states may need \$200,000 to \$300,000 per year in planning funds in order to provide the machinery for effective decision-making.

The states have a formidable task in establishing mechanisms for planning for OCS impacts. A planning strategy for the control over future growth and development in order to be effective should have a basic underpinning, consisting of three elements, 1) the physical capability of the land, 2) the economic potential of the area--in our case, the state and region and 3) the social goals of the people in the area. Planning will be required to identify sites or areas that meet environmental, economic and social criteria for each of the several kinds of key facilities ancillary to OCS development. Regional needs for the siting of OCS related facilities will have to be considered too, tradeoffs between and among states will probably have to be included in any analysis.

Honorable Earnest F. Hollings
United States Senate

April 1, 1975
Page three

Methods will have to be developed within each state for evaluating the siting of OCS related facilities in relationship to all other legitimate uses, including inland vs. coastal and other energy facilities.

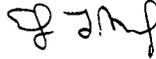
In addition to the siting element, state programs for dealing with OCS impacts should include study elements that examine relevant policies, resource capabilities and legal and institutional mechanisms. Major efforts will involve building an inter-agency policy capability. Critical environmental areas that ought to be protected from such activities will be identified through on-going efforts. However, all the work will have to be integrated, not only within each coastal zone program, but also within the context of all state natural resource management programs.

Each state, as part of its initial grant application under Coastal Zone Management, developed an overall three year program which may not have made provisions for dealing with all these requirements. Agreements among state planning, environmental, commerce and energy office and agencies will have to be worked out.

The development of state strategies for dealing with OCS impacts, especially in frontier areas will require significant new staff resources.

On behalf of the state gubernatorial coastal zone desingees of the region, you are urged to do all within your power to help us obtain these objectives.

Sincerely yours,



Evelyn F. Murphy
Chairman, New England-New York
Coastal Zone Task Force

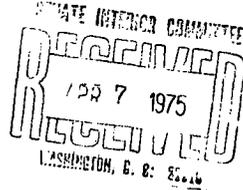
WILLIAM W. DOAR, JR.
SENATOR, GEORGETOWN AND
CHARLESTON COUNTIES
SENATORIAL DISTRICT NO. 16
SENATE OFFICE NO. 5

HOME ADDRESS:
P. O. DRAWER 418
GEORGETOWN, S. C. 29440



COMMITTEES:
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FEDERAL RELATIONS
JUDICIARY
LEGISLATIVE LIBRARY
LOCAL LEGISLATION
PRIVILEGES AND ELECTIONS

April 3, 1975



Senate Committee on Interior and
Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

ATTENTION: Mr. D. Michael Harvey

Dear Mr. Harvey:

As a member of the South Carolina Committee on Oil and Natural Gas, I am aware of the need for the immediate development of our off-shore oil and gas resources. In view of our dwindling energy supply, it is the position of our Committee that the development of our off-shore supplies could fill the gap. I am in favor of the exploration for oil and gas by private enterprise, and I would urge you to proceed on with plans for exploration. Further delays in the development of our off-shore energy potential could well jeopardize the economic future of the many industries and citizens of South Carolina who daily depend upon oil and natural gas.

With kindest regards, I am

Very truly yours,

William W. Doar, Jr.

WWD,Jr./el

JOHN DRUMMOND
 SENATOR, GREENWOOD AND
 MCCORMICK COUNTIES
 SENATORIAL DISTRICT NO. 3

HOME ADDRESS:
 BOX 748
 GREENWOOD, S. C. 29646



OCS District Rep's

COMMITTEES:
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 2nd V. Chm.
 EDUCATION
 FINANCE
 FISH, GAME AND FORESTRY
 HIGHWAYS
 MEDICAL AFFAIRS
 RULES
 RURAL ELECTRIFICATION

April 4, 1975

Senate Committee on Interior and Insular Affairs
 Attention Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D.C. 20510

Dear Mr. Harvey:

On behalf of myself and my constituents in South Carolina District # 3, consisting of Greenwood and McCormick counties, I would like to urge that every effort be made to expedite the exploration of the Outer Continental Shelf for the much needed reserves of oil and natural gas.

During the past two (2) years, while serving as Chairman of the Legislative Committee on Energy, I have had the opportunity to see the needs of many of our businesses throughout the state. During the Arab Embargo, we were forced to allocate product among various industries and commercial properties. Our main priority was to keep people working, businesses operating and our people as comfortable as possible.

We did the best that we could with an impossible situation; and we found that allocation was not the answer to our long term problem. Allocation sufficed during a time of crisis but now we must turn our attention to solving our long range energy problem.

I am aware of the numerous legislative proposals that are before Congress. Most of these proposals are well intentioned but unfortunately, would lead us in the wrong direction.

States should have a voice in OCS development. I believe that we can do this through existing laws and regulations, such as the Clean Air Act, the National Environmental Policy Act, Environmental Impact Statements and Coastal Zone Management. State governments should not be given veto power over offshore leasing.

We must expedite production of oil and gas in our Outer Continental Shelf area, and all other areas which show promise. We must develop our domestic resources. I believe increasing our domestic production would improve our national security, help balance our budget, and insure our people that they can continue to have most of the comforts which we have enjoyed for so many years.

Mr. D. Michael Harvey
Page 2
April 4, 1975

Conservation is a very important factor and we must develop a conservation ethic. We must all realize that we can no longer waste our precious resources. Unfortunately, conservation alone will not solve our problem, but it should help our dilemma.

I understand that some Congressional leaders favor exploration of the OCS by the federal government instead of private industry. We do not have the time to wait years while setting up a government exploration program. Also, a government effort would be costly to the taxpayers who are already overburdened.

Private enterprise has the ability to get the job done if we only give them the necessary encouragement. The competence of the United States petroleum industry is recognized around the world. Let's give them the opportunity to use their expertise in developing the petroleum potential of the Atlantic OCS.

Over the years, our state has acquired a reputation for encouraging healthy economic growth while protecting environment. The delicate beauty of South Carolina's coast is one of our greatest natural resources. Our coastal wetlands are as important a resource as the potential oil and natural gas deposits offshore.

I believe that the petroleum industry will insure that proper safeguards will be taken to minimize any adverse environmental effects of offshore drilling.

In closing, I urge immediate action be taken to eliminate further delay in the search for domestic oil and natural gas reserves offshore. Certainly, to delay further would be an economic and political mistake.

We can avoid that mistake if government officials provide the leadership necessary to make our country energy independent. The economic future of the citizens and industries in South Carolina and on the East Coast is at stake.

I would like to thank the Senate Committee on Interior and Insular Affairs for this opportunity to express my views on these very important public issues.

Sincerely,



John Drummond

JD/vj

T. ED GARRISON
 SENATOR, ANDERSON, ARREVILLE,
 OCONEE AND PICKENS COUNTIES
 SENATORIAL DISTRICT NO. 1
 SENATE OFFICE NO. 1

HOME ADDRESS:
 ROUTE 2
 ANDERSON, S. C. 29621



COMMITTEES:
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 EDUCATION
 FINANCE
 FISH, GAME AND FORESTRY
 HIGHWAYS
 INVITATIONS
 LOCAL LEGISLATION
 NATURAL RESOURCES, Chm.

April 3, 1975

Senate Committee on Interior and Insular Affairs
 Attention Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D.C. 20510

Dear Mr. Harvey:

I would like to make this statement concerning petroleum development of the Atlantic Outer Continental Shelf both as a State Senator and a member of the farming community.

As a State Senator who is a member of the Oil and Gas Study Committee of the South Carolina General Assembly, I am in favor of speedy development of the Atlantic OCS petroleum potential. As a member of the agriculture community, I also see the need for additional supplies of oil and natural gas since farming relies so heavily on petroleum products.

If the modern-day farmer is to meet the increasing demands for greater production of food and fiber, he must have an adequate supply of petroleum products. The agriculture industry alone accounts for more than 13 percent of all the energy consumed in this country today.

Certainly, farmers need a secure supply of petroleum for gasoline, diesel fuel, liquid propane gas, nitrogen fertilizers and other key oil products. Today's farmers are utilizing greater amounts of energy to produce more food for the people of South Carolina and the nation.

I am also concerned about the industrial segment of our state. Already, in the Piedmont section of South Carolina certain industries are being forced to lay off workers and curtail plans for expansion because of natural gas shortages.

We can not afford to delay any longer the exploration for oil and natural gas on the Atlantic OCS. Offshore drilling deserves a first priority attention.

- 2 -

Proposals that government step in and take control of offshore exploration are pure political and economic folly. Private enterprise has proven that it can get the job done. I say let them get on with the job, now.

Sure, I am concerned that we carefully plan our steps, but it seems to me that we are simply dragging our feet while our dependence on foreign supplies for petroleum continues to increase.

The South Carolina consumer, and farm and industrial workers would be the victims of further delay. Our state has been growing faster than the rest of the nation, but now we face serious setbacks if we can't guarantee industry secure energy supplies.

We all want to preserve our priceless ecology. I feel strongly that the oil industry's safety record over the years proves that they can drill offshore with a minimum effect on the environment.

As a member of the Oil and Gas Study Committee I have studied offshore drilling activities of the oil industry near Florida and California. I am convinced that the oil industry will take the proper safeguards in conducting their operations so our delicate coastal environment will be protected.

In closing, I want to strongly emphasize that one of our most serious concerns is that government stay out of the business of exploring for oil. Government has been successful where it has stuck to its business, and that business is government. But, it has been a dismal failure in cases where it has tried to run a business enterprise.

Let's get on with the search for oil offshore on the Atlantic OCS—but let's make sure that it is done by private enterprise—they are the ones to get the job done.

Thank you.

Sincerely,



T. Ed Garrison

TEG/vj

PHONE 274.7978
P. O. BOX 5374

OFFICE AND PLANT
FAIRVIEW ROAD AT BILTMORE

ASHEVILLE OIL COMPANY, INC.

ASHEVILLE, N. C. 28803

March 25, 1975

E. S. KOON, PRES.
G. N. KOON, V. PRES.



GULF OIL PRODUCTS
GULF TIRES
GULF BATTERIES
ACCESSORIES

Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Att: Mr. D. M. Harvey

Gentlemen:

Our country must follow the course of becoming independent of energy sources which are subject to the whims of foreign nations and must develop all its sources of energy, particularly the offshore gas and oil leases of our coastal states.

The Trans-Alaska Pipeline is finally underway and will be a reality, but it could have been supplying oil to our country during the winter of '73-'74, during the Arab oil embargo, had Congress not withheld the start. We should have learned from this experience, that time is of essence and to proceed with the offshore leases. The offshore exploration and production of the gas and oil leases should be done by the private oil companies, who have the necessary knowledge and experience. So without further delay, let us get on with Project Independence.

Sincerely,

A handwritten signature in cursive script that reads "G. N. Koon".

G. N. Koon

W. H. BRISTOW, INC.
 DISTRIBUTOR GULF OIL PRODUCTS
 March 25, 1975

TELEPHONE 803-662-4311
 POST OFFICE BOX 1030
 FLORENCE, S. C. 29501

TELEPHONE 803-393-2896
 POST OFFICE BOX 158
 DARLINGTON, S. C. 29532

Senate Committee on Interior and Insular Affairs
 Attention: Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Mr. Harvey:

Please allow us to give our reasons for opposing any proposal that Government take over the pre-leasing petroleum exploration of frontier off-shore areas. In our opinion, no Government Agency is equipped or suited for this work. Furthermore, even if the new agency had the technical knowledge, it would take several years to gear up for the job and several more years for explorations.

Congress has been fiddling around for more than a year trying to agree on an energy program, while our domestic petroleum supply has been dwindling. Most oil people agree that the best chance for oil and gas discoveries is in off-shore exploration. Time is of the essence if we are to reduce our reliance on foreign oil in the near future, and the oil companies are ready and able to begin explorations immediately.

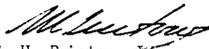
We believe that, because of price controls and regulation of the oil industry, the Government is largely responsible for the present energy shortage. For the Government to continue to control the oil industry, especially in this time of energy shortages, is self-defeating. This industry has done a remarkable job of supplying our country with an abundance of petroleum products far cheaper than any other country in the world, until Government interference made it unprofitable to continue.

The liberals in Congress and the liberal media are always harping on the large profits of the oil companies. Research shows that during the same period of time that eleven major oil companies had a return on their equity of less than 12 percent, the return of the New York Times and the Washington Post was more than 16 percent and the ABC Network's was 17 percent. We believe profit is necessary in all businesses, for it is nothing more than interest on capital investment. Without profits, we will eventually move into a communist slave system without freedom and opportunity.

We beseech you to support a program that will insure the oil companies an incentive to explore and produce more domestic oil and gas in the shortest possible time.

Thank you.

Yours very truly,


 W. H. Bristow, Jr.

WHB:ea

808 Kingsbridge Road
Columbia, S. C.
March 31, 1975

Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Attention: Mr. D. Michael Harvey.

Dear Mr. Harvey:

It is extremely difficult to read the newspaper and not become depressed and concerned over our government's "do nothing" position with regards to an U. S. energy policy.

Every day I read where U. S. oil and gas production is still declining. Every day I read or hear in news broadcasts about some plant shutting down or cutting back because of energy shortages.

It appears that Washington is in agreement on one thing and that is, it will be in the best interest of all Americans for the U.S. to become self-sufficient in energy as soon as possible, but how to do it nobody seems to know.

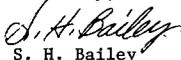
It's apparent if we plan to become self-sufficient, then we have got to drill more U. S. wells, but I shudder at recent proposals for the government to do it. If the U. S. Postal Service is any example of government expertise in private enterprise, then we are in for a rough ride.

It makes sense to me that the system of private and free enterprise which has served this country so well for more than 100 years is the answer. The oil industry, as complex as it is, has got to have the expertise to do this job for us. They have a good track record, over 19,000 offshore wells drilled with 4 blowouts of any consequence. The oil industry is spending over \$2.million a day on the environment and from what they are doing in Alaska in a slide presentation I saw, they are more concerned and more aware of the environment than the general public.

South Carolina, as far as I know, doesn't produce one drop of oil. If we have possible resources off our shores then we should go after it with the most experienced teams available. The oil industry has the technology, the equipment and the available knowledge to make our dream of self-sufficiency come true.

I hope the hearing of this matter before the Senate Committee will produce some positive, quick results in choosing the right approach to this vital subject.

Sincerely,


S. H. Bailey

SHB/db

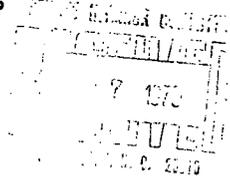
M H

INSTRUCTIONS—CANCELS LETTER(S) OF _____ SIGNED BY _____ Form S-418 B (10-74)
 PERMANENT ROUTINE TEMPORARY

APR 4 10 23 AM '75

April 2, 1975

Mr. Mike Harvey ✓
 Staff Director
 Senate Committee on Interior
 and Insular Affairs
 Room 3206
 Dirksen Senate Office Building
 Washington, DC 20510



Dear Mr. Harvey:

Our nation's energy situation is one that is of grave concern to me and, I feel certain, to many other citizens. We are seriously feeling the effects of not having a workable energy policy, in our daily standard of living and the effects on our economy. Much talk has taken place in recent years concerning the establishment of an energy policy, but little action has taken place. We continue to be entirely too dependent upon foreign crude.

As a deeply concerned citizen, I urge that immediate consideration be given to leasing the Outer Continental Shelf for oil and gas production to private enterprises at the earliest date.

It is my belief that political wrangling over leasing of the Outer Continental Shelf area is greatly threatening any timetable of the United States Energy Program and prolonging our reliance on foreign oil.

The Ford Administration recognizes the fact that our best chance of adding significant oil and gas reserves by big discoveries rests in off shore exploration and has made this an integral part of Project Independence. I am confident that you too recognize this as our best chance and that it must be given priority attention and positive action.

I respectfully urge you and other government officials involved to move forward rapidly in this leasing program.

Very truly yours,

H. T. Birchett

H. T. Birchett
 2809 Waumpi Trail
 Maitland, Florida 32751

cc: Hon. Henry Jackson
 Hon. Lawton Chiles
 Hon. Richard Stone

*Oct - Reprint -
Don #***BRICK ASSOCIATION OF NORTH CAROLINA****GREENSBORO, N.C. 27405****POST OFFICE BOX 6305
1917 E. WENDOVER AVENUE
PHONE: 919 273-5566**

Senate Committee on Interior and Insular Affairs
Room 3206, Dirksen Senate Office Building
Washington, D. C. 20510

Attn: Mike Harvey

Gentlemen:

The Brick Association of North Carolina represents 22 manufacturers of clay brick who produce nearly 15% of all the brick consumed in the United States. All of their modern automated plants depend upon natural gas for producing top quality brick.

For the past two years our state has been hurt worse than others by the extreme shortage of gas on the only pipe line serving the state. Curtailments up to 40% of normal natural gas supply have made it necessary for many of these plants to shut down for varying periods of time; or to produce a less perfect quality of face brick with alternate fuels such as fuel oil.

Many bills are currently under consideration in Congress dealing with exploration and development of the petroleum potential on federal lands.

Our industry would like to urge your immediate attention to enactment of legislation which would allow exploration for oil and natural gas under the Outer Continental Shelf.

Unless immediate action is taken by your committee to assure exploration by the private sector, there is no way that our nation can become self sufficient to meet its energy requirements.

Even as this letter is being written members of this association are being told they will be curtailed more than 40% of their normal requirements for the summer period beginning April 15, 1975 and lasting 214 days.

We need your assistance to insure no more costly delays in exploration of the offshore for additional energy reserves.

Yours very truly,

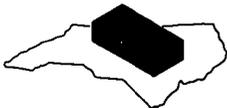
Brick Association of North Carolina



by C. E. Garton, General Manager & Secretary

CEG/ld

April 30, 1975



BRICK CAPITAL OF THE NATION

Mr. C. E. Carter
1006 Park Forest Lane
Jacksonville, Fla. 32211
April 14, 1975

Mr. Mike Harvey, Staff Director
Senate Committee on Interior and
Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

While I am writing this letter as a private citizen, I do derive my livelihood from the Petroleum Industry and for this reason it naturally makes me more aware of our Nation's Energy dilemma. In my own time I spend many hours in reading all materials both pro and con that I can obtain to try to keep myself abreast of the energy needs and be more aware of where our nation stands in this most important matter.

I sincerely believe that the time is way past due, that our politicians put their political haggling behind them and get on with a positive action program to correct our energy situation.

I may be a bit old fashion but I can't help but feel that when any man runs for a National Political Office, he should have first and foremost our national interest at heart. From what we read in the papers it appears that most of our politicians have their own selfish interest at heart and not that of our nation. I do not want to sound like a flag waver, but really I believe that each and every one of us has reached the point and time that we must get back on the basic fundamentals that our nation was founded, our trust in God and that each of us do what we deep down inside know, would be the best for our Nations Welfare.

I sincerely request and solicit your full support in seeing that matters under your jurisdiction, such as off-shore leasing and other matters that will increase our own domestic supply and lessen our dependency upon foreign oils is most vitally necessary and personally will appreciate all that you can do toward this end. Thanking you in advance, I remain.

Sincerely,



C. E. Carter

CEC/at

C. D. COLEMAN OIL COMPANY

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April 1, 1975

Senate Committee on Interior and Insular Offices
 Attention: Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Mr. Harvey:

As President of Coleman Oil Co., Inc., a small Oil Jobbership that has been in business for almost forty years, I want to express to you and your committee my very stern opposition to the Federal Government trying to run the complicated business of looking for oil and gas offshore and especially off the coast of the Carolinas.

I know first hand the headaches, hardships and inconveniences the Energy Crisis has caused and continues to cause. If we have any oil or gas off our coasts, we should go after it now with the most experienced teams available, since we are wholly dependent on outside sources for our supply.

Our business started with and thrived on the private interprise system and we live by it. Please, Mr. Chairman, don't shackle us with another burden -- but turn your efforts towards means of speedy action of eliminating this nation's heavy dependence on foreign oil by cutting red tape, limit your proposals and debates in Congress and let the people who know get on with the job of finding sufficient energy.

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. D. Coleman", with a long horizontal flourish extending to the right.

C. D. Coleman, Sr., President

CC: Senator Henry M. Jackson, Chairman

Senator Strom Thurmond

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OCS Room

April 4, 1975

Mr. Mike Harvey, Staff Director
 Senate Committee on Interior and Insular Affairs
 Room 3206, Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Mr. Harvey:

I have read and heard many facts regarding our domestic energy shortage. Much emphasis has been placed on the fact that we, as a nation, should be a self-sustaining oil producing country. The public has been made aware that there is an energy shortage and yet, there seems to be very little being offered as a solution to this problem.

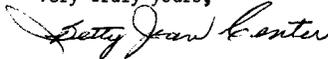
A recent article advised that off shore leasing for drilling of oil is being delayed and that consideration is being given for governmental administration and/or control of off shore exploration for oil. This is a very serious matter and in order to solve our energy problems, immediate action is needed to attempt to provide additional sources of oil. The delays presently being experienced in holding back this exploration and development is certainly not in the best interests of the people of this country.

The concept of the government controlling, administering or entering in the area of exploration and production of energy in oil development certainly should not be considered. This is an encroachment into the free enterprise system and would be best left to those with the knowledge and ability to locate and provide additional energy sources rather than establishing "another governmental agency" to further slow down an already critical energy emergency situation.

We are all interested in protecting our environment and much is being done in this really important regard, however, we are also interested in solving the energy problem now. It is already late in terms of providing sufficient energy to meet the nation's needs and further delays just don't serve any good purpose.

Please give this matter immediate attention.

Very truly yours,



(Mrs.) Betty Jean Center
 811 East Chelsea
 Tampa, Florida 33603

cc: Senator Henry Jackson
 Senator Lawton Chiles
 Senator Richard Stone

Miami, Florida
April 2, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, DC 20510

Dear Mr. Harvey:

It appears that our Representatives in Washington do not have our best interest at heart; it is hard for the average American citizen to discern any agreement at all within the government. If our elected officials don't stop haggling over semantics and begin taking positive, non partisan actions that are best for the whole country, our nation will never get out of the serious energy situation we are in.

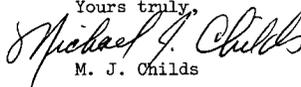
From the viewpoint of the average American citizen, which I feel that I am, the solutions to the energy problems seem simple enough; we need stepped up drilling on the outer continental shelf area, relaxation of ecological regulations so that more coal can be used, a strong commitment to proceed with the construction of atomic energy generating plants and in general more free enterprise and less government regulation on the petroleum industry as well as other energy producing industries.

President Ford has stressed energy independence and I don't think you will find one member of Congress that denies the need for energy independence; however, no action is taken. There is nothing but unnecessary delay and political bickering which is crippling this country's effort towards achieving any reasonable degree of energy self sufficiency. In fact, all it is doing is increasing our dependency on foreign oil.

I think that every American citizen wants no more than to have his elected Representatives to conduct themselves in such a manner as to reflect the true feelings of their constituency and to do what is best for our country, not what is best for the Representatives political career.

Thank you.

Yours truly,


M. J. Childs

MJC/djr

cc: The Honorable Henry Jackson
The Honorable Lawton Chiles
The Honorable Richard Stone



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March 28, 1975

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Senate Committee on Interior and Insular Affairs
Attention: Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey: Re: Offshore Oil Exploration and Drilling

We would like to express our sincere alarm at proposals to superimpose yet another government agency on private enterprise in the form of a government oil exploration effort. It seems to us that, in a time of critical energy shortages, it would be ill-advised to have an inexperienced group of government people trying to run the complicated and vital business of looking for oil and natural gas off the coast of the Carolinas and elsewhere.

We do not know how many jobs have been lost in our State over the past few years because of insufficient energy supplies. But we do know that, in this time of increasing recession, we cannot afford to have a government effort delaying the search for petroleum.

It is our understanding that the Carolinas do not produce one gallon of oil. Nor do they have a single gas well in operation. That makes us wholly dependent on sources outside of our State. We have no nearby source to draw from and, if there is oil and gas off our shores, then we should be going after it now-with the most experienced teams available.

Maybe the atmosphere in Washington makes people forgetful of what's going on down here in homes and factories. But we've been living with the energy shortages. We've had to wait in line for gasoline during the Arab embargo. We've had to cut back on the fuel we burned in houses and offices. And we've had to face-and continue to face-the possibility of jobs being lost because of the natural gas shortage.

One thing we do not want is further delay in trying to locate nearby oil and gas. Another thing we do not want is more proposals and debates in Congress that are not more than verbal substitutes for positive and speedy actions to eliminate-as soon as possible-our nation's heavy dependence on foreign oil.

It seems to us that, until government started meddling with the price of natural gas, there was plenty in the pipelines. And, when government started fooling around with gasoline and heating oil prices and distribution, these fuels grew painfully scarce. Apparently, the lesson lost its impact between here and the U. S. Capitol.

Lost too, apparently, is the lesson of the multi-billion dollar goof on the part of Congress in mandating catalytic converter equipment on 1975 cars. Now Congress wants to apply its fingers to the search for new oil and gas supplies.

Our businesses started with and thrived on the private enterprise system. We feel sure that you will agree that offshore exploration should be left to private industry, and we will deeply appreciate your genuine efforts applied to the private enterprise system.

Yours very truly

CITY ICE & FUEL CO.

Joe L. Wolfe, Jr.
Joe L. Wolfe, Jr., President

JLW:ml



OFFICE OF THE MAYOR
 CITY OF FORT MYERS
 FORT MYERS, FLORIDA

OSCAR M. CORBIN, JR.
 MAYOR

March 31, 1975

Mr. Mike Harvey
 Staff Director
 Senate Committee on Interior
 and Insular Affairs
 Room 3206
 Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Mr. Harvey:

I am concerned that this country is in deep trouble with our energy program. I feel that it is time that our elected officials and our public officials take action necessary to expedite an "at-home" energy program for our American people.

Too much time has already been wasted in the decision of offshore oil drilling, exploration of new sources of energy and the increase of our petroleum reserves to substantially supply our domestic needs. We are still 5 years behind if we receive the go ahead for offshore drilling today. We need to boost our energy program now.

We must take positive action in seeking an alternate source of energy, and offshore drilling efforts should be made. Our national welfare may well depend upon developing oil and gas resources that are thought to lie offshore.

Further unnecessary delay in decisions of offshore exploration in areas such as the Eastern Seaboard is crippling this country's efforts toward achieving a reasonable degree of energy self-sufficiency and increasing our dependence on foreign oil. Time is running out--we must become more dependent on our nation for our energy sources and less dependent upon foreign countries which many times are unfriendly.

We must also become more dependent on the private industries to get the energy job done in this country and less dependent upon establishing a federal government bureaucracy to carry out this exploration.

Mr. Mike Harvey

Pg. 2

March 31, 1975

I recommend that we move ahead with the offshore exploration with great speed and I sincerely hope that our elected and other public officials can get together and find a viable solution to the problem.

Sincerely,

A handwritten signature in cursive script, appearing to read "Oscar M. Corbin, Jr.", written in dark ink.

Oscar M. Corbin, Jr.
Mayor

OMCJr:dk

cc: Honorable Henry Jackson
 United States Senate
 Honorable Lawton Chiles
 United States Senate
 Honorable Richard Stone
 United States Senate



COLONIAL OIL COMPANY

1903 EAST ADAMS STREET · P. O. BOX 2290

JACKSONVILLE, FLORIDA 32203 - 904 353-8947

March 19, 1975

Mr. Mike Harvey, Staff Director
 Senate Committee on Interior & Insular Affairs
 Room 3206, Dirksen Senate Office Building
 Washington, D. C.

Dear Mr. Harvey:

I should like to add my voice to that of many others within the petroleum industry decrying the continued delay in offshore drilling along the Eastern and Western coasts of the United States. I believe that this continued delay is extremely damaging to the entire economy of the country. The Company which I head is independent of any integrated oil companies and consequently I have no axe to grind except for the good of the United States economy and for our petroleum industry in general.

We have already witnessed the devastating damage brought about by the environmentalists successful fight to block the Alaskan pipe line and thus delayed for a period of five years the flow of an abundant amount of crude oil. This despite the fact that currently we have thousands of pipe lines under the United States with little or no pollution.

Proven facts show that danger from pollution caused by offshore drilling have been enormously exaggerated by the environmentalists who continue to point towards the Santa Barbara spill which was occasioned largely by a peculiar local geological formation. Some 17,000 other offshore wells have been drilled with little or no pollution.

I believe that the prospecting and drilling of offshore wells by the private sector of our economy (and not the government) should proceed with all possible speed in order to correct the critical shortage of energy hanging over the heads of every citizen in this country. The oil industry possesses the "expertise" to do the job speedily and well.

Sincerely,

J. B. Love
 President

JBL:la

s/c - Senator Henry J. Jackson
 Chairman, Committee on Interior &
 Insular Affairs

Senator Lawton Chiles
 United States Senate Office Bldg.
 Washington, D. C.

Senator Richard Stone
 United States Senate Office Bldg.
 Washington, D. C.

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 ———
 PHONE (305) 635-0806

March 26, 1975

Mr. Mike Harvey, Staff Director
 Senate Committee on Interior and Insular
 Affairs - Room 3206
 Dirksen Senate Office Building
 Washington, D. C.

Dear Mr. Harvey:

It has been proposed by certain United States Congressmen that the exploration of off-shore areas for oil and gas be placed in the hands of the United States Geological Survey or some new federal agency. Speaking as an oil company executive and an elected official of the City of Coral Gables, I would like to register my protest against such a system.

At the present time, there is an urgent need for the leasing of off-shore areas for oil and gas exploration to reduce our dependency on foreign oil. The proposal to place this exploration in the hands of the United States Geological Survey, or some new federal agency, would delay actual off-shore exploration for a period of at least two years, and probably much longer.

We need immediate leasing of the off-shore areas for oil and gas exploration by private enterprise, which system has been successful for more than 100 years in developing the nation's mineral resources. The placing of frontier exploration in the hands of the United States Geological Survey or some other governmental agency, would solve none of the problems that the country is faced with today in our dependency on foreign oil. In fact, if it would do anything, it would complicate the situation. The United States Geological Survey has already admitted that it is not equipped

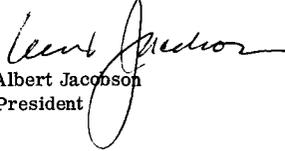
Continued.

Mr. Mike Harvey, Staff Director
March 26, 1975
Page Two.

at the present time for this type of work. Any new agency created would take precious time to gear up for this gigantic task. Private enterprise would have greater incentive to explore all promising areas and would have available the experts and equipment necessary to gather the data.

The nation's energy plight is immediate and compelling and now is not the time to put the United States government into the oil business. Our private enterprise system has a history of success and this is no time to experiment with socialism.

Very truly yours,



Albert Jacobson
President

AJ/lav

Laurens, S. C.
March 25, 1975

Senate Committee in Interior and Insular Affairs
Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

Almost daily I read in the papers and hear in news broadcast of the political wrangle over leasing of offshore areas to be used for the exploration and production of oil and gas. I now hear that there are those of our congress who propose placing exploration in the hands of the U. S. Geological Survey, and that some even go so far as to propose creating a new Federal Agency, thereby putting the federal government into pre-leasing exploration, instead of allowing free enterprise to continue to do the job. This news has now become so prevalent that I find it necessary to personally request your immediate help on restoring proper faith in the free enterprise system.

I am completely convinced that the federal government interference, coupled with unjust pressure from the environmentalists, is the major cause of our energy shortage of today. I am further convinced that had it not been for the holdup in building the trans-Alaska pipeline we would now be receiving almost enough oil from Alaska to take care of the ridiculously high priced imported Arabian oil. I am still further convinced that the oil industry, operation under the free enterprise system, if unharnessed, can and will take care of the petroleum needs of our nation.

Of course, we need controls in order to protect our environments, and I would be most naive to say otherwise, but there is a common ground and a sensible way of controls, and to this end we must all work.

It is my urgent request that you use your powerful influence for a speedy development of offshore drilling to find and produce oil and gas that is gravely needed to meet our nations energy needs, and that this be allowed by competent and private free enterprise people of our nation instead of by any government agency. I am convinced that this is the best, and the only safe way to take care of our needs.

I therefore, most urgently request your help in bringing our present energy shortage to this conclusion.

Yours truly,



W. C. Cullum

March 24, 1975

Senate Committee on Interior and Insular Affairs
Room 3206, Dirksen Senate Office Building
Washington, D. C. 20510

Attention: Mr. Mike Harvey
Staff Director

Gentlemen:

It is suggested that the Senate Committee on Interior and Insular Affairs avoid any unnecessary delays in leasing offshore areas for exploration and production of oil and natural gas. Needless political bickering with resulting delays in the formation of the U.S. energy program can only result in a continued weakening of the United States economy.

As a U. S. citizen that is concerned with the future of the U. S. energy program, I beseech this committee to take immediate action and whatever steps as are required to lease Federal held lands for offshore exploration and development. Senseless delays cannot be tolerated and should be avoided in every way possible.

One of the delaying tactics often mentioned in the news media is that of placing exploration for oil and natural gas in the hands of governmental bodies. This, in my opinion, would be an economic and political folly with many years of delay in solving our immediate and future energy requirements.

Yours very truly,

E. B. Eubanks

E. B. Eubanks
636 Park Shore Drive
Naples, Florida

cc: Senator Henry M. Jackson, Chairman
Senator Lawton Chiles
Senator Richard "Dick" Stone



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March 21, 1975

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Counsel

JOHN T. CLARY, ESQ.

Executive Secretary

JOHN J. MCGARRY

Mr. Michael Harvey, Counsel
Committee on Interior & Insular Affairs
Room 3206 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey:

The Delaware Valley Council, a civic organization promoting the orderly growth and development of 15 counties in Pennsylvania, New Jersey and Delaware, notes with deep concern the proliferation of bills in Congress which would either delay or preclude government issuance of leases and permits for offshore exploration.

Of specific concern to us in the growing idea that the federal government should take over the exploration and, in some cases, development of natural resources within the federal domain.

The holders of this idea seem to forget, or ignore, the fact that the technical skill and expertise of U.S. oil companies are acknowledged and respected throughout the world. U.S. companies now operate in the challenging environments of the North Sea, Arctic Alaska, Southeast Asia and elsewhere.

The decisions of exploring and developing petroleum reservoirs should remain outside of the political sector.

What is needed is not more government controls and interference in fuels discovery and development, but fewer controls and less interference. The national interest would best be served by investigating and developing offshore oil and gas resources as soon as possible.

Another aspect of these new proposals coming before Congress is the loss of time which would occur if government was to organize, recruit, study, and conduct the extended geological and geophysical programs that precede any decision to drill a well. This is time which the nation cannot afford to lose. Already unemployment and economic loss are resulting from national gas shortages.

We would appreciate it if you would see that our concerns are made known to the proper Congressional committees and elected officials. If the need arises we stand ready to elaborate on these views and help in any manner that would expeditiously make off-shore leasing and drilling a reality.

Sincerely,

A handwritten signature in cursive script that reads "John J. McGarry". The signature is written in dark ink and is positioned above the typed name.

JOHN J. MCGARRY,
Executive Secretary

JJM:BB

Florida Chamber of Commerce



March 26, 1975

**Mr. Mike Harvey
U. S. Senate Committee on
Interior and Insular Affairs
Dirksen Senate Office Building
Washington, D. C. 20510**

Dear Mr. Harvey:

We would like to call the Committee's attention to the enclosed copy of a report issued by an Energy Task Force of the Florida Chamber of Commerce.

For the record we would appreciate the Committee giving favorable consideration to item "C" on page 8 of the report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Parrott'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

**Joe Parrott
Director
Governmental Relations**

hh
CC: Sen. Richard Stone.

REPORT OF THE
FLORIDA CHAMBER OF COMMERCE
ENERGY TASK FORCE

INTRODUCTION

Of all the varied elements which go into the make-up of our nation's economic fabric and technological growth, few are as basic to our success as the ready availability of reliable, low cost energy.

This essential commodity, coupled with the industrious quality and ingenuity of the American people and a form of government particularly designed to encourage individual, industrial and national growth, has led to an outstanding economic system.

The present energy crisis brings with it the realization that America's readily usable indigenous energy sources and natural resources are limited. Because of this, it is obvious that our ability to become self-reliant in supplying essentials for the production of energy is a long-range goal.

Florida is particularly vulnerable to shifts in the availability and cost of oil and natural gas. Since these fuels supply 93 per cent of the state's energy requirements, our state energy policy must recognize the realities of the world wide energy shortage as well as the United States' situation.

Tourism, agriculture and other major energy oriented industries are vital factors in the state's economy and so it is not surprising that Florida ranks eighth in gasoline consumption.

Not soon to be forgotten are the long lines of motorists at gasoline service stations, stranded state visitors and the uncounted numbers of would-be visitors who just didn't make the trip South at all in the year 1974.

Currently consumers statewide are carrying the burden of high energy costs superimposed on continuing inflationary pressures and the most serious economic recession since the thirties.

These factors dictate a need for the expansion of our energy supplies coupled with efforts to more efficiently utilize on a long-range basis our present energy resources.

Against this background the Board of Directors of the Florida Chamber of Commerce directed the establishment of an Energy Task Force to develop a program and suggest policies to enable our state to meet its energy requirements in the years ahead.

By providing these recommendations, which have been considered by businessmen who are highly knowledgeable in various fields of energy development and use, the Florida Chamber hopes to give governmental authorities and other interested parties the benefit of the business community's opinions as to how our energy problems might be solved.

- - - - -

I. MATTERS OF GENERAL POLICY.

- A. The best mechanism for assuring the development of sufficient energy, allocating existing and future energy to the best uses, and automatically encouraging conservation where appropriate is the free market place. Legislation designed to dictate prices, allocate products, and require conservation have historically failed to accomplish their purposes and have led to a proliferation of additional regulations and agencies to correct their ineffectiveness. The anti-trust laws are available to prevent monopolistic or anti-competitive price fixing.
- B. Each piece of energy legislation or regulation, or the repeal thereof, should be tested to assure that it will not discourage incentives to provide additional energy in accord with Florida's special environmental considerations. Proposals such as allocations and rationing of energy should be avoided as they do not produce more energy and possibly damage initiatives to provide additional energy.

II. SPECIFIC STATE ACTION RECOMMENDED.

- A. Development of Energy Systems.
1. Strongly encourage, consistent with Florida's special environmental considerations, the development of oil and

gas resources within the state.

2. Review, consolidate and streamline the procedure for granting permits for energy related projects through the reorganization of the various state agencies concerned with this effort. The state procedural requirements should pre-empt those of local governmental bodies in order to avoid undue delay.
3. The electric utilities of Florida should be encouraged to use nuclear or coal fired power plants where it is economically possible to do so in their expansion of base load generating capacity.
4. Encourage research in alternative energy sources, particularly solar and solid waste.
5. Encourage the deepening of major ports in the areas of Jacksonville, Fort Lauderdale, and Tampa in order to reduce the cost of importing petroleum products.
6. Evaluate each proposal for a refinery in Florida on its own merits.

B. Environmental. Until such time as the present energy shortage is substantially improved, the following actions, as they relate to the production or utilization of energy, should be taken:

1. Existing rules and regulations of environmental agencies should be reviewed and amended to ensure that they are not more stringent than the Federal rules on the same subject. Latitude should be allowed for the adoption of more stringent rules and regulations but only after a determination is made that the environmental benefits of the more stringent regulations clearly outweigh the additional social and economic impacts they cause.

2. The Department of Pollution Control should modify its regulations limiting SO₂ emissions from existing fossil fuel plants, and should adopt uniform statewide air quality standards.

3. Emission regulations as stated in the state implementation plan which prohibit the use of fossil fuels having more than 1.0% sulphur by weight should be amended to permit the use of coal up to 3.5% sulphur by weight and oil up to 2.9% sulphur content. The use of the

higher sulphur fuels would be contingent on provision of alternative control strategies to maintain ambient air quality standards under adverse meteorological conditions.

4. Thermal limitations should not be applied to existing water discharges from power plants which are exempt under the Federal guidelines, since to do so would invariably increase the cost of energy at a time when the burden of high energy cost already threatens our state's economy as well as our national security.

Future energy installations should be planned and sited in such a way that the cost of providing essential environmental protections is minimized. Since access to the state's land and water resources is essential to meet this objective, the state should encourage and expedite such access.

5. The power of local governments to enact and enforce more stringent energy-related environmental regulations than those adopted by state pollution control agencies should be eliminated unless they can be clearly justified by the application of an economic and social balancing test.

6. In site certification proceedings the State of Florida should accept the fact findings of the Atomic Energy Commission (now the Nuclear Regulatory Commission) with respect to the approval of nuclear plants, including nuclear, radiological, and safety matters, basically in accordance with the Governor's 1964 Agreement with the AEC.

7. Long-range pre-approval of nuclear plant sites should be encouraged.

C. Energy Conservation.

1. The state should take the necessary action to establish and implement a program of energy conservation for all state facilities.

III. RECOMMENDED FEDERAL ACTION.

A. The Federal agencies should continue the exemption of existing power plants from thermal water quality standards and should approve any modified water quality standards of states that comply with this exemption policy.

Future energy installations should be planned and sited in such a way that the cost of providing essential environmental protections is minimized. Since access to the land and water resources is essential

-8-

- to meet this objective, the Federal government should encourage and expedite such access.
- B. The Congress is urged to pass President Ford's proposed legislation removing Federal Power Commission regulation of well-head prices on new supplies of natural gas.
 - C. The U. S. Department of Interior is urged to accelerate government leasing of the Federal outer continental shelf (OCS), including the early leasing of prospective tracts offshore Florida.
 - D. The Federal Power Commission is urged to approve a proposal to convert a segment of a major natural gas pipeline system terminating in Florida to petroleum products usage.
 - E. The Congress is urged to adopt legislation allowing the strip mining of coal with reasonable requirements for environmental rehabilitation.
 - F. The Congress is urged to streamline licensing procedures so that Florida electric utilities will be encouraged to use nuclear power plants where it is possible to do so in their expansion of base load generating capacity.
 - G. The Congress is urged to encourage the study of the feasibility of offshore locations of nuclear generating stations in the current energy research and development program.

- H. The Congress is urged to review the clean air act particularly in regard to coal fired plants to assure that current regulations do not unduly increase energy costs to the public beyond the point of assuring an environment of reasonably clean air.

- I. As a matter of general policy, the Federal energy allocation plan is undesirable; however, if Federal allocation procedures are continued, the Federal Energy Administration is urged to give proper weight to Florida's growth and the vital nature of tourism to the state.

- J. The Florida delegation is urged to recognize and consider the statements set forth in Section I pertaining to matters of general policy when enacting new laws.

Doc Record

FLORIDA CONSERVATION COUNCIL

A State-wide organization for the conservation of all Natural Resources

T. N. ANDERSON, Chairman
PETER H. FISCHER, Secretary

1111 East Lafayette St. Apt. 1-104
Tallahassee, Florida 32301
Telephone (904) 877-7313

April 30, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, DC 20510

Dear Mr. Harvey:

Even though Florida is not a major petroleum producing state, all residents of Florida are still very much concerned with the petroleum business and greatly depend on oil and natural gas for their livelihood. This is reflected by the fact that tourism is the state's major business and without adequate oil and gas products to heat, cool, feed and transport the visitors, the industry would die.

We believe the country's petroleum and related companies have done an outstanding job in providing the residents of not only Florida, but of all Americans, with energy at the lowest possible cost to the individual. We do not believe the Federal government can accomplish this, as illustrated by the way the Tennessee Valley Authority, Amtrack, the Postal Authority and other government ventures are being handled.

Additional bureaucratic red tape is the last thing this country needs to solve the nation's energy problems. Our nation has an excellent history of being successful via the free enterprise system, and it would be a grave error to change this method of supplying the American people with the goods and services they need.

Our sentiments are perhaps more eloquently expressed in the words of the editorial writer of the Shreveport, Louisiana JOURNAL, who on March 19 stated:

"When AFL-CIO President George Meany recently proposed nationalization of our oil industry and when Sens. Henry "Scoop" Jackson, D-Wash., and Adlai Stevenson III, D-Ill., advocated formation of a federal oil firm, they were rising to new heights of

Founded in 1957, the FLORIDA CONSERVATION COUNCIL now represents over 25 conservation organizations

Page -2-

ridiculousness.

"These suggestions only serve to emphasize what may be the main trouble in the nation's fight to escape from dependency on foreign oil imports: Everyone seems to have a plan but no one will agree to anyone else's plan.

"We think that our own Sen. J. Bennett Johnston disposed of the Meany-Jackson-Stevenson suggestions when he said, in effect, 'Here we are with the most advanced technologies and most skilled personnel in the world in oil production. Other countries come to us for our know-how in finding oil, refining it and transporting it. Are we going to turn it over to a bunch of bureaucrats to administer?'

"We probably have the most glaring example of the results of what happens when government takes over a business in our post office service.

"Postal deficits are in the hundreds of millions of dollars annually. No private business could afford to carry on a losing proposition of this magnitude year after year.

"It is not our intention to tell you that private enterprise could carry on the postal service more efficiently. Regardless of the calumny heaped on the postal service, it basically does a pretty good job of moving and delivering the mountains of mail it receives every day. Errors do occur every day, of course, and many of them find their way into the news as examples of inefficiency in the postal service.

"We do believe, though, that there is more room for dawdling on the part of employees in a government service than there is in private enterprise. The private corporation, seeking a profit, is more apt to cut wasteful operations and discharge non-productive personnel than in a similiar enterprise run by the government.

"While there have been some private firms entering the field of moving packages and letters of late, they have come into the more profitable parts of the business and avoided the losing parts.

"There are so many things the average citizen wants his mail service to do that are a part of everyday life and business that it not unseemly for the government to give this service - even at a loss. We do wish, though, that the losses would not be quite so staggering.

"The petroleum industry is unlike the postal service in that there are numerous firms that are anxious to do all the various things connected with it for a reasonable profit.

"The various facets of the business are best accomplished by private industry because the individuals connected with them know that their operations must show a profit or else they are out of jobs.

Page -3-

"Personal initiative is recognized more than in the normal bureaucracy. The geologist whose work leads to the finding of more productive wells rises to a vice presidency; the lease scout who gains the more desirable locations at reasonable fees becomes chief scout. The lazy or unproductive workers are seldom carried on the payrolls for long. Hopefully, they will have learned that they must be more productive in their next job.

"Our capitalistic system has shown that it can outproduce any other system yet devised. We have only to look about us to see that communism fails to provide the essentials and better things of life for those under that ideology; socialism, as practiced in Great Britain's nationalization of steel, coal and railroads, has worsened rather than bettered conditions as a whole in that nation.

"Nationalize the oil industry? It would be folly."

Sincerely,



T. N. Anderson
Chairman

TNA: cdk

cc: The Honorable Henry Jackson
The Honorable Lawton Chiles
The Honorable Richard Stone

Florida Home Builders Association

P.O. BOX 1259 · TALLAHASSEE, FLORIDA 32302 · TELEPHONE (904) 224-4316

March 13, 1975

PRESIDENT
JACK C. DEMETREE
JACKSONVILLE

FIRST VICE PRESIDENT
RALPH DEMEO
OPA LOCKA

SECOND VICE PRESIDENT
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ST. PETERSBURG

AREA VI
PETER TAYLOR
SARASOTA

AREA VII
AL SINGER
MIAMI

IMMEDIATE PAST PRESIDENT
STEPHEN ABRAMSON
WEST PALM BEACH

KINNEY S. HARLEY
EXECUTIVE DIRECTOR

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, DC 20510

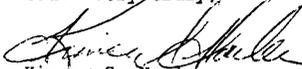
Dear Mr. Harvey:

This is to advise that Florida Home Builders Association would like to go on record as being totally opposed to any further delay in offshore leasing for oil and gas exploration.

It has been proved that offshore exploration by private oil industry under the free enterprise system is by far more efficient than federally operated projects.

It seems ridiculous to continue political haggling over a matter that rightfully belongs to an industry that has proven capabilities in this area. We will be forever dependent on foreign oil if these unnecessary political delays in leasing are not abandoned and we are allowed to begin oil and gas leasing on the Outer Continental Shelf.

Yours very truly,



Kinney S. Harley
Executive Director

KSH/rc

xcs: The Honorable Lawton Chiles
The Honorable Richard "Dick" Stone

AFFILIATED ASSOCIATIONS

HBA BAY COUNTY
HBA BREVARD COUNTY
DAYTONA BEACH HBA
FIVE COUNTY B & CA
FLORIDA ATLANTIC BA

HBA GAINESVILLE
HBA HIGHLANDS COUNTY
HBA LAKE COUNTY
HBA MARION COUNTY
HBA MARTIN COUNTY

HBA MID-FLORIDA
HBA NASSAU COUNTY
NORTHEAST FLORIDA BA
HBA OKALOOSA COUNTY
HB & CA PALM BEACH COUNTY

CBA PINELLAS COUNTY
HBA POLK COUNTY
HBA PASCO COUNTY
CA SARASOTA-MANATEE CO.
BA SOUTH FLORIDA

TALLAHASSEE BA
HBA GR. TAMPA
HBA WEST FLORIDA
HBA W. VOLUSIA COUNTY

HAY OIL DISTRIBUTORS, INC.

P. O. Box 3188

CHARLESTON, SOUTH CAROLINA 29407

TELEPHONE 766-0231

March 28, 1975

Mr. D. Michael Harvey
Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

I and the people in my organization are very much concerned that needless political wrangling over leasing frontier offshore areas will wreck the timetable of the U.S. energy program. It is crippling the nation's ability to reverse quickly its declining petroleum supply and is making a shambles out of strategy to reduce any time soon the distressing reliance on foreign oil.

It's accepted now that the best chance of adding significant oil and gas reserves by big discoveries rests in offshore exploration. The Ford administration recognizes this fact by making an ambitious program of offshore leasing an integral part of Project Independence. Even critics agree in principle.

BUT TIME is running short.

U.S. oil and gas production is still declining. The shortage of gas already is being felt in plant shutdowns in some areas with accompanying loss of jobs. These will spread unless supply increases. Conservation tactics alone can't cover the deficit, certainly not without heavy economic penalty, and any relief from alternate energy sources is years away. Unless U.S. domestic supply can be bolstered substantially, the only short-term option is increasing imports.

In the face of these facts, tragic acts are unfolding in Washington. The Environmental Protection Agency confounded administration plans by publicly asking for a 2-year delay in leasing. And Sen. Hollings won surprising support in Congress for his bill that would delay and hamper any offshore effort even further. The senator proposes to put the Government into preleasing exploration, give Congress a veto over commercial leasing and development and encourage coastal states to seek a delay in leasing plans for up to 3 years.

The chief argument advanced by proponents of delay is need for time to assure adequate environmental controls over offshore work and prepare for the economic impact on coastal states' onshore areas.

Mr. D. Michael Harvey
Senate Committee on Interior and Insular Affairs

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Mar. 28, 1975

FURTHER DELAY in leasing has no merit.

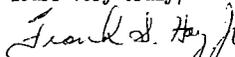
There's ample time to prepare these economic and social programs even if the administration proceeds now with leasing. It will be several years before any oil or gas can be brought ashore if leases were let immediately. It will take that time sufficiently to test enough structures and determine if commercial reserves exist. The environmentalists and concerned state governors can use this normal lag time to prepare for large-scale development. Delay will magnify future shortage without solving any current problems.

Putting the Government into exploration has even less merit. The private oil industry can test the prime areas quicker and cheaper under the existing structure. There's absolutely no advantage to the Government in becoming an active participant.

The nation's energy plight is compelling. The U.S. must shed regional politics and face facts. Legitimate needs for environmental controls, for revenue sharing, for setting up machinery to help states meet new economic burdens can be met. But senseless delay in getting a fix on the oil and gas reserves that may exist offshore is gambling with the nation's economic future.

I am enclosing a copy of an editorial from the Oil and Gas Journal which deals with the prospect of the federal government getting into the petroleum exploration business. This article expresses my sentiments well. I hope that you will agree and act accordingly.

Yours very truly,



Frank S. Hay, Jr.

HAY OIL DISTRIBUTORS, INC.

FSH,jr:al
Enclosure

CC: Senator Henry M. Jackson
Senator Strom Thurmond
Senator Ernest F. Hollings

Giving Government the job will get less exploration

FRESH from its sorry experience handling the postal service, the federal Government is now being nominated for the even more complex and risky job of directing petroleum exploration on public lands.

A group of congressmen, faced with the problem of devising a national energy policy, proposes to depart from the system of private enterprise that has been successful for more than 100 years in developing the nation's mineral resources.

Instead of removing economic disincentives and making leases available for private companies, the lawmakers propose to place exploration in the hands of the U.S. Geological Survey or some new federal agency. They are joined by some coastal-state governors who want tighter safeguards against onshore impacts of offshore development. The coalition wants to hold up OCS leasing at least 2 years—probably more—until the federal Government can explore all frontier areas and identify oil and gas deposits worthy of development.

Putting frontier exploration in the hands of the USGS, or forming a federal oil company to do the job as some alternately propose, solves none of the problems perceived by backers of the plan.

The reason is that the approach is based on at least three false premises: (1) that the present system has failed due to shortcomings of private enterprise and the federal Government could do the job faster; (2) that adequate data on OCS resources can be provided only by direct exploration by the Government; and (3) that the federal umbrella is necessary to give states time to prepare to handle onshore development once offshore discoveries have been made.

WHAT are the facts? The USGS is the first to concede that it is neither equipped nor suited for this work. It or any new agency would take at least 2-4 years to gear up for the task and several more to explore the virgin Atlantic and Pacific provinces. The barriers that do exist have been raised by the Government and certain states. If they would just get out of the way, the job could be done much quicker under the present leasing system by private companies who already are equipped and ready to start work.

As to the issue of OCS exploration and reserve data to protect the public interest, USGS already is revising regulations to take care of that. The present system, furthermore, has built into it a natural time lag between leasing and development that will give states the planning time they say they need.

Private companies also could achieve a more thorough assessment of potential OCS resources. Spurred by competition, companies could put scores of experts and a variety of equipment into gathering data. They would have greater incentive to explore all promising areas, whereas a governmental agency would tend to pick only the better prospects involving less risk.

Putting the Government into the oil business is pure economic and political folly and a grave disservice to the nation. It is a "solution" for which there is no problem, except the one it would create.

3834 NW 34th. Place
Gainesville, Florida 32601
April 5, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey:

It appears we have a number of people, in our National Capitol, with personal interests that mean far more to them than do the interests of the country at large.

What does it take to get some action for a strong energy program? It appears the outer continental shelf area of this country is being lost to oil production to satisfy a few people. VERY FEW.

I believe some 37% of the petroleum used in this country is imported either in the form of crude oil, or the finished product. With the uncertainty that exists through out the world today, it seems quite ridiculous to rely this heavily upon imports.

The time has come to put an end to all this political nonsense and get to work on a workable program of energy self sufficiency, before it is too late.

For the sake of our children and our grandchildren, let us make sure that private enterprise be permitted to do the exploration, drilling, and producing. We have had entirely too much government involvement in the past, for the good of all concerned.

Tomorrow may be too late!

Yours truly,



E. C. Hendren

ECH: jmh

cc: Henry Jackson
Lawton Chiles
Richard Stone

**HOLLIDAY PETROLEUM INC.**

510 SOUTH FRASER STREET -- PHONE 546-6666
GEORGETOWN, SOUTH CAROLINA 29440

April 14, 1975

Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey:

On behalf of our organization, I would like to express our sincere alarm at proposals to superimpose yet another government agency on private enterprise in the form of a government oil exploration effort. It seems to us that, in a time of critical energy shortages, it would be ill-advised to have an inexperienced group of federal bureaucrats trying to run the complicated and vital business of looking for oil and natural gas off the coast of the Carolinas and elsewhere.

I don't know how many jobs have been lost in our State over the past few years because of insufficient energy supplies. But I do know that, in this time of increasing recession, we can't afford to have a bungling government effort delaying the search for petroleum.

It is my understanding that the Carolinas don't produce one gallon of oil. Nor do they have a single gas well in operation. That makes us wholly dependent on sources outside of our State. We have no nearby source to draw from and, if there is oil and gas off our shores, then we should be going after it now--with the most experienced teams available.

Maybe the atmosphere in Washington is a little heady and makes people forgetful of what's going on in the homes and factories down here. But we've been living with the energy shortages. We've had to wait in line for gasoline during the Arab embargo. We've had to cut back on the fuel oil we burned in our houses and offices. And we've had to face--and continue to face--the possibility of jobs being lost because of the natural gas shortage.

One thing we don't want is further delay in trying to locate nearby oil and gas. Another thing we don't want, or need, is more proposals and debates in Congress that are nothing more than verbal substitutes for positive and speedy actions to eliminate--as soon as possible--our nation's heavy dependence on foreign oil.

Page 2

Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D.C. 20510

It seems to us that, until government started meddling with the price of natural gas, there was plenty in the pipelines. And, when the bureaucrats started fooling around with gasoline and heating oil prices and distribution, these fuels grew painfully scarce. Apparently, the lesson lost its impact between here and the U.S. Capital.

Lost, too, apparently, is the lesson of the multi-billion dollar goof on the part of Congress in mandating catalytic converter equipment on 1975 cars. Now Congress wants to apply its fumbling fingers to the search for new oil and gas supplies.

Our businesses started with and thrived on the private enterprise system. We believe in it, and live by it. And we are particularly appalled when a man we sent to Congress turns against the private industry concept and favors government-run systems. If we wanted that, we could move to England. But they're a lot worse off than we are.

Very truly yours,



Larry E. Holliday

LEH/snw

cc: Senator Henry M. Jackson, Chairman
3106 Dirksen Senate Office Building

Sen. Strom Thurmond
Senate Office Building

Sen. Ernest F. Hollings
Senate Office Building



Home Oil and Coal Company, Inc.



HEATING OILS — COAL — BOTTLED GAS — FURNACE INSTALLATION — REPAIR SERVICE

R. L. CHANDLER, JR.

CORNER KERR AND R. R.

MRS. E. C. WORKMAN

SALISBURY, NORTH CAROLINA

DIAL 636-4711

April 7, 1975

Senate Committee on Interior and Insular Affairs
 Attention Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D. C. 20510

Dear Sir:

This is to request your support of offshore petroleum exploration and development.

I would like to express our sincere alarm at proposals to force yet another government agency on us in the form of a government oil exploration effort. To me we would be terribly ill-advised to have an inexperienced group trying to run the complicated and urgent business of looking for oil and natural gas off the coast of Carolinas and elsewhere. We cannot afford to have a bungling government effort delaying the search for petroleum. The Carolinas are wholly dependent on outside sources for our petroleum products. If there is gas and oil off our shores we should be going after it now - with the most experienced teams available.

We strongly oppose any proposal that would further delay offshore drilling on our Outer Continental Shelf. Surely the six year battle and delay over the trans-Alaska pipeline is proof enough to the high cost of delaying energy production. Our businesses started with and thrived on the private enterprise system. We believe in it and live by it.

We urge your support in preventing further delays in the boosting of our U. S. energy plans and your support of private enterprise exploration, promotly, of our offshore potentials.

Very truly yours,

HOME OIL & COAL COMPANY, INC.

R. L. Chandler, Jr.
 R. L. Chandler, Jr.

RLC:vw

cc: Senator Henry M. Jackson
 Senator Robert Morgan
 Senator Jesse A. Helms

April 1, 1975

Mr. Mike Harvey, Staff Director
Senate Committee on Interior and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

I am concerned about the delays in oil exploration and drilling on the outer continental shelf. The delays are crippling our country's ability to reverse the declining petroleum supply. The exploration and drilling should be part of a strong energy policy. We need to decrease our dependence on foreign oil.

I am against our government placing exploration in the hands of a government agency. Private enterprise can accomplish the job faster and more efficiently.

The time for action is now -- not two or three years from now.

Very truly yours,



Larrie A. Jensen
3210 San Carlos Street
Clearwater, Florida 33519

LAJ:bjc

cc: Senator Henry Jackson
Senator Lawton Chiles
Senator Richard Stone

Tampa, Florida
March 18, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior and Insular Affairs
Room 3206, Dirksen Senate Office Building
Washington, D. C.

Dear Mr. Harvey,

The vital problem of devising a national energy policy, faced by the Congress, is seriously being delayed by indecision and wrangling among various agencies, States, and other interests.

The joint hearings by The Senate Interior and Insular Affairs Subcommittee on Minerals, Materials and fuels, the Senate Commerce Subcommittee on Oceans and Atmosphere, and the Senate's National Ocean Policy Study and National Fuels and Energy Policy Study considering bills pertaining to oil and gas leasing on the Outer Continental Shelf must realize that time is running short. If we are to achieve the important objectives of Project Independence and quickly reduce our reliance on foreign oil, immediate leasing of offshore areas for oil and gas exploration is mandatory.

Some lawmakers propose to place frontier exploration in the hands of the U.S. Geological Survey or some other new Federal Agency. This also has support of some coastal-State governors. This approach is based on three false premises: (1) that the present system has failed due to shortcomings of private enterprise and the Federal Government could do it faster, (2) that adequate data on OCS resources could be provided only by direct exploration by the Government, and (3) that a Federal umbrella is needed to give States time to prepare onshore development once offshore discoveries have been made.

The facts indicate the folly of this on economic and political standpoints. The U.S.G.S. will concede that it is neither equipped nor suited for this work. It, or a new agency would require at least 2 - 4 years to gear up for the task and several more to explore virgin Atlantic and Pacific provinces. The task can be accomplished more quickly by private companies who are already equipped and ready to start work.

- 2 -

With respect to the issue of OCS exploration and reserve data to protect the public interest, U.S.G.S. is already revising regulations safeguarding the public interest. The present system, now has built into it, a natural time lag between leasing and development to give States adequate planning time for onshore development and environmental considerations. If leasing were to proceed today it would be several years before oil or gas would be brought ashore. This is ample time to prepare the economic impact and environmental programs on coastal States areas.

Private companies can also achieve a more thorough assessment of potential OCS resources. Such companies, spurred by competition, can put scores of experts and a variety of equipment into gathering data. They have greater incentive to explore all promising areas, whereas a government agency would tend to pick only the better prospects which involve less risk.

Putting the Government in the oil business would be a grave disservice to the Nation. It can best be accomplished more thoroughly and efficiently by private enterprise at less cost to the public.

There are legitimate needs for environmental controls, for revenue sharing, for setting up machinery to help States meet new economic burdens. The built in delay between leasing, exploration and actual production is ample time to meet and solve these requirements.

I, therefore, respectfully urge, our Honorable Senators to take action toward the strategy of immediate leasing of offshore areas, as a means of solving our present and future energy problems.

Very truly yours,



Martin Johnson
10380 Carrollwood Lane
Tampa, Florida 33618

cc: Honorable Henry M. Jackson, United States Senate
Honorable Lawton Chiles, United States Senate
Honorable Richard Stone, United States Senate

Pinewood Apt 4-D
Camden, SC 29020
27 March, 1975

Mr. D. Michael Harvey,
Senate Committee on Interior and Insular Affairs,
3206 Dirksen Senate Ofc Bldg.,
Washington, D.C. 20510

Dear Mr Harvey:

Several weeks ago I learned of two disturbing matters: (1) federal court decisions stating that the Feds had leasing rights for the offshore lands and (2) that your committee was studying a proposal to allow the Feds to start drilling, using our tax dollars for such a matter.

Concerning the first matter, the Supreme Court has made its decision. So be it ... till they meet with the question again ... I believe that any company who laid claim should bid, on a competitive basis for certain areas, to the state governments. Certain areas should be open to independent exploration, on a competitive bid basis to the smaller companies. If inefficient or undercapitalized, they would be bought out by the "big 5" anyway; at least, the smaller companies could prove themselves, without gov't intervention.

Concerning the proposal for governmental drilling on the offshore lands - it's assinine for the following reasons: (1) inefficiency. Since

when have the Feds had skill in oil drilling?
 This severely delays needed oil to the coast +
 midwest. (2) it promotes increased socialism.
 (3) it is unethical for government to do something
 that a free citizen can do for himself. The Creator
 did not give a certain government a lease on the
 oil lands; if He planned it at all, the oil lands
 are for private capitalism. All one receives for gov'tal
 actions (outside of the police & the army) is
 money (ours to begin with) and control over one's
 life. Supply and demand is one helluva lot
 more moral than trading favors for increased allocations.
 Ultimately you'll put yourselves in too many ventures
 and drag the country's financial & mfg system to hell—
 perhaps you want this, for governments tend to
 despise excellence and favor mediocrity. (I'm a gov't
 employee who's sick of the controls and the utter
 blankness of today's gov't. And I'm only 26, and a
 liberal-in-spirit, if not by voting record.) It make
 take 100 years for you people to screw us up, for the
 erosion of personal (i.e. economic) freedom flows
 slowly year-by-year.

As it is now, I despise Sen. Jackson and will
 vote against Sen. Hollings; ~~His~~ The latter's support
 of the above is the icing ... it started with his televised
 "discovery" of Charleston poverty ... when his office was
~~down~~ the street from it for years. I despise his hypocrisy.
 Sincerely,
 Dave Keegan

Les Fuel says it all.

Broward County Energy Conservation Committee
Broward County Courthouse / Room 248
201 Southeast 6th Street
Fort Lauderdale, Florida 33301

Chairman
Jack L. Moss / Broward County Commission Chairman
Vice-Chairman
Virginia Young / Mayor / Fort Lauderdale

March 28, 1975

Mr. Mike Harvey
Staff Director Senate Committee
on Interior and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D.C.

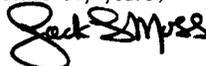
Dear Mr. Harvey:

The Broward County Energy Conservation Committee is an unofficial group of concerned citizens who voluntarily give their time and effort to promote energy conservation in the County.

We recognize that while conservation will continue to contribute positively until our independence is secured from foreign oil producing nations, it is not by itself, the answer. With our domestic oil and gas production lagging, we deem it vital to our economic welfare and imperative to our National well being that off-shore oil and gas exploration be allowed to proceed unimpeded. We must not permit delays experienced by the Alaskan Pipeline to be reintroduced and retard our progress toward self sufficiency. We concur with those who claim that further delay in determining off-shore oil and gas reserves is gambling with the very life of our great country.

It is requested that your committee be informed of the contents of this letter and it be made part of the official record.

Sincerely yours,



Jack L. Moss
Chairman
Broward County Energy
Conservation Committee

cc: President Gerald R. Ford
Governor Ruben O. Askew
Sen. Lawton Chiles
Sen. Richard (Dick) Stone
Sen. Henry M. Jackson
Hon. Rogers C. B. Morton

JM:GH:mb

LOWCOUNTRY OIL COMPANY*Serving the Famous Lowcountry of South Carolina***HAMPTON, S. C.**

March 31, 1975

Senate Committee on Interior and Insular Affairs
Attention Mr. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

The OPEC monopoly's quadrupling of the price of oil has brought about a critical shortage of energy. Unfortunately, our national policy seems to be following a course of increased dependence upon imported oil from foreign monopoly sources that, as experience has taught, is expensive and involves political pressures and maneuvers that play havoc with national economies and the budgets of American families. It is, in my opinion, past time to reduce our dependence on foreign oil and give the go-ahead for private companies to lease offshore areas and begin the search for much needed oil fields.

Citizens of South Carolina have suffered from the energy shortage. From the textile industry in the foothills to the shrimp fleets on the coast, our citizens have "conserved" to the point of nonproduction, a frightening possibility in this inflationary period.

I am appalled that Congress may be convinced to prolong private exploration and drilling. The end of years of legal wrangling over state vs. Federal control of the submerged lands by the Supreme Court's recent decision should have served as the catalyst for immediate bidding for leases. Instead, we hear that the Environmental Protection Agency wants a 2-year delay in leasing, that Senators Jackson and Hollings have introduced bills ordering the Federal government to make exploratory probes to determine potential value and volume before granting leases, and that the Government Accounting Office calls the Interior's planned leasing policy "hastily conceived" without consideration of important environmental and energy questions. It all sounds like a three ring circus with government agencies and Congressmen trying to by the star attraction.

LOWCOUNTRY OIL COMPANY*Serving the Famous Lowcountry of South Carolina***HAMPTON, S. C.**page 2
March 31, 1975

These proposed delays will only add to an already unbearable situation. Even if leasing were to begin today by private firms who are already equipped and ready to start work, it is doubtful we would see the first drops of oil until 1979. Isn't that a sufficient delay for whatever safeguard and impact studies that are needed? Why place exploration in the hands of the U. S. Geological Survey when private studies, such as the Digicon survey, have already been made?

As I see it, immediate exploration and drilling on our submerged lands can bring welcome relief to our energy crisis. Private, competitive companies are prepared to begin leasing and drilling for new sources of energy immediately. Senseless delays in this exploration and drilling will only prolong a crisis that American families can no longer endure.

Yours truly,

A handwritten signature in cursive script that reads "Frances L. Rivers".
Frances L. Rivers

March 19, 1975

3312 Morrison Avenue
Tampa, Florida 33609

Mr. Mike Harvey
Staff Director
Interior and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D. C. 20510

Dear Sir:

I am writing as a concerned citizen and an active voter, as well as a permanent resident of the State of Florida.

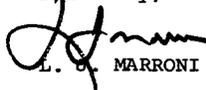
My concern is to prevent any further unnecessary delays in the leasing of our offshore areas for search of much needed domestic oil now that the Federal Government has been given the clear-cut right to control such leasing by the courts.

Furthermore, it is strongly felt that such offshore exploration should be done by the private oil industry under the free enterprise system because this system has consistently proven to be more efficient than federal operated projects.

The energy plight of our country is a real and compelling situation that we must overcome. Legitimate needs for proper environmental controls are supported by me, as well as revenue sharing to the various states involved. It's time to get on with the job of approaching energy self-sufficiency for the U. S. in the foreseeable future.

I certainly hope our government will now proceed most expeditiously in this matter.

Sincerely,



L. S. MARRONI

cc: Senator Lawton Chiles
Senator Richard Stone
U. S. Senate
Washington, D. C. 20510

March 26, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206 Dirksen Senate Office
Washington, D. C. 20510

Dear Mr. Harvey:

Our nation's energy plight is one that is of great concern to me and countless numbers of other concerned citizens. We have seen in the past few months, the effects on our economy, our standard of living, and our productivity of not having a viable energy policy. There has been much talk of establishing an energy policy for years, yet we continue to be entirely too dependent upon foreign crude and delay establishing an energy policy. In short we must develop our energy resources without further delay.

It is my opinion that political wrangling over leasing of the outer continental shelf area is seriously threatening any timetable of the U.S. energy program. It is crippling the nation's ability to reverse its declining petroleum supply and is making shambles out of strategy to reduce our reliance on foreign oil.

The Ford Administration recognizes our best chance of adding significant oil and gas reserves by big discoveries rests in offshore exploration and that this area is an integral part of Project Independence. I believe that you also recognize this area as being top priority and should receive immediate positive action.

As Staff Director of the Committee of Interior and Insular Affairs, I trust that I can count on you and others to push ahead

1668

Mr. Mike Harvey

-2-

March 26, 1975

in this area without further delay and political haggling. Our Country must move forward in this area.

Very truly yours,



G. B. McGraw
2907 Forestwood Drive
Brandon, Florida 33584

GBMcG/jab

cc: The Honorable Henry Jackson
The Honorable Lawton Chiles
The Honorable Richard Stone

Richard C. Mixa
3110 Lake Ellen Dr.
Tampa, Florida 33618
March 24, 1975

Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Bldg.
Washington, DC 20510

Dear Sir:

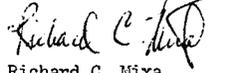
I write you today to appeal for less government involvement and more private industry action in moving ahead today to stabilize and improve our country's position toward self-sufficiency. We need to get moving now in drilling in the outer continental shelf area. Domestic supply must be bolstered substantially or increased imports are inevitable. Haven't we already learned our lesson in this regard?

I also appeal for statesmanship rather than political, self-serving motives in establishing a strong energy policy now. Greater emphasis on our children's and grandchildren's futures needs to be stressed rather than parochial, political decisions aiming at re-election.

Copies of this letter have been sent to my United States Senators Chiles and Stone as well as Senator Jackson in an attempt to let them be aware of a concerned citizen's views.

Your assistance and thoughts on these crucial matters are sincerely appreciated.

Sincerely,



Richard C. Mixa

RCM/rm



**NORTH CAROLINA
FARM BUREAU FEDERATION**

TELEPHONE 782-1705 / P. O. BOX 27766 / RALEIGH, NORTH CAROLINA 27611

April 17, 1975

Senate Committee on Interior and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D. C.

Attention: Mr. Mike Harvey

Re: Atlantic Offshore Oil Explorations

Gentlemen:

This is to encourage your favorable consideration for the development of oil reserves found in the Outer Continental Shelf. The pace of this exploration and development must be quickened if the United States is to become independent in its energy needs.

American farmers would be the first to encourage the fullest investigation of resource availability and its development. Farm operations are fueled primarily by petroleum products. This allows us to use only a small percentage of our population to produce food and fiber for this nation and provide exports to other nations strengthening our balance of trade.

Incentives should be granted to private industry to encourage the exploration and development of reserves. Industry has demonstrated its ability to find and deliver to the consumer whatever oil and gas is out there. Government's role should provide the proper economic and regulatory framework that will encourage production - Federal policy should be soundly conceived, fairly and consistently administered and coordinated in all its aspects.

Our position is to approach the energy situation reasonably, with concessions from industry, government and environmentalist alike. We do not suggest that environmental goals be abandoned. We do hope for understanding and reason. Our goal should encompass both environmental harmony and an adequate supply of fuel in order that this country remains strong and productive.

Thank you very much for your consideration of this most important matter

Sincerely,

John Sledge
President

JS:s

**NORTH CAROLINA
HIGHWAY USERS CONFERENCE**



Ralph O. Howard, CHAIRMAN
N. C. Tire Dealers and Retreaders Association
P. O. Box 2386
Chapel Hill, North Carolina 27514

R. D. Jenkins, VICE CHAIRMAN
N. C. Tam Commission
605 Oberlin Road
Raleigh, North Carolina 27606

Motte V. Griffith, Jr., SECRETARY
N. C. Petroleum Council
P. O. Box 167
Raleigh, North Carolina 27602

April 4, 1975

Mr. Mike Harvey
Senate Committee on Interior & Insular Affairs
Room 3206, Dirksen Senate Office Bldg.
Washington, DC 20510

Dear Mr. Harvey:

Enclosed is a copy of a statement formulated by the North Carolina Highway Users Conference relative to the nation's energy problems. This statement was recently presented to members of the congressional delegations of North and South Carolina and Virginia at a joint meeting in Washington.

Please note that this statement speaks to all phases of the energy problem, including offshore exploration. The N. C. Highway Users support the basic premise that this nation must have a secure base of energy, and we endorse the exploration of the marine regions of the nation by the private sector as the best and most logical means of adding to our sagging petroleum reserves.

The North Carolina Highway Users Conference is a group of 45 associations and businesses which have a vital interest in the highways and transportation in North Carolina. We request that our statement be included as a part of the record in any consideration of the nation's energy problems.

Sincerely,

Ralph Howard
Ralph Howard, Chairman

RH:t
Enc.

STATEMENT
North Carolina Highway Users Conference

ENERGY

The petroleum shortage has created much of the country's economic ills during the past year and has been the major cause of the enormous surge in inflation. The situation is one of a true national crisis and should be so viewed by Congress. Following are listed some of the steps which should be taken to help correct this situation:

Short Term

1. One of the main causes of our failure to keep pace with energy demand has been the passage of many environmental protection laws. Until such time as we can achieve a reasonable degree of energy self-sufficiency, we should, where necessary, sacrifice a good many of the aesthetic aspects of environmental protection and other regulations where human health is not endangered. This program should be one of wartime urgency.
2. Congress should approve the creation of a 500 million barrel crude oil storage program as recommended by the National Petroleum Council to provide a safety margin against another petroleum embargo or other shortages.
3. Nuclear power must be utilized. Construction should begin immediately on 275 to 300 nuclear power plants.
4. A full-scale effort must be made to develop the Nation's oil shale resources. The Congress should pass the required laws to permit the development of these vast resources.
5. Offshore leasing by the federal government must be stepped up substantially since these areas are seemingly the greatest domestic potential reserves of oil.
6. Siting agreements for refineries and other facilities such as offshore tanker unloading ports must be worked out between industry and government.
7. Congress should not permit unreasonable environmental requirements to reduce strip mining production. Reclamation goals should be concerned with quality rather than doctrinaire and inflexible requirements.
8. The size of the domestic coal industry must be doubled. The additional production should go into coal liquefaction and gasification.
9. Price controls should be lifted on domestic oil production in order that stable and realistic market conditions will emerge.
10. Energy conservation programs should be encouraged at the highest levels. These include carpooling and use of available public transportation for job commuting trips. Highway and traffic improvements to expedite traffic flow and ease congestion are essential components of any energy conservation program. Manufacturers and other businesses should develop energy conservation programs throughout their operations. Where possible, machinery and equipment should be modified to achieve more energy efficiency.

2-

11. There should be no further tightening of emission standards.
12. Every possible effort should be made to convert present petroleum energy users who have readily available alternate energy sources. In many cases, no new technology is needed. Railroads, many types of watercraft and other power sources now using petroleum could utilize coal generated steam power. This process could be speeded by the imposition of various tax incentives and penalties.

Long Term

1. A massive research and development program into nuclear fusion should be undertaken. While this would be an expensive project and one which would have little hope of succeeding before the 1990s, the rewards are great. Once nuclear fusion is achieved, the Nation would have energy self-sufficiency virtually forever.
2. An accelerated program for development of breeder reactors should be established and a commercialization of the breeder reactor by 1990.
3. A balanced and reasonable study of what contribution solar energy and geothermal power could play in the country's future energy program.
4. Priorities should be set on the use of petroleum fuels and highest priorities for this resource should be for transportation and chemicals. They should not be used as boiler fuel when there are reasonable alternates available.
5. According to unpublished U. S. Department of Transportation studies, development of more energy efficient vehicles within the next 20 years offers far greater potential fuel savings than any form of mass transit. The development of such vehicles should be encouraged by government.

REDUCTION OF GOVERNMENT IMPOSED COSTS ON MARKETS

The total costs which government rules and regulations add to the final cost of consumer goods is largely unknown, but some of the more flagrant ones are obvious. These recommendations are addressed to those points. It should be recognized by Congress that these are costs which are not added just once, but at every level of production. Thus an item made from an extractive industry's raw material may have these costs added three or more times into the finished product. There should be a high level Commission appointed to thoroughly study not only the direct costs brought on by government, but the hidden costs resulting from decreased production brought on by fear and uncertainty.

1. Consumer Benefit Impact Statement

Government agencies, federal and State, should be required to make and properly publicize a consumer cost-benefit impact statement in connection with any proposed regulations or legislation that would affect any commercial activity. It should deal with the expected unit cost to consumers affected either directly or indirectly and on short and long term periods.

3-

2. Fair Treatment for Violations

Any federal or State law or regulation should have means by which fines are mitigated, suspended or voided if the business firm concerned does no damage or injury and corrects the violation. Certain laws have been adopted in respect to oil spills which require a mandatory fine. Moreover, the agency imposing the fine is a different one from that which investigates the incident and supervises the clean-up operation. This type of unreasonable administration ultimately adds to the costs of all petroleum products and should be corrected.

3. Government Agency Accountability

Any agency investigating a firm for violation should be required to keep account of the contribution made in time and other resources by the firm. If acquittal or compliance is effected, the firm should be permitted a tax credit against its contribution to the investigation.

4. Government Management Accountability

Government management personnel should be legally responsible for their conduct in carrying out their duties under the law similar to the liability held by private sector executives. These officials should be open for legal action by private citizens and companies in cases of malicious intent or misconduct leading to abuse of their authority. Furthermore, attorneys general should be required to pursue and prosecute such cases.

5. Relaxation Of Record Keeping Requirements

Congress should review existing laws affecting small businesses and eliminate the requirements of special record keeping now required by various government agencies, provided this information can be readily obtained within a reasonable period from other sources.

6. Cost of New Regulations

Any new rule or regulation should also recognize the cost to all business, in particular the small businessman, and allow all associated costs to be deducted as an expense in the year purchased instead of depreciated when such change involves radical and extraordinary technology or equipment.

3520 Sandburg Road
Jacksonville, Florida 32211
March 25, 1975

Mr. Mike Harvey
Staff Director for the Senate Committee
on Interior and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D.C.

Dear Mr. Harvey:

It is my understanding that the Senate Interior and Insular Affairs Subcommittee on Minerals, Materials and Fuels is in the process of holding hearings on bills pertaining to oil and gas leases on the Outer Continental Shelf.

As a concerned American I would like to ask that all due consideration be given to leasing the Outer Continental Shelf for oil and gas production to private enterprises at the earliest date.

It is extremely hard for me, an American citizen, who loves the country he lives in, to understand how politicians can delay the leasing of the Outer Continental Shelf and thereby increasing this country's dependence on foreign petroleum imports. I am also amazed at how our Government officials feel they can better serve the need of the American people by holding up the Outer Continental Shelf leasing for several years while the U.S. Geological Survey or some other Federal agency can explore the Outer Continental Shelf and then form a Federal Oil Company to develop and produce the petroleum supplies that we so drastically need now to reduce this country's dependence on foreign petroleum imports. We have only to look at the U. S. Post Office and it's continuing deficit to realize that the enormous cost of a Federal Oil Company would be borne by Americans like me, who in this time of double digit inflation, can least afford it.

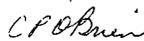
It has been said that no country remains powerful unless it controls its sources of food and energy. The Arab embargo, the quadrupling of foreign crude oil prices and its subsequent effect on the balance of payments for all nations that depend on imported petroleum products have proven this statement is very true.

-2-

I read in a recent newspaper editorial where a layman had written to the paper accusing businesses of seducing the Government in a streetwalker fashion, of squandering, of ineffectual and weak management and confusion. As I read more and more of how our Governmental bureaucracy grows, and is trying to grow larger, I feel this statement should be how the Government is seducing the American citizens in streetwalker fashion by forcing them to pay the high cost of foreign petroleum products while they delay the leasing of the Outer Continental Shelf and consider a Federal Oil Company with more Government employes which will exert a still tighter Governmental control over each and every American citizen.

America has been good to me. I have four children that I would like to grow up and live in a free America, one that is not controlled completely by a Government. One way I can be assured of this is by this country becoming self sufficient in its energy needs and immediately leasing the Outer Continental Shelf for oil and gas exploration and production to private enterprises which is, in my opinion, the fastest way that this can be done.

I therefore urge you and any other Government official involved to press forward in this leasing program to assure that this country of ours will remain the greatest country in the world.



C. P. O'BRIEN

CPO'B:s

cc: Senator Henry M. Jackson

**ORANGEBURG OIL COMPANY**

DORCHESTER AVENUE EXT.
P. O. BOX 312 PHONE 534-3268
ORANGEBURG, S. C. 29115

March 31, 1975

Senate Committee on Interior & Insular Affairs
Attention: Mr. D. Michael Harvey
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Gentlemen:

Being in the oil business as a jobbing distributor of petroleum products, we feel that it is very urgent that our representatives in Washington give the proper authorities the go-ahead to explore and speed up development of off-shore drilling to find the oil and gas necessary to meet our nation's energy needs. We wish to emphasize also, in our candid opinion, this job of exploration for oil and gas should be done by private enterprise rather than the government.

We also oppose any proposal that would further delay off-shore drilling on our Outer Continental Shelf. Taking into consideration the six (6) year battle over the Trans-Alaska pipeline, is conclusive proof enough to the high cost of delaying every production. If the pipeline had been built as originally scheduled, it is very much known through out our country that the United States would now be receiving almost enough oil from Alaska to off-set the effect of the Arab Oil Embargo of the winter 1973 -74.

We, in our oil business, have personally suffered tremendous losses of profit and our expenses have been increased because of the fiddling and diddling that has been going on among the people in Washington who are responsible for having authority delegated at the proper place and proper times instad of causing delays to business in general as well as the motoring public, and those who have to depend on petroleum products for the operations of industry, etc.

Page #2

Senate Committee on Interior & Insular Affairs

We sincerely and emphatically urge that the people we refer to in responsible positions pertaining to the development of exploration and drilling for petroleum products, get off of their duff and see that action is expedited immediately.

Respectfully yours,

ORANGEBURG OIL COMPANY, INC.



W. K. Hart
President



(Mrs.) Sallie I. McMichael
Secretary & Manager

CC: Senator Henry M. Jackson, Chairman
Senator Strom Thurmond
Senator Ernest F. Hollings
Phillips Petroleum Company

Dmd - cc

PENNSYLVANIA HIGHWAY USERS CONFERENCE

PAYNE-SHOEMAKER BUILDING · BOX 1169 · HARRISBURG, PENNSYLVANIA 17108 · 717/238-8311

A. C. HERBERT, Secretary

April 8, 1975

Michael Harvey, Esquire
Counsel to Senator Henry M. Jackson's
Committee on Interior and Insular Affairs
Room 3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Mr. Harvey:

The attached resolution supporting exploration of oil and natural gas through private industry technology and expertise on the Outer Continental Shelf of the Atlantic Coast represents the unanimous consent of the Executive Committee of the Pennsylvania Highway Users Conference which met on March 26.

The Conference is composed of 40 associations concerned with the efficient and safe highway transportation. Among its members are the Pennsylvania AAA Federation, Pennsylvania Truck Dealers Association, Pennsylvania Farmers Association, Pennsylvania Automotive Association, Pennsylvania Retail Association and the Pennsylvania Chamber of Commerce.

Very truly yours,



Edwin W. Parkinson
Chairman

Enclosure

RESOLUTION OF THE
PENNSYLVANIA HIGHWAY USERS CONFERENCE

WHEREAS, Pennsylvania is a heavily industrialized state and is suffering acutely from industrial cutbacks with resultant high unemployment precipitated to a great degree by domestic energy shortages and high cost of foreign petroleum, and

WHEREAS, Pennsylvania is highly dependent on foreign oil and foreign oil producing countries which are severely damaging the United States economy, and

WHEREAS, there is an obvious and vital need for new domestic sources of oil and natural gas in the United States; and

WHEREAS, development of these resources should be an integral part of this nation's long range energy-use planning, and

WHEREAS, it is believed that there are vast new resources of oil and gas off the Atlantic Coast of the United States; and

WHEREAS, development of these resources, with proper environmental safeguards, would alleviate the energy shortage and ease the economic burden of Pennsylvania; and

WHEREAS, the present proven system of exploring for oil and gas through private industry technology and expertise has served the nation well while on the other hand, government lacks these capabilities and is unlikely to gamble on areas with lower potential, and

WHEREAS, further delay in the search for domestic oil and gas would be intolerable, now

THEREFORE, be it resolved that the Pennsylvania Highway Users Conference give full support to efforts being made to explore for oil and natural gas on the Outer Continental Shelf of the Atlantic Coast of the United States under currently existing practices.

March 26, 1975

cc: Senator Henry M. Jackson



SERVICE OIL COMPANY, INC

PHILLIPS 66 GASOLINE • MOTOR OILS
HEATING OILS • GREASES • SOLVENTS

DIAL 583-3688 or 583-3689
1107 UNION STREET - P. O. BOX 3255
SPARTANBURG, S. C. 29302

March 29, 1975

Mr. D. Michael Harvey
Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Sir,

I would like to express our concern about the energy situation and the efforts of our Senators and Congressmen, along with the horde of beaucrats, to try and solve the problem by talking with each other.

We see no reason why efforts cannot be made to explore the off shore drilling possibilities along the East Coast of the United States. If oil or gas could be discovered in this part of the country, and refineries could be built in this section to process the crude oil, it would greatly alleviate the dependence of the East Coast on other sections of the country for their oil products.

We hope that every thing possible to be done will be done to expediate this drilling program. If people hadn't dragged their feet on the Alaska project, we would have been able to override the Arab embargo through the use of the Alaskan oil. If we don't go ahead and explore the off shore areas of the East Coast, we may find ourselves right back in the same boat should we have another embargo.

We also would like to express our opinion about who will do the exploratory drilling. We see no reason why the government should get involved. The oil industry has the personnel, the equipment, and the know-how to proceed with the drilling. The government doesn't have any knowledge of the oil business, and any efforts on their part will probably result in the same problems we now have with other government run operations, such as the post office. Past history will show that government cannot compete with private enterprise on any level. We in the oil industry are overloaded now with government directives and regulations, with the multitude of forms and surveys that are requested by some bureaucrat who is trying to justify his position. About all we can see that the government is doing now is trying to become a wealth redistribution system for the American people.

We urge your consideration for immediate off shore exploratory drilling by private enterprise.

Sincerely,
T. R. Fuller
T. R. Fuller

March 25, 1975

Mr. Mike Harvey
Staff Director
Senate Committee on Interior
and Insular Affairs
Room 3206
Dirksen Senate Office Building
Washington, D.C. 20510

Mr. Harvey:

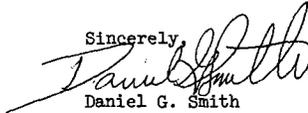
Our nation must reduce its reliance on foreign oil. In order to do this, we need to step up drilling in the outer continental shelf area of this country and develop a strong energy policy. We need both and we need action now.

The best chance of adding oil and gas reserves by big discoveries rests in offshore exploration. This is recognized by the Ford administration but time is running out.

The fastest and cheapest methods of testing and exploring these areas is through the private oil industry. By turning this over to the government, competition is eliminated and waste both in time and money will occur.

Not only will delays cause a further need for imported fuels, but they will cause increased costs which will drive up the ultimate price to the consumer. Lets stop wasting time and money and let the experts do their jobs.

Sincerely,



Daniel G. Smith

cc Henry Jackson
Lawton Chiles
Richard Stone

April 4, 1975

TO: Mr. Mike Harvey

FROM: C. B. Smelling Jr.

SUBJECT: Offshore Drilling and Private Enterprise

With our country's demand of oil more and more, with the world situation so uncertain, I think its time this country become self sufficient and produce its own oil.

The only way I can see this can be accomplished is by competitive private companies. Leasing offshore areas for drilling, ambitious programs by private well equipped and knowledgeable companies could only ^{help} our sagging economy.

Time is running out. Immediately needs of us Americans cannot be postponed any longer. We need action now.

Sincerely,

C. B. Smelling Jr.
C. B. Smelling Jr.

6101 10th Avenue South

Gulfport, Florida 33707

TELEPHONE 796-5490



ESTABLISHED 1936



South Carolina State Motor Club

1215 KNOX ABBOTT DRIVE • P. O. BOX 52 • CAYCE, S. C. 29033

April 8, 1975

Mr. D. Michael Harvey
Senate Committee on Interior and Insular Affairs
3206 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey,

We are aware and concerned about our dependency on imported crude oil and the effect it is having on the economical structure of our nation.

Every effort should be made to expedite the development of our own national resources without further delay.

It is believed there are vast new resources of crude oil and natural gases off our Atlantic coast. We hope offshore explorations will begin as soon as possible to determine the amount of energy that can be realized from this area. We feel like this exploration and production of whatever energies found there should be leased to private business.

Sincerely,

Joseph W. Bouknight
Executive Vice President
and General Sales Manager

JWB:cw

1685

The North Carolina Merchants Association

2400 GLENWOOD AVENUE
RALEIGH, NORTH CAROLINA 27608

April 7, 1975

THOMPSON GREENWOOD
EXECUTIVE VICE PRESIDENT

TELEPHONE
AREA 919 787-9520
9521

Senate Committee
Interior and Insular Affairs
Room 3206
Dirksen Office Building
Washington, D. C.

Attention: Mr. Mike Harvey

Dear Mr. Harvey:

It has come to our attention that hearings are being held, or will soon be held, on the Interior Department's general position regarding off-shore drillings for oil, gas, and other minerals.

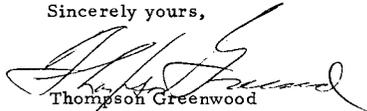
Now that a decision has finally been rendered by the U. S. Supreme Court on the rights in this area, we urge the Senate Committee on Interior and Insular Affairs to employ all of its influence toward achieving action.

It is easy for matters of this kind to become mired in bureaucracy and indecision. But, caught as we are in the energy crunch and daily more dependent upon foreign powers for oil, this just must not be allowed to happen.

Let's one time--now that the way has been cleared by judicial fiat--move steadfastly ahead upon a project that could conceivably determine the entire future of this great country.

There is really no legitimate excuse for delay.

Sincerely yours,



Thompson Greenwood

TG:ch

In Our 72nd Year of Service to Retailing



TRAVEL COUNCIL OF NORTH CAROLINA, INC.

816 BRANCH BANK BUILDING

P. O. BOX 1063, RALEIGH, N. C. 27602
TELEPHONE 919/834-5079

April 7, 1975

PRESIDENT

HUGH M. MORTON
GRANDFATHER MOUNTAIN
LINVILLE, N. C.

FIRST VICE PRESIDENT

MACK B. PEARSALL
PEARBALL OPERATING CO.
ROCKY MOUNT, N. C.

SECOND VICE PRESIDENT

WILLIAM A. V. CECIL
BILTMORE HOUSE & GARDENS
ASHEVILLE, N. C.

SECRETARY

MRS. WILDA HURST
HURST INSURANCE & REALTY
SWANSBORO, N. C.

TREASURER

BILL F. HENSLEY
N. C. STATE MOTOR CLUB
CHARLOTTE, N. C.

EXECUTIVE DIRECTOR

MRS. EVELYN COVINGTON

Mr. Mike Harvey

Senate Committee on Interior & Insular Affairs
Rm. 3206, Dirksen Senate Office Bldg.
Washington, DC 20510

Dear Mr. Harvey:

I am filing this statement as an individual, and the comments represent my personal feelings in this matter. I am, however, the executive director of the Travel Council of North Carolina, and I believe that my long association with the travel industry in North Carolina qualifies me to professionally assess the energy situation as it effects my industry.

The travel industry is North Carolina's third largest industry and it is dependent upon the free movement of individuals both intrastate and interstate. Any appreciable shortfall in energy, especially fuel for transportation purposes, will materially retard this viable and necessary industry.

For that and other reasons, I personally urge and support an accelerated program aimed at making this nation more energy-secure and less subservient to the whims and caprices of foreign nations.

I have followed with interest the debate in Washington regarding the search for petroleum supplies in the Atlantic offshore. From the information I have available to me, it appears that this region offers the best hope for the discovery of large new oil and natural gas supplies. We need to move with haste in opening this region to exploration by the nation's private sector. Continued governmental inaction will surely bring us to the point of no return.

Being from a state with so many scenic wonders, I appreciate the need for protecting the environment, especially that fragile ecosystem that exists in the coastal areas. I also believe that the technology currently in use and certainly on the planning boards for the future can allow us to tap the very necessary petroleum supplies of our oceans without despoiling the environment.

Mr. Mike Harvey - 2 -
Senate Committee on Interior & Insular Affairs

April 7, 1975

We must move the nation toward economic recovery and adequate energy supplies will be a vital factor in this recovery. The travel industry generates more than \$1 billion in North Carolina and the industry's economic well being is dependent upon the energy necessary to turn the wheels.

Sincerely yours,



(Mrs.) Evelyn Covington

cc: Senator Robert Morgan
Senator Jesse Helms

F. R. Van Hercke
Emerald Tower - Apt. No. 209
1401 S. Ocean Boulevard
Pompano Beach, Fla. 33062

March 25, 1975

Mr. Mike Harvey, Staff Director
Senate Committee on Interior and Insular Affairs
Room #3206
Dirksen Senate Office Building
Washington, D. C.

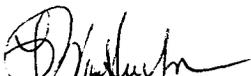
Dear Mr. Harvey:

I was heartened recently by the United States Supreme Court's decision on ownership of the outer continental shelf lands for the purpose of leasing for oil and gas exploration and development. This should go a long way toward expediting a search in these areas for badly needed oil and gas to help this Nation meet its energy self-sufficiency goals by 1985.

However, I am concerned that there are a number of roadblocks yet to be dealt with. A few of these would include extreme environmental pressures directed toward intolerable delays and impossible to meet safeguards relative to oil exploration offshore. Another problem I envision is an endless range over whose responsibility it should be to conduct the exploration and production. No doubt well meaning people from many persuasions have suggested the Federal Government should be assigned this responsibility. In my opinion the Government is not equipped, nor can it bear the tremendous financial risks associated with such development without seriously delaying the time when these new supplies can be added to our domestic reserves. The oil industry has over the past quarter century drilled more than 18,000 wells in waters surrounding the United States with only three major incidents resulting in pollution, and those were not of lasting significance. Furthermore, all of this was conducted with an efficiency that has resulted in our country enjoying the lowest costs for energy of any nation in the world.

I urge you and those in your agency to do whatever you can to expedite a sensible, free enterprise approach to the development of these vital resources.

Sincerely,


F. R. Van Hercke

cc: Senator Henry M. Jackson
Senator Lawton Chiles
Senator Richard Stone

CLAIBORNE D. GREGORY
EXECUTIVE DIRECTOR
222-0141

VIRGINIA
Petroleum
INDUSTRIES

1809 STAPLES MILL ROAD · RICHMOND, VIRGINIA 23230

March 14, 1975

Mr. Mike Harvey
R. 3206, Dirksen Office Building
Washington, D. C. 20510
c/o Senator Henry M. Jackson

Dear Mr. Harvey:

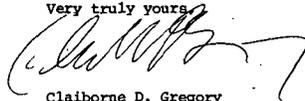
Enclosed are the following:

Senate Joint Resolution No. 91
Editorial from Richmond Times-Dispatch, Feb. 17, 1975
"Oil Interest Reaffirmed By Godwin"
Editorial from Richmond Times-Dispatch, March 14, 1975
"From Alaska to Virginia"

These items are sent to you so that you will know that the officials and people of the State of Virginia are in favor of immediate development of our offshore oil resources. Should the Supreme Court decide with Virginia as to the ownership of subaqueous lands off our coast, you can readily see the State of Virginia will be in a position to immediately proceed with the exploration of the offshore areas.

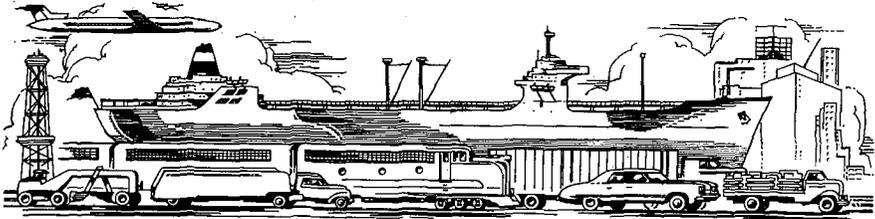
It is my hope that Senator Jackson will understand the feeling of our area and the necessity for this country moving ahead to develop domestic oil sources.

Very truly yours,



Claiborne D. Gregory

CDG:FA
Encs.



LD4653

1 SENATE JOINT RESOLUTION NO. 91

2 Offered January 8, 1975

3 *Virginia should encourage and promote exploration of the Outer Continental Shelf.*

4

5 Patrons—Messrs. Campbell, Barnes, Hopkins and Willey

6

7 Referred to the Committee on Rules

8

9 WHEREAS, the demand for energy in the Commonwealth and
10 the nation is increasing and will continue to increase for the
11 foreseeable future; and

12 WHEREAS, domestic production of oil and gas has declined in
13 recent years; and

14 WHEREAS, it is in the interest of Virginia and the nation to
15 reduce the degree of dependence upon imports of oil from foreign
16 nations to meet domestic energy demand; and

17 WHEREAS, there is reason to believe that the Atlantic Outer
18 Continental Shelf contains significant quantities of oil and gas
19 which can be developed consistent with State and national
20 environmental policies; and

21 WHEREAS, the Commission to Study the Energy Crises in the
22 Commonwealth, after a review of information and evidence
23 gathered in connection with development of the Outer Continental
24 Shelf, including the document released by the ad hoc Virginia Outer
25 Continental Shelf Advisory Committee in November, nineteen
26 hundred seventy-four, believes that the development, processing,
27 and distribution of the oil and gas reserves on the Outer Continental
28 Shelf adjacent to Virginia's coast should proceed in order to meet
29 energy demands; now, therefore, be it

30 RESOLVED by the Senate, the House of Delegates concurring,
31 That exploration and development of oil and gas resources of the
32 Outer Continental Shelf adjacent to Virginia's coast should be
33 encouraged and promoted, provided, however, that such activities
34 are consistent with the requirements of applicable environmental
35 safeguards and conducted so as to protect, insofar as possible,
36 onshore social, economic and environmental conditions of the
37 coastal area of Virginia.

FROM: VIRGINIA PETROLEUM INDUSTRIES
1809 STAPLES MILL ROAD
RICHMOND, VIRGINIA 23230

RICHMOND TIMES-DISPATCH
February 17, 1975 B-1

Oil Interest Reaffirmed By Godwin

23
2-18-75
Atlantic Offshore
Committee
F. J. Jandrowitz
N.C.L. Brown
API - Press Rel.

Gov. Mills E. Godwin Jr. reiterated Sunday that Virginia continues its interest in the exploration of oil and natural gas off the state's coast.

In a special statement, which the governor's office said was released because of recent "considerable publicity" on exploring and developing the outer continental shelf, Godwin said that Virginia is interested in determining the "economic potential" of resources in the shelf.

"I wish to emphasize that every safeguard will be taken to protect the environment," he said. "However, we will continue to encourage the exploration of the offshore resources to determine the kind and quality of resources under the submerged lands with the intent to encourage the development of the resources if such development is thought to be economically advantageous to the commonwealth and in the public interest. . . ."

Godwin added that another consideration in encouraging the exploration and development of the offshore resources will be whether they can be accomplished in such a way "as not to cause undue stress upon the coastal zone" of the state "and the local governments that would be affected.

"The commonwealth will continue its interest in determining the economic potential of the outer continental shelf and make preparations to work effectively with all parties interested in or affected by the exploration and development of the outer continental shelf with special emphasis on the protection of the environment that might be affected by such exploration and development."

Godwin said he also was taking the opportunity to "commend the General Assembly for the highly constructive legislation related to the outer continental shelf now under consideration that, if passed, would immeasurably strengthen the position of the executive branch . . ."

He added: "It is my considered judgment that the Commonwealth of

Virginia is well prepared to deal effectively with situations related to the outer continental shelf as circumstances dictate.

"The study entitled 'Virginia and the Outer Continental Shelf' carries a significant body of information and pertinent recommendations that serve as a guide in making sound decisions and is supportive of pending legislation."

Godwin said a full time coordinator of outer continental shelf activities was employed last November and "we have worked closely with the the governors of the entire East Coast on this important issue.

FROM: VIRGINIA PETROLEUM INDUSTRIES
1809 STAPLES MILL ROAD
RICHMOND, VIRGINIA 23230

Richmond Times-Dispatch, Fri., March 14, 1975

From Alaska to Virginia

Work on the Alaskan oil pipeline has finally begun.

Construction starts after six years of acrimonious national debate and legislative and judicial delay. The cost, now estimated at an astronomical \$6 billion, has ballooned because of inflation.

Americans could have used the Alaskan crude in 1973 and 1974 when the Persian Gulf producers began to hold back their exports for political and economic purposes. But at least in the interim the nation should have advanced in its knowledge of how to extract and transport the oil through the fragile Alaskan environment without great harm.

If drilling off the shores of Virginia, Maryland and other East Coast states eventually discloses deposits of oil and gas sufficiently large to justify tapping, let us hope that some of the hard-earned lessons of faraway Alaska will be applied here.

Let's hope there will be less heat and more light applied to the question than was evident on the North Slope. Let's hope orderly plans can

be made to protect the ocean, beaches and bays—fishing, farming and recreation lands—from all avoidable damage if the petroleum development does occur. But let's hope that we don't have mindless obstructionism if there does prove to be enough oil out there 30 to 100 miles off shore to play a significant role in easing this nation's critical energy problems.

In Alaska, the start of pipeline construction has set off a "black gold rush" that is bringing some problems along with the sudden prosperity. Approximately 10,000 workers are on the job, and another 6,000 are expected by the long working days of the summer. The influx is creating heavy demands for social services such as health care, housing and police protection that had not been fully anticipated.

Alaska is much more of a wilderness area than the East Coast, but nevertheless those persons in Virginia and elsewhere who are trying to predict the impact of offshore oil development might want to keep a weather eye out for developments in the northwest.

Walter F. Wagner
 3601 N. Howard Ave.
 Apt. B-203
 Tampa, Florida 33607

March 20, 1975

Mr. Mike Harvey
 Staff Director
 Senate Committee on Interior
 and Insular Affairs
 Room 3206
 Dirksen Senate Office Building
 Washington, DC 20510

Dear Sir:

In considering the complex energy problems confronting our country it should be evident to even the casual observer that further delays in leasing or governmental intervention in the free enterprise system that has produced the standard of living we now enjoy can only deter from the goal of higher crude production in this country.

I think the Congress is vastly underestimating the intelligence of the voter by attempting to blame oil companies for our present problem and pushing the idea that the elimination of depletion allowances and windfall profit taxes will be of benefit to the public. To strip capital from an industry that needs to spend unheard of amounts to develop our domestic reserves would not make sense to a junior high-school student.

History shows clearly that Governmental intervention into business has destroyed the railroads, is destroying the airlines, has caused unreasonable freight rates in trucking, and has spent two hundred years developing a postal system that is so bad it is doubtful if even United Parcel Service could make it work. All of this action has cost me more money and frankly, Mr. Harvey, I can not afford any more government protection.

I implore your committee to let private enterprise, the oil companies in particular get on with the job of developing domestic oil as soon as possible without government intervention. I can not afford the balance of payments for imported oil either.

Sincerely,

Walter F. Wagner

cc: Senator Henry Jackson
 Senator Lawton Chiles
 Senator Richard Stone

[Handwritten initials]

2809 26th St., West
West Briar Apts., #5
Bradenton, Florida 33505
March 28, 1975

Mr. Mike Harvey, Staff Director
Senate Committee on Interior & Insular Affairs
Room 3206, Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Harvey:

I am writing you this letter to express my personal opinion as to how dissatisfied I am with the delay tactics that are being used by our Federal Government in dealing with offshore drilling. The offshore lands are only a partial answer to the nation's energy needs, which require making up the difference between the 17 million barrels of oil we Americans consume each day and the 11 million we produce, but they can make an important contribution, as long as they are actually producing rather than tied up in endless controversy and haggling.

The Environmental Protection Agency plans by publicly asking for a two-year delay in leasing the offshore fields. Their grounds for argument are based primarily on the damaging spill in California's Santa Barbara Channel in 1969. But offshore drilling and cleanup technology has greatly advanced since then.

Senator Hollings proposal to put the Federal Government into preleasing exploration, and giving Congress a veto over commercial leasing and development and encouraging coastal states to seek a delay in leasing plans for up to three years. The chief argument advanced by proponents of delay is need for time to assure adequate environmental controls over offshore work and prepare for the economic impact on coastal states' onshore areas. Being from Florida, I can appreciate the concern on the economic impact, but we have come to the crossroads as to which can withstand the delay the most, our energy problems, or environment.

Needless political wrangling over leasing frontier offshore areas threatens to wreck the timetable of the U.S. energy program. It is crippling the nation's ability to reverse quickly its declining petroleum supply and is making shambles out of strategy to reduce any time soon the distressing reliance on foreign oil.

My biggest fear is the way the Federal Government is trying to affect our free enterprise system that has been successful for more than 100 years in developing the nation's mineral resources.

Instead of removing economic disincentives and making leases available for private companies, the lawmakers propose to place exploration in the hands of the U. S. Geological Survey or some new federal agency.

What are the facts? The USGS is the first to concede that it is neither equipped nor suited for this work. It or any new agency would take at least two-four years to gear up for the task and several more to explore the offshore fields. Putting the Government into the oil business is pure economic

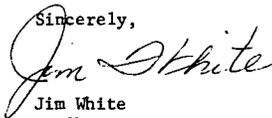
Page 2 -- Mr. Mike Harvey, Staff Director

and political folly and a grave disservice to the nation , as proven by its' sorry experience of handling our postal service.

The nation's energy plight is compelling. The U. S. must shed regional politics and face facts. Legitimate needs for environmental controls for revenue sharing, for setting up machinery to help states meet new economic burdens can be met. But senseless delay in getting a fix on the oil and gas reserves that may exist offshore is gambling with the nation's economic future.

You have my full support in conserving what is very dear to you, me and our country, that is our Private Free Enterprise System.

Sincerely,

A handwritten signature in cursive script that reads "Jim White". The signature is written in dark ink and is positioned to the right of the word "Sincerely,".

Jim White
JW:lh

P. O. Box 389
Easley, S. C. 29640
March 25, 1975

Senate Committee on Interior and Insular Affairs
Attention: Mr. D. Michael Harvey
3206 Dirkson Senate Office Building
Washington, D. C. 20510

Gentlemen:

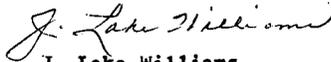
According to the information I have observed in various publications, I understand that your committee is studying the feasibility of offshore drilling to locate new reserves of oil and gas.

In view of the critical need of new developments in our nation's energy requirements, I would like to urge your committee to proceed with this study just as rapidly as possible.

Also, and possibly more importantly, I want to urge your committee to allow this exploration to be done by private enterprise rather than by the Government. This country desperately needs to return to the system that has made it the greatest nation on earth; and that is the system of free enterprise!

Time is of the utmost urgency and your committee can do much to speed the solution to our energy problems by acting promptly in this matter and by keeping the Government out of the oil business.

Yours very truly,


J. Lake Williams


WRIGHT OIL CO., INC.

PHIL HEAT - S & H GREEN STAMPS
 P. O. BOX 2119 - PHONES 692-8661 - 693-4551
 1009 OLD SPARTANBURG ROAD
 HENDERSONVILLE, NORTH CAROLINA 28739

April 2, 1975

Senate Committee on Interior and Unusual Affairs
 Attention Mr. D. Michael Harvey
 3206 Dirksen Senate Office Building
 Washington, D.C. 20510

Dear Sir;

On behalf of our organization, I would like to express our opinion and alarm at the proposals to superimpose another government agency on private enterprise in the form of a government oil exploration effort.

The oil companies are very well qualified for the job of looking for oil and natural gas off the coast of the Carolinas and elsewhere, whereas the government would have to hire qualified personnel at a great cost, to do the job the oil companies are prepared and trained to do.

It is my understanding, we in the Carolinas are wholly dependent on sources outside our state for gas and oil. If there is gas and oil off our shores, we should presently be going after it with the most experienced and qualified teams available.

One thing we don't need, is more proposals and debates in Congress that seem to further delay the nations independence of foreign oil.

We feel that the government should stay out of the oil business and let our businesses, which started and thrived, on the private enterprise system continue and settle our own problems with the law of supply and demand.

We are appalled when a man we sent to Congress turns against the private industry and concept and favors a government-run system.

Yours truly,

A handwritten signature in cursive script, appearing to read "Joel W. Wright, Jr."

Joel W. Wright, Jr.

cc: Senator Henry M. Jackson, Chairman
 Senate Committee on Interior and Unusual Affairs
 3106 Dirksen Senate Office Building
 Washington, D.C. 20510

SIERRA CLUB

FLORIDA CHAPTER

2405 Delgado Drive
Tallahassee, Fla.
February 18, 1975

Mr. John Hussey, Director
National Ocean Policy Study
U.S. Senate Committee on Commerce
Washington, D.C. 20510

Dear Mr. Hussey:

A few days ago, in withdrawing its request for tract nominations for the Middle Atlantic, the Department of the Interior stressed its reluctance to do so because of the great amount of time needed for environmental studies between that step and actual leasing. This letter concerns information that casts doubt on the Department of the Interior's good faith efforts to perform the environmental studies alluded to.

In Mr. Jared Carter's testimony before the NOFS panel, he spoke of the Department's two tier nomination system as a means for providing the public with input into the Department's leasing decisions. This is nonsense. When Sec. Morton issued his call for environmental ranking to environmental groups a year ago this month, I had the job of contacting marine scientists in the Gulf area for data on making such a ranking. They replied that it was an impossible task, because no data existed that was anywhere near sufficient, and such data could only be acquired through Federal funding of a kind nowhere contemplated. So the Sierra Club, like all the other environmental groups, was unable to rank any area of the OCS according to risk. We submitted some obviously vulnerable sites as needing special protection, but that was the best we could do. Note, however, that the value of environmental ranking has entered the Department's collective mind.

In a rational world one would suppose that the Government, following the advice of the CEQ study, would set about acquiring the research data that would make ranking according to environmental risk possible. And the sad thing is that in the public's mind the Department of the Interior's pronouncements about "environmental studies" has that connotation. "Baseline studies" also connote to the public the idea of environmental protection. When the Department promises baseline studies prior to leasing, it is the natural assumption of press, public, and I think legislators, that some sort of environmental assessment will be made that will have an impact upon leasing decisions.

Until recently even I had that impression. I kept interro-



gating Florida's marine scientists who were working on the "MAFLA" studies to find out what they were learning that might impinge on drilling decisions (since the MAFLA tract is already leased) and as I invariably learned that their efforts, excellent science in themselves, did not produce that kind of information, I wondered why. My questioning finally led me to a member of the BLM staff who is connected with the granting of research contracts. He told me, so emphatically that I can not have misunderstood, three very important facts relevant to BLM sponsored baseline studies.

1) BLM sponsored baseline studies have only one purpose, to serve as a yardstick for the assessment of damages in the event of a polluting incident after leasing. (Qualification--drilling regulations may also be modified to prevent repeated pollution.) They have never been intended to acquire data that might be useful in making environmental assessments of risk, in other words, for predicting risk, for helping the Department of the Interior make wise decisions about leasing or drilling. The conferences of scientists and others in California and in Maryland to draw up baseline studies programs relative to the proposed increase in OCS leasing have been given guidelines limiting their proposals to the collection of "yardstick" data.

2) There is no institutionalized system for communicating research data from the arm of BLM that conducts it (including the Research Management Board to which coastal states send representatives) and the arm that advises the Department on leasing decisions. It follows that no such communication would exist, since the purpose of research has no bearing on leasing decisions. The pity is, though, that sometimes as a fringe benefit even the limited baseline studies authorized do come upon data that indicates vulnerabilities and should be considered by the leasing decision makers.

3) The BLM assumes no responsibility for environmental studies of any kind, not even their narrow baseline "yardsticks", in coastal waters, where the most severe impacts of OCS related activity is known to occur. I was told that this is the responsibility of NOAA, except for a very narrow range of work related to pipelining. Mr. Robert Knecht's testimony at Barbara Heller's meeting leads me to assume that NOAA welcomes this responsibility--but is there some assurance that the Office of Management and Budget will fund it? (That is a rhetorical question.) From the Sierra Club's point of view what is important is that genuine, broad ranging environmental assessments take place, both on the OCS and in the Coastal Zone. We think that without them Coastal Zone Management decisions relative to the OCS will be impossible to make.

Finally, conversations with many scientists have given me a hearty respect for the complexity of the kind of environmental assessment we are begging for. Surely one way for its complexity to be dealt with meaningfully is for government to encourage a reasonable amount of scientific analysis and planning concerning the nature of the problem and the best way to deal with it.

Sincerely,

Ellen Winchester
Ellen Winchester

Chairman, Fossil Fuel
Subcommittee, National
Energy Policy Committee, Sierra Club

*OCs
Add record this
M H*

HAMPTON ROADS ENERGY COMPANY

SUITE 913 - 1010 VERMONT AVENUE, NORTHWEST
WASHINGTON, D. C. 20005

H 75

(202) 783-1546

JOHN K. EVANS
President

April 15, 1975

VIRGINIA OFFICE
Suite 215

281 Independence Boulevard
Virginia Beach, Va. 23462
804 - 499-8523

Mr. Gerald McCarthy
Executive Director
Council on the Environment
Commonwealth of Virginia
P. O. Box 790
Richmond, Virginia 23219

STATE ENERGY COMMISSION
RECEIVED
APR 21 1975
RECEIVED
RICHMOND, D. C. 20510

Re: Your letter 3-25-75 - O.C.S.

Dear Gerry:

This is in reply to the request contained in the subject letter. I hope the subject will be covered in greater detail in the panel discussion in which we are participating at the Norfolk Chamber of Commerce meeting on April 22, 1975.

First, I am not an expert on O.C.S. As you know, my expertise and interest lies in refining - supply and demand. Naturally, I have a citizen's interest and responsibility in O.C.S. activities. I became interested several years ago when I looked at the North Sea operations. To truly understand and evaluate this controversial issue, a trip to the North Sea certainly is desirable. There the weather conditions make the North Atlantic off our coast look like a mill pond. When one sees what the oil industry has done in developing technology to effectively and safely develop North Sea oil, one is truly impressed - even the sophisticated cynic became convinced that our O.C.S. can be safely developed. Frankly, it is mind boggling to see the great depths of water in which drilling operations are going forward under God-awful weather conditions. Divers are working in many hundreds of feet of water that I never thought possible - taking two week spells in compression chambers, and walking around the floor of the turbulent North Sea as if they were taking a stroll down Norfolk's Marine Plaza. I understand these fellows get \$80,000 a year, and they sure earn it. Then the equipment in use to snake pipelines from fields to shore around huge boulders (North Sea was once glacial) seem part human. All I am trying to say is that my industry has the technology and the will, if we are just given a fair chance to go to work.

I have discussed the Byrne paper you sent me with a broad segment of experts - I had to because, I repeat, I am no expert. Incidentally, I asked a Department of Interior staff member to send you some background papers on this subject.

Mr. Gerald McCarthy
April 15, 1975
Page 2

Yes, the ultimate resources in the Gulf of Mexico may exceed the Atlantic O.C.S., but we need both regions. The U.S. Gulf reserves are being depleted. Both could produce 4.7 million barrels a day by 1985, and we need more if we are going to get even partial self-sufficiency. We are now importing over 6 million barrels a day, and the way the North East Congressional group are acting, we will become more and more dependent on foreign refined fuels that will far offset any saving in a reduction of imported crude oil. You don't have to be told what is happening on natural gas, because Virginian consumers are already feeling the crunch, and its going to get worse.

Regarding New Jersey's concern for its industrial environment - that State is already refining in its plants more oil than is expected to be found in the O.C.S. It is environmentally safer to move oil from the O.C.S. to refineries on the East Coast via pipeline, than by the hundreds of tankers that yearly move the oil there now - don't you agree? Incidentally, most environmentalists disregard this fact - for example, Hampton Roads, more fuels are now coming into the Port by tanker than would crude oil for the Portsmouth refinery, and it sure is much safer environmentally.

Next, regarding the cost of oil. It is conservatively estimated that at current dollar prices, it would cost less than \$6 a barrel to deliver O.C.S. oil to the East Coast refineries. A hell of a lot cheaper than present foreign oil costs that are in excess of \$12 a barrel - and safer. Also the federal government gets large royalty and bonus payments - in excess of \$500 million a year on royalties and over \$5 billion last year in bonus payments.

Regarding government exploration - the idea sounds good, but from my experience, we would be better off letting private industry handle. The industry has the experience and technology, and competition will keep them honest. I have seen what happened in Mexico and Brazil for example - bureaucratic hesitancy to gamble huge sums in drilling holes, political interference, and I regret to say graft. I agree that Uncle Sam must discourage small independent operators, and this can and has been done via royalty auctions, etc. - last year, one small company bid a low fee plus the highest royalty bid, and got hit for 82% of the value of the oil in the ground.

Regarding environmental protection, I am assured that a detailed assessment has and will be made, base line studies of all factors, firm status before any drilling, and then continuous surveillance and studies and corrective action taken before any trouble starts.

Regarding "failure of our tort liability system to compensate" for injuries - this is being taken care of by new bills before Congress.

Mr. Gerald McCarthy
 April 15, 1975
 Page 3

Regarding the idea of the federal government conducting exploration studies before any bidding, the problem is delayed action, and we can't afford the time delay. A system whereby the rights to explore are sold with a contingent right to produce with the exploitation plan being approved by the federal government.

I am convinced that the greatest care and caution is being exercised by the federal government on all aspects of environmental issues. In this regard, and in all fairness, the record of the federal government and my industry on O.C.S. and environmental affairs is a good one. The ones in "blackeye" is the ever publicized "Santa Barbara" channel. Here, I agree, that the then Secretary of the Interior should never have approved any deviation from drilling standards, he did and look what a saving of a few thousand of dollars in drilling one well cost my industry. All of us learn the hard way - even the Secretary of the Interior, who is now a leading environmentalist.

Yes, the draft "environmental impact statement" (was) seriously deficient", but it was only a draft and it is being corrected.

The Department of the Interior is not committed "to sell up to 10 million acres this year." It will depend on the environmental assessment, and then on industry bids.

Contiguous states should certainly share in the revenues from the O.C.S. The O.M.B., and I think the President, are not in favor but that is a decision Congress can and should make. I would suggest that Governor Godwin pursue this issue with your Congressional delegation. I am confident that the Department of the Interior wants active participation by the coastal states - it is really a partnership interest and operation. One thing no one should want is any more delay - it is not necessary, and we can't afford the luxury of procrastination.

Regarding the U.S. versus Maine suit - this case is now settled. Regarding acreage "sold," the largest to date is only 9 square miles - any less would be self-defeating. There are about 300 million acres on all of the O.C.S. (potential fields). Only 10 million federal and 10 million state lands have been leased to date.

In closing, I repeat, I am no expert on the O.C.S. I do know that economically, strategically, and from the standpoint of our nation's security, we need the oil under our Continental Shelf. I know my industry has the know-how to find and bring this oil to shore. I hope that I have the privilege of playing an active role in providing the refining facilities to refine this oil safe and secure in Virginia, employing Virginians, and paying taxes to Virginian authorities.

Sincerely,

John K. Evans
 President

JKE/cr

CALIFORNIA COASTAL ZONE CONSERVATION COMMISSION

1540 MARKET STREET, 2nd FLOOR
 SAN FRANCISCO, CALIFORNIA 94102
 PHONE: (415) 557-1001



May 7, 1975

REV. 5/8/75

Hon. Ernest Hollings
 435 Old Senate Building
 Washington, D.C. 20510

Re: Senate Bill 586

Dear Senator Hollings:

The important legislative proposals embodied in your SB 586 would be of great assistance to the work of the California Coastal Zone Conservation Commissions. Because of the pressures of our work under the deadlines in the California coastal law, there has not been time for the Commission members to review SB 586, but I believe the staff comments below reflect the views of the State Commission, based on its previous policy decisions.

Clearly, the additional financial help to States in the bill—including changing the Section 305 matching ratio from 66 2/3 per cent to 80 per cent—would greatly aid in the preparation of State coastal zone plans that would meet the many requirements if such plans are to qualify for Section 306 grants. Given the heavy demands on State funds, an adequate level of Federal funding is likely to make the difference in whether States are able to prepare useful and timely coastal zone plans.

Similarly, the proposal in SB 586 to provide additional funds to States to plan for minimizing the impact of coastal zone energy facilities is of great importance. Once again, in the absence of Federal assistance, the heavy demands on State revenues may well mean that such planning will go undone, with consequent loss of opportunities to help protect the coastal environment when major development takes place.

The Energy section of California's Preliminary Coastal Plan recommends policies that would govern site selection and development of power plants, offshore oil exploration and production, tanker terminals, coastal refineries, and liquefied natural gas terminals and facilities. To go on from these basic policies and to identify specific areas of the coast for energy facilities development will require additional technical staff, and extensive detailed cooperation with a broad array of Federal, State, and local agencies, and with industry. This additional help would particularly assist in planning for OCS-related activities and facilities in Southern California. Interior Department lease sales are presently proposed

Hon. Ernest Hollings

-2-

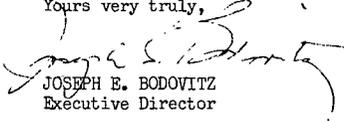
May 7, 1975

for September, 1975, in areas off California from Point Conception south to San Diego. Ten million people, half of California's total population, live in the coastal counties of Southern California, and depend heavily on the coast for both recreation and employment. Some people say that most of the OCS activities can be carried out and supported using existing onshore facilities, pipeline corridors, tankage, terminals, etc., but little data is available to support that conclusion. The tracts proposed for leasing are estimated to contain anywhere from 2 to 19 billion barrels of recoverable oil, as compared with an aggregate of only 6 billion barrels recovered from the OCS nationally over 25 years to 1974, and only by special study and planning can we make sure that any approved development is consistent with sound coastal planning and management efforts.

The bill's requirement for "a general plan for the protection of access to public beaches and other areas of environmental, recreational, historical, esthetic, ecological, and cultural value" is fully consistent with the California Coastal Zone Conservation Act of 1972, the citizen initiative that established the California Coastal Commissions. Strong efforts to increase public access to the ocean coast are contained in the Preliminary Coastal Plan that is now the subject of 20 public hearings in California.

I would be glad to provide more detailed comments on specific portions of the bill if this would be of any assistance, but it seems to me the bill fully reflects the needs of the coastal states for prompt and adequate assistance if they are to meet the demands placed on them, both by their own citizens and by the Federal Coastal Zone Management Act, for the preparation of plans to guide the use and protection of the nation's invaluable coastal areas during a time of rapid change.

Yours very truly,



JOSEPH E. BODOVITZ
Executive Director

JEB:pmg

COMMONWEALTH OF PENNSYLVANIA



DEPARTMENT OF ENVIRONMENTAL RESOURCES

In reply refer to

P. O. BOX 1467

RM-R

HARRISBURG, PENNSYLVANIA 17120

W 69:18

May 13, 1975

Honorable Ernest F. Hollings
 Senate Office Building
 Washington, D. C. 20510

MAY 15 1975

Dear Senator Hollings:

This is in response to your invitation of May 1, 1975, for comments and suggestions on Senate Bill 586 amending the Coastal Zone Management Act of 1972. We appreciate your gracious offer and the unusual opportunity of participation.

We strongly endorse the S. B. 586 amendments. They adequately address the needs of the States in terms of funding assistance, and provide ample time for developing practical and balanced management programs for coastal areas. Since the adoption of the 1972 Act, the energy crisis has introduced new and demanding policy questions that challenge such planning in terms of policies and goals, adequate financing, and available time. The S. B. 586 amendments would effectively remove these uncertainties.

The amendments are needed to insure a balanced focus on the two foremost issues confronting public management today: the conservation and improvement of the environment, and the development of adequate energy resources. Such a balance is particularly valid for land and water use planning, which is the essence of the coastal zone program. Since public management is justified only when conflicting uses become public issues, the S. B. 586 amendments add the necessary ingredients that make the Coastal Zone Management Act truly comprehensive.

The new comprehensive awareness has particular application to Pennsylvania's coastal problems. The 1972 Act addresses the problems of a typically rural coastline, which applies to the State's shorelands along Lake Erie quite well. However, the State's other coastal zone, the Upper Delaware Estuary, is almost entirely urbanized. This area includes the City of Philadelphia and 13 other municipalities. The conflicts of uses, both land and water, are much more numerous and complex here, than for the Lake Erie coastal zone. Our experience indicates that the 3-year period specified by the 1972 Act for developing a management program is inadequate because of the magnitude and complexity of coastal issues.

The energy problem is, or will be, an issue in both of the State's coastal areas. The East Coast's second largest oil refinery and storage complex is located along the Delaware Estuary in Pennsylvania, and several expansion

Honorable Ernest F. Hollings

May 13, 1975

projects are already under construction. For Lake Erie, Pennsylvania has developed regulations for natural gas exploration adjacent to the active Canadian drilling operation. Currently, there is a moratorium of such exploration by executive order; however, it must be considered in developing the management program.

The amendment providing assistance for interstate coordination recognizes an expensive, but necessary, operation that was not addressed by the 1972 Act. The regulations published in the Federal Register did, however, and the grant assistance funds were used to finance the operation. The Great Lakes States provided \$1,500.00 each for part-time staff assistance by the Great Lakes Basin Commission for the first year, and have agreed to provide \$2,000.00 for the second year. This amount covers only partially the actual costs, and is much too small for encouraging highly desirable efforts involving interstate problems and issues such as dredging, spoil disposal, and others. Coordination efforts for the Delaware Estuary is being done by an informal committee that meets quarterly on a rotation basis for each State, with the host State taking care of meeting expenses. The frequency of the meetings is expected to increase during the second year after inventory efforts are completed.

The amendment providing assistance for research related to the coastal zone management program is needed very much. The foremost research need is the development of an information and data system that quickly responds to activities in the management area. This would necessarily be composed of a group of models, mathematical and otherwise, encompassing the range of involved sciences. Some of these models are already developed, but many of these need updating and re-evaluated, e.g., the water quality models for the Delaware Estuary. Other research is needed to provide information, e.g., the erosion rates of Lake Erie's shore bluffs, the effects of dredging on littoral currents, and the movement and balance of water-borne sediment.

((The financial aid for public access and protection of beaches and islands is another much needed amendment. Ownership is the only sure way of management, and purchase of coastal lands is quite expensive. Pennsylvania has an on-going program of providing public access to fishing and boating areas, but the costs keep the development of these at a very slow pace.

The proposed 3-year extension for developing the management programs is the most important amendment. This recognizes the time needed in the first year for setting up a new program and for the collection of data and information, as well as the time needed for enacting new legislation for the management program. It also recognizes the time-consuming operation of coordinating the program development with three levels of government, which is probably the most important aspect of the program. We are also learning that the staff effort required for developing the management program will almost certainly go beyond the 3-year limitation for development grants. This is being done by the Critical Path Method, which indicates more and more that the magnitude of work tasks will exceed the two years remaining for the effort.

Honorable Ernest F. Hollings

May 13, 1975

Finally, we strongly endorse your Committee's consideration of reducing the State matching requirements to 20 percent. In the present economic status, we have been forced to suspend new staff additions which are needed very much, particularly with the completion of data-gathering activities. Your favorable judgement on this important issue is earnestly solicited.

Sincerely yours,



C. H. McConnell, Deputy Secretary
Resources Management



**DEPARTMENT OF
LAND CONSERVATION AND DEVELOPMENT**

1175 COURT STREET N.E. • SALEM, OREGON • 97310 • (503) 378-4926

ROBERT W. STRAUB
GOVERNOR
HAROLD F. BRAUNER

May 16, 1975

Director

LAND CONSERVATION AND
DEVELOPMENT COMMISSION

L. B. DAY
Chairman

STEVEN SCHELL
Vice Chairman

DOROTHY ANDERSON
ALBERT BULLIER, JR.
RICHARD GERVAIS
DR. PAUL RUDY
JAMES SMART

Hon. Ernest F. Hollings
435 Old Senate Office Building
Washington, D. C. 20510

Dear Senator Hollings:

Thank you for the opportunity to comment on S. 586. This letter is a follow up to our May 5 telegram of our strong support for these amendments.

Oregon has been working on a coastal zone management (CZM) program since 1971. CZM grant funds available since 1974 have greatly assisted our program and the additional aid anticipated under S. 586 will actively help to move our program along at a more satisfactory rate. Mitigating the adverse impacts related to energy facilities will certainly hasten the pace of developing new energy sources. An important additional benefit of this new legislation will be to spur the integration of our coastal program into the state's comprehensive land use planning system. Our objective is the development of one single land management process for the entire state, incorporating all state and federal land use requirements into local coordinated comprehensive land use plans prepared under state standards.

Reduced State Matching Requirements

In your letter of May 1, you mentioned the possibility of reducing the state matching requirement in Section 305 and 306 to 20% as a way of relieving the pressing financial burden on coastal states. We would certainly concur with such a decision and urge that a provision of this nature be added to S. 586.

MAY 20 1975

Hon. Ernest F. Hollings
May 16, 1975

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The effects of increasing the funding for CZM programs will be felt most directly by coastal cities and counties. In Oregon, the state constitution prohibits more than a 6% annual increase in local government budgets without approval via constituent referenda. Because our coastal communities are struggling to overcome the effects of inflation, high unemployment and increased service demands, it is difficult for some localities to remain actively involved in planning and CZM activities. More aid with a lower match will help coastal jurisdictions continue to meet national and state objectives in coastal management.

Also, at the state level, inflation has seriously eroded the validity of earlier CZM cost estimates. There is no question that more federal assistance at a higher level will be necessary for the state to accomplish its CZM tasks and actions in a timely manner.

We urge that the match requirement be modified through S. 586.

Energy Impact Fund

Lessening the adverse impacts of energy development activities, both direct and in-direct, will substantially help overcome resistance to the accelerated development of coastal energy sources.

In most instances, the primary local point of energy impacts will be at the local level, i.e. within the jurisdictions of coastal cities and counties. However, overburdened local property tax bases and constitutional budget ceilings severely limit city and county abilities to plan and respond with needed facilities and services as well as react to negative consequences to support energy development.

The potential for large-scale energy projects in the Oregon coastal zone does exist. There are several known deposits of oil off the coast and marketable coal reserves in Coos County along the south coast. Also the state's Nuclear and Thermal Energy Council has identified portions of the coastal zone as suitable for nuclear and fossil-fired generating facilities, particularly in view of the availability of vast amounts of cooling water.

Hon. Ernest F. Hollings
May 16, 1975

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Although we expect that comprehensive plans developed under the state's planning system will be capable of avoiding some of the negative impacts associated with energy development, assistance through grants under S. 586 would help to cope with the effects of accelerated energy development and broaden the coast's economic base. Great care must be exercised though, since the Oregon economy is heavily dependent upon its commercial fishing and tourism. Both of these activities are directly dependent upon the maintenance of a high quality in the coastal zone and energy development requires the protection and safeguards available under this legislation.

Interstate Coordination

For Oregon, one of the key sections of S. 586 is the funding for interstate planning and coordination. At the present time, a portion of our current 305 grant is being directed toward a special bi-state, inter-agency (local, state and federal) task force to develop an overall management plan for the lower Columbia River estuary. This effort represents the first phase of the work which needs to be completed. Assistance under this legislation would also permit upstream stretches of the river influenced by tidal action to be included within the study area.

To the south, there is no similar coastal coordination activity occurring between Oregon and California. Such cooperation could be established through the help provided by these amendments to the CZM Act.

Coastal Research Assistance

Lastly, it is encouraging to know that S. 586 has been drafted with a recognition of the importance of research and data collection to effective coastal planning. There is no question that the quality of and support given to public and private location and investment decisions are directly proportional to the type and amount of sound information available. In this state, there are a number of coastal research projects which need to be pursued. As noted during our recently completed round of coastal goal (standards) hearings, the siting and impact of dredge spoil disposal and the movement characteristics and deposition of sand formations are two pressing concerns to coastal communities.

Hon. Ernest F. Hollings
May 16, 1975

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Other subjects awaiting further study include establishing base line data profiles for our estuaries, defining the geographic boundaries of shorelands, developing a carrying capacity methodology for coastal resources and applying the concept of "net social benefit" to local decision-making. We firmly believe that the new knowledge gained from these investigations will be of significant value in carrying out Oregon's CZM program.

In closing, Oregon is anxious to proceed with its CZM program and your amendments will provide the needed help to fulfill our commitments to manage our famed coastal resources in a wise, responsible and timely manner. Please accept our appreciation for your leadership and dedication in seeking to protect and guide the development of our nation's coastal areas.

Sincerely,



Harold F. Brauner
Director

HB:lkr

STATE OF MICHIGAN



WILLIAM G. MILLIKEN, Governor

DEPARTMENT OF NATURAL RESOURCES

STEVENS T. MASON BUILDING, LANSING, MICHIGAN 48926
HOWARD A. TANNER, Director

NATURAL RESOURCES COMMISSION

CARL T. JOHNSON
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DEAN PRIDGEON
HILARY F. SNELL
HARRY H. WHITELEY
JOAN L. WOLFE
CHARLES G. YOUNGLOVE

May 16, 1975

Senator Ernest F. Hollings
Chairman, Subcommittee on
Oceans and Atmosphere
Senate Office Building
United States Senate
Washington, D.C. 20510

Dear Senator Hollings:

We very much appreciate the opportunity to provide our inputs and observations as they pertain to S 586, amending the Coastal Zone Management Act of 1972.

The inclusion of a greater emphasis on the importance of islands and beaches, and the concomitant availability of additional funding for such purposes is commendable. In Michigan, where nearly 80% of the shoreland is in private ownership, the establishment of adequate public access to beaches and the preservation of island and beach areas of environmental, recreational and aesthetic value is an ever increasing problem.

Islands are an outstanding resource in Michigan's Great Lakes' waters. Inventories by the Michigan Department of Natural Resources and the U.S. Bureau of Outdoor Recreation have identified over 150 islands, 10 acres or more in size. The great majority of these are undeveloped and provide excellent fish and wildlife habitat. 80 such areas are to be designated as environmental areas under the State's Shorelands Protection and Management Act. However, many are in private ownership and proper protection, in many cases, can only be assured by fee simple acquisition or partial acquisition. Other islands have the potential to provide excellent low impact recreational opportunities of a nature usually associated with much larger tracts of mainland wilderness. A considerable number are of scientific value since, because of the climatic buffering effects of the Great Lakes, they support disjunct plant species or other latitudinally displaced plant communities. A good example of this is Manitou Island in Lake Superior which has been recommended for preservation as a natural island preserve.



R1026 1/75

Extension of the Act to fiscal year 1980 is well justified because of the unavailable delays that occur in the start-up of any new program. Reduction of state matching requirements would be a most opportune time, coinciding with the recognition of the need to strengthen coastal management programs and at the same time cope with the fiscal constraints of the current economy.

Financial incentives to encourage interstate cooperation would substantially strengthen the ongoing arrangements that have been developed between the Great Lakes States through the Great Lakes Basin Commission. The need for interstate cooperation in coastal zone management is vital in many areas: beach erosion, navigation, lake level control, water quality management, etc. Additional funding will better guarantee comprehensive and functional state coastal zone management programs.

There are many complex issues in coastal zone management that require research. But one example on the Great Lakes are the effects of natural damages resulting from lake level fluctuation (in the last 10 years water levels have fluctuated 5.2 feet on Lakes Michigan-Huron and annual fluctuations of 1 to 2 feet occur). The impact of such fluctuations are of considerable magnitude but are not well understood. Research in these kinds of areas would be most beneficial.

The coastal impact fund, conceptually, is a much needed safeguard to minimize the potential adverse effects of energy-related activities; however, current perception of its applicability seems somewhat narrow and restrictive, especially in the case of the Great Lakes' states. To limit its utility to OCS-related facilities and activities, or to exempt the non-OCS states from its benefits would be both unreasonable and unrealistic.

It is true that the immediate environmental and socioeconomic impacts of OCS-related energy activities would appear in OCS states; however, energy shortages and needs are the result of energy markets, and the Great Lakes' states are both an intensive concentration of such markets as well as a transporter, processor and distributor (by means of the Great Lakes system) of energy and raw materials to other markets. The Great Lakes region is responsible for approximately 50% of the nation's steel production and 38% of the nation's manufacturing, as well as supporting a multitude of other industries. Industrial activity of this intensity has transformed the Great Lakes region into a major energy sink; one that will be filled, at least partially, by OCS oil and gas. This in turn, may require additional energy-related facilities (the great majority of which have been and will probably continue to be located along the Great Lakes shoreland) increased

Great Lakes shipping; extension of the winter navigation season; and increased dredging and harbor maintenance activities.

Furthermore, the proposed impact fund should not be limited to merely OCS-related energy activities and their resultant problems, but should encompass a broader range of energy related activities. Again, this is of particular importance for Michigan and the other Great Lakes' states.

With the development of the Alaska pipeline, increased use of western coal reserves and the possible increased use of western shale-oil, there will be an ever increasing flow of energy from west to east. Much of this energy transport will be along the Great Lakes system, either by ship or pipeline, many times in close proximity to the Great Lakes shoreland. Again this will require additional shore facilities, increased dredging and harbor maintenance activities, greater demands on Great Lakes shipping and navigation, and increased safeguards for oil spills and other energy related accidents and hazards.

I have already mentioned the very large industrial base of the Great Lakes' region and its enormous energy needs. At present, 88% of these needs are being met by thermal electric power plants, the great majority of which are located on or near the Great Lakes shoreland. 1971 projections by the Great Lakes Basin Commission predict an annual compound increase in energy needs for the region in excess of 5%, and an increasing utilization of Great Lakes' shoreland locations for energy generating and transmitting facilities.

In addition, the Region's great abundance of water may very well foster the development of new energy-processing facilities such as coal gasification plants along the Great Lakes Coastal Zone.

The Great Lakes corridor has immense value for recreational pursuits of all types; it harbors many valuable environmental, aesthetic and agricultural areas; it is in great demand for residential, commercial and industrial development and a storehouse of historic archaeological significance. Both proposed OCS-related energy activities and other non-OCS energy projects will put increasing demands on the Great Lakes and their shores to process, transport, store and use these new energy sources. These demands, in turn, will create additional environmental, social, economic and land use problems. The "national interest" clause of the Coastal Zone Management Act prohibits states from excluding or restricting facilities of a greater than statewide significance. The Great Lakes navigation system and its corresponding shoreland corridor, presently, and in the future to even a greater extent, will play a major role in satisfying national energy interests. Consequently, it is only fair that the Great Lakes be included in any programs addressing the potential adverse impacts associated with satisfying our nation's energy demands.

If any additional information would be helpful, please let us know.

Very truly yours,

BUREAU OF WATER MANAGEMENT

William D. Marks

William D. Marks, Chief
Water Development Services Division

WDM:cer



May 16, 1975

The Honorable Ernest Hollings
Chairman, Subcommittee on
Oceans and Atmosphere
United States Senate
Washington, D. C. 20510

Dear Senator Hollings:

Thank you for your letter requesting my comments on S. 586, "The Coastal Zone Environment Act of 1975." I have reviewed the bill and certainly support efforts to plan for and alleviate the impacts of outer continental shelf development upon the coastal states.

I would like to call one matter to your attention, however, that is of significant concern here in Texas: that is the short title to S. 586. Calling it the "Coastal Zone Environment Act of 1975" may lead people to believe that the coastal act is biased against economic development. Since this is not the case, I would hesitate to endorse the use of the misleading title. I would hope that you could find other language such as "Coastal Management Amendments of 1975."

Thank you again for the opportunity to review and comment upon this legislation. I look forward to hearing from you as to the progress of the bill.

Yours truly,

Bob Armstrong
Commissioner
General Land Office

BA/sks



GOVERNMENT OF
THE VIRGIN ISLANDS OF THE UNITED STATES

OFFICE OF THE GOVERNOR
VIRGIN ISLANDS PLANNING OFFICE
P. O. Box 2606
Charlotte Amalie, St. Thomas, V.I. 00801

May 14, 1975

Honorable Ernest F. Hollings
Chairman, Subcommittee on Oceans
& Atmosphere
United States Senate
Washington, D. C.

Dear Senator Hollings:

This office as the lead agency designated by the Governor of the Virgin Islands to receive and administer grants from the U.S. Department of Commerce for the purpose of developing a coastal zone management program for the Virgin Islands, whole-heartedly supports Bill S. 586 in its present form and content. Unfortunately, the proposed bill did not arrive in this office until May 12, 1975, and with a deadline for responding set for May 19, 1975, there was not sufficient time available to fully evaluate and/or to offer detail comments.

The proposed amendments to the Coastal Zone Management Act of 1972 would undoubtedly make the act more comprehensive by enabling states to deal more effectively not only with the problems resulting from the ordinary use and development of land and water areas of coastal states but with the impact of energy facilities siting and production of energy resources. The proposed bill further provide financial assistance for the acquisition of lands for protection of and access to public beaches and preservation of islands. This provision is vital to the Territory of the Virgin Islands since there are limited publicly owned shorelands and scarce financial resources for acquiring high priced beaches or access to shoreline areas. For example, the Government of the Virgin Islands has condemned 3.4 acres of undeveloped

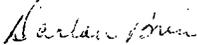
Honorable Ernest F. Hollings
Page 2
May 14, 1975

beach property on the island of St. Thomas, the value of which is to be decided by the U.S. District Court for the Virgin Islands since the owners have claimed that the property is worth over \$1 million while the government assessed has its value at some \$407,000.

The Virgin Islands, moreover, is responsible as of 1974 for administering and controlling activities within its coastal waters which previously was the responsibility of the Department of the Interior. This has placed additional responsibility and financial burden on the Territorial Government. The proposed bill would provide the financial assistance required for the government to plan, research, administer, train, and implement policies and programs for the development and preservation of coastal land and water resources of the Virgin Islands.

I am very grateful for the opportunity offered by you for me to comment on the proposed legislation. Enclosed please find a copy of a newspaper clipping regarding the acquisition of beach property in the Virgin Islands.

Sincerely,



to Thomas R. Blake
Director of Planning

db:TRB:ses

enclosures

[FROM THE DAILY NEWS OF THE VIRGIN ISLANDS, WEDNESDAY, APRIL 23, 1975]

DEVELOPER SEEKS OVER \$1 MILLION FOR LAND

Developer James Armour is seeking over one million dollars for property at Hull Bay condemned last year by the government for use as an archeological site.

A compensation hearing began in District Court yesterday in which Armour's attorney, Frederick Watts, told the court he will show that the \$407,000 originally paid Armour is inadequate.

The sum was the amount specified in legislation passed last year appropriating funds for a deposit in District Court for the condemnation.

Watts opened by noting that the law requires that the

court determine the 3.4 acres of land's value.

The Department of Conservation and Cultural Affairs sought condemnation of the 3.4 acres of beachfront property after two skeletons believed to be as much as 1,000 years old were found.

Armour fought the proceedings, saying that the land and adjacent property was scheduled for development as a condominium and commercial project.

Watts noted in his opening statement yesterday that condemnation law requires that the court determine the land's value at its "highest and best use."

In the present case, he continued, the highest and best use was obviously as a site for condominiums and commercial and recreational development.

Watts stated that he would show that Armour's firm, Armour Enterprises, had assembled what is known in real estate circles as a "package" or the real estate and the plans for its use.

The package, he said, enhanced the value of the land beyond its base value as land. He conceded that the court would have to deduct from such value expenses incurred by Armour which were not directly related to the land's value.

He noted that one method for determining land value is by comparing it with similar sites and said that, in using this method, government appraisers ignored the state of development at the Hull Bay parcel.

This development, said Watts, had been extensive in that when Armour acquired the land over six years ago, the beach had been almost stripped of sand but was rebuilt by Armour.

Watts asked the court view the site at some point in the hearing to see the present state of the beach and Chief Judge Almeric Christian agreed to go at some point today.

Watts outlined another method of determining the value, called the land residual method, based on a formula for calculating the value from income from sales and rentals.

Assistant Attorney General James Van Damm questioned the use of this method in his opening statement, noting that Watts would likely assume that all condominiums had been sold and all commercial property rented and costs had been kept down.

A main point, said the government attorney, is that there is in fact no construction on the site and cited precedents to indicate that anticipation of development does not necessarily enhance value.

Van Damm further stated that he disagrees with the extent of improvement of the beach, saying that "we are dealing with the same beach as six, seven or even eight years ago."

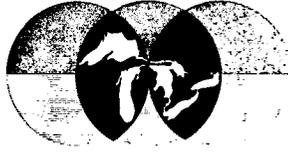
Admitting that Armour may have spent money on the site, Van Damm said that it is not a matter of compensation but whether the improvements changed the value

of the land.

The hearing opened on a light note as Watts noted that, since administrative leave had been granted government employees wishing to attend the Carnival Food Fair at 1 p.m., he would not object if Van Damm and another government attorney absented themselves from the proceedings at that time. Christian asked why he, as a government employee, should not go himself.

Never the less, the judge later corrected Watts when the attorney used a reading from the Bible as the first evidence of condemnation law.

Watts read a chapter from the book of Kings in which a king offers a subject a better vineyard in exchange for the one he has. Christian reminded him that the transaction eventually resulted in murder.



Great Lakes Basin Commission

Frederick O. Rouse
Chairman

State of Illinois
Natural Resources Development Board
State of Indiana
Department of Natural Resources
State of Michigan
Department of Natural Resources
State of Minnesota
State Planning Agency
State of New York
Department of Environmental Conservation
State of Ohio
Department of Natural Resources
Commonwealth of Pennsylvania
Department of Environmental Resources
State of Wisconsin
Department of Natural Resources

Department of Agriculture
Department of the Army
Department of Commerce
Department of Health,
Education & Welfare
Department of Housing &
Urban Development
Department of the Interior
Department of Justice
Department of State
Department of Transportation
Environmental Protection Agency
Federal Power Commission
Great Lakes Commission

May 21, 1975

Senator Ernest F. Hollings
Chairman, Subcommittee on
Oceans and Atmosphere
Senate Office Building
Washington, D.C. 20510

Dear Senator Hollings:

On behalf of the Great Lakes Basin Commission State
Caucus, I am pleased to transmit for your consideration the
following resolution adopted May 20, 1975:

The member states of the Great Lakes Basin
Commission support the proposed amendments to the
Coastal Zone Management Act offered by Senator
Hollings, particularly those parts of the proposal
which add substantial funding for interstate
coordination, research, and land acquisition.

Whereas the Great Lakes Region does not currently
have the outer continental shelf offshore drilling problems,
the projections for the future indicate a large number of
power plants may be located along the Great Lakes shoreline.
The siting of these plants is a crucial consideration for
minimizing environmental damage and conflicts in shoreline
resource utilization.

Additionally, although several states, including
the State of Michigan, have longstanding policies prohibiting
exploration or development of oil and gas resources within the
Lakes themselves, there are indications that several Great
Lakes States are considering the development of these valuable
fossil fuels. Oil, and to a lesser extent, gas drilling
within the Lakes has numerous inherent potential environmental
impacts which are clearly interstate and regional in nature.
In addition to the environmental considerations, offshore
oil and gas development and the attendant development of

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313/763-3590 FTS: 313/769-7431

Senator Ernest F. Hollings

May 21, 1975

Page Two

shoreland facilities exerts a tremendous influence on the land resources of the coastal zone. Consequently, for those states considering development of offshore oil and gas resources, there is a definite need to assess the resource potential and develop regional plans and policies to minimize the environmental degradation and insure efficient and equitable resource development. Your amendments to the Coastal Zone Management Act would provide vitally needed assistance to plan for and manage these energy related developments.

Your amendments would also provide assistance to analyze another problem of great importance in the Great Lakes Region. Between 1970 and 1974 a tremendous amount of erosion and property loss occurred along nearly all of the coastal areas of the Great Lakes. Recently, increasing attention has been directed towards the potential for lake level regulation, through reducing the fluctuation in extremes of lake levels and thereby reducing the amount of damages suffered by shoreland property owners. Following an extensive nine-year study, a principal recommendation of the International Joint Commission Great Lakes Levels Board was that State and local governments should implement shoreland use regulation including structural setback requirements to reduce further damages to the shorelines. Your amendments would provide funds for the Great Lakes States to analyze the feasibility and desirability of these and other types of nonstructural alternatives to reduce and prevent damages sustained by high lake levels.

We appreciate the opportunity to comment on your proposed amendments. If we can be of any further assistance, please do not hesitate to call.

Sincerely,



William J. Watt
Executive Assistance to the Governor of Indiana
Vice Chairman of Great Lakes Basin Commission

Illinois Department of Transportation

2300 South Dirksen Parkway Springfield Illinois 62764

Division of Water Resources

Illinois Coastal Zone Management Program

May 20, 1975

Mr. Ernest F. Hollings
Chairman, Sub-Committee on
Oceans and Atmosphere
Senate Commerce Committee
United States Senate
Washington, D.C. 20510

Dear Senator Hollings:

As the authorized representative of the Illinois Coastal Zone Management Program, I appreciate the opportunity to comment on the provisions of S. 586. The attached comments on sections of the legislation reflect experience to date with developing the Illinois Coastal Zone Management Program. If there is any additional information that I can furnish your subcommittee, please let me know.

Cordially,



Leo M. Eisel
Director
Illinois Division of
Water Resources

LME/dwb

1. Sections 2 and 3, and the first portion of Section 4 (adding a new Section 308 to the Coastal Zone Management Act of 1972), all relate to energy facilities siting and energy resource development or production that affect the coastal zone. Illinois now has one nuclear power facility (the Zion plant) located in its coastal zone. And because of the concentration of energy consuming homes, industries, and activities in the greater Chicago area, further development of energy-related facilities in the area is a very real possibility in the foreseeable future.

Because such facilities and activities can have very significant and very complex impacts on coastal zone elements such as government facilities, the area economy, land-uses, and the ecology of the coastal zone, it is essential to plan for and manage the energy-related effects. And the magnitude of the potential effects will in many cases dictate a planning and management effort on the part of the states that will require significant funding. To the extent that energy-related activities or facilities would adversely impact the coastal zone, it is highly likely that dealing with the impacts would be far more costly than planning for such impacts, and it is questionable whether \$200 million is an adequate fund to serve all coastal states for all of these purposes. For these reasons, a high priority must be placed on such energy-related efforts, and it is hoped that the Coastal Impact Fund will be increased.

It is not clear, under paragraph (d) of the new Section 308, who will be projecting energy-related impacts on the States, or what the basis for such projections will be.

2. New Section 309, concerning interstate coordination grants, can serve a very significant role in Coastal Zone Management. It has already become very clear that coastal related activities in neighboring States can and do have very important effects on the Illinois Coastal Zone (and vice-versa). It is essential to recognize these effects and to provide a level of interstate coordination in the development and management of Coastal Zone Programs that will decrease duplication of effort and adverse interstate spill-over effects on coastal activities. New Section 309 is an appropriate step in this direction.
3. New Section 310 provides no basis for assessing how much of the \$5 million annual funding would actually be allocated to coastal States. This point should be clarified, and some assurance should be given that coastal states will in fact receive the greatest proportion of such funds, since they are responsible for the actual coastal zone planning and management effort.
4. The proposed amendments to Sections 305 and 306 regarding the general plan for the protection of access to and the funding for the acquisition of lands for protection of and access to public

beaches and preservation of islands could be important steps to aiding the Illinois Coastal Zone. It is hoped that consideration could be given to expanding the amendment of Section 306 (c)(9)(2) to include funding for protection measures other than property acquisition. Similarly, Section 305 (b)(1)(7) could include planning not only for the protection of access but also the "improvement" of the same.

5. Your correspondence indicated the Committee is considering reducing the State matching share for Sections 305 and 306. This would most certainly be welcomed by the State of Illinois.



OFFICE OF COMPREHENSIVE PLANNING
 STATE OF NEW HAMPSHIRE
 STATE HOUSE ANNEX, CONCORD 03301

May 8, 1975

MAY 16 1975

Senator Ernest F. Hollings
 Chairman, Subcommittee on
 Oceans and Atmosphere
 Senate Office Building
 Washington, D. C. 20510

Dear Senator Hollings:

We have completed a review of S. 586, your proposed amendment to the Coastal Zone Management Act of 1972, and wish to compliment you and the Senate Commerce Committee for the constructive additions to the current Act. With few exceptions, it appears that S. 586 will improve this vitally needed program.

Our reservations are directed to the language of your cover letter rather than the proposed bill. Any modifications which limit a coastal impact fund to "planning and management required to cope with energy facilities" would appear to severely restrict the uses of such funds. The current language of the bill affords far more flexibility in coping with the broad impacts of energy facilities siting and it is hoped that those provisions will not be changed.

We also ask, as a matter of some urgency, that the State matching requirements in Sections 305 and 306 be reduced to 20 percent. This State, like many others, faces a serious fiscal situation. Our Coastal Zone Management Program will be left in a better competitive position for the available State Operating Funds if the grant formula is made more attractive.

We are pleased with the Coastal Zone Management Act and hope that your continued attention will maintain the vitality of this program which is being so ably administered by Bob Knecht and the Office of Coastal Zone Management.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. Minnoch".

James E. Minnoch

JEM:am

cc: Mr. Robert Knecht
 Dept. of Commerce
 NOAA, OCZM
 Rockville, Md. 20852



Office of Planning and Budget

Executive Department

May 19, 1975

James T. McIntyre, Jr.
Director

Senator Ernest F. Hollings
Chairman
Subcommittee on Oceans and
Atmosphere
United States Senate
Washington, D.C. 20510

Dear Senator Hollings:

Thank you for providing me an opportunity to comment on S. 586. I would like to commend you for your efforts to bring about effective management of the nation's coastal resources.

I think the concept of "federal consistency" as enacted by the Coastal Zone Management Act of 1972 and operationalized by NOAA is the most meaningful approach to local-state-federal partnership yet to be devised. I am pleased that this concept is included in S. 586. At this point in the development and refinement of the concept, OCZM of NOAA is the most logical location to bring it to fruition. This, I recommend that S. 586 be administered by OCZM.

I have mixed emotions about changing the match requirement for Sections 305 and 306. I am aware that some states are already experiencing problems in identifying matching funds. Georgia might have that problem in the future as levels of funding increase and new programs such as these created by S. 586 or land use legislation are enacted. On the other hand, I believe a partnership is more meaningful and all interests are more actively involved if all concerned parties are required to participate financially to a significant extent. Thus, I offer a compromise matching ratio of 75-25 for your consideration.

A concern I have with S. 586 as presently written is that Section 9 subsection (1) (h) defines "development and production" and Section 4, (b) (2) (d) states "...resulting from development or production..." To ensure that no confusion exists and no administrative interpretation is required to define "development" separately from "production," I suggest the language be consistent

Senator Ernest F. Hollings
May 19, 1975
Page Two

while retaining the eligibility of states to receive funds to mitigate impacts from any OCS activity.

Thank you for consulting with State personnel who are responsible for developing Coastal Zone Management Programs relative to S. 586. If I may be of further assistance, please feel free to contact me.

Sincerely,



James T. McIntyre, Jr.

JTMjr:lgs



Ohio Department of Natural Resources

Fountain Square • Columbus, Ohio 43224 • (614) 466-3770

May 16, 1975

*The Honorable Ernest F. Hollings
United States Senator
Senate Office Building
Washington, D.C. 20510*

Dear Senator Hollings:

In light of increasing demands for new sources of energy and our concern for wise utilization of coastal resources, this agency fully supports S. 586. As an industrial state, our coastal zone problems are complex and diverse. Energy is essential to our industrial economy, while a sound environment is vital to the quality of life which that economy supports.

We have argued in the past that issues arising from the development of coastal resources are as significant in the Great Lakes as in saltwater coastal areas. This position includes problems associated with energy facility siting and production. As presented, S. 586 infers that the Great Lakes states would be eligible for funding assistance under the proposed grant programs. We would strongly oppose any modification of the bill that would restrict these programs to OCS or federal lands related activities.

We favor the legislation's coverage of all forms of energy development. While exploration for oil and gas resources in the Great Lakes is an important issue in Ohio, issues related to the development of nuclear generating plants are also of great importance. It is our concern that S. 586 not be modified to preclude coverage of all energy related issues in the coastal zone.

Lastly, we strongly support the coastal research assistance element of the proposed bill. It has long been our concern that the ecology of freshwater coastal systems has been neglected. Definitive studies of the nature, scope, and extent of freshwater coastal processes are practically non-existent. It is our hope that the provisions in S. 586 will assist us in dealing with this problem.

Senator Ernest F. Hollings
Page 2
May 16, 1975

In closing, our most pressing concerns are for preserving the present scope of S. 586. We welcome this legislation as a vitally important supplement to the coastal zone management program.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Teater". The signature is written in dark ink and is positioned above the typed name.

ROBERT W. TEATER
Director

RWT:sjd



SOCIETY OF EXPLORATION *Geophysicists*

April 21, 1975

APR 23 1975

Honorable Ernest F. Hollings
United States Senate
Washington, D.C. 20510

1974-1975

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BUSINESS OFFICE

Executive Secretary
HOWARD BRECK
P.O. Box 3098
Tulsa, Oklahoma 74101
Tel. (918) 743-1385

Dear Senator Hollings:

On behalf of the Society of Exploration Geophysicists I testified before the hearings of the Committees on Interior and Insular Affairs and Commerce on April 8, 1975, concerning OCS development. Unfortunately I was not privileged to have you in attendance at the time of my testimony. I assume that you received a copy of my statement; if not, one is enclosed.

Subsequently, I received a copy of a speech you delivered April 14 before the Petroleum Equipment Suppliers Association. I was very encouraged by several statements you made in that speech. In particular:

"While there is some thought that a government corporation should be organized to explore and develop the government's resources, the overriding view of Congress is that we should keep the government out of the drilling and production business. I firmly believe that we should keep the government out of the oil business."

Although no mention is made of the geophysical portion of the oil business, I hope you also feel that geophysics exploration should be left to private industry. That approach will certainly ensure a more complete and effective exploration of the OCS.

In this connection, I call your attention to two portions of my testimony--the first paragraph on page 2 and the final paragraph on page 3. Note that while most geophysical data collection manpower and expertise is in geophysical contracting companies, almost all geophysical interpreters and their associated technology are in oil companies. Therefore, it would be impractical for the government to carry on geophysical exploration or even contract such work out. This distribution of manpower and know-how must be kept in mind in the drafting of any OCS legislation.

Honorable Ernest F. Hollings

-2-

April 21, 1975

In the aforementioned speech you also state:

"I want to make absolutely sure that the program developed by Congress is received with approval by the industry and the Interior Department."

This is a very commendable objective, and our Society stands ready to assist you and other government officials in any way appropriate to ensure the optimum development of this nation's offshore petroleum reserves in a manner mutually acceptable to all involved.

Sincerely,



J. Dan Skelton

JDS/cs
Enclosure



George C. Wallace
Governor

R.C. "Red" Bomberg
Director

W.M. "Bill" Rushton
Assistant Director

STATE OF ALABAMA
ALABAMA DEVELOPMENT OFFICE

May 16, 1975

The Honorable Ernest F. Hollings
Chairman, Subcommittee on
Oceans and Atmosphere
United States Senate
Senate Office Building
Washington, D. C. 20510

Dear Senator Hollings:

This is in reply to your letter of May 2, 1975 regarding Senate Bill 586. The staff of the Alabama Development Office and the Alabama Coastal Area Board members have reviewed the Bill. We are in agreement with those changes in and additions to the Coastal Zone Management Act of 1972 as proposed by Bill 586. We feel that the extension of the Act to 1980 and the addition of sections related to the Coastal Impact Fund, Interstate Coordination Grants to States, and Coastal Research Assistance will be positive additions to the Act.

We appreciate your continued interest in coastal zone affairs. Thank you for giving us an opportunity to review the Bill.

Sincerely,

Luther W. Hyde

LWH:bh



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COASTAL AREA MANAGEMENT PROGRAM

71 CAPITOL AVENUE - HARTFORD, CONNECTICUT 06115 (203) 566-7404

May 19, 1975

The Honorable Ernest F. Hollings
Chairman, Subcommittee on Oceans and Atmosphere
United States Senate
Senate Office Building, Room 437
Washington, D. C. 20510

Dear Senator Hollings:

Thank you for giving me the opportunity to review and comment on S. 586.

I fully support the intent and substance of this bill. It recognizes ongoing coastal zone management programs in the various coastal states as the proper vehicle for advance planning of OCS impacts. It also expands and strengthens the CZM Act of 1972 by giving new impetus to coastal zone management programs and added credence to state coastal zone management plans.

Specific comments relative to the various provisions of S. 586 are as follows:

Coastal Impact Fund - The Federal Government has assigned the monumental task of assessing and ameliorating on-shore impacts from OCS development to coastal states without providing the necessary financial resources. If advance planning to maximize the economic effects of OCS development in the Georges Bank Frontier Area and to ameliorate the negative social, environmental, and economic impacts is to occur in Connecticut, then the proposed coastal impact fund or its equivalent must become a reality.

Probable sites in Connecticut for energy resource production or energy facilities will, more than likely, lack suitable public infrastructure. Institutional mechanisms for ameliorating impacts are non-existent. In addition, the time frame is limited, the problems are extremely complex, and Connecticut is faced with a severe fiscal dilemma and spending cutbacks. Therefore, assistance in substantial amounts must be provided.

My specific comments and suggestions regarding this fund proposal are as follows:

1. The impact funds must be 100 percent federal dollars if they are to meet Connecticut's needs.
2. A distinction should be made between planning and management funds and compensatory funds. The proposed funding level of \$200,000,000 annually should be adequate to cover planning and management costs and some of the

initial and continuing construction, facility operation, and service costs required of the coastal states.

3. The proposed coastal impact funding level will be insufficient when the full impacts of OCS development are felt. Perhaps a revenue sharing provision similar to the Mineral Leasing Act should be added to provide a major source of supplemental compensatory funding for the coastal states.

4. The February 5 version of S. 586 provides for the award of coastal impact funds to states adversely impacted by the "development or production of energy resources or by the siting of energy facilities." More recent proposals would restrict grant eligibility to those activities associated with the location, construction, expansion, or operation of an energy facility only. This would appear to exclude such key activities as platform construction and onshore (harbor) support bases. The restoration of the broader language to encompass the impacts associated with the development or production of energy resources, as well as those impacts of energy facilities per se is strongly urged.

5. Broad guidelines for equitable distribution of the planning and management funds should probably be included in the bill.

6. Incentives for impact assessment on a regional basis are necessary for a rational public decision-making process and have been appropriately included in the bill.

Interstate Coordination Grants - Creating financial incentives for interstate cooperation has considerable merit, since such cooperation is necessary to optimize coastal planning and management on a regional basis. Because of the difficulties of encouraging states to work together, I would suggest that 100 percent federal monies be made available and that additional monies for implementation purposes be provided.

Certification of Consistency - The explicit consideration of energy-related facilities is desirable and has been appropriately included in this bill. I would suggest that certification of consistency with a state coastal zone management program be done only when adequate impact information is provided by an applicant.

Financial Aid for Public Access to and Protection of Beaches and Islands - It would appear that this provision would encourage, among other things, access to beaches and islands. Perhaps S. 586 should also include a specific reference to improving public access to the coastline (at locations where beaches or islands may not be involved).

Most of the Connecticut coastline is in private ownership, and access is severely restricted. Property acquisition is an expensive proposition, since much of Connecticut's coastline is developed. In addition, existing federal funding programs for public access and open space acquisition are insufficient to meet growing demands.

(c)

The Honorable Ernest F. Hollings

- 3 -

May 19, 1975

I would suggest that the federal matching share, at least for public access improvements, be increased substantially beyond 50 percent. This would offer stronger incentives for public access improvement and make the program more effective. Given Connecticut's fiscal dilemma and current budgetary restraints, the state has a limited capacity to utilize grant acquisition funds at this time. This situation will, hopefully, change in the near future.

Extension of the Coastal Zone Management Act of 1972 - This extension will encourage coastal states to make longer term commitments to coastal zone management. While there is considerable and growing support for coastal zone management in Connecticut and elsewhere, additional time and resources will be required to fully implement all aspects of coastal zone management programs and to sustain such programs on a continuous basis. I would support a provision to reduce the coastal states' matching share of funds under Sections 305 and 306.

Sincerely,



Charles D. McKinney
Director

CDM/cr
cc Robert Knecht, OCZM

State of Florida



JH

DEPARTMENT OF NATURAL RESOURCES

HARMON W. SHIELDS
Executive Director

CROWN BUILDING / 202 BLOUNT STREET / TALLAHASSEE 32304

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ROBERT L. SHEVIN
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GERALD A. LEWIS
Comptroller
THOMAS D. O'MALLEY
Treasurer
DOYLE CONNER
Commissioner of Agriculture
RALPH D. TURLINGTON
Commissioner of Education

Coastal Coordinating Council
309 Office Plaza Drive
Tallahassee, Florida 32301

May 12, 1975

Senator Ernest F. Hollings
United States Senate
Washington, D.C. 20510

Dear Senator Hollings:

Thank you for your letter of May 1st asking for my input on SB 586. I certainly appreciate the opportunity to comment on this most important bill and the opportunity to make suggestions concerning potential modifications to it.

Senate Bill 586, as it is now written, will be of substantial benefit to impacted coastal states. To insure that the benefits to the states are not lost there are several items which, I believe, should not be compromised. The explicit statement of new Section 308 (c) calling for coordination of the coastal impact funds with the states' coastal zone management programs should not be changed in any way. This section is of tantamount importance since it provides for efficient coordination of energy-related development with other coastal activities. Also, the coastal impact funds should remain as 100 percent federal grants, as is now written in the bill. If the impact funding is changed so as to call for state matching funds then Florida would have considerable difficulty in providing the needed matching ratio. Limiting the coastal impact fund to the planning and management of energy facilities associated with the OCS and other federal lands, which you indicated is being considered, would be acceptable to Florida. However, adequate lead time is necessary to develop the plans prior to siting of energy facilities which may impact the coastal zone.

The definition of "development and production" is quite broad in scope. This definition is most advantageous to the coastal states since it permits assistance to states that are likely to be indirectly as well as directly impacted by energy-related activities in the coastal zone. "Development and production" is satisfactory as is now written and should remain intact to allow all impacted states to receive coastal impact grants. The section of SB 586 that calls for "a general plan for the protection of access to

Senator Ernest Hollings
May 12, 1975
Page Two

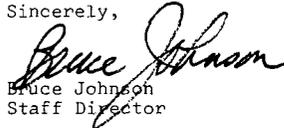
public beaches and other coastal areas. . ." is most important to Florida. This section will enable Florida to contend with development pressures that are threatening to close off public access to Florida's numerous beaches; this is a problem which, up to the present, Florida has had substantial difficulty in dealing with. This section should not be amended.

Besides the sections that should remain essentially unchanged, several sections should be considered for modification. The 50-50 federal-state funding ratio for "acquisition of lands to provide for protection of and access to public beaches and preservation of islands" should be increased to allow greater federal participation. The high cost of beach areas and islands in Florida would probably prohibit substantial state participation in this program with a 50-50 funding requirement. Also, a reduction in the state matching requirements to 20 percent under sections 305 and 306 would be most helpful to Florida. The state's 1975-76 coastal zone management budget is likely to satisfy the minimum state matching requirement under section 305. However, continuation of current funding trends might result in Florida's inability in future years to appropriate the 33-1/3 percent necessary under current coastal zone management guidelines.

I hope that these comments are useful to you. If I can provide you with additional information, please feel free to call on me.

With kind regards,

Sincerely,



Bruce Johnson
Staff Director

BJ:rss



JAMES B. LONGLEY
GOVERNOR

STATE OF MAINE
OFFICE OF THE GOVERNOR
AUGUSTA, MAINE
04800

May 28, 1975

Senator Ernest F. Hollings
U. S. Senate
Senate Office Building
Washington, D. C. 20510

Dear Senator Hollings:

Since offering our comments on your bill S. 586 that would amend the Coastal Zone Management Act of 1972, we have learned of a potential modification which would limit the use of coastal impact funds to the planning and management required to cope with only energy facilities. This possibility causes us consternation and compels me to send along some additional thoughts. I hope you will find them useful even at this late date.

We still believe the basic intent of the bill is laudable. Studying, planning for and managing the consequences of energy resource development which would affect the coastal zone seems like an appropriate function of the Coastal Zone Management Program. Expanding and strengthening the the Coastal Zone Management Act for this purpose would be a major step forward, especially in view of the range and magnitude of onshore and nearshore impacts likely to accompany offshore oil development in frontier areas. Given the sudden prospect of OCS development and the massive impacts that may result, the unanticipated nature of these impacts, and the strained fiscal situation in most states, major new Federal funding represents the only hope of coping effectively with the coastal zone consequences of offshore oil and gas development.

Simply put, we need the money, and I think an adequately funded Federal "coastal impact fund" is essential. The Federal government has made it clear that the states will be expected to take on a major role in assessing and managing

Senator Ernest F. Hollings
Page 2

the onshore impacts of OCS activities. This will take money and time to do well. Particularly in New England and especially in Maine, where we have no history of large-scale oil-related development and unique, fragile coastal resources to protect, we need the kind of financial help proposed in S. 586.

This brings me to the central point of this letter. The original draft of S. 586 called for the establishment of a fund to provide grants to coastal states in order to help them plan for onshore development in the coastal zone, construct public facilities and provide public services made necessary by a wide range of activities associated with the development or production of energy resources or the siting of energy facilities. The broadness of this phrasing seemed appropriate, particularly considering the scale and complexity of activities undertaken to explore and develop offshore oil resources.

Later drafts of the bill, however, appear to restrict the funds to planning and compensation for impacts arising solely from the energy facilities per se. I think this limitation would lead to a dangerous and unwise fragmentation of a complex planning problem. Additionally, it would apparently disqualify the states from receiving planning and/or compensation funds for the impacts arising from some major activities associated with offshore oil and gas development -- platform construction and the development and operation of harbor supply bases, for example. I think it is imperative to restore the original coverage (including OCS exploration activities) so that all the onshore impacts of OCS oil development can be managed comprehensively, and so that states can be compensated for any net adverse impact attributable to OCS development, not just those arising from "energy facilities".

This issue of the coverage of the impact funds is our overriding concern. Other observations regarding possible changes in S. 586 are:

1. The separation of planning and compensation funds, as I understand you now intend, would seem to be a sound idea. In this case, the planning funds should be 100% grants.

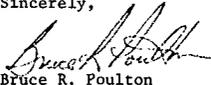
Senator Ernest F. Hollings

Page 3

2. Limiting the use of the funds to the coastal zone may be too restrictive, particularly considering the possibility of locating refineries at inland sites (which may be out of the "coastal zone". Perhaps the limiting geography should be a coastal State (as defined in the Coastal Zone Management Act).
3. It would seem sensible to distribute the planning funds somehow proportionally to the probable impacts of OCS development on each affected state. Some expression of this intent could be incorporated into the bill.
4. The section about interstate coordination seems particularly commendable, especially those aspects that would act to reinforce the desire on adjacent states to cooperate. In this sense, the prior approval of interstate agreements or compacts is laudable, although I think 100% Federal money will be needed to make the intended cooperation a reality.

In sum, we remain highly supportive of your initiative to amend the Coastal Zone Management Act to deal explicitly with the issue of energy development, and we urge you to draft the broadest possible legislation dealing with the full range of impacts that are associated with energy development and production.

Sincerely,



Bruce R. Poulton

BRP/gph W-2239 & 2240



HERBERT M. SACHS
DIRECTOR

STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES ADMINISTRATION
TAWES STATE OFFICE BUILDING
ANNAPOLIS, MARYLAND 21401

MAY 13 1975

May 12, 1975

Senator Ernest F. Hollings
Chairman, Subcommittee on Ocean
and Atmosphere
Washington, D.C. 20510

Dear Senator Hollings:

Thank you for offering an opportunity to comment on S. 586, The Coastal Zone Environment Act of 1975. Although the views presented here generally reflect positions taken in the past by the state of Maryland, they are not stated here as the official policy of the Governor.

1. Coastal Impact Fund. The rubric "revenue sharing" is currently being used to describe two separate issues: the right of adjacent states to share in revenues earned on contiguous public lands, a principle recognized for terrestrial public lands of the U.S.; and compensation to adjacent states to cover demonstrable adverse impacts resulting from offshore operations.

The two central points of the fund are:

a) Front end money. As written, S.586 would provide for front end money to plan for and ameliorate the consequences of OCS development, and to construct public facilities made necessary by OCS and energy development. Your letter to me, dated, May 1, 1975, touches on two points that are directly related to the importance of front end money in providing public facilities and services: first, you note that your Committee is considering restricting the use of front end money to planning and management purposes; second, that states are already encountering difficulties in meeting matching provisions in federal Coastal Zone grants. There is an inconsistency in these two phrases: it is precisely because state budgets are already straining and can not provide the massive outlays needed to provide public infrastructure in energy development areas, that provisions should be retained in the Fund to provide the monies needed for public facilities and services. Front end money for planning only would amount to just half a bet, when the stakes are the immense recreational and environmental values of the coastal zone.

b) 100% funding. As stated above, and in your letter, state budgets are already hard pressed to meet matching provisions of grants. The 100% funding commitment in this area reflects the federal government's firm commitment to consider all coastal values during the energy facility development process.

The Coastal Impact Fund treats the "compensation" aspects of revenue sharing, and ignores the perceived rights and interests of states adjacent to public lands. We would view with unqualified favor a revenue sharing formula that recognizes both compensation claims and sharing rights. Under such a scheme a \$200,000,000 compensation fund would be overly generous, while a 50-50 state-federal split of OCS revenue also would not be equitable. Whatever, the amounts finally agreed to, Maryland considers both grants-in-aid for compensation and revenue sharing principles and terms proclaimed and protected by law, as important elements in a revised offshore resources program.

2. Interstate Coordination Grants. The Mid-Atlantic Governors' Coastal Resources Council (MAGCRC) has been formed to develop coordinate and promote the common OCS policy interests of the Governors of New York, New Jersey, Delaware, Maryland and Virginia. At present, this group works on an ad hoc basis to develop relationships with federal agencies involved in energy affairs, and to conduct policy and planning studies of related issues of regional concern. Sec. 309 of S.586 would permit the MAGCRC to develop, as OCS energy resources are developed, into an important focus of regional coordination without placing a greater financial burden on the states.

3. Coastal Research Assistance. Sec. 310 would establish grants to promote coastal related research and training programs. Although these provisions would support valuable programs, questions remain regarding the relationship between Sec. 310 and Sec. 312 of the coastal zone management act of 1972, which provides grants for the purchase of estuarine sanctuaries. The relationship between Sec. 310 and Sec. 312, remains unclear. Is it feasible to establish a combined estuarine sanctuary, research and education program?

4. Extension of Sec. 305 Grants to 1980. Several states are developing Coastal Zone Management programs in response to a state legislative mandate. Others, including Maryland, are operating under administrative orders. States without the legislative momentum can be expected to proceed more slowly to a management mode of operation. Extension of the program development grants will provide more time for those state programs that are operating without legislative authority to develop a constructive workable approach to Coastal Zone Management.

5. Reducing Sec. 305 and 306 state matching requirements to 20%. This provision would permit the state match to cover the increased federal Coastal Zone Management allotments that can be expected in the next few years. Maryland's state matching funds already are stretching to cover supplemental OCS appropriations expected this year. The 20% rule would be a welcome indication of federal understanding of state problems.

6. Beach Provisions. At present only 3% of the shorelands of Chesapeake Bay are in public ownership. Maryland Law S.840, enacted this year (copy attached) provides limited funds for the purchase of beach lands fronting on the ocean. The beach provisions in S.586 would provide a planning element to Maryland's fledging public beach access program, and would double the purchasing power of limited state funds that are already committed to purchasing beach lands. This increased funding capability could provide impetus for extending our beach access program to the Chesapeake Bay shoreline.

The above six points express our interpretation of the significant provisions of S. 586. Thank you again for this opportunity to review this significant legislation.

Yours truly,



Charles A. Bookman
Natural Resources Planner
Coastal Zone Management

CAB:fam

(Not Yet Signed By Governor)

SENATE BILL No. 840.

Introduced by Senators Hoyer, McGuirk and Crawford

Read and Examined by Proofreader:

Proofreader.

Proofreader.

Sealed with the Great Seal and presented to the Governor, for his approval this _____ day of _____ at _____ o'clock, _____ M.

President.

CHAPTER 91

AN ACT concerning	42
Beach Erosion Control District	45
POR the purpose of [[providing that certain activities within beach erosion control districts shall be reviewed and approved, or disapproved, by the Department; defining beach erosion control districts; providing certain review criteria;]] <u>creating and defining a certain beach erosion control district and prohibiting for certain reasons certain activities related thereto; providing that open space program funds be used for any taking of property rights constitutionally guaranteed;</u> providing a finding of legislative intent; and generally relating to [[regulation of these activities]] <u>beach erosion control on Atlantic Coast beaches.</u>	49 50 51 52 53 54 56 57 58
BY repealing and re-enacting, with amendments,	60
Article - Natural Resources	63

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.
[Brackets] indicate matter stricken from existing law.
[[Double brackets]] indicate matter stricken out of bill.
Underlining indicates amendments to bill.

SENATE BILL No. 840

Section 8-1101 [[and 8-1105]]	65
Annotated Code of Maryland	67
(1974 Volume and 1974 Supplement)	68
<u>BY adding to</u>	71
<u>Article - Natural Resources</u>	74
<u>Section 8-1105.1</u>	75
<u>Annotated Code of Maryland</u>	76
<u>(1974 Volume and 1974 Supplement)</u>	77
SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF	80
MARYLAND, That [[Sections 8-1101 and 8-1105]] <u>Section</u>	81
<u>8-1101</u> of Article - Natural Resources, of the Annotated	84
Code of Maryland (1974 Volume and 1974 Supplement) be and	86
[[they are]] <u>it is</u> hereby repealed and re-enacted, with	
amendments, to read as follows:	87
Article - Natural Resources	90
8-1101.	93
The General Assembly determines and finds that lands	96
and waters comprising the watersheds of the State are	97
great natural assets and resources. As a result of	98
erosion and sediment deposit on lands and in waters	99
within the watersheds of the State, these waters are	
being polluted and despoiled to such a degree that fish,	100
marine life, and recreational use of the waters are being	101
affected adversely. IN ADDITION THE GENERAL ASSEMBLY	
FINDS AND DECLARES THAT LAND MOVEMENT AND DISTURBANCE	102
ACTIVITIES ON ATLANTIC COAST BEACHES EAST OF [[THE	103
DUNES]] <u>CERTAIN NATURAL AND PHYSICAL CONTOURS AND</u>	104
<u>ELEVATIONS OF THE BEACH ENDANGERS THE INTEGRITY AND</u>	105
<u>CONTINUITY OF THE [[(DUNE)] BEACH SYSTEM WHICH INCLUDES A</u>	106
<u>DUNAL SYSTEM, PREVENTS ADEQUATE MAINTENANCE, SHORE</u>	107
<u>EROSION AND SEDIMENT CONTROL, AND STORM PROTECTION OF</u>	108
THESE AND ADJACENT AREAS, AND RESULTS IN THE IMPOSITION	
OF ADDITIONAL FINANCIAL BURDENS ON THE CITIZENS OF THE	109
STATE. To protect the natural resources of the State,	111
the Secretary shall adopt criteria and procedures for the	112
counties and the local soil conservation districts to	
implement soil and shore erosion control programs. These	113
procedures may provide for Departmental review and	114
approval of major grading, sediment, and erosion control	115
plans.	
[[8-1105.	117
(a) The provisions of § 8-1104 do not apply to any	120
State unit. If a State unit undertakes any land	121
clearing, soil movement, or construction activity, the	122
Department shall review and approve this action.	

(B) (1) IN ADDITION TO THE PROVISIONS OF § 8-1103	124
AND § 8-1104, ANY LAND CLEARING, SOIL MOVEMENT OR	125
CONSTRUCTION ACTIVITY UNDERTAKEN BY ANY PERSON WITHIN THE	126
BEACH EROSION CONTROL DISTRICT FIRST SHALL BE REVIEWED	
AND APPROVED, APPROVED CONDITIONALLY, OR DISAPPROVED BY	127
THE DEPARTMENT AND THE APPROPRIATE SOIL CONSERVATION	128
DISTRICT. THE BEACH EROSION CONTROL DISTRICT CONSISTS OF	129
THAT LAND BORDERED ON THE NORTH BY THE BOUNDARY LINE	
BETWEEN THE STATE OF MARYLAND AND THE STATE OF DELAWARE,	130
BORDERED ON THE EAST BY THE WATERS OF THE ATLANTIC OCFAN,	131
BORDERED ON THE SOUTH BY THE BORDERLINE BETWEEN THE STATE	132
OF MARYLAND AND THE STATE OF VIRGINIA, AND BORDERED ON	
THE WEST BY A LINE WHICH COINCIDES, MORE OR LESS, WITH	133
THE WEST CREST OF THE EXISTING NATURAL OR ARTIFICIAL DUNE.	134
(2) IN REVIEWING PROPOSED PLANS, THE	136
DEPARTMENT SHALL CONSIDER AT LEAST THE FOLLOWING	137
CRITERIA:	
(I) THE OVERALL INTEGRITY AND	139
CONTINUITY OF THE NATURAL DUNE AND BEACH SYSTEM,	140
INCLUDING EXISTING CONDITIONS IN THE DEVELOPED, PARTIALLY	
DEVELOPED, AND UNDEVELOPED REACHES OF THE SYSTEM;	141
(II) THE DYNAMICS OF THE COASTLINE	143
PROCESSES;	
(III) THE RELATIONSHIP OF DEVELOPMENT TO	145
NATURAL AND PROPOSED PROTECTIVE SYSTEMS; AND	
(IV) THE NATURE AND LOCATION OF THE	147
PROTECTIVE MEASURES TO BE UTILIZED.	
(3) THE DEPARTMENT SHALL ADOPT CRITERIA AND	149
PROCEDURES TO IMPLEMENT THE NECESSARY BEACH PROTECTION	150
PROGRAM, INCLUDING THE ESTABLISHMENT OF SPECIAL DISTRICTS	151
OR ORGANIZATIONS.]]	

SECTION 2. BE IT FURTHER ENACTED, That new Section 154
8-1105.1 be and it is hereby added to Article - Natural 155
Resources, of the Annotated Code of Maryland (1974 Volume 156
and 1974 Supplement), to read as follows:

Article - Natural Resources 159

8-1105.1. BEACH EROSION CONTROL DISTRICT 162

(A) A BEACH EROSION CONTROL DISTRICT IS CREATED 164
WHICH CONSISTS OF THAT LAND BORDERED ON THE NORTH BY THE 165
BOUNDARY LINE BETWEEN THE STATE OF MARYLAND AND THE STATE 166
OF DELAWARE, BORDERED ON THE EAST BY THE WATERS OF THE
ATLANTIC OCEAN, BORDERED ON THE SOUTH BY THE BORDERLINE 167
BETWEEN THE STATE OF MARYLAND AND THE STATE OF VIRGINIA, 168
AND BORDERED ON THE WEST BY A LINE WHICH COINCIDES, MORE 169

OR LESS, WITH THE WEST CREST OF THE EXISTING NATURAL DUNE ON ASSATEAGUE ISLAND, AND IN OCEAN CITY, IS A MUTUALLY APPROVED LINE TO BE KNOWN AS THE STATE-OCEAN CITY BUILDING LIMIT LINE WHICH COINCIDES, MORE OR LESS, WITH THE EXISTING OCEAN CITY BUILDING LIMIT LINE AND ON OCCASION MAY COINCIDE WITH THE CREST OF THE LITTORAL SYSTEM. THE DEPARTMENT, AFTER SURVEYING, [[PLATING]] PLATTING AND RECORDING THE STATE-OCEAN CITY BUILDING LIMIT LINE, HAS THE AUTHORITY TO DESCRIBE BY REGULATION THE STATE-OCEAN CITY BUILDING LIMIT LINE. THE DEPARTMENT SHALL PERFORM THE SURVEY, PLATING AND RECORDING AT ITS OWN EXPENSE WITHIN 30 DAYS OF THE EFFECTIVE DATE OF THIS ACT.

(B) FOR THE PURPOSES OF MAINTAINING THE ATLANTIC COAST BEACHES OF THE STATE AND THE BEACH EROSION CONTROL DISTRICT, THE INTEGRITY AND CONTINUITY OF THE DUNAL SYSTEM AND ASSURING ADEQUATE MAINTENANCE THEREOF, TO PROVIDE FOR SHOPE PROSION AND SEDIMENT CONTROL AND STORM PROTECTION, AND TO MINIMIZE STRUCTURAL INTERFERENCE WITH THE LITTORAL DRIPT OF SAND AND ANY ANCHORING VEGETATION, ANY LAND CLEARING, CONSTRUCTION ACTIVITY, OR THE CONSTRUCTION OR PLACEMENT OF PERMANENT STRUCTURES WITHIN THE BEACH EROSION CONTROL DISTRICT IS PROHIBITED. THIS PROHIBITION DOES NOT APPLY TO ANY PROJECT OR ACTIVITY APPROVED BY THE DEPARTMENT AND THE APPROPRIATE SOIL CONSERVATION DISTRICT SPECIFICALLY FOR STORM CONTROL, BEACH EROSION AND SEDIMENT CONTROL, AND MAINTENANCE PROJECTS DESIGNED TO BENEFIT THE BEACH EROSION CONTROL DISTRICT.

(C) IF THE PROHIBITIONS IMPOSED FOR THE BEACH EROSION CONTROL DISTRICT WOULD CONSTITUTE A TAKING OF A PROPERTY RIGHT WITHOUT JUST COMPENSATION IN VIOLATION OF THE CONSTITUTION OF THE UNITED STATES OR THE CONSTITUTION OF MARYLAND, FUNDS UNDER PROGRAM OPEN SPACE MAY BE USED TO PURCHASE OR OTHERWISE PAY FOR ANY PROPERTY TAKEN.

(D) THE PROVISIONS OF THIS SECTION ARE IN ADDITION TO THE PROVISIONS OF SECTION 8-1103 AND SECTION 8-1104.

SECTION [[2.]] 3. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 1975.

Approved:

Governor.

President of the Senate..

Speaker of the House of Delegates.



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Administration
 STATEWIDE PLANNING PROGRAM
 265 Melrose Street
 Providence, Rhode Island 02907

May 19, 1975

The Honorable Ernest F. Hollings, Chairman
 Subcommittee on Oceans and Atmosphere
 United States Senate
 Senate Office Building
 Washington, D. C. 20510

Dear Senator Hollings:

We are pleased to respond to your letter of May 1, 1975, requesting state comments on S586. As you know, Rhode Island is in the final quarter of its first program year of sec. 305 planning, and the state is hopeful that a complete management program can be effected after one more year of planning under section 305. Most importantly, the state has had a coastal zone management mechanism, the Coastal Resources Management Council, since 1971, and as a result, planning and management has proceeded together to prepare for future needs as well as to meet daily pressures.

After reading the proposed changes to the Coastal Zone Management Act of 1972, we wish to offer the following observations:

First, we support the efforts of the Office of Coastal Zone Management. We have found that office to be sensitive to the needs of the state while maintaining a posture designed to speed the state's effort. OCZM has been receptive to state ideas, and has accommodated the idiosyncrasies that exist in state programs. Any efforts to establish OCS and energy related federal mechanisms outside OCZM would tend to create additional bureaucratic levels within the states and compound the problems of coordination and communication.

Moreover, under the current arrangement, a semblance of balance tending toward the real is struck between the natural resources conservation intent of the CZM Act, and its administration by OCZM, and the resource and economic development orientation of the Department of Interior.

There will be an overwhelming need for the OCS impacted Coastal states to avail themselves of the 100 percent annual grants proposed in the new section 308, "Coastal Impact Fund". This key section in the proposal is of special interest to us because Rhode Island, and the New England region, is concerned with the extraordinarily high regional energy costs and the needs to develop future alternative energy sources and facilities. In order to assure best uses of the land when siting these facilities, we now have an urgent need for careful planning, especially to develop land use guidelines and land capability criteria, as well as to determine socio-economic impacts. Moreover, considerable public investment will be required to minimize the impact of these facilities, should they occur, on the public infrastructure.

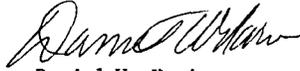
Section 309, "Interstate Coordination Grants to States" can have particular use in New England where there is increasing awareness of the regional aspects of resource development and conservation. Funding under this section will serve to strengthen the entire regional approach, and enable the region to develop cost benefit ratios for regional facilities and to locate optimum sites for energy and energy related development.

Section 310, "Coastal Research Assistance" has some particular benefits, most notably its manpower training emphasis. The three year limitation on this section will inhibit overdevelopment of coastal resources manpower capabilities while enabling the state to staff its management programs with qualified personnel.

We are currently investigating several potential estuarine sanctuary areas, but are concerned that the current legislated deadline will pass before we can submit our best proposal or commit state funds. While we support the increase in estuarine sanctuary funding to \$50 million annually through fiscal year 1980, we feel the 50 percent match requirement is prohibitive in view of current state fiscal difficulties which are realistically expected to plague Rhode Island for the next few years.

Thank you for this opportunity to provide the state's perspective on S586. If we can be of further assistance in this or any related matter, please contact us.

Yours very truly,



Daniel W. Varin
Chief

DWV/IRW/bam

cc: Mr. John Lyons
Mr. Dennis Murphy
Mr. Stuart O. Hale



State of Wisconsin \ DEPARTMENT OF ADMINISTRATION

Patrick J. Lucey
Governor

Anthony S. Earl
Secretary
James B. Wood
Deputy Secretary

1 WEST WILSON STREET
MADISON, WISCONSIN 53702

May 16, 1975

WNY 2 2 1975

Senator Ernest F. Hollings
Senate Office Building
Washington, D.C. 20510

Dear Senator Hollings:

Let me preface my response to your letter of May 1 by stating that the wisdom which went into the Coastal Zone Management Act of 1972 also found its way to the federal office implementing the Act. As a result the Coastal Zone Management Development Program in Wisconsin is a flexible working program, supported by responsive federal assistance and a minimum of bureaucratic paper shuffling. We hope this "unusual" situation does not change.

With that backdrop, let me address some of the issues raised in S. 586. First of all, Great Lakes states still suffer from a modest case of "invisibility" at the national level. The coastal impact fund provides us with no assistance in dealing with the pressing problems of shore erosion or federally-regulated fluctuating lake levels. Consideration should be given to provide incentives to the Great Lakes states to ameliorate the impact of shore erosion problems. Of course, management plans to prevent future development of erosion-prone areas should be closely linked to erosion damage aids. Specific reference might be made to the applicability of the Flood Disaster Act of 1973 to erosion damage, including clarification of definitional language which has impeded this aspect of the program.

A revision of the time frame for Section 305 from three to four years is a definite aid. Even four years, however, may be inadequate to enact the state level legislation needed to meet the requirements of the Act. Wisconsin has a two year legislative cycle. We anticipate that after two years of public dialogue, data collection and policy analysis we may be ready to introduce a legislative package midway in our third grant year under Section 305. Assuming the best of conditions, a full legislative session would be necessary for enactment. It is expected that within states where coastal zone legislation ends in impacting "my property," enactment of requisite legislation will be a time consuming process. We recommend therefore that states be provided assistance under Section 305 for five years.

Senator Ernest F. Hollings

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Consistent with the Legislature's involvement in the development of a coastal zone management program is their release of funds as a portion of the state's match. While a one-third match places a burden on states during these times of austerity, a 20% match may be too low. Most states can meet that commitment with solely in-kind efforts. In doing so, legislative obligation of funds, and therefore commitment might be avoided. We view the possible lack of an "earnest money" commitment to be detrimental to the overall program and a potential threat to budding legislative interest and support in any coastal zone legislation. We agree that a reduction of the state match is beneficial, but suggest consideration be given to a 25% match versus 20%.

We are highly supportive of the proposed new Section 309. The water quality, fish management, shore erosion, port development and recreational issues of the coastal area are all multi-state in nature. This section allows interstate efforts to address these problems without drawing from the limited resources of Section 305.

During the past year the state was faced with the recommendations of the International Joint Commission to modify its Great Lakes lake level control plan. Wisconsin citizens on Lake Superior strongly reacted to the recommendations and sought assistance from the Governor. Our first year coastal zone program was already well underway and funds were not available to research and analyze the voluminous reports of the IJC. Section 310 as proposed, provides the flexibility to respond to such research needs and we are highly supportive of its inclusion. In our specific example, we have had to delay analysis until second year grant funding was available, a delay of about seven months.

The provision for financial aid for public access to and protection of beaches and islands receives our strong endorsement. Of the 620 miles of shoreline in Wisconsin only 14% is publicly owned. These public access points are generally located away from major urban centers therefore providing access only to those sufficiently mobile to travel to them. A major policy analysis of this issue is currently underway to define alternative state actions to improve the situation. Michigan and Wisconsin are presently working together to study the feasibility of establishing an interstate park made up of a chain of 16 islands between Door and Garden Peninsulas. The financial aid proposed in S. 586 would greatly assist in addressing and resolving such important issues.

We hope these comments are of assistance to you in preparing the amendments to the act. If further clarification is desired, we would be glad to respond. We are particularly concerned with the problems of

Senator Ernest F. Holling
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shore erosion and hope that at some future date representatives of the Great Lakes states could meet with you and your staff to discuss this issue.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen M. Born". The signature is written in a cursive style with a horizontal line underneath.

Stephen M. Born, Director
State Planning Office

cc: Senator Gaylord Nelson
Senator William Proxmire
Congressional Delegation



TERRITORY OF GUAM
OFFICE OF THE GOVERNOR
AGAÑA, GUAM 96910
U.S.A.

May 16, 1975

Senator Ernest F. Hollings
Chairman, Subcommittee on
Oceans and Atmosphere
United States Senate
Washington, D.C. 20510

Dear Senator Hollings:

I appreciate this opportunity to present my thoughts on S. 586 to you and the Subcommittee on Oceans and Atmosphere. There are several sections I wish to endorse.

An extension of the effective period of the Act to 1980 would allow more time for coastal states not now participating in the program to assess its value and benefits to them, thereby giving them further incentive to participate. From our viewpoint, extending the time limit of Section 305 to June 30, 1980 will allow flexibility to insure completion of the development phase of our management plan beyond our scheduled 1977 completion.

I also support the reduction of matching funds from the present 33 1/3% to 20%. Guam is facing extreme financial problems, and this change in matching ratio may well permit the program to continue here on Guam should financial problems become worse.

I favor the establishment of the Coastal Impact Fund. Guam already enjoys a good working relationship between the Bureau of Planning and the Guam Energy Office, and could effectively coordinate energy and coastal zone consideration. This amendment would further encourage much-needed cooperation in other areas.

Finally, I strongly support making financial aid available specifically for access to and protection of beaches and islands. The Guam Legislature has recognized the serious access problems its citizens face, and has passed legislation relative to this problem. Having federal funds available to help implement their efforts will improve our effectiveness.

Thank you for the opportunity to express my feelings on this legislation.

Very truly yours,

Joseph J. Partic
for PAUL B. SOUDER
Director of Planning