OUTER CONTINENTAL SHELF LEASING PROGRAM

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

SECOND SESSION

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OUTER CONTINENTAL SHELF LEASING PROGRAM

TUESDAY, OCTOBER 8, 1974.

WITNESSES

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PAUL VETTERICK, CHIEF OF DIVISION OF BUDGET PROGRAM DEVELOPMENT, BUREAU OF LAND MANAGEMENT

Mrs. HANSEN. The committee will come to order.

This morning the Department of Interior is before the committee in response to a directive in the committee's report relative to OCS leasing. Our principal witness this morning is Mr. Whitaker, the Under Secretary.

Mr. Secretary please introduce your staff.

INTRODUCTION OF WITNESSES

Mr. WHITAKER. Yes, Madam Chairman, Jared Carter, Deputy Under Secretary.

Mrs. HANSEN. Mr. Carter was mentioned in the newspapers this morning.

Mr. WHITAKER. We have his leaked memo.

Dr. Vincent McKelvey, Director, Geological Survey; Dr. David E. Lindgren, Deputy Solicitor; Frank Edwards, Assistant Director for Minerals Management, Bureau of Land Management; Dr. Darius Gaskins, Director, Office of Minerals Policy Development; and of course we have our old standby, Frank Wiles, whom we could not work without and also Mr. Duke Ligon, Assistant Administrator of FEA.

I think that represents the main group here.

Mrs. HANSEN. May I say it is a pleasure to welcome all of you, in spite of almost a brand new cast. Every time I look around Interior has a brand new cast of people. Mr. Whitaker, please proceed with your opening remarks.

Mr. WHITAKER. Thank you, Madam Chairman.

We have submitted to you what is referred to as a technical paper. My statement will be a highlight of that technical paper to hopefully bring it into focus. The thrust of it will be why we think a 10-million acre OCS program in calendar year 1975 is a logical objective and in the Nation's best interest.

[The technical paper follows:]

ACCELERATION OF OUTER CONTINENTAL SHELF LEASING

"Technical Paper"

I. EXPANDED OCS LEASING'S ROLE IN A COMPREHENSIVE ENERGY STRATEGY FOR THE UNITED STATES

A question has been raised as to the appropriate role for the offshore to play in meeting our Nation's energy requirements. Also information has been requested on the relationship of potential offshore production to total reserves and to our total future energy mix.

A. Overview

The petroleum and natural gas resource potential of the United States equals 200 to 400 billion barrels of oil and 1,000 to 2,000 trillion cubic feet of natural gas. Of these amounts, 32.5 percent of the oil is attributable to the offshore and 39.5 percent of the natural gas. The acreage in our accelerated program is expected to contain 8.4 to 16.5 billion barrels of oil and 38.4 to 77.8 trillion cubic feet of natural gas. In terms of 1985 production this would mean 2 to 3 million barrels per day of oil and 10 to 19 billion cubic feet of natural gas per day.

We are unable to determine at this time the exact contribution these resources will make to our total domestic energy picture. Projections as to what our energy mix will be in future years are currently being finalized in connection with Project Independence.

Imports of petroleum in 1973 amounted to 2.264 billion barrels. At current world oil prices, this amount of oil costs $23 billion to import. Even if dependence on foregin sources of oil involved no potential international ramifications, the United States would still not want to import $23 billion worth of oil, if some or all of this oil could be produced domestically for less cost. Preliminary reports from the Project Independence task force indicate that in all likelihood domestic oil and gas operations will need to be increased and this increase will need to come from accelerated leasing on the OCS.

It is evident that OCS oil can be produced for considerably less than the current world price of oil. The recent high bonus prices of OCS leases are one indication that OCS oil can be produced for far less than the value of the oil obtained. Not only is this true of leases currently being sold in the Gulf of Mexico, but it also appears to be true in most if not all of the frontier OCS areas where future leasing will take place.

The Department has made some initial estimates of the transportation and extraction costs per barrel for oil from four OCS frontier areas. These estimates range from about $1.50 for the Atlantic to $3.50 for the Gulf of Alaska. At the current world price of about $10 per barrel, OCS producton in these frontier areas is clearly much cheaper than the price of imported oil.

The importation of this high cost petroleum continues to have inflationary effects. In simple terms, the importation of oil requires that sooner or later real resources must be exported to foreign countries to pay for oil imports. The resulting increased export demand for U.S. products will tend to raise domestic prices of these products for American consumers.

With domestic OCS oil production costing far less than the price being charged for imported oil, there is every reason to more rapidly develop this domestic energy resource. Since 1954, the Department has leased to private developers almost 10 million acres on the OCS. This is only a small percentage, however, of the potentially productive acreage remaining to be leased. Thus, an accelerated leasing program offers great potential for increased OCS oil production at a tremendous cost savings over oil imports.

In addition to oil imports, other energy alternatives have been analyzed. However, despite the possibility of alternative sources, there is no combination that will relieve us in the near future from our dependency on foreign imports. If we can produce offshore oil and gas at less cost to our economy than imported oil, it is essential that we proceed with the acceleration of this program.

B. Alternatives to Accelerated OCS Leasing

1. *Reduce Energy Demand.*—Lowering domestic energy demand could possibly obviate the need for rapidly accelerating the rate of OCS leasing. In the past the American people have cut back their demand for energy when asked to do so. However, voluntary conservation by the consumer usually continues only as long as the "crisis" lasts. In the long run, voluntary conservation alone cannot be depended on to significantly reduce energy use unless conservation is cost effective.

There are some indications that reduced energy demand can be realized with minimum negative results. One such sign is the popular endorsement of zero population growth. Limiting the number of potential energy consumers is a sure method for keeping growth in energy demand low. Additionally, recent efforts by the industrial sector of the economy in conjunction with the Department of Commerce have shown that curtailed energy demand can be achieved without adverse effects on productivity or output. It should also be noted that if mass transit continues to substitute for the automobile and the airplane, then effective energy demand will be reduced and real energy savings can occur.

Rate of introduction of energy conservation will depend largely on Government policies, removal of institutional constraints, promotion of incentives and regulations to induce conservation and investment in more efficient plants and processes. Rates of retirement of existing structures, equipment, et cetera and its replacement by more energy efficient elements, and prices of energy sources can also be used to promote energy conservation.

In the residential-commercial sector, the most promising conservation options are increased building insulation and an increased awareness by consumers of energy alternatives in housing construction and appliance choice. Options in industry are more recycling of energy intensive materials, use of energy saving materials in manufacturing and construction, and investment in energy saving processes and equipment. In transportation, increased auto efficiency is a promising short-term option. In the longer term, conservation could be effected by a reversal of the trend to less energy efficient modes of transport.

The prospect of reduced energy demand, however, does not warrant forgoing our plans for the OCS. Energy demand is directly related to life style. Unless tremendous increases in energy efficiency can be demonstrated, reduced demand may correspond with a lowered standard of living.

2. *Increased onshore production.*—Increasing onshore production is not an alternative to accelerated OCS production—all available domestic sources will have to be drawn on to reduce dependence on foreign sources.

According to the Project Independence blueprint interagency oil task force, and to many other recent analyses by academic institutions and industry, domestic oil production will continue to decline for a few years, even though the stimulus of high prices has already accelerated exploration. High prices will also stimulate secondary and tertiary recovery, but even new onshore exploration and increased secondary and tertiary discovery together will not prevent continued decline in onshore production in the contiguous States. According to the oil task force analysis, acceleration of OCS leasing would make possible a cessation of production decline and an increase in total production by 1980. In the maximum production possibility estimates for 1975, about 25 percent of the total would come from the OCS and about 25 percent from northern Alaska. Of the production from other sources, some 60 percent would be the product of secondary and tertiary recovery.

3. *Increase nuclear power.*—Installed nuclear capacity in the United States is presently 25,000 megawatts. Nuclear generators were producing 5 percent of the Nation's electricity by the end of last year and almost half of the electric power capacity under construction involves atomic energy. The number of 1,000-megawatt nuclear plants needed to replace the oil and gas from offering 10 million acres for lease varies depending upon whether the oil and gas is used directly for end uses such as home heating or whether it is used to power the generators for electricity. For the "electricity only" case, complete nuclear substitution would mean constructing between 486 and 972, 1,000-megawatt nuclear generating stations. For the "end uses" examples, this would necessitate adding between 756

and 1,620 nuclear generators to our current supply. Since OCS oil is used for generating electricity as well as end uses, we estimate that to completely substitute nuclear power for the energy produced through offering 10 million acres, from 600 to 1,300, 1,000-megawatt nuclear powerplants would be required. It is doubtful that nuclear power could be accelerated to that extent by 1985 because environmental and licensing consideration are generally prolonging the average leadtime of 10 years. In addition, nuclear power cannot fully substitute for the transportation and petrochemical uses of petroleum.

4. *Increased use of coal.*—The energy shortfalls of recent months have increased interest in coal, our most abundant energy resource. It is estimated that between 1.2 and 2.4 billion tons of coal per year would have to be produced to replace the annual hydrocarbon production from the offering of 10 million acres. If this additional coal were provided by surface mining, then 215 to 480 mines of 5 million short tons annual capacity would be needed. A single mine of this size would employ about 600 persons and have capital cost of $40 million. If, on the other hand, underground mines were used, 600 to 1,200 mines would be needed. Manpower for a single mine would be 1,700 workers and capital expenditures would range from $11 to $23 million. Again, complete substitutions of coal would not be practical, however, in areas such as the transportation sector which relies heavily on petroleum. The transportation sector currently accounts for approximately 53 percent of total petroleum consumption.

Coal extraction can have numerous environmental impacts such as reduction in air quality, lowering the quality of our surface and ground waters due to acid mine drainage, decreasing land quality due to strip mining, and subsidence resulting from underground mining; however, as in other activities that man engages in, these impacts need not result in a degradation of our natural environment. Both the technology as well as State and Federal regulations exist for the purpose of protecting our environment at the same time that our coal resources are being mined. The mining community too recognizes the need to extract this much needed fossil fuel in a responsible manner, and they are moving forward in both research and responsible mining techniques.

II. DETERMINANTS OF EXPANDED OCS LEASING'S FEASIBILITY

Concern has arisen over industry's ability to expeditiously develop the 10 million acres scheduled to be leased in calendar year 1975. The following discussion focuses on projected availability of the capital, equipment, and manpower required by this undertaking. The Department's monitoring of these variables is a continuous effort and updated information will be provided to the committee as it is obtained.

A. Background

The availability of sufficient quantities of exploration and construction equipment is crucial to rapid OCS development. Current shortages in drilling pipe and in onshore and offshore rigs may affect accelerated development of the OCS if the situation does not improve. Production platforms and skilled labor are also in short supply.

Present supply difficulties stem largely from steel shortages that developed under price controls. Much of the technical equipment used on the OCS is fashioned from steel, specifically tubular steel whose low profitability induced curtailed output during the price control years. Eliminating price controls have helped and will continue to help correct this problem. Thus the broad outlook for equipment availability over the next 5 to 6 years is favorable. Persistent spot shortages will be inhibitory in effect. However, the probability that these shortfalls will develop is not sufficient to warrant modifying our proposed objectives.

Expected rig availability for OCS drilling.—During 1971 and 1972, scheduled wildcat OCS leasing was delayed for environmental reasons. This caused a shift of oil company interest to foreign offshore areas where high potential leases were available and as a result, 13 mobile drilling rigs were moved to foreign waters—primarily the North Sea. The availability of leases and the success of foreign drilling have caused North Sea operations to more than double in the past year.

The resumption of leasing in the Gulf of Mexico in late 1972 provided sufficient quality tracts to encourage exploration, thus seven rigs—a 10-percent in-

crease—have been added to OCS drilling. One unit has already returned from the North Sea and another may follow soon.

Industry representatives indicate that with a dependable, accelerated leasing program, including attractive prospects in new frontier areas, they will either keep newly constructed rigs here or return U.S. registered rigs from overseas. It is their best guess, based upon historical patterns of rig movements to better prospects, that 10 percent or more of the rigs estimated for foreign operations could be available for OCS drilling. Therefore, in response to an accelerated leasing schedule, a reasonable estimate of the number of foreign operating rigs that would be available for OCS drilling would be 10 percent of the 259 rigs available for foreign offshore drilling in 1975. Probably the maximum case would be to divert 25 percent of the rigs to U.S. operations. The 10-percent figure nearly could be achieved by retaining for OCS drilling those U.S. constructed rigs to be completed in the remainder of 1974 and 1974 which are now contracted for foreign use.

If 10 percent of the rigs projected for foreign service were made available for U.S. drilling, it would increase the U.S. rig count by 26—or 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.

Over 85 percent of the foreign operating rigs are capable of deepwater drilling and most are of the type required for drilling in the Atlantic and off California. Many of the units are considered acceptable for Gulf of Alaska drilling under most weather conditions.

These estimates show the possible range of increase in domestic rig availability that can occur in 1 year. The above range would not be realistic unless the worldwide rig population proved to be highly mobile with a tendency to concentrate in highly prospective frontier areas, characteristics that have been confirmed by past experience. Given this mobility and the prospective nature of the OCS we foresee that rig distribution will readily acclimate itself to the demands of accelerated leasing.

B. Offshore drilling rigs

As of September 1974, 68 drilling rigs were operating in U.S. waters. Of this number, eight are presently classified as idle—three off Louisiana, two off Texas, and three off the Pacific coast. Idle rigs include those available for contract, those moving between areas or those undergoing major repair. Among the seven rigs added to the total U.S. supply since April 1972, only one is known to have been returned to American waters from foreign operation. One more rig is tentatively scheduled to be returned on U.S. waters from the North Sea.

At the present time, 48 drilling rigs are under construction in domestic shipyards. Nineteen of the rigs are of the semisubmersible type while 16 are of the jackup variety. The 13 remaining rigs are drillships. Taken together these 48 rigs amount to 3 percent of current total world construction. By the end of this year 12 of these rigs should be completed and ready for operation while calendar year 1975 should witness the completion of 17 more rigs. The 19 remaining rigs should be finished in 1976 or later.

The 48 rigs presently being constructed represent the percent ceiling on rig construction capacity in the United States. Testimony at recent FEA hearings indicated that rig-building capacity could be expanded by 20 percent, but a 3-year lag between order and delivery for rigs exists today.

The operating capabilities of drilling rigs is another factor that affects the domestic supply-demand situation. Many of the rigs operating in the Gulf of Mexico, where most current domestic offshore oil and gas drilling occurs, will not be capable of working in deepwater regions although they will be operable in the mid-Atlantic. Thus Gulf of Mexico rigs can be transferred domestically as offshore Gulf of Mexico reserves are exhausted.

As of April 1974, 31 rigs available in U.S. waters were limited to drilling in water depths of less than 100 feet and of this number 14 could not operate in waters over 50 feet. The National Petroleum Council interim report on rig availability shows that by the end of 1974, an expected 84 rigs will be available for U.S. offshore drilling. Of this number, 52 will be capable of operating in water depths over 100 feet, but only 21 will drill in water over 300 feet. The report forecasts that by the end of 1976, the total U.S. rig count may reach 119 units if all rigs now in U.S. waters will remain and all units under construction and not now committed overseas can be retained in the United States.

C. Steel pipe, drilling muds and bits, wire rope, production platforms, and other essential equipment

Tight supplies of essential equipment are a direct consequence of the economic stabilization program. Price controls motivated the steel industry to concentrate on producing high-profit items while neglecting low-profit goods. Tubular steel products are low-profit items. Today's shortages in essential equipment thus reflect steel industry strategy during the era of price controls. Shortages do not demonstrate inadequate capacity or inability to keep pace with expanded OCS development. Moreover, as price increases begin to reflect true demand there will be a positive impact on supply. Thus, despite current difficulties the outlook for the next 5 years is good. Shortages should be erased early next year and subsequent supplies will be adequate.

Presently, tubular steel goods such as pipes, tubings, and casings are in short supply. Independent operators have felt the impacts of these shortages most severely. Most of these shortages arose during the economic stabilization program when the steel industry devoted less effort to the production of lower-profit items such as tubular goods. Recent devaluations of the dollar, encouraging tubular goods exports and limiting their import have also curtailed the availability of these materials.

The scarcity of drill pipe, tubing, and casing has become more critical in the past 8 months, causing cutbacks in drilling plans for majors and independents alike. Exxon expects to fall 20 percent short of its drilling targets in 1974 unless there is an improvement in supplies. Another major producer on the gulf coast will be able to purchase only enough casing for 30–35 percent of this year's planned wells. Steel mills and distributors are allocating the available tubular goods based on a percentage of previous years' purchases.

In case of the drill pipe, there is the additional problem of the lack of facilities for welding tool joints to the drill pipe. Waiting time for new orders of drill pipe has increased to 2 years.

Drill bits, benefiting from ample productive capacity and an insignificant steel requirement, have not caused any supply problems. Supplies of drill muds, on the other hand, fluctuate with the availability of their petrochemical constituents. Drilling muds are now available but the situation could change quickly. Some of the component chemicals used in producing drilling muds are already being allocated.

Wire rope is in scarce supply, again due to critical shortages of steel. On January 1, 1973, it was an "off the shelf" item ; by January 1, 1974, there was a waiting period to 2 years. Production platforms are also in short supply. Platform components, especially steel, are in short supply and the utilization rate of current productive capacity is almost 100 percent. The lead time for a platform is currently between 12 and 18 months.

D. Manpower

The skilled labor necessary in developing the OCS is in somewhat restricted supply at the present time, though there has been an improvement in the situation over the past few months. The major problem seems to be rig and service and supply boat crews. Skilled laborers usually require from 6 to 24 months training to develop the necessary competence. (Some of the more specialized skills are subject to licensing by the Coast Guard and other agencies.) It is expected that improved wage conditions for skilled labor will accompany expanded OCS leasing. This development will attract the manpower needed for efficient offshore operations. Thus, the outlook in this area is also promising.

E. Ancillary Industries

There are a number of other support industries that are critical to the goal of expeditious OCS development. The sophisticated equipment that is required to extract the hydrocarbons and then channel these resources to land, demands highly specialized maintenance and service. Our shipbuilding industry is likewise essential since ocean vessels are involved in almost every phase of OCS operations. Finally, the health of the steel industry and successful OCS development are closely related. These are a few major examples of the many sectors of our economy that are involved directly or indirectly with OCS activity.

A survey of industry publications reveals that the service and supply industry is presently sound. Small shipyard capacity exists so that the vessels that are needed for these tasks can be supplied without problem. The relatively small size of service craft minimizes potential competition with the shipyards devoted to rig and major ship construction.

Major vessel shipyards are working at or near capacity worldwide. Yards in the United States are also heavily committed to the requirements of naval construction. The Shipbuilders Council of America estimates the backlog in the United States at $6.5 billion worth of orders. Domestic shipyards are faced with the problems of capacity and obtaining steel for contract orders. The industry has spent $500 million on expansion in the last 5 years, and plans to spend another $500 million in the next few years.

Steel investment has recently begun to expand. One estimate is that something on the order of $2 billion a year will be necessary to meet expected requirements. While no serious labor problems are expected there is a possibility for maintenance shutdowns in the near future. The plants have been running at capacity for some time.

F. Capital

The capital position of OCS participants, both major and independent, is excellent. In 1973, the oil industry accumulated unprecedented profits. This year's profit outlook is just as promising. In addition to these high-profit levels, there exists additional evidence of the industry's financial strength. Mobil Oil Corp., for instance, is currently purchasing a controlling interest in Marco Corp., a major merchandising firm. This move is expected to cost Mobil in the vicinity of $500 million. Mobil, a vigorous OSC participant, plans to make this purchase in cash. Other major OCS participants. Gulf Oil Corp., for example, have also revealed diversification plans similar in nature and expense to Mobil's. In terms of the major companies, the money is available if attractive prospects are offered for lease.

Fiscal vitality is not limited to the major oil firms. Independent oil companies, bidding individually and jointly with other independents or majors, are winning continually increasing percentages of the leases offered at OSC sales. In the December 1973 OCS sale, independent—bidding within singly or with each other—produced 9 percent of total high bids. In the March and May 1974 sales the respective figures were 32.4 percent and 48 percent. If consortia between majors and independents are included the respective percentages for the three sales are 58.6, 72.8 and 90.1. Despite this success, capital assembly is considerably more difficult for the small independent than it is for the major vertically-integrated firm. As a result, the Department will test royalty bidding on October 16, 1974. In addition, banning joint bidding among the major oil firms in order to promote competition and improve the bidding position of the small independent firm, is currently being considered.

Today, an OCS lease is generally considered one of the best investments available in any market. Thus industrial giants like General Motors have expressed their intention to invest in OSC property as well as utility suppliers. Other industrial investors have demonstrated similar enthusiasm for OCS lease purchases. A second encouraging sign is the innovative financial arrangement that have arisen recently, increasing the number of participants at OCS lease sales. One of the independent oil companies, for instance, recently became a very significant purchaser of OCS leases by raising capital through a unique sale of equity interests in OCS leases. Partnership ventures between industrial oil and gas consumers and exploration and production companies are another example of innovative participatory arrangements designed to improve a bidder's chances for lease acquisition. These joint ventures obtain ownership interests in, or first call on, oil and gas reserves discovered by the organizations in which they participate.

It has been estimated that the oil and gas industry will expend $7.8 billion in capital investments during the year 1974, a 42-percent advance over comparable expenditures in 1973. This increase exceeds the mean rise of 18 percent in 1974 capital outlays projected for all U.S. industry. In addition, the petroleum industry is expected to surpass all other industries in terms of size of increase in capital spending between 1974 and 1973. It is predicted that 75–80 percent of the $7.8 billion capital outlay will be directed into exploration increases or production-expanding activity.

The industry's accessibility to capital funds in the short term appears relatively secure. Capital spending was accelerated without difficulty by 4 percent between 1972 and 1973 and the projected advance between the 1973 and 1974 levels has not been lowered because of foreseeable constraints on capital availability. Also noteworthy was the record-setting $2.1 billion expended in the March 1974 OCS lease sale. The industry's second quarter capital appropriations—the authorizations to spend money before actually placing orders—increased by 125 percent over first quarter appropriations.

For the 16-year period, 1970–85, the Chase Manhattan Bank estimates that the oil industry will require $1.35 trillion for capital expenses. This estimate, computed from 1973 data, represents a 35-percent increase over similar projections based on 1972 data.

WORLDWIDE OIL CAPITAL NEEDS FOR 1970–85

[In billions of dollars]

	Estimates made in 1973	Estimates made in 1972
Areas of spending:		
Exploration production	450	265
Plant and facilities	360	335
Financing	540	400
Total	1,350	1,000
Sources of funds:		
Borrowing, equity, capital recovery	695	735
Profits	655	265
Total	1,350	1,000

Source: Chase Manhattan Bank. The Oil and Gas Journal; Apr. 1, 1974; p. 56.

As shown in the above table, the anticipated proportional contribution of the various sources of capital formation has also been revised. The 1972 forecast has external sources (borrowing and equity funding) plus capital recovery accounting for 73.5 percent of the industry profits. The revised 1973 projection envisions about a 50–50 split in the contribution of each category of capital. This change means that the responsibility of profits to future capital formation is increased by a magnitude of $390 billion. Chase Manhattan provides no explanation for increasing the relative burden attributable to profits in the 1973-based forecaset. However, if profits are to fulfill this geometrically increased responsibility, then they will have to grow at an average annual rate of 18 percent, more than double the 8-percent growth rate in profits achieved during the 1955–70 interval.

If, however, the relative proportional contribution of each source had been consistently maintained for both the 1972 and the 1973 projections, then the expected input to capital formation by profits would be $364 billion, $291 billion less than the 655 figure generated by the 1973 scheme. This is demonstrated in the following table:

WORLDWIDE OIL CAPITAL NEEDS FOR 1970–85

[In billions of dollars]

	Estimates made in 1973 maintaining relative proportions of 1972 estimates	Estimates made in 1972
Sources of funds: Borrowing, equity, capital recovery	986	735
Profits	364	265
Total	1,350	1,000

Even if the extreme case does materialize, oil industry profitability should be sufficient to meet the challenge of expanded OCS leasing. One index of oil industry profitability, return on stockholders' equity, increased by 55 percent between the first and fourth quarters of 1973. This trend indicates that the oil industry is financially sound and thus quite capable of undertaking capital-intensive ventures like the OCS.

III. INSURING RAPID EXPLORATION AND DEVELOPMENT FOR OCS LEASING UNDER AN EXPANDED PROGRAM

The committee has asked for assurances that there be expeditious development of the OCS leases. What follows is a discussion of the Department's efforts in this area.

A. Overview

Section 8 of the Outer Continental Shelf Lands Act states that an oil and gas lease shall be for a period of 5 years and as long thereafter as oil and gas may be produced from the area in paying quantities, or drilling or well reworking operations as approved by the Secretary are conducted thereon.

If a producible well is awaiting installation of transportation or other essential facilities, then the lease is extended beyond the primary 5-year term. Also if drilling has commenced the lease will be extended to determine if production can be established. Therefore, the lease for any tract on which oil and/or gas is discovered and developed remains in force until production ceases. Conversely, if the tract covered by the lease is barren or if development is not undertaken, then the lease expires after 5 years. Development plans for all OCS tracts must be approved by the U.S. Geological Survey.

There is concern that expanded OCS development will encourage speculation; that is lessees will delay development in the hope that potential price increases will make deferred production more profitable than expenditious production.

Studies by the Geological Survey indicate that purposefully delayed production has not occurred in the Gulf of Mexico in the past. To guarantee that future production is not delayed, we are actively monitoring OCS production.

The Department had given carefully consideration to the possibility of imposing stricter diligence requirements (that is, a shorter primary term and fewer extensions) upon OCS leases. A Federal Register notice was published on July 5, 1974, requesting industry's and the public's views on maximizing oil and gas production on the OCS. In the past two arguments were recognized in rejecting stricter diligence requirements. First oil and gas prices have been of a level that should preclude speculation. Second, acceleration of OCS leasing will put some pressure on the supply of trained personnel and equipment. Under current guidelines, lessees may develop the most promising tracts while postponing activity on marginal tracts. Since our goal is to maximize OCS production, diligence requirements, by forcing development of mediocre tracts first, might be counterproductive. The entire issue of diligence requirements, is still under review.

In order to determine the effectiveness of our current procedures if we lease in frontier areas, a report is now being prepared by the Solicitor's Office of the Department of the Interior, the Geological Survey, and the Bureau of Land Management, which will address the following issues:

(*a*) Will existing lease terms create serious problems for any company trying to develop leases in the frontier areas?

(*b*) Which lease terms can be changed within the authority of the existing Outer Continental Shelf Lands Act to solve these problems?

(*c*) Which lease terms will require changes in the Outer Continental Shelf Lands Act?

B. Proposed geological and geophysical data regulations

In order to increase the Government's and public access to data concerning OCS resources and environmental conditions, the Department in May 1974 proposed for comment some new rules regarding the submittal to the Government and public disclosure of geological and geophysical data. Availability of this data is expected to improve resource evaluations, to increase awareness of environmental conditions, and to increase competition for certain lease tracts.

To simplify, the rules proposed in May 1974 would acquire that (1) all leases and all future exploration permittees make available to the Government within 30 days all geophysical and geological data collected in the OCS, (2) all exploration permit data concerning tracts that are leased would be made publicly available 60 days after the tracts were sold or would be made publicly available 10 years after collection if the area was not sold, and (3) all data collected on a leased tract would be made publicly available 60 days after collection. Public

hearings were held on July 15 and 16. The comments, predominantly from industry spokesmen, have criticized the proposed rules basically (a) as being confiscatory, (b) as leading to a reduced demand for data and hence financial ruin for data collection companies, and (c) as discouraging R. & D. in data collection and interpretation.

The Department believes there is basic merit in increasing Government and public access to this data to some extent over the existing conditions and that the benefits will exceed the suggested costs. A revised set of proposed submittal and disclosure rules presently are being drafted that will take into consideration the comments to the May 16th proposal. These revised proposed rules are expected to be published later in October.

IV. EFFECTIVE MANAGEMENT OF AN EXPANDED PROGRAM

There has been interest in the Department's plans to deal with the management problems that might develop from an expanded OCS program. The strategies for dealing with possible inefficiencies and diseconomics of scale in three areas are discussed elsewhere in this paper. The solutions to managerial problems in the area of timely resource development are discussed in section I, Expanded OCS Leasing's Role in a Comprehensive Energy Strategy for the United States, and in section III, Insuring Rapid Exploration and Development for OCS Leasing Under an Expanded Program. section V, Efforts to Assure Receipt of Fair Market Value Under an Expanded Program, outlines the Department's efforts to confront potential managerial bottlenecks in the fair market value area. Insuring administrative efficiency in the realm of environmental protection is discussed section VI, Protecting the Environment Under an Expanded OCS Program.

In all of the major areas of administrative and management concern—environmental assessment and mitigation, resource valuation, and supervision of drilling and production operations—the Deparement has the expertise and capability to execute the program. However, we are not content to rest on our present level of capability. We are seeking improvement through more careful attention to environmental baseline studies and analyses and public attention to environmental process. We have implemented more effective and stringent regulations and OCS orders to ensure efficient use of the oil and gas resources and improve protection of the environment from major or minor spills. We are also improving our ability to ensure a fair market value for resources leased.

V. GUARANTEEING RECEIPT OF FAIR MARKET VALUE UNDER AN EXPANDED PROGRAM

The committee has asked for assurances that the prices for the leases reflect fair market value and a fair return to the Government.

A. Overview

The fair market value of OCS properties is difficult to estimate. Most of the difficulty arises from the uncertainty which exists about the actual amount of oil and gas reserves contained in any given lease. Given this uncertainty, the fair market value of a lease must be derived from estimates of oil and gas reserves based on available geophysical and geologic information about the lease. For any given lease, most of the variations among leases valuations assigned by different bidders and the Government arise from differences in the interpretation of available information; company bidding pholosophy and internal company needs.

Because of these factors, there will continue to be wide variations in lease valuations assigned to the same lease by different evaluators.

B. Maintaining a competitive environment under an expanded program

Concern has been expressed over the impact that a continuous offering of large sales will have on receipt of fair market value. In order to help alleviate this concern the Department has taken steps to supplement free market forces. These include a strong bid evaluation procedure, the testing of royalty bidding at our next OCS lease sale, the consideration of banning majors from bidding jointly, the initiation of a two-tier nomination system and the continuous monitoring of availability of capital, equipment and manpower necessary for offshore development which has been discussed under section II. We also after each sale review the results to see if there have been any changes in the competitive climate.

1. Bid evaluation procedure.—Prior to a sale, both Government and industry estimate the present value of the tracts to be offered. The Interior Department currently employs Monte Carlo simulation techniques to derive a range of values ROV for each tract, with the mean of the range representing the resource value of the tract. In calculating the resource values, Geological Survey is responsible for collecting and analyzing geologic, geophysical, and engineering data and for evaluating the tracts. The Bureau of Land Management, in consultation with the Department, provides Geological Survey with the prices of oil and gas and the discount factor to be used in the evaluation. Exhibit I describes in detail how the ROV concept is implemented and provides a computer printout for a sample tract valuation.

After the bids have been submitted, the Bureau of Land Management prepares a post-sale matrix which summarizes and highlights the critical data on each tract included in the sale. The purpose of the matrix is to guarantee consistency in the decision and to provide a permanent record of each factor that influences the final decision. See exhibit II for a sample matrix.

Since the inception of the ROV method of evaluation an average of 18 percent of high bids submitted at general sales have been rejected on grounds of inadequacy. The bid evaluation procedure is continually under review in order to help insure we are receiving fair market value.

2. Royalty bidding experiment.—Under section 8 of the Outer Continental Shelf Lands Act of August 7, 1953 (67 Stat. 462; 43 U.S.C. secs. 1331–43), the Secretary is authorized to issue oil and gas leases only on a competitive basis as follows: (1) Sealed bids on the basis of the highest cash bonus with fixed royalty; or (2) sealed bids on the basis of highest royalty with a fixed cash bonus.

Only option 1 has been used to date. On October 16, 1974, we plan to offer 10 tracts on a royalty bid basis. The argument in favor of royalty bidding has been that it relieves the burden of the high front end cost associated with bonus bidding thereby increasing competition and allowing the Government to share a greater portion of the risk. Problems associated with royalty bidding are premature abandonment, lack of incentive to proceed with development, and the greater chance of less responsible parties acquiring leases. Provisions have been designed to help alleviate these possibilities but only the execution of the experiment will permit a true analysis of this bidding method. The provisions provide for limiting company profits to a 12-percent rate of return over their direct costs in the event of a royalty reduction along with compulsory unitization of reservoirs containing a royalty tract. The fixed bonus has also been set at $25 an acre in order to help preclude speculators from participating.

3. *Two-Tier Nomination System.*—Prior to the preparation of a draft statement on the 10-million-acre proposal the two-tier system was initiated. The first tier of the system was implemented on February 20, 1974, when the Federal Register carried a request for comments from the Department of the Interior to members of the oil and gas industry as well as to environmental groups and the general public. The information requested from the industry included the following: (1) a ranking of the 17 OCS areas by order of oil and gas potential (2) outlines of geologic structures occurring in areas of interest shown on appropriate maps and (3) estimated time intervals required to achieve initial and peak production after a positive discovery, and identification of factors impeding development. The information requested concerning environmental factors included: (1) ranking according to environmental concern (2) indications of specific environmental hazards to be considered and (3) specific actions which may be taken to reduce or eliminate potential conflicts with oil and gas exploration and development activities.

The Department's Bureau of Land Management received 63 replies to the request of February 20. On June 5, 1974 the Department released its Report on the Responses Received in Reply to the Request for Comments on Potential Future Outer Continental Shelf Oil and Gas Leasing which summarized and highlighted the details of the various responses.

The second part of the two-tier system is the call for nominations of specific tracts prior to each sale. This system is used along with other in-house data in determining which tracts are to be considered in the environmental impact statement and which tracts are offered for lease.

Each of these steps are undertaken in an effort to ensure that we are offering attractive prospects for sale which should enhance the competitive climate.

4. The Department is studying a proposal to ban joint bidding among major oil companies with world oil reserve holdings in excess of 5 billion barrels.

This is being done in order to see if such an action would increase competition between the major oil companies. A public hearing was held on June 25, 1974, and comments were received through July 31, 1974. The majority of comments were from industry, but some were received from other Federal Government agencies. Some legal and economic objections to the draft amendment were raised. They are being considered in an effort to decide whether or not to publish rulemaking.

VI. PROTECTING THE ENVIRONMENT UNDER AN EXPANDED OCS PROGRAM

The Committee has asked for assurances that the environmental impact of proposed OCS leasing actions be carefully and fully assessed.

A. Overview

The environmental impacts of proposed OCS leasing are carefully considered before any leases are issued. In addition to information from the two-tier nomination process, the Bureau of Land Management requests interested Federal agencies—including EPA, NOAA, GS and the Fish and Wildlife Service—to prepare reports describing valuable natural resources contained within the general areas of a possible lease sale, and the potential effect of mineral operations upon the resources or upon the total environment. Environmental data is also developed through a baseline study program. All of the data (which is discussed in detail in a later section) will be used in determining which tracts should or should not be included in proposed offering because of environmental hazards.

A draft programmatic statement to assess the impacts of accelerating OCS oil and gas leasing to 10 million acres is being prepared. The statement assesses the relative impacts of leasing in 17 OCS areas. A public hearing will be held on the draft statement. A final statement will be filed with the CEQ following analysis of all comments received. Individual statements will be prepared for each OCS oil and gas lease sale tentatively identified.

B. Proposed Supervisory Procedures for OCS Resource Development

Once a tentative list of tracts in a given OCS area is selected and announced to the public, the Bureau of Land Management prepares a draft and final environmental impact statement.

Federal agencies and coastal States which may be affected by the proposed action are notified and requested to provide inputs into the drafting of the environmental impact statement.

Multidisciplinary staffs (including oceanographers, marine biologists, and land use planners) both in the OCS field offices and in Washington write the comprehensive texts which comprise the environmental impact statement. The impact of the proposed leasing action is analyzed on a tract-by-tract basis. The draft statement is filed with the Council on Environmental Quality and 30 days later a public hearing is held in the locale where the proposed sale is scheduled to occur. The public is requested to provide comments either orally or in writing on the proposal and its potential impacts.

As a result of the comments received, the draft statement is revised, any unresolvable conflicts are presented, and special stipulations are recommended on all or some leases if it is considered necessary to mitigate any adverse impacts. Among the types of special stipulations placed on leases in the recent past to mitigate adverse environmental effects are: (1) requirements that oil cleanup containment equipment be on site within a specified timeframe—the basis for this stipulation is an analysis of winds and currents of the area which would indicate how fast a spill could reach the shoreline; (2) requirements that the number of platforms on a lease be kept to a minimum in order to minimize interference with commercial fishing operations; (3) requirements that pipelines bringing the oil and gas to shore be placed in designated areas which are the least environmentally hazardous.

These types of stipulations have been applied to leases in the Gulf of Mexico. As frontier areas are opened for leasing the results of the OCS baseline and monitoring studies program will aid in the development of new stipulations for these areas.

The Geological Survey maintains a vigorous enforcement program for these orders and regulations. GS maintains a list of potential items of noncompliance and enforcement action which affect OCS lessees. Enforcement action is nondiscretionary and a list of such violations will be made available shortly. Drilling

and production inspections are made and reports are made on the state of compliance of the lessees.

On March 1, 1974, a new procedure on inspection frequency was initiated for OCS leases. It requires all major platforms—4 or more completions—to be inspected at least once every six months and all minor platforms—5 or less completions—to be inspected at least every 15 months. These inspections are not conducted according to a predetermined schedule—all OCS operations are subject to inspection at any time without prior notice. There are some cases, as in "unmanned platforms," when the lessee or operator has to be notified of an inspection in order to have personnel available when the GS inspectors arrive. Otherwise, a great deal of time is lost. In these instances, advance notice is given only to the extent to insure that company personnel are present during the inspection. Other inspections are announced in that the company will notify the GS when a platform is ready to commence production and requests an inspection by Survey. However, these constitute only about 10 percent of the total inspections. During the first 5 months of 1974, 368 drilling rig inspections and 695 production paltform inspections were made in the Gulf of Mexico. As a result of these inspections, 1,374 enforcement actions were taken.

In the event of an oil spill, cleanup and containment equipment is required to be available on site within a specified time frame. OCS order No. 7 which deals with the requirements will be modified as appropriate for any new operational areas in coordination with the appropriate agencies having expertise or authority.

If an operator is unable to deal with the adverse consequences of a spill, the Government can step in and clean up the oil under the regional or national oil and hazardous substances pollution contingency plan. Subsequently, the lessee would be billed for the cost incurred.

C. Related management and supervisory authorities

As a result of various laws passed by the Congress, OCS operations must comply with additional stipulations designed to protect the environment. Legislation in this category includes the Coastal Zone Management Act, the Federal Water Pollution Control Act, the Land and Water Conservation Act, and the Endangered Species Act.

D. Environmental data gathering programs

The Department has initiated an environmental research program on the Outer Continental Shelf to provide general and specific data needed to ascertain the short and long term effects of the development of offshore oil and gas resources on the surrounding marine environment.

Basically, there are three types of studies being conducted on a contract basis: (1) literature surveys of specific regions of the OCS to determine available environmental and socioeconomic data and identify data gaps. At the present time, literature surveys are nearing completion for OCS areas offshore southern California, the North Atlantic, the South Atlantic, the Mid-Atlantic and the Gulf of Alaska; (2) field surveys to obtain specific information as critical data are identified in the literature reviews; and (3) baseline and monitoring studies to gather oceanographic, geologic, and biological data in areas of proposed leasing and subsequently to monitor the effects of oil and gas development on the marine environment.

In fiscal year 1975, baseline studies will be initiated offshore south Texas, southern California, in the Gulf of Alaska, offshore Atlantic. Baseline studies will be continued offshore Mississippi, Alabama, and Florida in the areas leased in the December 1973 sale.

The aim of this program is to establish preoperation benchmark data on those critical parameters in the OCS environment which may be used in later monitoring to watch for effects of oil and gas development activities. Future monitoring will be done on a continuing basis to detect environmental hazards to insure compliance with existing regulations and/or to lead to the promulgation of additional regulations to protect the environment. Some of the parameters are: background levels of hydrocarbons and trace metals in the water sediments and organisms and characterization and standard oceanographic measurements (i.e. salinity, temperature). The need for additional basic marine biological research on such subjects as adaptation of organisms to oil and toxic metal exposure also is being considered.

E. OCS Research Advisory Board

The OCS Research Advisory Board was created in accordance with the authority of the Federal Advisory Committee Act (Public Law 92-463). This Board, whose charter was issued March 20, 1974, advises the Assistant Secretary, Land and Water Resources, the Bureau of Land Management and other offices of the Department, in designing and implementing environmental studies related to OCS oil and gas development. It is expected that the Board will function for the duration of the OCS environmental baseline research and monitoring program, a period of approximately 10 years. The Board is composed of various representatives of Interior Department agencies, EPA, NOAA, and representatives from the coastal OCS States. The Board meets at least biannually and reports directly to the Assistant Secretary, Land and Water Resources.

EXHIBIT I

EVALUATION PROCEDURES

1. For lease sale-tract selection purposes Survey geophysicists make a preliminary interpretation of the data and prepare a travel-time-structure-contour map to determine the most prospective structures. These data and maps are used, at this stage, for both environmental impact assessments and statements. Following the final selections, which are the "localized" areas to be evaluated for potential resources, detailed geophysical interpretations and maps are prepared.

2. Using the detailed geophysical maps and reports, geologists redraw the maps on depth (instead of travel time) and, with the aid of stratigraphers and paleontologists, prepare maps showing reservoir thicknesses. This requires knowledge of all related geology from trends, stratigraphy, and paleontology.

3. Petroleum engineers use the maps and accompanying data to determine the acre-feet of potential hydrocrabon bearing reservoir. Many factors concerning reservoir mechanisms and characteristics are determined from the nearest exploratory and producing wells and comparable producing fields. Hydrocarbon recovery factors are estimated from these data and potential resources are estimated. These estimates are, for the purpose of lease sales, considered to be "estimated recoverable reserves" and treated accordingly to determine presale values. Using many factors such as exploratory well costs, operating costs, price of products, rate of return on invested capital, etc., the present worth value of each tract is determined by a discounted cash flow calculation. A risk or probability of success factor is applied and the resulting figure is adjusted for condemnation or dry hole costs.

4. For the December 1972, and later OCS sales, the formerly used discounted cash flow method was expanded into a new technique called the range of values method by the Survey and which has proven merit in scientific applications where there is great uncertainty.

The most probable outcome or result of a series of interrelated factors or events, each of which is unknown or uncertain, is predicted by a random selection of values for each factor, based on the laws of probability.

The range of values computer program developed by USGS determines a value for each OCS tract using the discounted cash flow method, but instead of considering just the most reasonable estimate of each significant parameter, the program considers all reasonable estimates. As an example, USGS scientists may agree that the most reasonable estimate of the thickness of an oil-bearing sand is 100 feet. They may also agree that the sand may very well be only 20 feet thick, but that it might be as much as 200 feet thick. The computer program randomly selects a number between 20 and 200. Other critical parameters such as permeability of sand, cost of drilling, et cetera, are handled in a similar manner, and using these randomly selected values for the factors a value is computed for the tract. The process is repeated 500 times and 500 different values are obtained and plotted by computer on a histogram and bar graph. Thus, for each tract a range of values is obtained. The probability of each value occurring is also printed in percentiles. The most probable or expected value can be visually determined quickly. Results derived from Survey evaluations are furnished to BLM for use in their "decisionmaking matrix" and following the lease sale GS personnel meet with appropriate BLM personnel and advide of the Survey's recommendations for tract acceptance and rejection furnishing technical expertise as required.

INPUT DATA
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PROSPECT TRACT

STRUCTURE DEPTH, FEET = 8500.
WATER DEPTH, FEET = 350.
PRESSURE GRADIENT, PSI/FT = 0.4650
TEMPERATURE GRADIENT, F/FT = 0.0100
TRACT SIZE = 5000.
DEVELOPMENT COST (OVERRIDES BUILT IN VALUE),$ 0.
YEARLY OPERATING COSTS(OVERIDES BUILT IN VALUE),$ 0.
NUMBER OF EXPENDABLE WELLS = 2
FRACTION OF INDIVIDUAL COMPLETIONS THAT WILL BE DUALS = 0.300
NUMBER OF PLATFORMS = 2
PLATFORM DRILLING COST (OVERRIDES BUILT-IN VALUE) = 0.
EXPENDABLE WELL DRILLING COST (OVERRIDES BUILT-IN VALUE) = 0.
FRACTION OF COMPLETED WELLS ON PLATFORMS 1,2,3,4 = 0.500 0.500 0.0 0.0
FRACTIONAL DEVELOPMENT COSTS, YEAR 1 = 0.3000
FRACTIONAL DEVELOPMENT COSTS, YEAR 2 = 0.4000
FRACTIONAL DEVELOPMENT COSTS, YEAR 3 = 0.3000
FRACTIONAL DEVELOPMENT COSTS, YEAR 4 = 0.0
DRY HOLE RISK = 0.300

CARD I.D.	MINIMUM	MAXIMUM	MOST PROBABLE	
ACRE	1737.000	1991.000	1884.000	
PAUB	0.0	0.0	0.0	
LIFG	10.000	25.000	20.000	
LIFO	0.0	0.0	0.0	
THIC	30.000	80.000	50.000	
PORO	0.0	0.0	0.0	
SW	0.0	0.0	0.0	
BO	0.0	0.0	0.0	
RECO	0.0	0.0	0.0	
RECG	1428.000	1950.000	1775.000	GAS RECOVERY IS IN MCF/ACFT
Z FA	0.0	0.0	0.0	
OILR	0.0	0.0	0.0	
GASR	2000.000	6000.000	4000.000	
INTE	0.110	0.150	0.130	
DELA	3.000	4.000	3.500	
FRAC	0.0	0.0	0.0	
GOR	0.0	0.0	0.0	
YIEL	3.000	10.000	8.000	
OIL$	5.500	7.500	6.500	
GAS$	0.550	0.750	0.650	
TAX	0.100	0.190	0.130	
ESCG	0.0	0.0	0.0	
ESCO	0.0	0.0	0.0	
OPER	1.300	1.500	1.400	
[illegible]	1.300	1.400	1.350	

41-563 O - 75 - 2

, BLOCK

EVALUATION OF THE MOST PROBABLE CASE (NO RISK)

PRODUCTIVE ACRES 1884.
OIL AC-FT/TOTAL AC-FT 0.0
PAY 50.0
POROSITY 0.0
WATER SATURATION 0.0
OIL FORMATION VOLUME FACTOR 0.0
OIL RECOVERY(EITHER FRACTION OR STB/ACFT) 0.0
GAS RECOVERY(EITHER FRACTION OR MCF/ACFT) 1775.000
Z FACTOR 0.0
STB/WELL 0.
MCFPD/WELL 4000.
DISCOUNT RATE 0.1300
DELAY TIME 3.50
FRACTION PRODUCED BEFORE OIL DECLINE 0.0
GAS OIL RATIO 0.
INITIAL OIL VALUE 6.50
INITIAL GAS VALUE 0.65
TAX RATE 0.100
GAS ESCALATION PER YEAR 0.0
OIL ESCALATION PER YEAR 0.0
YIELD 5.00
CALCULATED GAS LIFE 19.0
NUMBER OF GAS STREAMS 6
GAS RESERVES 167204992.
GAS RATE PER YEAR 8760000.
NUMBER OF OIL STREAMS 0
OIL RESERVES 0.
OIL RATE PER YEAR 0.
CALCULATED OIL LIFE 11.0
NUMBER OF DUAL WELLS 0
NUMBER OF SINGLE WELLS 6
NUMBER OF PLATFORMS 2.0
YEARLY OPERATING COST 306432.
DEVELOPMENT COST 6787510.
PRESENT WORTH 17399200.

BLOCK

SAMPLE	PRESENT WORTH ($MM)									
1	-2.292	-2.288	-2.281	-2.270	-2.269	-2.261	-2.259	-2.258	-2.250	-2.236
11	-2.233	-2.227	-2.226	-2.225	-2.220	-2.216	-2.215	-2.210	-2.203	-2.199
21	-2.199	-2.199	-2.199	-2.198	-2.193	-2.191	-2.191	-2.190	-2.189	-2.189
31	-2.189	-2.188	-2.184	-2.182	-2.181	-2.181	-2.180	-2.180	-2.179	-2.179
41	-2.176	-2.168	-2.168	-2.168	-2.168	-2.166	-2.166	-2.165	-2.164	-2.162
51	-2.162	-2.161	-2.160	-2.160	-2.159	-2.159	-2.158	-2.155	-2.152	-2.150
61	-2.148	-2.147	-2.146	-2.144	-2.143	-2.143	-2.141	-2.139	-2.138	-2.138
71	-2.138	-2.136	-2.134	-2.131	-2.130	-2.129	-2.127	-2.126	-2.126	-2.125
81	-2.124	-2.123	-2.121	-2.119	-2.119	-2.118	-2.118	-2.118	-2.117	-2.116
91	-2.115	-2.115	-2.111	-2.110	-2.109	-2.104	-2.103	-2.103	-2.102	-2.102
101	-2.101	-2.101	-2.100	-2.098	-2.096	-2.096	-2.096	-2.095	-2.094	-2.094
111	-2.094	-2.093	-2.090	-2.089	-2.087	-2.086	-2.085	-2.081	-2.079	-2.075
121	-2.074	-2.073	-2.072	-2.067	-2.066	-2.065	-2.063	-2.062	-2.060	-2.058
131	-2.058	-2.056	-2.056	-2.055	-2.053	-2.052	-2.051	-2.047	-2.044	-2.039
141	-2.036	-2.034	-2.034	-2.034	-2.031	-2.031	-2.028	-2.025	-2.022	-2.018
151	-2.005	-1.999	-1.983	-1.980	7.242	8.650	9.140	9.486	9.577	10.112
161	10.127	10.275	10.333	10.352	10.422	10.455	10.529	10.558	10.614	10.793
171	10.814	10.877	11.076	11.241	11.290	11.394	11.523	11.524	11.541	11.634
181	11.607	11.716	11.773	11.828	11.928	12.011	12.045	12.144	12.299	12.309
191	12.338	12.366	12.401	12.441	12.518	12.541	12.546	12.577	12.603	12.653
201	12.672	12.796	12.734	12.820	12.820	12.871	12.914	13.025	13.046	13.074
211	13.096	13.120	13.138	13.179	13.315	13.416	13.437	13.442	13.658	13.707
221	13.722	13.724	13.817	13.821	13.832	13.835	13.881	13.891	13.935	13.988
231	13.991	14.061	14.117	14.142	14.199	14.345	14.433	14.464	14.520	14.577
241	14.581	14.616	14.663	14.681	14.688	14.729	14.784	14.808	14.811	14.834
251	14.857	14.881	14.954	15.009	15.044	15.059	15.067	15.204	15.240	15.276
261	15.333	15.373	15.389	15.443	15.459	15.465	15.492	15.563	15.578	15.634
271	15.706	15.724	15.734	15.784	15.892	16.063	16.077	16.101	16.151	16.154
281	16.199	16.236	16.275	16.292	16.298	16.315	16.320	16.330	16.516	16.523
291	16.527	16.566	16.575	16.608	16.616	16.645	16.718	16.721	16.779	16.845
301	16.934	16.987	17.036	17.094	17.119	17.124	17.125	17.170	17.281	17.334
311	17.397	17.399	17.562	17.655	17.699	17.730	17.829	17.832	17.855	17.867
321	17.939	17.968	17.980	18.025	18.034	18.072	18.075	18.115	18.200	18.219
331	18.258	18.298	18.346	18.349	18.357	18.371	18.389	18.420	18.483	18.499
341	18.535	18.569	18.579	18.671	18.651	18.724	18.774	18.806	18.861	18.877
351	19.012	19.019	19.026	19.037	19.053	19.052	19.064	19.068	19.071	19.098
361	19.184	19.206	19.225	19.240	19.299	19.337	19.409	19.453	19.615	19.933
371	19.922	19.928	19.983	20.065	20.198	20.283	20.299	20.369	20.374	20.416
381	20.540	20.616	20.667	20.793	20.805	20.812	20.819	20.901	20.927	20.928
391	21.083	21.208	21.317	21.323	21.337	21.377	21.374	21.545	21.560	21.665
401	21.674	21.710	21.776	21.806	21.885	21.937	21.950	21.974	22.002	22.012
411	22.012	22.044	22.068	22.102	22.145	22.150	22.185	22.211	22.241	22.273
421	22.319	22.324	22.437	22.517	22.553	22.604	22.614	22.620	22.624	22.643
431	22.746	22.797	22.837	22.852	22.963	23.256	23.342	23.470	23.649	23.868
441	23.935	23.943	24.041	24.104	24.117	24.227	24.228	24.255	24.321	24.351
451	24.451	24.513	24.516	24.655	24.693	24.694	24.850	25.010	25.016	25.015
461	25.113	25.115	25.157	25.434	25.514	25.531	25.635	25.717	25.718	25.744
471	25.777	25.864	26.017	26.200	26.297	26.387	26.461	26.581	26.780	26.783
481	27.208	27.614	28.559	28.713	29.513	29.539	29.767	29.932	29.984	30.048
491	30.130	30.504	30.622	30.661	31.064	31.776	31.473	31.983	36.087	36.272

MEAN VALUE OF PRESENT WORTH = $ 12190932. STD DEV OF MEAN= $ 470636. MEAN VALUE WITH TAX WRITE-OFF = $ 13458259.

PRESENT WORTH USING MOST PROBABLE VALUES OF VARIABLES (UNRISKED) = $ 17599200.

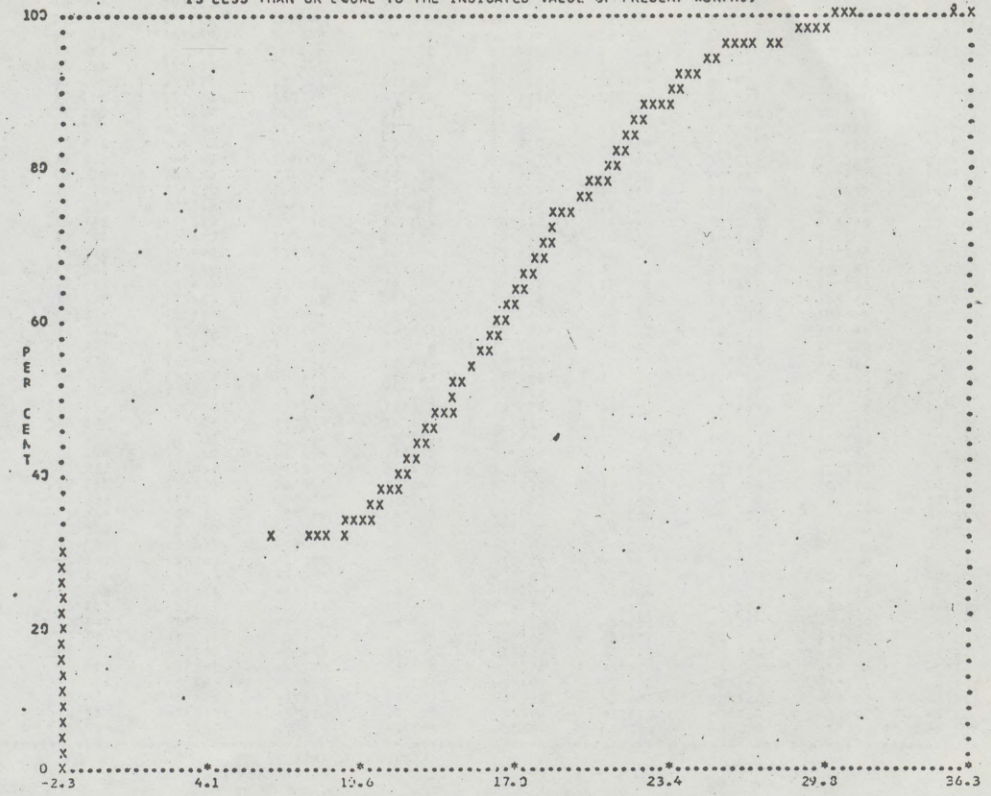
MEAN VALUE OF RESERVES (FROM 500 TRIALS)=

CAMEC CORP

BLOCK

PLOT OF CUMULATIVE DISTRIBUTION FREQUENCY

(NOTE - Y AXIS REPRESENTS THE PROBABILITY THAT THE PRESENT WORTH OF THE LEASE IS LESS THAN OR EQUAL TO THE INDICATED VALUE OF PRESENT WORTH.)



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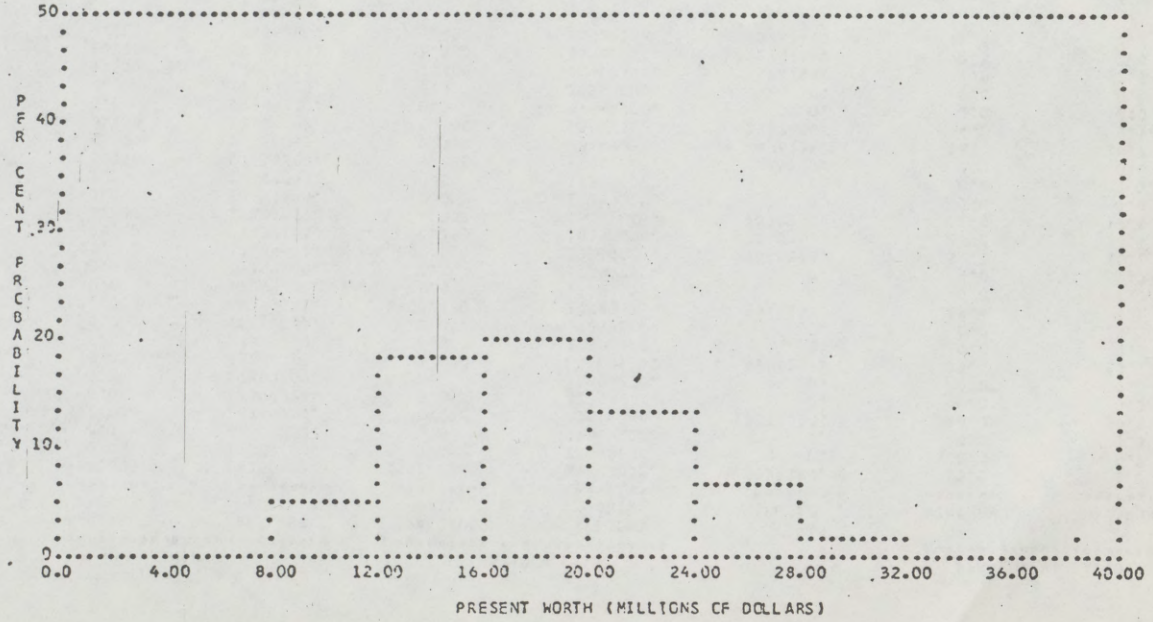
HISTOGRAM OF PRESENT WORTH



NOTE-THERE IS A 0.308 PROBABILITY OF THE PRESENT WORTH BEING NEGATIVE.

SENSITIVITY ANALYSIS

BLOCK

VARIABLE	MINIMUM VARIABLE VALUE	MINIMUM PRESENT WORTH	MAXIMUM VARIABLE VALUE	MAXIMUM PRESENT WORTH	SPREAD	PERCENT VARIATION MINIMUM	PERCENT VARIATION MAXIMUM
ACRE	1737.000	14755473.	1991.000	17687872.	2932399.	15.2	1.7
PROB	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
LIFO	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
THIC	30.000	10740757.	80.000	27816768.	17076000.	38.3	59.9
PERO	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
SW	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
LIFG	10.000	24256752.	25.000	15110595.	9146157.	39.4	13.2
BO	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
RECO	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
RFCG	1420.000	14030181.	1950.000	17943328.	3913147.	19.4	3.1
Z FA	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
OILR	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
GASR	2000.000	11694622.	6000.000.	19334800.	7640178.	32.8	11.1
INTS	0.110	21437656.	0.150	14196293.	7240763.	23.2	18.4
DELA	3.000	17074400.	4.000	15031610.	2042790.	1.9	13.6
TRAC	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
GOR	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
OIL$	5.500	17236800.	7.500	17561600.	324800.	0.9	0.9
GAS$	0.550	14151682.	0.750	20647296.	6496214.	18.7	18.7
TAX	0.100	18194592.	0.190	15807586.	2387406.	4.6	9.1
ESCG	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
ESCO	0.0	17399200.	0.0	17399200.	0.	0.0	0.0
YIEL	1.200	17836080.	1.400	16962336.	873744.	2.5	2.5
OPER	1.200	17836080.	1.400	16962336.	873744.	2.5	2.5
OCVF	1.200	17836080.	1.400	16962336.	873744.	2.5	2.5

SPREAD=ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN THE PRESENT WORTH USING THE MINIMUM VARIABLE VALUE AND THE PRESENT WORTH USING THE MAXIMUM VARIABLE VALUE.

PERCENT VARIATION (MINIMUM) = PRESENT WORTH USING THE MINIMUM VARIABLE VALUE-MOST PROBABLE VALUE/MOST PROBABLE VALUE.

LEASE EVALUATION DATA FORM

RUN IDENTIFICATION

PROS.	TRACT

DRLLG. DEPTH	WATER DEPTH	PRES. GRAD.	TEMP. GRAD.	TRACT SIZE, AC.	OR. DEV. COST	OR. OPER. COST

NO. EXP. WELLS	DUAL FRACTION	PLATFORM NO.

PLAT. 1 WELLS	PLAT. 2 WELLS	PLAT. 3 WELLS	PLAT. 4 WELLS

YEAR 1 DEV.	YEAR 2 DEV.	YEAR 3 DEV.	YEAR 4 DEV.	DRY RISK

VARIABLE	MINIMUM	MAXIMUM	MOST PROB.	
ACRE				Productive acres
PROB				Oil ac. ft./Total ac. ft.
LIFG				Gas reservoir life
LIFO				Oil reservoir life
THIC				Net pay, ft.
POR				Porosity, fraction
SW				Water saturation, fraction
BO				Oil formation volume factor, bbl./STB
RFO				Recovery factor, oil (fraction of OIP or STB/ac. ft.)
RFG				Recovery factor, gas (fraction of GIP or MCF/ac. ft.)
Z				Gas Z factor
QILR				Initial STB/day/stream
QASR				Initial MCF/day/stream
DISC				Discount rate, fraction
DELA				Years to production
FRAC				Fraction of oil reserves prod. before decline sets in (set equal to 0)
GOR				SCF/STB
YIEL				STB condensate/MMSCF
QILS				Current $/STB
QASS				Current $/MCF
TAX				Tax, fraction of gross income
ESCG				Price escalation of gas, $/MCF/year
ESCO				Price escalation of oil, $/STB/year
INFC				Inflation factor for operating costs (1972 = 1.0)
INFD				Inflation factor for development costs (1972 = 1.0)

EXHIBIT II

POST SALE ANALYSIS

After a sale, each high bid must be analyzed in order that the accept or reject decision may be made by the BLM OCS field office manager. The post sale analysis chart allows consideration of the three major leasing objectives; (1) receipt of fair market value (2) environmental protection, and (3) orderly and timely resource development. The chart technique was developed to insure consistency in decisionmaking and to provide a permanent record of each factor considered by the manager.

A general explanation of each column in the chart should demonstrate the chart's usefulness in bid analysis. The chart's columns are organized in a manner that separates considerations for each of the three leasing objectives.

Accept/reject—These columns are left blank until the decision has been made. One of the two columns is then checked for each tract.

Prospect number and tract number—These columns are used for identification purposes.

(1) Type of tract—shows whether the tract is drainage (I) development, (II) or wildcat (III). Each time a frontier area is entered for leasing all tracts will be type III.

(2) Total high bid.

(3) GS Reliability rating—refers to the quantity and quality of Geological Survey's data, and ranges from A to E with A referring to a drainage tract with very good data available and E designating a wildcat or development tract with very little data available.

(4) Mean of range of values (ROV)—The mean of the range of values is the GS presale estimate of the value of the tract. The program used by GS generates 500 values for a tract based on variations in input parameters. The mean of these values is one of the values considered by the manager in the decisionmaking process.

(5) High bid as percent of mean of ROV—shows the relationship of the high bid to the value placed on the tract by GS.

(6) Discounted mean of ROV—The mean of the range of values is discounted by 10 percent per year for 2 years. A tract for which a high bid is rejected may not be reoffered for lease until final disposition of any appeal that may be filed. In the past, appeals have required a minimum of 2 years to process. The mean value is discounted to reflect the present value of the loss to the Government. It is another value for consideration by the manager.

(7) High bid as percent of discounted mean of ROV.

(8) Average evaluation of tract—This evaluation is calculated by summing all bids on the tract and the Government's presale value and dividing by the total number of bids plus one. This number represents an average value of the tract. Its significance increases with the number of bids submitted on a tract.

(9) High bid as percent of average evaluation of tract.

(10) Number of bids on tract—reveals the degree of competitive interest on the given tract.

(11) Average number of bids per tract by type of tract—this number reveals the average number of bids received by all drainage tracts, by all development tracts, or by all wildcat tracts depending upon the type of tract in question. The three types of tracts are separated in determining averages because drainage tracts typically receive fewer bids than the other two types, and this might distort the average if all tracts were considered together.

(12) Tract's deviation from average/mean deviation by type of tract—the average cannot be regarded as a typical value if the scatter or dispersion around it is very large. Therefore, the mean deviation by type of tract is calculated as a measure of dispersion around the average.

(13) Bidding performance of high bidder by quarters—shows how many times the high bidder on the tract in question bid at the sale, and where the high bidder's bid stood in relation to other bids on tracts of interest.

(14) Average number of bids on tracts on which high bidder bid—shows the level of competitive interest in tracts bid on by high bidders. Columns 13 and 14 are used together to evaluate the high bidder's strategy. The analysis helps to identify the speculative bidder.

(15) Potential environmental hazard—each tract is rated in the environmental impact statement as to its potential environmental hazard. These levels or zones, such as minimal or moderate, are listed on the chart for the manager's use.

(16) Geologic/bottom hazards: Shortly before the sale, members of the BLM environmental assessment team review GS's latest resolution data on the sale tracts, and provide a report to the OCS manager detailing determined geologic/bottom hazards. Information from this report is shown on the charts as another measure of environmental risks associated with leasing and development of the tract in question.

(17) History of tract: Indicates nominations received on tract for current and past sales, whether ever offered and ever leased previously.

(18) Miles from shore.

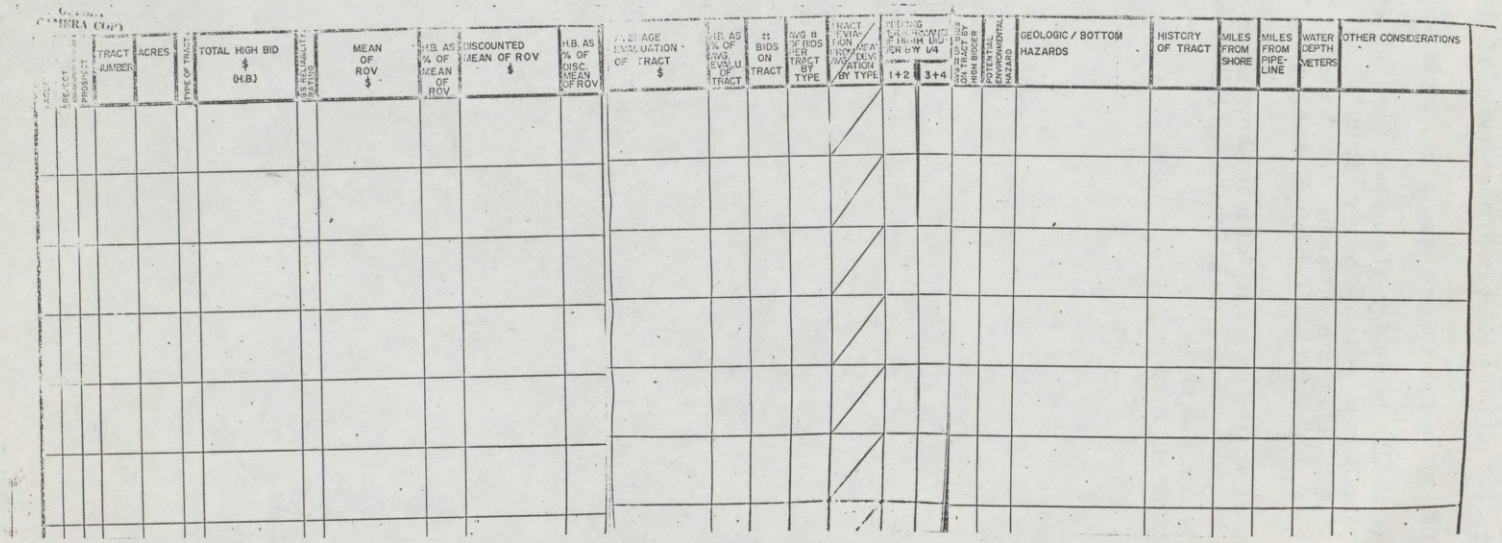
(19) Miles from pipeline.

(20) Water depth meters.

(21) Other considerations: Provides space for listing any other factors having impact on the decision such as special stipulations to be imposed on tract if leased and existence in fairway.

The remainder of each page of the matrix consists of a map which shows the tracts up for bid and those adjacent to them. Leases in existence and expired leases are delineated.

REJECT	PROSPECT	TRACT NUMBER	ACRES	TYPE OF TRACT	TOTAL HIGH BID $ (H.B.)	G.S. RELIABILITY RATING	MEAN OF ROV $	H.B. AS % OF MEAN OF ROV	DISCOUNTED MEAN OF ROV $	H.B. AS % OF DISC. MEAN OF ROV	AVERAGE EVALUATION OF TRACT $.	H.B. AS % OF AVG. EVALU OF TRACT


CAMERA COPY
TRACT NUMBER
ACRES
TOTAL HIGH BID $ (H.B.)
MEAN OF ROV $
H.B. AS % OF MEAN OF ROV
DISCOUNTED MEAN OF ROV $
H.B. AS % OF DISC. MEAN OF ROV
AVG # BIDS ON TRACT
GEOLOGIC / BOTTOM HAZARDS
HISTORY OF TRACT
MILES FROM SHORE
MILES FROM PIPE-LINE
WATER DEPTH METERS
OTHER CONSIDERATIONS

Mr. WHITAKER. First, the United States is currently importing 6.4 million barrels of oil per day at an annual cost of $23 billion.

COUNTRIES THAT THE UNITED STATES IS IMPORTING OIL FROM

Mrs. HANSEN. Mr. Secretary, at this point in the record, could you indicate the countries we are importing oil from?

Mr. WHITAKER. They are primarily the Mideast, Nigeria, Venezuela, and probably a little bit from Ecuador and then also from Canada.

Mr. YATES. Can you break it down to show where it comes from and the prices you pay which make up the $23 billion?

Mr. WHITAKER. Yes, sir.

[The information follows:]

1. Listed below are the countries and quantities of oil in units of thousand barrels, the United States imported from January - July, 1974; Refer p. 5.

Country	Crude Oil	Refined Products
Algeria	31,583	385
Angola	10,059	102
Bahamas	--	35,753
Bahrain	--	1,744
Belgium	--	2,151
Bolivia	1,869	--
Brazil	--	466
British West Indies	--	1,500
Canada	173,582	62,581
Canal Zone	--	2
Colombia	--	1,579
Ecuador	11,318	150
Egypt, Arab Rep. of	2,126	--
France	--	1,815
Finland	--	1,045
Gabon	2,0[illegible]	--
Ghana	--	380
Greece	--	1,566
Guatemala	--	1
Hawaii Trade Zone	--	1,049
India	--	4
Indonesia	59,269	4,380
Iran	105,258	1,109
Israel	--	9
Italy	--	19,369
Japan	--	399
Korea	--	148
Kuwait	326	--
Libya	1,003	--
Malaysia	--	2,856
Mexico	--	1,624
Netherlands	--	11,676
Netherland Antilles	--	113,415
Nigeria	132,387	1,859
Norway	322	--
Oman	--	36
Panama	--	767
Peru	--	836
Phillipines	--	2
Portugal	--	216
Puerto Rico	--	19,194
Qatar	1,457	159

Country	Crude Oil	Refined Products
Rep. of Congo (Brazzaville)	670	--
Rep. of South Africa	--	3
Romania	--	3,047
Saudi Arabia	59,082	4,842
Singapore	--	1,257
Spain	--	2,962
Taiwan	--	30
Trinidad	11,612	39,761
Tunisia	3,494	--
Turkey	--	797
United Arab Emirates	11,884	592
United Kingdom	--	1,448
U.S.S.R.	--	2,918
Venezuela	57,483	146,727
Virgin Islands	--	73,625
West Germany	--	2,376
Yemen	--	227
Total	676,840	570,939

Source: Department of Commerce
Federal Energy Administration
Bureau of Mines

IMPORTS--JANUARY-MARCH 1974 (Refer p. 5.)

Source: Department of Commerce

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4750510-Crude Petroleum under 25° API			
Canada	5,166	32,838	6.36
Mexico	1,335	5,247	3.93
Trinidad	317	3,973	12.53
Venezuela	13,252	114,335	8.63
Italy	161	987	6.13
Iran	187	2,110	11.28
Indonesia	1,292	14,095	10.91
Libya	606	3,255	5.37
4750520-Fuel Oil under 25° API			
Trinidad	265	1,874	7.07
Iran	100	1,297	12.97
4750530-Fuel Oil under 25° API			
Canada	249	2,432	9.77
Bahamas	661	4,626	7.00
Trinidad	49	509	10.39
Netherland Antilles	789	8,471	10.74
Venezuela	982	12,119	12.34
United Kingdom	97	810	8.35
Italy	390	8,272	21.21
Malaysia	32	271	8.47
4750540-Fuel Oil under 25° API			
Bahrain	82	484	5.90
4750550-Fuel Oil under 25° API			
Canada	5,381	58,308	10.84
Mexico	320	4,092	12.79
Canal Zone	186	935	5.03
Bahamas	6,463	61,277	9.48
British West Indies	483	6,556	13.57
Trinidad	3,971	30,179	7.60
Netherland Antilles	36,083	293,454	8.13
Colombia	108	520	4.82
Venezuela	50,982	403,712	7.92
Peru	273	5,317	19.48

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4750550-Fuel Oil under 25° API (Continued) . . .			
United Kingdom	138	1,021	7.40
Netherlands	1,121	12,985	11.58
Belgium	628	9,424	15.00
West Germany	111	1,896	17.08
Italy	4,408	80,094	18.17
Greece	239	4,564	19.10
Romania	188	3,618	19.25
Iran	429	2,484	5.79
Israel	49	718	14.65
Saudi Arabia	18	116	6.44
Oman	45	288	6.40
Malaysia	3	13	4.33
Indonesia	1,393	22,027	15.81
Ghana	141	1,977	14.02
Nigeria	495	5,393	10.90
Angola	74	405	5.47
4751010-Crude Petroleum, Shale Oil, Inc. Reconst., Test 25DEG API AOV BBL			
Canada	75,562	562,269	7.44
Mexico	5	68	13.60
Trinidad	5,403	64,788	11.99
Colombia	294	2,706	9.20
Venezuela	25,256	256,802	10.17
Ecuador	7,041	76,601	11.35
Bolovia	956	15,051	15.74
Chile	298	5,195	17.43
Netherlands	234	5,587	23.88
Iran	41,872	423,305	10.11
Saudi Arabia	1,729	9,276	5.37
Malaysia	387	4,400	11.37
Indonesia	20,686	209,245	10.11
Algeria	319	5,200	16.30
Tunisia	292	2,291	7.85
Nigeria	41,292	531,731	12.88
Angola	3,440	48,075	13.98
4751020-Fuel Oil A TCR 25DEG API RFHMT, SUV UND 145SEC, 100DEGF BBL			
Bahamas	122	432	3.54
Venezuela	385	6,364	16.53
Netherlands	127	2,310	18.19
West Germany	332	8,210	24.73

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4751030-Fuel Oil A TCR 25DEG API AOV NES, SUV UND 145 SEC, 100 DEGF BBL			
Canada	68	566	8.32
Bahamas	6,816	29,875	4.38
British West Indies	63	2,179	34.59
Trinidad	1,418	17,577	12.40
Netherland Antilles	6,447	79,059	12.26
Venezuela	6,000	66,036	11.01
Peru	148	3,766	25.45
Netherlands	2,467	48,341	19.60
Belgium	140	3,899	27.85
West Germany	281	1,985	7.06
U.S.S.R.	728	18,046	24.79
Spain	455	8,504	18.69
Italy	2,565	56,286	21.94
Saudi Arabia	39	227	5.82
Malaysia	57	632	11.09
Indonesia	1,282	11,027	8.60
Algeria	125	2,655	21.24
Nigeria	353	5,220	14.79
Other Countries	1/	1	1/
4753540-Naphtha Derived Petroleum, Shale Oil, Natural Gas, etc.			
Canada	317	3,971	12.52
Trinidad	351	1,548	4.41
Netherland Antilles	1,640	17,428	10.63
Venezuela	2,501	24,185	9.67
U.S.S.R.	251	2,618	10.43
Italy	162	2,100	12.96
Greece	335	5,121	15.29
Singapore	2	32	16.00
Indonesia	30	406	13.53
4754000-Mineral Oil, Medicinal, Derived from Petroleum.			
Canada	1/	4	1/
4754500-Lubricating Oils from Petroleum and/or Shale Oil			
Canada	20	212	10.60
Trinidad	25	295	11.80
Sweden	1/	9	1/
United Kingdom	1/	32	1/
Netherlands	1/	12	1/
Belgium	29	472	16.28
France	2	105	52.50
West Germany	1/	12	1/
Switzerland	1/	16	1/
Australia	1/	5	1/
Other Countries	1/	3	1/

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4751040-Fuel Oil A TCR 25DEG API AOV RFNMT SUV 145SEC AOV100 DEGF BBL			
Bahamas	150	2,389	15.93
4751050-Fuel Oil A TCR 25DEG API AOV NES SUV, 145SEC A OV,100 DEGF BBL			
Canada	216	1,673	7.75
Mexico	5	51	10.20
Bahamas	3,101	43,367	13.98
Trinidad	6,422	71,010	11.06
Netherland Antilles	4,159	49,692	11.95
Colombia	131	2,537	19.37
Venezuela	8,287	94,875	11.45
Peru	141	2,751	19.51
Netherlands	588	15,505	26.37
West Germany	187	2,810	15.03
Spain	188	508	2.70
Italy	2,371	39,822	16.80
Indonesia	1,043	14,133	13.55
Other Countries	1/	1/	1/
4751510-Propane			
Canada	6,444	42,091	6.53
Venezuela	2,091	19,454	9.30
4751530-Liquefied Petroleum Gases, NES			
Canada	3,499	20,636	5.90
Netherland Antilles	364	4,547	12.49
Venezuela	2,209	26,269	11.89
United Kingdom	1/	6	1/
Netherlands	276	7,535	27.30
France	1/	34	1/
West Germany	1/	16	1/
Iran	4	14	3.50
Oman	2	6	3.00
Malaysia	2	8	4.00
Indonesia	2	14	7.00
Nigeria	1	10	10.00

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4752540-Jet Fuel			
Canada	509	3,894	7.65
Panama	72	780	10.83
Bahamas	522	7,211	13.81
Trinidad	1,575	16,828	10.68
Netherland Antilles	2,295	16,465	7.17
Venezuela	1,877	18,524	9.87
Iran	54	674	12.48
Saudi Arabia	11	162	14.73
Yemen	146	1,517	10.39
Bahrain	6	90	15.00
Malaysia	810	5,179	6.39
Singapore	323	1,906	5.90
Indonesia	28	181	6.46
Japan	215	1,154	5.37
Morocco	1	5	5.00
4752520-Gasoline			
Canada	680	7,646	11.24
Guatemala	1	10	10.00
British West Indies	60	1,416	23.60
Trinidad	1,165	14,307	12.28
Netherland Antilles	1	5	5.00
Venezuela	77	1,137	14.77
Netherlands	2,006	40,638	20.26
Belgium	228	4,769	20.92
France	147	3,271	22.25
West Germany	12	261	21.75
U.S.S.R.	391	8,292	21.21
Spain	334	7,771	23.27
Italy	2,112	43,088	20.40
Romania	579	12,620	21.80
Turkey	332	6,546	19.72
Japan	42	491	11.69
Other Countries	1/	2	1/

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4753520-Naphthas from Petroleum, etc. Certified by Importer for Refinement			
Canada	3,119	21,670	6.95
Panama	56	304	5.43
Bahamas	3,194	48,634	15.23
Trinidad	589	4,856	8.24
Netherland Antilles	2,826	28,087	9.94
Venezuela	6,507	78,016	11.99
Netherlands	24	341	14.21
U.S.S.R.	403	3,486	8.65
Italy	451	6,038	13.39
Greece	515	9,389	18.23
Oman	55	392	7.13
Indonesia	159	1,657	10.42
Japan	154	1,420	9.22
4752560-Motor Fuels, NES			
Canada	33	325	9.85
Mexico	15	191	12.73
Netherland Antilles	6	77	12.83
Oman	10	145	14.50
Malaysia	32	340	10.63
Indonesia	11	158	14.36
Japan	44	542	12.32
4753000-Kerosine Derived from Shale Oil, Petroleum or Both			
Canada	14	207	14.79
Netherlands	53	1,602	30.23
U.S.S.R.	473	12,810	27.08

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4755500-Lub. Greases Nov. 10 PCT Salts of Fatty Acids an or veg orig.			
Mexico	1/	22	1/
United Kingdom	1/	8	1/
France	1/	18	1/
West Germany	1/	91	1/
Other Countries	1/	4	1/
4756000-Lubricating Greases, Nes			
Canada	1/	8	1/
United Kingdom	1/	7	1/
France	1/	4	1/
Switzerland	1/	3	1/
Other Countries	1/	6	1/
4756520-Liquid Derivatives Petroleum for Further Refinement, Nes			
Canada	1,846	9,948	5.39
Venezula	456	8,708	19.10
Netherlands	65	355	5.46
4756540-Liquid Derivatives of Petroleum, Exc. for Fur Refinement			
Canada	1,015	6,406	6.31
Trinidad	10	169	1.69
Venezula	3	33	11.00
Netherlands	38	467	12.29
Other Countries	1/	1	1/

Country	Quantity 1000 bbl	Value 1000 dollars	Value/bbl (derived)
4942200-Paraffin and Other Petroleum Waxes			
Canada	15	329	21.93
Mexico	3	74	24.67
Colombia	7	197	28.14
United Kingdom	2	90	45.00
Netherlands	10	430	43.00
West Germany	1	35	35.00
Norway	1/	4	1/
France	1/	15	1/
Singapore	7	222	31.71
Indonesia	13	309	23.77
China	1/	14	1/
Japan	15	520	34.67
Rep. of South Africa	2	88	44.00
5211100-Asphaltum, Bitumen and Limestone Rock Asphalt			
Canada	12	123	10.25
Canal Zone	2	33	16.50
Trinidad	7	117	16.71
Netherland Antilles	2,450	7,380	3.01
Venezuela	332	3,060	9.22

1/ Less than one unit.

Mr. WHITAKER. The Federal Energy Administration estimates this amount could increase to as much as 10 million barrels of oil per day in 1988 at an annual cost of $36.5 billion at a $10 per barrel price. Vigorous conservation measures may reduce these figures significantly, but even with such conservation measures, all realistic estimates project an ever-increasing amount of oil being imported into the United States unless there are significant increases in domestic production.

CONSERVATION MEASURES

Mrs. HANSEN. Mr. Secretary, can you tell us what significant reductions have been made in energy demand due to conservation measures?

Mr. WHITAKER. Well, I am not absolutely sure of my figures.

[Discussion off the record.]

Mr. YATES. Can you tell us what success you have had in conservation.

Mr. MCKELVEY. We are down about 500,000 barrels a day in petroleum consumption as compared to a year ago.

Mrs. HANSEN. What was our consumption a year ago?

Mr. MCKELVEY. Present consumption is about 16.5 million barrels a day compared to about 17 million a year ago.

Mr. GASKINS. The normal growth pattern is an increase of about 500,000 barrels a day. If you talk about where we would have been without the higher prices and voluntary conservation we have saved in the order of 1 million barrels a day.

Mr. YATES. What measures have resulted in the savings?

Mr. MCKELVEY. I think it is a response of the public, partly because of the public concern, the lower speed limits, turning down the thermostats and a variety of elements.

Mr. YATES. A year ago we were faced with this emergency and everybody was willing to respond. Now there is no feeling of emergency at all. I do not see any response by anybody. As I drive along at my 55 miles an hour the cars whizz by me.

Mr. MCKELVEY. But you are driving 55.

Mr. YATES. Yes; but a year ago everybody was driving 55 miles an hour. The point is that there has been no pressure by the administration or anybody to try to persuade the people that there ought to be conservation.

Mrs. HANSEN. There is a posted speed limit on every highway in the United States.

Mr. YATES. There is no pressure.

Mr. WYATT. You talked about the reduction in use of gasoline. What is the situation with regard to the use of total energy? Do you have any figures on that?

I agree with what Mr. Yates said. The feeling of urgency is just totally gone. I know we have a postage stamp out urging conservation in the use of energy but there is just no feeling of urgency about it.

Mr. WHITAKER. Other than barrels per day, can you give energy across the board without relating it to barrels per day?

Mr. MCKELVEY. I do not know what it is with respect to total energy consumption.

Mr. LIGON. We could supply for the record a breakdown on savings across the board from the Arab embargo to the current time on a monthly basis. You can track and see the extent of the savings or lack of it in the various fuel areas.

[The information follows:]

Current Data and Percent Changes [1]

	July 1974	June 1974	July 74/June 74	Percent Change July 74/July 73	Cum.74/Cum.73
Rotary Rigs in Operation					
total number	1,480	1,432	3.4	28.1	–
Well Completions					
total number	2,353	2,806	-16.1	4.3	18.2
Crude Oil					
refinery runs	12,905	12,709	1.5	1.2	- 3.4
imports	4,167	3,957	5.3	19.0	2.4
stocks (1,000 bbls)[2]	252,399	253,008	- 0.2	9.4	–
Motor Gasoline					
production	6,835	6,642	2.9	- 2.2	- 3.9
imports	122	145	-15.9	- 8.3	90.6
stocks (1,000 bbls)	227,195	226,652	0.2	7.4	–
domestic demand	6,941	6,895	0.7	~~-1.7~~ -1.2	- 3.7
Jet Fuel					
production	813	886	- 8.2	-1.5	- 3.4
imports	188	115	63.5	-18.6	-34.5
stocks (1,000 bbls)	32,231	33,128	- 2.7	25.6	–
domestic demand	1,032	1,016	1.6	-1.2	-10.2
Distillate Fuel Oil					
production	2,881	2,818	2.2	4.6	- 4.0
imports	165	175	- 5.7	-47.3	-28.9
stocks (1,000 bbls)	198,374	173,639	14.3	24.5	–
domestic demand	2,251	2,249	0.0	- 5.4	- 6.1
Residual Fuel Oil					
production	1,091	1,058	3.1	23.7	6.2
imports	1,197	1,260	- 5.0	-25.1	-18.2
stocks (1,000 bbls)	73,066	68,646	6.4	36.9	–
domestic demand	2,135	2,177	- 1.9	-12.1	-11.5
Imports of Refined Products	2,143	2,218	- 3.4	-19.8	-11.0
Domestic Demand for Products	16,156	16,459	- 1.8	- 1.7	- 4.5
Natural Gas (billion cubic feet per day)					
marketed production	59.35	60.33	- 1.6	- 2.5	- 2.9
imports	2.43 ⟷ switch	2.39	~~-1.7~~ -1.6	- 7.4	- 7.3
Bituminous Coal & Lignite (thousands of short tons)					
production	48,905	47,635	2.7	9.6	6.7
domestic consumption	46,400	44,631	4.0	- 2.8	1.4
total stocks	104,800	108,765	- 3.7	- 0.2	–
exports	5,307	6,369	-16.7	27.4	17.2
Electricty (billions of kWh)					
production	177.34	158.34	12.0	1.7	- 0.3

1 Current petroleum data are based on the FEA Weekly Petroleum Statistics Report. All units are thousands of barrels per day, except where noted.

2 This series has been changed. See Definitions.

Table 1

U. S. Gross Consumption of Energy Resources by Major Sources and Consuming Sectors
(Trillion Btu)1/

Consuming sectors	Anthracite	Bituminous coal and lignite	Natural gas dry 2/	Petroleum	Hydro-power	Nuclear power	Total gross energy inputs	Utility electricity distributed	Total net energy inputs	Percentage change fr. last yr.
Household and commercial:										
1971	98	304	7,366	6,538	--	--	14,306	3,161	17,467	
1972	75	312	7,642	6,667	--	--	14,696	3,478	18,174	4.0
1973 (preliminary)	75	295	8,001	7,024	--	--	15,395	3,727	19,122	5.2
1974 (forecast)	54	224	7,840	7,159	--	--	15,277	3,748	19,025	-0.5
Industrial:										
1971	47	4,203	10,570	5,133	34		19,987	2,329	22,316	
1972	35	4,232	10,591	5,668	35	--	20,561	2,493	23,054	3.3
1973 (preliminary)	29	4,425	10,825	6,043	35	--	21,357	2,671	24,028	4.2
1974 (forecast)	30	4,392	10,461	6,111	--	--	20,994	2,697	23,691	-1.4
Transportation:										
1971	--	6	766	16,330	--	--	17,102	17	17,119	
1972	--	4	790	17,264	--	--	18,058	17	18,075	5.6
1973 (preliminary)	--	5	814	17,927	--	--	18,746	18	18,764	3.8
1974 (forecast)	--	4	833	17,683	--	--	18,520	19	18,539	-1.2
Electricity generation, utilities:										
1971	42	7,374	4,117	2,475	2,811	404	17,223	5,507		
1972	40	7,797	4,102	3,134	2,911	576	18,560	5,988		
1973 (preliminary)	36	8,655	3,918	3,435	2,906	853	19,803	6,416		
1974 (forecast)	40	9,235	3,723	3,078	3,065	1,016	20,157	6,464		
Miscellaneous and unaccounted for:										
1971	--	--	--	173	--	--	172		172	
1972	--	--	--	233	--	--	233		233	
1973 (preliminary)	--	--	--	260	--	--	260		260	
1974 (forecast)	--	--	--	182	--	--	182		182	
Total energy inputs:										
1971	186	11,887	22,819	30,649	2,845	404	68,790		57,075	
1972	150	12,345	23,125	32,966	2,946	576	72,108		59,536	4.3
1973 (preliminary)	140	13,380	23,558	34,689	2,941	853	75,561		62.174	4.3
1974 (forecast)	124	13,855	22,857	34,213	3,065	1,016	75,130		61,437	-1.2

1/ Gross energy is the total of inputs into the economy of the primary fuels (petroleum, natural gas, and coal, including imports) or their derivatives, plus the generation of hydro and nuclear power converted to equivalent energy inputs.

2/ Excludes natural gas liquids.

Mr. WYATT. Not only do we have the 55-miles-per-hour speed limit being violated but the minute the embargo was over, the big mass of traffic was back on the road. That proved two things: That conservation can be achieved when people really feel there is an emergency, and secondly that the people don't feel any more pressures to cut down on their consumption.

I think this must be true throughout the spectrum of energy all over this country.

Mrs. HANSEN. Please proceed, Mr. Secretary.

REDUCTION OF IMPORTS

Mr. WHITAKER. It is in the national interest to reduce the existing projected rate of imports for at least three reasons. First, as events demonstrated last winter, independence in our foreign policy can be jeopardized by control or attempted control over critical commodities. More recently, we have been threatened by additional price increases, production cutbacks by Kuwait to maintain high prices, and impending further nationalization of American firms operating in foreign countries supplying American markets.

Second, the importation of high-cost petroleum continues to have inflationary effects. In simple terms, the importation of oil requires that sooner or later real resources must be exported to foreign countries to pay for oil imports. The resulting increased export demand for U.S. products such as grain, lumber, and machine tools will tend to raise domestic prices of these products and related products—bread, housing, and automobiles—for American consumers.

Third, it is simply more economical to produce domestic oil than to buy high-cost imports.

It is estimated, for example, that, excluding bonus payments, OCS oil costs from $1.50 to $3.50 per barrel to produce. The discrepancy I refer to is this: It would cost about a dollar and a half in the California area but probably $3 a barrel in the Alaska area because of the transportation. But given that discrepancy, compared to about $10 there is less profit for imported oil. If a barrel of oil is imported therefore, about $10 worth of goods and services will eventually be exported to pay for this oil. If a barrel of OCS oil is produced, on the other hand, only $1.50 to $3.50 of goods and services is consumed in the process. The cost savings of producing OCS oil will be captured by the Federal Government, primarily in the form of bonuses paid for tracts leased.

SHIPPING COSTS PER BARREL OF OIL

Mrs. HANSEN. What is the shipping cost per barrel for our imports from such countries as Venezuela, Ecuador, and the Arab countries?

Mr. WHITAKER. I can supply that for the record.

[The information follows:]

WORLD SCALE TANKER RATES (REVISED JAN. 1, 1974) BASED UPON FULL COST OF OPERATION OF A 25,000 DWT

Selected area	Rate (per long ton)	Conversion	Per barrel
Caribbean-United States	$2.33	7.111	$0.33
Mediterrznean-United States	4.66	7.111	.65
Eastern Mediterranean-United States	5.07	7.111	.71
Persian Gulf-U.S. gulf	10.91	7.111	1.53

Source: Worldwide tanker nominal freight scale (world scale).

Mr. WHITAKER. I don't know the answer precisely. It is about $1 to $1.50 per barrel.

Mrs. HANSEN. How does that cost relate to the cost of transporting oil from Alaska?

Mr. CARTER. It is probably about 90 cents a barrel. It depends on who you are paying. If you are paying a foreign corporation and only a portion of it gets back to the United States in the form of returned income, your total cost is more than if you are paying U.S. seamen and U.S.-flag vessels.

Mr. WHITAKER. To put the issue another way, if Arab oil was $10 a barrel and domestic oil, new oil, is about $3.50, then you have $6.50 lying in between. The issue is who is going to get it, the Arabs or the United States? This is the issue. For these reasons the maximum development of domestic petroleum resources is of major importance. In this regard, the period of approximately the next 15 years is particularly critical. During that period—except for increased direct use of coal in powerplants—we cannot expect major input from alternative energy sources—such as coal gasification and liquefaction, oil shale, nuclear fusion, the fast liquid metal breeder-reactor or solar energy. In other words, all the R. & D. things we have in our bag that we think are at some time going to pay off, they are not going to pay off in the next 10 to 15 years in any substantial way. So to reduce our projected increase in demand the answer lies in requisite technology. This is true because requisite technology does not exist and because these alternatives are more costly on a Btu basis even at today's high oil prices. The demand for coal may increase primarily for electrical generation but it will generally not substitute for petroleum products during this period. In other words, we are saying $8 or $10 or $11 per barrel is a cheaper bargain than anything we see on the horizon such as oil shale or coal gasification.

DEMAND FOR OIL

What it comes down to is this: Demand for petroleum will continue to increase; alternative energy sources and energy conservation may slow, but will not halt, that increase. Therefore, the question is not whether we will continue to require oil in increasing amounts; rather, it is whether we choose to maximize production of domestic oil and gas to minimize as much as possible reliance on imports or instead forgo that additional domestic production and substitute for it imported oil—and there are strong reasons why our national interest requires that we reduce our petroleum imports as much as possible.

Mrs. HANSEN. Are your estimates based on the current housing construction rate?

What is the increased demand for energy for every thousand houses constructed?

Mr. WHITAKER. Are you referring to if we insulated or did not insulate a house?

Mrs. HANSEN. No. I am referring to an increase in the number of new homes, which is a necessity in this country. You certainly have to predicate the demand for oil in the future upon housing growth because each house consumes so much energy, as you are well aware.

Mr. WHITAKER. We will try to get you that answer.

[The information follows:]

The dollar cost of energy use for new housing construction would vary from area to area. However, we do have some figures on the amount of energy used in construction of a home and estimates of annual energy use per home.

An estimated 615 million Btu's are used in construction of a new house or 615 billion Btu's per 1,000 new houses. To place the amounts in perspective, energy consumed in the construction of 1,000 new houses equals 0.0007 percent of projected national energy demand for 1974.

Once constructed, the increased domestic use per house is estimated to be 238 million Btu's per year. Increased domestic energy use per thousand homes amounts to approximately 0.0002 percent of projected national energy demand for 1974.

Mrs. HANSEN. Have you included this additional future demand into your projections?

Mr. WHITAKER. We have growth projections in general. I will try to get that answer for you. I think that is in units of 1,000 houses what is the growth required.

CONVERSION OF COAL TO ELECTRICITY

Mrs. HANSEN. Mr. Secretary, we have discussed previously the increased use of coal for the generation of electricity. How much savings could the United States as a conservation measure reap if we were to convert totally for purposes of electric generation to coal rather than using petroleum products?

Mr. WHITAKER. I don't know the exact amount. It would be considerable. Does anybody have an estimate of the exact amount if you had a total conversion?

[Discussion off the record.]

Mr. WHITAKER. That assumption flies in the face of our current air laws. To make that assumption whole flies in the face of our current air laws.

Mrs. HANSEN. How about our present transportation system?

Mr. WHITAKER. I do not think the answer Mr. Gaskins gave assumes any change in buses and automobiles.

Mrs. HANSEN. In the West you don't have coal mines beside rail heads.

Mr. MCDADE. I would like to pursue that with you a little bit if I may. The conversion loss when you use a fuel to obtain electricity represents a loss of what, 30 to 50 percent?

Mr. MCKELVEY. About 60 percent, I believe. It could be in that range depending on the range of the plant. It could be up to 70 percent.

Mr. MCDADE. So clearly using a fuel in short supply to obtain another form of energy and losing 60 percent, if that is an accurate figure, in conversion penalties is unbelievable in a time of national shortage. I think we agree on that, do we not?

Mr. WHITAKER. Yes. That does not mean I would not like to get as much coal as we could, provided we could do it in an environmentally sound way, but the energy conversion from coal to electricity is more costly than conversion from oil to electricity.

Mr. MCDADE. No. I am saying when you do this you are not only using a premium fuel to create another form of energy, but you are paying a conversion penalty of 60 percent.

Mr. CARTER. It is normally 55 percent.

Mr. MCDADE. That is still a large penalty, especially when you are using a product which is in short supply.

TAX ON COAL

Are you aware that the House-Senate Conferees are recommending putting a 35-cent tax on coal?

Mr. WHITTAKER. Yes. We have opposed this. That does not mean that it would not pass.

There is a 35-percent tax on coal, the tax being used primarily for reclamation of orphaned lands.

Mr. MCDADE. I know, but it is a 35-percent tax which will increase the cost of electricity and it is a disincentive to the use of coal. We create electric energy and lose 55 to 70 percent in the conversion process and we are using a fuel that is in short supply to do it. That does not make any sense to me. I hope we can be a lot more vigorous on increasing the use of coal. I realize the air pollution problem. We need to work on it. I realize the attendant problems in transportation, but you have those in any event. I am glad you are opposing the 35 cents a ton tax on coal. Thank you.

Mr. WHITTAKER. Therefore, domestic oil and gas production must be increased to fill the gap.

Onshore oil and gas production has already peaked, and except for Alaska (particularly Naval Petroleum Reserve No. 4 and Northwest Alaska), we do not expect any more major onshore discoveries.

SECONDARY AND TERTIARY RECOVERY OF OIL

Mr. EVANS. What policy have you for developing the secondary and tertiary recovery of oil from existing onshore wells?

Mr. WHITAKER. Vince?

Mr. MCKELVEY. I do not believe there has been a policy directed specifically toward that, Mr. Evans. However, price increases themselves will have and are having quite an effect.

Mr. EVANS. Have you given any attention to this in terms of the total energy requirements of the Nation? It seems to me to be important to examine it.

Mr. MCKELVEY. Yes.

Mr. EVANS. But you have no policy on it?

Mr. MCKELVEY. I am not able to think of a policy directed specifically toward encouraging secondary and tertiary recovery in a direct way. But the Department has requested increased appropriations for research in this area.

Mrs. HANSEN. Will the gentleman yield?

Dr. McKelvey, we have been discussing this problem of secondary and tertiary recovery of oil for the last 3 years. I think you testified about two-thirds of the oil is still in the ground. Why haven't the oil companies moved in the direction of extracting more of the oil from the ground?

Mr. MCKELVEY. I think it has been a matter of economics, whereas the industry I think has increased total recovery about a half percent per year over a period of 10 or 15 years or so——

Mrs. HANSEN. What is their depletion allowance per year?

Mr. MCKELVEY. Probably a good deal more than that can be accomplished at higher prices with greater incentives.

Mrs. HANSEN. Can you tell me how much their profits have increased per year and how much their depletion allowance has increased?

Mr. McKelvey. I cannot really speak to either one of those questions myself.

OLD OIL

Mr. Gaskins. Can I respond?

I think there is a limit you should be aware of. There is a problem about price because old oil receives a price of $5.25 a barrel. The definition of old oil is that if you apply secondary and tertiary efforts to a field producing before 1972 which is in decline, you will probably only get $5.25 a barrel for that effort. I know the administration thought about changing the price regulations for secondary and tertiary efforts, deregulating the price of this oil. The problem with deregulation of old oil is the high price paid by consumers. I understand there are studies going on at FEA to explore ways of deregulating secondary and tertiary oil without deregulating all old oil.

Mr. Evans. When you make that decision, don't you have to make a decision because of the cost to the consumer?

Mr. Gaskins. Yes.

Mr. Evans. It costs the consumer to use and consume the oil produced from offshore leases. What will that cost per barrel be?

Mr. Whitaker. The cost per barrel of offshore oil, the original cost to produce, is in the order of $1.50 to $3. But the issue gets down to, who gets the $6 or $7 difference? That would not do anything for the consumer because it is new oil. It will also, in the world market, come up to roughly the Arab price unless we can decrease our demands and have the normal laws of supply exceeding demand. That is the only way to get the price down.

Mr. Evans. You have to keep that in mind when you start talking about policy when it comes to secondary and tertiary recovery.

Mr. Gaskins. If I can interject, except for some very high future price expectations, the existing incentives are for people to produce through secondary and tertiary recovery if the costs are less than $5.25 a barrel because that is the price they get in the marketplace.

Mr. Whitaker said OCS oil will cost us between $1.50 and $3. In terms of a society making a decision, we should produce the OCS before secondary and tertiary. With the world price between $5 and $10, we should do both. But if you are trying to balance between OCS oil and secondary and tertiary oil, OCS oil is cheaper.

Mr. Evans. That is assuming you know where the oil is and that you have the rigs and capital.

Mrs. Hansen. Does that assume environmental cost?

TOTAL COST TO PRODUCE OIL

Mr. Yates. Will you yield? What factors go into the $1.50 per barrel? Does your initial bonus payment?

Mr. Whitaker. No. The bonus payment does not go into it.

Mr. Yates. Then you are giving us an inaccurate picture when you say it costs $1.50 to produce a barrel of oil. The cost should be the total costs to the company to produce that oil.

Mr. Gaskins. I said total cost to society.

Mr. Yates. What do you mean?

Mr. Gaskins. The Federal Treasury collects the bonus. That is a benefit we all receive.

Mr. YATES. I understood your reply to Mr. Evans that the cost of producing a barrel of oil from the OCS would be $1.50 to $3.

Mr. GASKINS. There is a transfer payment. When we sell a lease they pay us a very large payment for the right to that lease. That is a transfer between the company and the Federal Government. It is not a cost to society.

Mr. YATES. But it is a cost to the Federal Government. I am trying to find out what the cost is to produce a barrel of oil in the Outer Continental Shelf. Your answer to that is what, $1.50?

Mr. GASKINS. Between $1.50 and $3.50.

Mr. YATES. It costs an oil company to produce that?

Mr. GASKINS. That is what it costs society. The cost to the oil company is more than that.

Mr. YATES. But they are selling it for that?

Mr. GASKINS. New oil sells for more than $10.

Mr. YATES. I am trying to find out what it costs the company to produce a barrel of oil from the OCS, starting with the bonus payment and whatever other expenditures it has to make in order to bring the oil in. How much does it cost an oil company to produce a barrel of oil from one of your leases?

Mr. WHITAKER. Except for profit it will end up being about $10 because they will be competing against the foreign price.

Mr. YATES. That's what the sales price will be.

I am asking you what the costs are.

Mr. WHITAKER. I do not know what they are exactly, but here is the point, sir: An oil company, what are their costs, they have to figure in the bonus price. That is part of their cost.

Mr. YATES. I agree with that. I am trying to find out what the cost is to the company.

Mr. GASKINS. It cost $3.50 for them to produce and transport oil from the Gulf of Alaska to the lower 48 States. They have to pay $6.50 to the Government in the form of taxes, royalties, and bonuses. So the company's cost is roughly $10. It is $3.50 in resource cost. The other $6.50 is a transfer payment consisting of the bonus, royalties, and payments to the various taxing authorities.

Mr. EVANS. Now compare that to similar computations of the costs on secondary and tertiary recovery. Can you compare that?

Mr. GASKINS. I do not have the figures in terms of the tax payments on secondary and tertiary recovery. The Department of the Interior and FEA are conducting studies on the costs of new methods. There are a lot of things you can do in this field. In any case, secondary and tertiary recovery that is not old hat, costs more than $3.50 per barrel of oil.

COST TO THE PRODUCING COMPANY

Mr. YATES. Does anybody in the Federal Government know what the cost to the producing company is? Do they know what the costs are to Exxon or another company in bringing in a barrel of oil from the OCS?

Mr. GASKINS. We make estimates of this on a regular basis.

Mr. YATES. But does anybody look at the books of the company?

Mrs. HANSEN. Dr. McKelvey?

Mr. McKelvey. We do not examine the books of the company.

Mrs. Hansen. Who does?

Mr. McKelvey. I presume the Internal Revenue Service does.

Mr. Yates. That is to see if they are paying adequate taxes.

Mr. McKelvey. Their costs would vary a great deal from one field to another.

Mr. Yates. Dr. McKelvey, or gentlemen, what would happen if the Federal Government decided that it wanted to produce the oil instead of leasing the lands? You are talking in your testimony about putting out 10 million acres for lease to private companies. You are going to divide the 10 million acres into a certain number of tracts. You are going to lease those tracts. The last tract brought in what price to the Federal Government? When you leased a tract in the Gulf of Mexico, how much money did the Federal Government get?

Mr. Gaskins. $210 million.

COST OF OIL RIGS

Mr. Yates So some company or group of companies invested $210 million for the privilege of getting that oil. Then it has to get a rig there. Now what does that rig cost?

Mr. McKelvey. It would be between $20 and $25 million.

I read of one just yesterday being ordered for about $30 million.

Mr. Yates. Then it has invested the initial payment, it has the rig and it starts drilling. How much will it cost to drill?

Mr. McKelvey. I would have to supply that.

[The information follows:]

Drilling costs can vary widely within any given OCS region because of different weather, sea and bottom conditions. However, the interagency oil task force for Project Independence has estimated average drilling costs for each major OCS region:

	Dry hole costs (dollars per exploratory well)	Platform and drilling costs (dollars per producing well)
Offshore Alaska	[1] 3,300,000	[1] 1,741,000
Offshore Pacific	[2] 545,000	[2] 361,950
Gulf of Mexico	[3] 690,000	[3] 816,449
Offshore Atlantic	[4] 761,000	[4] 888,264

[1] Average depth of dry holes equals 10,100 ft; average depth of producing wells equals 10,000 ft.
[2] Average depth of dry holes equals 6,500 ft; average depth of producing wells equals 5,000 ft.
[3] Average depth of dry holes equals 9,200 ft; average depth of producing wells equals 9,700 ft.
[4] Average depth of dry holes equals 10,400 ft; average depth of producing wells equals 10,400 ft.

It should be noted that platform and drilling costs on producing leases as presented in the table above are allocated on a per well basis. Acquisition and installation of a platform in an area like offshore Alaska could run to over $10 million.

On a producing lease, cost of gathering, processing and storage equipment would amount to approximately 20 percent of producing well expenditures. Overhead would amount to approximately 15 percent of total drilling costs. Bonus costs per lease will vary widely depending upon expectations regarding prices, recoverable reserves and lease development costs.

Operating costs on producing leases are estimated to be as follows:

OCS well operating costs

	Dollars per year per producing well
Offsohre Alaska	134, 900
Offshore Pacific	50, 000
Gulf of Mexico	50, 000
Offshore Atlantic	50, 000

Mr. YATES. How much does the oil company invest?

Mr. CARTER. It costs in the neighborhood of $15,000 a day to run that rig.

Mr. YATES. That is part of the cost. That goes into the computation of what its basic costs are before it sells a barrel of oil. Now the costs are only a minor factor in determining what price it will get for its oil, aren't they? It is going to sell its oil for the price on the market. If it costs them $3.50 to bring in a barrel of oil, it will make a profit of about $6 per barrel exclusive of taxes.

Mr. MCKELVEY. But it is not exclusive of taxes and bonus. The costs that Dr. Whitaker mentioned of $1.50 to $3.50 represent the costs of discovery and production of the oil and added to that must be the cost of the acquisition of the lease and taxes and so on.

Mr. YATES. Dr. McKelvey, is my memory faulty? Did I understand in previous testimony that somebody said that it would cost something like $200 million for a rig?

Mr. WHITAKER. No; not that high. The highest I heard was $48 million.

Mr. CARTER. It might for a production platform.

Mr. YATES. The testimony before the committee was that. Was it Mr. Ligon? Mr. Ligon, didn't you testify at a previous hearing that the cost of a rigging platform, the total cost, was about $200 or $300 million?

Mr. LIGON. No, sir, I do not believe I did.

Mr. YATES. What would the cost be?

Mr. LIGON. There are so many variables but a typical one would be $100 or $75 million. It would be much lower than $200 or $300 million.

GOVERNMENT PRODUCTION OF OIL

Mr. YATES. Why doesn't it make sense, in view of the urgency as Mr. Whitaker has described it and in view of the fact that we have to bring this oil in, why doesn't the Government take some of its own lands, buy a rig like oil companies do and just start producing?

Mr. WHITAKER. The costs would not be any less. We would have to compete in the normal marketplace.

Mr. YATES. Couldn't the Government by Executive order decide that because of the urgency of the situation it needed these rigs and therefore tell the steel companies or oil companies to produce these rigs to bring in the production?

Mr. WHITAKER. Yes; under the Defense Production Act.

Mr. YATES. The Government could do that.

Mr. WHITAKER. In theory they could, but I think it would be much less efficient.

Mr. YATES. Why? Mr. Ligon testified before this committee that if he owned a tract of land that had oil on it, he could go out and hire somebody to bring that oil in. Didn't you testify to that? I can show

it to you right in the testimony. The point is, why can't the Government do it as well as Mr. Ligon?

Mr. WHITAKER. Because when you take it away from some private company you lose the incentive to efficiency provided by the desire for profits. If you want no private industry then you are not taking it away from somebody, it all belongs to the Government. But if you want a mix, you have to take it away.

PRODUCTION OF RIGS

Mr. YATES. But the private companies cannot get the rigs and the pipes?

Mr. WHITAKER. I will get into that in a minute if you want. There is a problem with that, but it is solvable and we are solving it.

Mr. YATES. How are you solving it?

Mr. WHITAKER. Private industry is solving it. In the 1971–72 period when we did not offer and give the opportunity to the oil companies to bid on areas in the gulf, when we were held up by court actions, primarily suits brought by environmental organizations, there was a reduction in domestic production of rigs. Some rigs, 13, I believe, in the Gulf of Mexico, moved to foreign waters, primarily to the North Sea. That is now changing. Now that we are having a comeback of offering of OCS areas we are getting an increase in domestic production of rigs and have gotten the first rig back from the North Sea. We think if we offer enough lands we can get a switch in the natural foreign trade competition to get rigs back from overseas. It will boil down to a decision as to whether the oil companies feel they have a better prospect somewhere in the Atlantic or Gulf of Alaska than they have in the North Sea.

Mr. YATES. Suppose they decide they have a better prospect in the North Sea, would you then advocate the Government to go ahead on its own? Why do you leave it to the oil companies any more than you leave it to the Mid-Eastern countries?

Mr. WHITAKER. You are asking a fundamental question as to whether we wish to impose an export provision on rigs. If you do that, you may have a retaliation on exports from the North Sea.

Mr. YATES. Do you mean that England would export to us?

Mr. WHITAKER. No. These oil companies have production overseas.

Mr. YATES. So this country is at the mercy of these oil companies who own the rigs?

Mr. WHITAKER. I am not talking about the oil companies. If we told Exxon, for example, we would not allow them to export another rig then the British Government might say "Exxon, you cannot export back to the United States any rigs that are now here."

Mr. YATES. Why, because they are under contract?

Mr. WHITAKER. The normal thing that can happen when you put an export control on is that there are trade retaliations that another country can embark on.

SUPPLY OF RIGS

Mr. YATES. So the shortage of rigs continues then?

Mr. WHITAKER. No. The shortage of rigs is decreasing because the opportunities are expanding.

We are in a tight supply for rigs now. We are in a tight supply for two reasons. In the 1971 and 1972 area we offered less OCS leases and

therefore there was a flight of foreign rigs. The second reason we are in short supply is because our price stabilization program made it more profitable for steel companies to make other things than one of the primary components of rigs, tubular steel. Tubular steel was a very low profit item under price controls so the steel company stopped making it. So every time we fool around with the private enterprise system, we have more problems.

Mr. YATES. I do not like the idea that our needs are subject to the big oil companies' own particular requirements. If we are going to bring in oil from the Outer Continental Shelf, we ought to find a way to bring it in. I had a conversation with Mr. Lawrence Schaeffer of Houston, who is with the Offshore Rig Data Service. He gave me the following statistics that in 1973 the mobile units that were built were 32. In 1974 they were 54. Those built in the United States were 17 in 1973 and 21 in 1974. Out of the 17 that were built in the United States in 1973, only 4 remained in the United States. Thirteen of them left the United States and went out of the country. In 1974, out of 21 that were built, 10 stayed in the United States and 11 went out of the country.

Mr. WHITAKER. Less than the year before.

Mr. YATES. Fifty percent, that is right.

The point is that if the need is so tremendous, why don't we expand the number of rigs being built?

Mr. WHITAKER. That is going on because we are offering more land.

Mr. YATES. But still 50 percent of the rigs built this year were exported out of the country.

Mr. WHITAKER. Yes. We estimate that by 1975 or 1976 we will be getting about 10 percent of the rigs that were previously headed for overseas. They will not go overseas because of the expanded offerings of OCS.

Mr. YATES. What does the 10 percent figure mean?

Mr. CARTER. Ten percent of the 50 that were going will not go.

Mr. YATES. Ninety percent will go?

Mr. CARTER. No; 50 will stay and 10 percent of the 50 were going to stay. That means 55 percent will stay rather than 50.

SHORTAGE OF PIPE

Mr. YATES. What about pipe between the offshore installations and the mainland? We are told that the reasons we cannot get natural gas to the mainland from offshore is because of the shortage of pipe, that the transmission companies have not been able to get pipe to bring in the oil and gas.

Mr. WHITAKER. There is no question there is a shortage of pipe, sir.

Mr. YATES. What are you doing about it?

Mr. WHITAKER. Expanding the OCS so the free market can operate. Our key problem with pipe is not in the OCS, but with three major projects. The pipe for one has been finished, the Alaska Pipeline. Then we have two competing proposals that could amount to almost 10,000 miles of pipe in getting gas from the rim of the Arctic down to the lower 48. That is a real problem.

Mr. YATES. Friends of mine in the steel business say it is more profitable for the steel companies to make other forms of steel than pipe

and that is the reason you have not been getting pipe. Mr. McKelvey says that is true. If that is true, what difference does it make if you lease the OCS or not, if it is more profitable for the steel companies to make other products than pipe?

Mr. GASKINS. As you lease the land you make the targets more attractive and that drives up the demands for pipe.

Mrs. HANSEN. Mr. Whitaker, please continue with your general statement.

OSC DEVELOPMENT

Mr. WHITAKER. Therefore over the next 15 years the OCS offers the best prospects for subtsantial increases in domestic oil and gas production.

The potential for OCS development, however, lies primarily in the frontier areas. Since 1953, approximately 10 million acres have been leased in the Gulf of Mexico. The next three sales are planned in the Gulf of Mexico one of which is planned for October 1974. Where the environmental impact statement has been completed the Secretary has gone ahead. Presuming that same fact, there could be a sale in January 1975, and the late spring or summer of 1975, the majority of large prospects will be leased. The most promising frontier areas outside of the Gulf of Mexico are southern California, the Gulf of Alaska, Baltimore Canyon off the mid-Atlantic States, Georges Banks off New England, and lower Cook Inlet in Alaska. In none of these cases has the Secretary reached the point where the NEPA process has been completed and he has reached a decision for or against leasing.

ENVIRONMENTAL PROBLEMS

In all of these areas, the Department intends to give increased attention to environmental problems, other OCS resource values such as the marine fisheries, and the onshore impact of offshore development.

Mr. WYATT. Isn't the Alaska potential a higher cost potential than the other geographic areas listed?

Mr. WHITAKER. The best prospect in North America we are aware of is still onshore, which is the Pet–4 area. In the offshore areas the Gulf of Alaska ranges highest in terms of a survey made by industry as to the highest potential.

Mr. WYATT. I am interested in the relative cost, considering transportation.

Mr. WHITAKER. I think the costs would be in the order of the three and a half.

Mr. WYATT. In the higher range.

Mr. WHITAKER. The costs of oil from anywhere in Alaska are going to be higher than from the Atlantic.

Mr. WYATT. Aren't the environmental problems more difficult in Alaska?

Mr. WHITAKER. Yes.

Mr. WYATT. Then on your scale of priorities is Alaska high in view of these two problems?

Mr. WHITAKER. Yes. We are between a rock and a hard place. Where we think the most oil is, is also where we have the most environmental problems. So we are doing what we can on those environmental problems, like this summer being involved in a group shoot where we can

get seismic information on the Gulf of Alaska not at depth but close to the bottom so we can learn about the environmental hazards of footing a rig in deep water where there is seismic and storm activity.

Mrs. HANSEN. You have a further question involved, in your various frontier areas. Do you have the refinery capacity in all these areas to process the oil?

Mr. WHITAKER. No, Madam Chairman; we never will until we find out if there is oil there to build the capacity. That is a general answer to your question.

Mrs. HANSEN. How much environmental impact have you had as a result of your gulf leases?

Mr. CARTER. Gulf of Mexico?

Mrs. HANSEN. Yes.

Mr. WHITAKER. We have been at it for 20 years. We have had some serious problems and some fires. I would think over the long run that record is quite good. About 2 to 4 percent of the oil that man puts in the ocean comes from offshore drilling, whereas we are up around 40–50 percent which is lost from the tankers.

Mrs. HANSEN. The rest comes from onshore facilities.

Mr. MCDADE. You mention the areas of the Gulf of Alaska. As I recollect, none of these areas are near the Prudhoe Bay find. Why not?

Mr. WHITAKER. The area where we could, subject to environmental impact, et cetera, referring to the Gulf of Alaska, is in this area here.

Mr. MCDADE. How about Cook Inlet?

Mr. WHITAKER. That is right here. Prudhoe Bay is up here. Next to it is the naval petroleum reserve.

Mr. MCDADE. But you don't mention offshore in that area.

BEAUFORT SEA

Mr. WHITAKER. That is a possibility. We do not at this point see it as a 1975 possibility. We see it potentially as a 1976 or 1977 possibility. The reason is that we are getting into what we refer to as the Beaufort Sea area. I have to do more checking on this. I have a meeting on it this afternoon. Technology would seem to indicate that you can build artificial islands out there.

Mr. Carter and I visited just last week one up here in the Mackenzie Delta. It is about a mile from shore in about only 4 feet of water.

The slope is tremendously gentle. The question is, Can we build these islands in deep water and make sure the ice rides on them and does not knock them down?

Mr. MCDADE. So the answer is because of the technological problems?

Mr. WHITAKER. Yes. At this moment Beaufort Sea is not a 1975 option. We might change our minds on that, but I do not think so from what we know about the technology.

Mr. MCDADE. Thank you.

GULF AREA

Mrs. HANSEN. Mr. Whitaker, how many barrels of oil are produced in the Gulf of Mexico?

Mr. WHITAKER. About 1 million barrels a day.

Mrs. HANSEN. How many refineries are in the Gulf area?

Mr. WHITAKER. We will have to supply that for the record.

[The information follows:]

3. Listed below are the refineries located in the Gulf area of the United States, and total crude oil throughput capacity as of January 1, 1974. Refer p. 39.

Refineries	Barrels Per Calendar Day
Alabama Refining Co., Inc., Theodore Alabama	15,000
Canal Refining Co., Church Point, Louisiana	3,500
Cities Service Oil Co., Lake Charles, Louisiana	268,000
Continental Oil Co., Egan, Louisiana	15,000
Continental Oil Co., Westlake, Louisiana	83,000
Evangeline Refining Co., Inc., Jennings, Louisiana	4,000
Exxon Co., U.S.A., Baton Rouge, Louisiana	445,000
Good Hope Refineries, Inc., Good Hope, Louisiana	29,450
Gulf Oil Corp., Belle Chasse, Louisiana	180,400
Gulf Oil Corp., Venice, Louisiana	28,700
LaJet, Inc., St. James, Louisiana	11,000
Murphy Oil Corp., Meraux, Louisiana	92,500
Shell Oil Co., Norco, Louisiana	240,000
Tenneco Oil Co., Chalmette Louisiana	97,500
Texaco, Inc., Convent, Louisiana	140,000
Standard Oil Co. (Kentucky), Pascagoula, Mississippi	240,000
American Petrofina, Co., of Texas, Port Arthur, Texas	84,000
Amoco Oil Co., Texas City, Texas	333,000
Atlantic Richfield Co., Houston, Texas	213,000
Champlin Petroleum Co., Corpus Christi, Texas	62,186
Charter International Oil Co., Houston, Texas	70,000
Coastal States Petrochemical Co., Corpus Christi, Texas	135,000
Crown Central Petroleum Corp., Pasadena, Texas	100,000
Eddy Refinery Co., Houston, Texas	2,160
Exxon Company, U.S.A., Bayton, Texas	400,000
Gulf Oil Corp., Port Arthur, Texas	312,100
Marathon Oil Co., Texas City, Texas	61,000
Mobil Oil Corp., Beaumont, Texas	335,000
Monsanto Chemical Co., Alvin, Texas	8,500
Phillip Petroleum Co., Sweeney, Texas	85,000
Quintana Howell Joint Venture, Corpus Christi, Texas	12,500
Saber Petroleum Corp., Corpus Christi, Texas	9,000
Shell Oil Co., Deer Park (Houston), Texas	294,000
South Hampton Co., Silsbee, Texas	5,600
Southwestern Oil and Refining Co., Corpus Christi, Texas	105,000
Sun Oil Co., Corpus Christi, Texas	57,000
Texaco, Port Arthur, Texas	406,000
Texaco, Port Neches, Texas	47,000
Texas City Refining Inc., Texas City, Texas	60,000
Union Oil Co., of California, Nederland, Texas	116,000
Union Texas Petroleum, a Division of Allied Chemical Corp., Winnie, Texas	9,400
Total	5,215,496

Mrs. HANSEN. Please proceed with your statement, Mr. Whitaker.

Mr. WHITAKER. CEQ's report, "OCS Oil and Gas—An Environmental Assessment," released last April, was basically a sound assessment. The Department concurs in most of the CEQ recommendations, has already adopted many of them, and is studying and implementing others, for example, operator personnel training, reporting system for accidents, surface-actuated subsurface safety values, and the programmatic environmental impact statement. CEQ's identification of special environmental conditions in places like the Gulf of Alaska is guiding extra efforts by the Department to evaluate those risks.

ELK HILLS RESOURCE

Mr. MCDADE. I did not see any mention of Elk Hills as a potential resource for alleviating in the near term the shortage.

Mr. WHITAKER. It is very much a potential. We would reach a production of approximately, if my recollection is correct, 160,000 barrels a day in about a 12-month period. I guess in layman's language that is about as close to finding an oil reserve as we can come.

Mr. MCDADE. That is the only place you can turn on the tap. What is your position?

Mr. WHITAKER. We have made a recommendation that oil be freed up and be given to the country. At the risk of sounding a little sassy here, I believe it is the view of the Navy that it is their oil instead of the Nation's oil.

Mr. MCDADE. Do you have legislation pending before the Armed Services Committee?

Mr. WHITAKER. Yes.

Mr. MCDADE. Thank you.

POSSIBLE SALE OFF SOUTHERN CALIFORNIA

Mr. WHITAKER. Starting with the environmental impact statement now underway for a possible sale off southern California, the Department is trying to increase public, scientific, and other expert input into the decisionmaking process. The California State Lands Commission and State Coastal Zone Commission, the city of Los Angeles and Orange County (to represent the local governmental units), the Sierra Club and the Seashore Environmental Alliance (SEA) have been asked to designate experts to work with BLM's local office in drafting the impact statement.

Contract studies have been conducted to assess the availability of environmental and socioeconomic data—and status of ongoing work—concerning Alaska, and the Atlantic coast.

These assessments, already totaling 25 volumes, will provide a basis for environmental impact statements and identify gaps that should be filled.

Baseline environmental studies are planned for all possible future frontier sale areas to provide an environmental benchmark against which possible changes can be assessed through a regular environment monitoring system. The intent is to have the initial data collection completed prior to each sale if the sale is to take place.

A baseline study for the south Texas area will commence later this

fall. Because of the limited field season, initial data collection began in the Gulf of Alaska last July. A symposium of California scientists and environmental experts to assist in designing a baseline study off the southern California area is being planned for November. A similar symposium concerned with the Atlantic coast is also being planned.

Discussions have been held with NOAA in the Commerce Department to devise means to increase the input concerning marine fisheries from NOAA and commercial interests into the selection of areas and the preparation of the environmental impact statements.

EFFECT ON OCEANIC LIFE

Mrs. HANSEN. Mr. Whitaker, you have had some input from the Virginia Institute of Marine Science. I quote from a Washington Star-News article of Sunday, October 6, entitled "Offshore Drilling Study Challenged."

Mr. WHITAKER. Yes; I read that.

Mrs. HANSEN. Aside from the possible effects of spilled oil on the bay's clams, oysters, fish, and birds, Don Bosch, another VIMS associate, believes, small routine leaks, in addition to special greases, used to lubricate deep-sea drills, can have a subtle but serious effect on oceanic life that may not be apparent for years.

Mr. WHITAKER. It is reports like that that have to get into the mainstream of this decisionmaking. That is the thrust of our remarks. I have read newspaper accounts of the report. I am not familiar with the organization. We will be in contact with that organization and organizations like it.

The Department also recognizes that many of the States adjacent to the frontier areas are very concerned with the onshore impact of offshore drilling. They are concerned with where pipelines, treating facilities, refineries, and other auxiliary facilities are located as well as the socio-economic impact on small towns and rural communities.

The Department believes the key to coping with such onshore development is doing good planning and zoning. In most cases, the needed facilities can be located in areas where environmental impacts can be mitigated and where the employment and tax bases are needed, and this will minimize the undesirable effects. The planning and zoning functions are, of course, State and local government functions.

The Department has discussed with the Office of Coastal Zone Management in NOAA how it might assist States in developing their coastal zone management plans. Furthermore, the Department stands willing to assist any coastal State with their coastal zone planning by providing existing natural resource data and analyses dealing with the topographic, geologic, hydrologic, and biologic factors of the coastal areas, et cetera.

LEASE OF 10 MILLION ACRES

I would like to turn now to the specific questions that the committee has raised concerning the Department's plan to lease 10 million acres provided we can do it in an environmentally safe way during 1975.

We have sent earlier to the committee a technical paper which I referred to at the beginning of the meeting, responding to those questions to the extent of our current analysis. Therefore, at this time I will simply summarize those answers.

The committee asked that the Department justify the proposed leasing level in terms of eight points.

First, the role of offshore oil and gas in a comprehensive energy strategy or plan. As I indicated earlier, the Nation, despite conservation efforts, will require a substantial volume of oil and gas in the next 10 to 15 years. Domestic sources, and particularly the OCS, can provide this oil and gas at substantially lower cost to our economy than by importing the oil, costs aside.

Additionally, greater self-sufficiency minimizes the threat of international political blackmail. Pursuant to briefings from FEA, I believe this is fully consistent with their Project Independence blueprint report to be released.

Second, the availability of drilling rigs, steel pipe, and personnel to support an expanded leasing program. There is no question that there are current shortages of these facilities and personnel. The crucial question is whether there will be a critical shortage during the 5 years following the lease of 10 million acres in 1975. It appears that steel as input into pipe and drilling rigs has been a bottleneck.

While there are leadtime problems, we believe that an adequate industrial flexibility exists, so that the supply of rigs and related equipment will be made available to explore and begin development of the 10 million acres. It is expected the attractive prospects of the frontier area will attract some drilling rigs back from overseas. Additionally, we expect that by encouraging unitization exploration fewer holes and, hence, fewer rigs will be needed for exploration than in the past.

AVAILABILITY OF CAPITAL

Third, the availability of capital to make the bonus bids and finance the exploration and development of the leases. The matter of capital availability can only be answered in terms of the economic attractiveness of the prospective lease-tract offerings.

It appears there is no shortage of money for attractive investments. We have a lot of arguments from the oil companies whether this is a fact, but that is our opinion at this point.

Mrs. HANSEN. But, with your plan to lease a substantial number of acres, would not the amount of bonus bids decline?

Mr. WHITAKER. Madam Chairman, it could in theory. In classical economic theory, as you increase the supply, the price will go down. So far we have not seen that happen.

We feel that is a responsibility we have to monitor very closely.

We have rejected bids, 70-some, I believe.

Mr. CARTER. Eighteen percent.

Mr. WHITAKER. Eighteen percent of the last two sales, because after our resource review we felt they were underpriced. The other side of the coin is that those leases we think will be so attractive that they will command very high prices.

We were staggered, frankly, that the Destin Dome, for example, down there off of Florida, went for as high as over $200 million. We

were staggered that oil shale went for $200 million for a 5,000-acre lease. Yet the economic theory says that the price of the lease will go down.

I take the responsibility to monitor that as it goes along.

OIL SHALE LEASES

Mr. EVANS. In regard to these bids that you speak of and your delightful surprise that they are so high, it is my understanding one of the oil shale leases went for some $210 million, but it also is my understanding that the company made that bid recently announced, and correct me if I am wrong, that it is not economically feasible for it to go along because of a lack of incentive or because of Government policy.

Mr. WHITAKER. One company, Colony Oil, recently announced it would not continue, but that is not one of the companies who bought the Department of Interior leases in the lease sale. That was on privately-owned shale land.

Mr. EVANS. Then the company that went for $210 million is proceeding ahead?

Mr. WHITAKER. They may be a little nervous but they are proceeding ahead, yes. I do not know for sure what price they predicated their oil on; I am guessing $9 or $10 a barrel, 7 or 8 years from now, but I do not know for sure, Congressman.

Mr. MCKAY. I believe he would be a little nervous if on private land the company is pulling out. Apparently he made a reassessment on that oil shale. Is it policy that made him pull out or is it price?

Mr. WHITAKER. It fundamentally has to do with the cash position of that particular company that makes that decision. I do not know, but I presume Colony Oil——

Mr. MCKAY. Government policy was the implication.

Mr. WHITAKER. I am sorry?

Mr. MCKAY. The implication was that Government policy was the nervous end which caused them to move out.

Mr. EVANS. Uncertainty of Federal energy policy was one.

Mr. YATES. Plus the lack of subsidies. There are two main reasons, lack of subsidies, lack of guarantee of oil prices?

Mr. WHITAKER. That is right.

Mr. YATES. Those were the two main reasons?

Mr. WHITAKER. I would agree with that. We looked at the possibility of whether the economics of oil shale was, shall we say, so risky that the Government as a policy should subsidize it and we decided not to. Thank God we did, because if we decide to subsidize something and learn later that it went without subsidy to bid $210 million for 5,000 acres, it would have made us look pretty bad.

Now that does not mean that 5 or 6 years out we might have been wrong, you never know. But I will bet on an alternative like OCS oil. There is no doubt that the technology is here and there is no doubt that it will compete in the oil market. It is our No. 1 objective, and the way to go, to fill the short term energy gap.

May I proceed?

Mrs. HANSEN. Please do.

Mr. WHITAKER. Capital is available from within the industry itself,

the petrochemical industry, large petroleum consumers such as utilities, and insurance companies. Recent sales have attracted not only high bids attesting to the attractiveness of OCS leases, but have attracted interest from the petrochemical industry and large energy consumers such as utilities.

Furthermore, the Department intends in its 1975 proposed sales to offer prime targets in the frontier areas.

CAPITAL SHORTFALL

Mr. EVANS. May I interrupt there?

It is my understanding that a fellow by the name of Frank Ikard, president of the American Petroleum Institute, was quoted last week as saying, "Where are we going to get the money to bid?"

Mrs. HANSEN. That is what I was referring to.

Mr. EVANS. The New York Stock Exchange made an estimate that there will be a $650 billion capital shortfall for energy development from 1974 through 1985.

Mr. WHITAKER. I know the oil companies have expressed their concern about the front money problem on bonus bidding. As I said, so far we have not seen a decline in price or, if there has been some decline in price, it is probably related to less attractive geological prospects being offered and not lack of industry capital.

In addition, because there is a question about the front money problem, we are, in our October 16 sale, offering 10 tracts on a royalty bid basis as opposed to a bid-bonus basis. And the Monday morning quarterbacking after that sale is completed will tell us a little more about this problem.

SELECTION OF TRACTS

Mr. EVANS. Are these scattered tracts representative of the general areas?

Mr. WHITAKER. No.

I will ask Dr. Gaskins to go into that in more detail because he designed the program.

Mr. GASKINS. The 10 tracts were picked more or less at random on 10 prime structures that are offered in the current sale. They were picked, in a sense, to be representative of the sale. This particular sale is not as attractive as some we have had in the past, and perhaps we may have in the future. The tracts are representative of this sale.

Mr. EVANS. It is not all good property?

Mr. GASKINS. They are not all prime tracts and they are not all bad; they are meant to be representative.

BIDS OF ARAB NATIONS

Mr. YATES. What is to prevent the representatives of the Arab nations from bidding on those leases?

Mrs. HANSEN. They certainly have the money.

Mr. LINDGREN. They have to be domestic corporations. There would not be a prohibition against a foreign-owned corporation from bidding on the OCS. An example of such a corporation would be Shell, which is foreign-controlled.

Mr. YATES. It can bid; Shell could bid?

Mr. LINDGREN. Shell can, the Shell Corp. which bids is a domestic corporation.

Mr. YATES. What you are saying is, representatives of Arab nations could bid?

Mr. LINDGREN. Under the present statutory scheme.

Mr. YATES. That is another opportunity for monopoly, is it not, with all the money they have available, right?

Mr. LINDGREN. It is a theoretical problem.

Mr. YATES. They are buying up land. They just bought an island off the coast of South Carolina.

Mr. WHITAKER. Once they understand what the National Environmental Policy Act is, they may not want to buy.

Your point is valid, Congressman Yates.

Mr. YATES. Yes; I would think it would be.

[Discussion off the record.]

Mr. EVANS. On availability of capital, are you satisfied that you have enough accurate sources of information to be able to measure this as your sales are offered for bid? It is possible that so many sales could be offered that it would be beyond the capital means of oil companies to bid. It could be that the opposite would be true, that the money is there but they are just not sufficiently interested.

BID VERSUS VALUE PLACED ON TRACT

Do you have the information available to you to give you the confidence now of making that decision, of measuring the rate at which you offer sales for bid against your judgment of the availability of capital?

Mr. GASKINS. Yes, sir, we have a system whereby we require ourselves to place a value on every tract we offer for sale. We spend a lot of time and effort getting the best information available to place that value on the tract.

As a matter of course, we regularly check the sale price, the high bid, against the value we place on the tract. I can tell you up to the current time that there is no indication that the demand on the part of the oil industry is falling off. We are getting more than 100 percent of the amount we thought we would get before the sale takes place.

They have been paying even more in the last few sales than we anticipated. The ratio of the high bids to our presale evaluations is rising. Since we monitor this on a regular basis, as soon as it starts to tail off, as soon as the value that they offer compared to what we think it is worth starts to fall, two things happen. First we will reject more bids; second, we will reevaluate our leasing program. We will have direct evidence that we have glutted the market or, for some reasons, the companies are not interested in the land we offer.

But we have no such indication at the present time.

Mr. YATES. You know the attitude of this committee.

The committee expressed itself in our fiscal year 1975 report, when it said we were really concerned with the President's announcement that we should lease 10 million acres, we were concerned that this might very well be a repetition of the coal-leasing program, when, under the leasing program of previous administrations, really

millions of acres of coal-producing lands in the public lands of the West had been turned over to the companies for years and none of them produced; the companies speculated and bought that land. We did not want that to happen to the land in the Outer Continental Shelf, so we put in the limitation of 3 million acres rather than agreeing to the 10 million acres proposed by the administration, because that was all we thought you could logically undertake at the present time, in view of all the obstacles.

The question I have is, what have you done with respect to the leasing of the 3 million acres? Is that already gone? What is happening to the 3 million acres?

Mrs. HANSEN. Hopefully we will discuss that in a minute.

Mr. WHITAKER. Do you want me to continue with my general statement?

Mrs. HANSEN. Yes.

Mr. WHITAKER. While the Department believes that capital availability is not a problem, the Department's royalty bidding experiment scheduled for October 16, 1974, may provide some direct evidence concerning this issue. Since royalty bidding substantially reduces the amount of money required initially in acquiring a tract, the bidding behavior evidenced in the experiment may indicate whether capital availability is a constraint on some of the bidders for OCS leases.

Fourth, the ability of the Bureau of Land Management and Geological Survey to effectively administer the program. In all of the major areas of administrative and management concern—environmental assessment and mitigation, resource valuation, and supervision of drilling and production operations—we have had the expertise and capability, we believe, to execute the program. However, we are not content to rest on our present level of capability.

ENVIRONMENTAL BASELINE STUDIES AND ANALYSES

We are seeking improvement through more careful attention to environmental baseline studies and analyses and public participation in the environmental process. We have implemented more effective and stringent regulations and OCS orders to ensure efficient use of oil and gas resources and improved protection of the environment from major or minor spills. We are improving our system to ensure a fair market value of the resources leased.

Fifth, a question of the effect on revenues returned to the Federal Government on leasing the proposed acreage. Competition for the lease tracts is a key in securing "fair market value."

Additionally, as you know, we further assure fair market value by assessing the value of all tracts based on sophisticated resource evaluations and economic computations by USGS and BLM prior to each sale, plus a thorough postsale system for evaluating bids. The Department intends to use this system for all tracts potentially to be offered in 1975.

The Department rejected 74 bids thus far in 1974 where the high bid for the tract was less than the Department had determined was an acceptable amount. While the bids per acre may decrease in 1975 as more acreage is offered, we believe this system will assure that the public receives a fair market value for those lands.

As I indicated earlier, the final answer to that can only be on a case-by-case basis as we proceed with each lease.

Mrs. HANSEN. So if you discovered that the bids were not adequate then you could halt additional leasing?

Mr. WHITAKER. Yes.

Mrs. HANSEN. And you would do just that?

Mr. WHITAKER. Yes, provided I knew that reason was the supply and demand, Madam Chairman, and not because of less geologically attractive prospects being offered.

In other words, there are two reasons, there is either too much land being offered or some of the land being offered is not good land having poor oil or gas potential.

Those are the two primary reasons.

The Department believes the resource potential of the planned lease sales will attract active bidding and competition for the tracts offered in the balance of 1974.

Additionally, the Department is examining in the sale scheduled for October 16, 1974, royalty bidding on 10 tracts, to determine whether that leasing system will increase competition by attracting other bidders.

JOINT BIDDING

Finally, the Department continues to study what restrictions should be placed on joint bidding as a means to increase competition. What I am referring to there is, we have had in the Federal Register and have had public hearings on the question of whether we should prohibit joint bidding among the major oil companies as a way of helping to bring smaller companies into the system.

Sixth, the relative environmental risks involved in each of the areas proposed for a lease. As I indicated earlier, the Department is fully assessing the environmental risk in each area being considered for lease through the established environmental impact statement procedure. This procedure is being supplemented by guidance from the CEQ report, literature surveys, baseline studies, and general advice from an OCS Research Management Advisory Board established in March 1974 to advise the Department on OCS environmental matters. This Board has members from all of the coastal States and selected Federal agencies such as NOAA and EPA.

I can assure you that the Department will eliminate from consideration from sale at this time any tract, or even entire areas, where it is found that technology is not available to cope with the environmental problems.

Additionally, we are prepared to place additional stipulations on selected tracts to assure that extraordinary procedures or facilities be used to protect the environmental or archeological resources out there.

Seventh, the onshore environmental, social and economic impacts. Again, as I indicated before, the Department is concerned about the possible onshore impacts. We believe these impacts can be significantly reduced or avoided through effective planning, baseline or bench mark studies, and continued environmental monitoring, and under the coastal zone legislation there is money available for coastal

zone planning. There can be an argument about how much or whether it should be available, but money is available to do that.

POTENTIAL OFFSHORE PRODUCTION

Eighth, the relationship of potential offshore production to total reserves, total consumption, and energy conservation practices. Our best estimate is that 10 million acres of leases would aggregate about 10 to 15 billion barrels of undiscovered recoverable oil, and 35 to 75 trillion cubic feet of natural gas. Production from the 10 million acres would, after about 10 years, be about 2 to 3 million barrels of oil per day. In other words, we are now getting 1 million barrels of oil per day and the bottom line estimate is that if this program proceeds, in 10 years we will be getting two to three times that amount of oil out of the Continental Shelf, and about 10 to 15 billion cubic feet of gas.

Mrs. HANSEN. That is still only about one-fifth of the estimated U.S. oil consumption.

Mr. WHITAKER. This quantity could equal as much as 15 percent of the estimated U.S. oil consumption in 1985.

To summarize, this 2 to 3 million barrels of oil per day from the 10 million acres represents a very significant addition to the domestic supply. It will be comparatively inexpensive energy and have a significant deflationary effect vis-a-vis imported petroleum or other domestic energy sources, and I believe industry has the capability to buy and develop this large increase in acreage. It will stimulate economic capability. And, with existing and expected technology, the projected 10 million acres could be explored and developed in an environmentally acceptable manner.

That is the end of my statement.

CURRENT LEASING SCHEDULE

Mrs. HANSEN. Mr. Whitaker, what is the current schedule for OCS leasing for fiscal year 1975, and for calendar year 1975?

Mr. WHITAKER. Let me answer the second question first while someone is getting the specific number of acres that have been sold. The current schedule for 1975 would include a sale in south Texas, probably 3 million acres.

Please understand, each of these I am mentioning is again subject to the decisional process of the Secretary. So I am not saying there will be a sale in south Texas of 3 million acres yet.

Mrs. HANSEN. But you have it programed?

Mr. WHITAKER. It is programed. The whole issue is, we cannot get anything done unless we set up a theoretical schedule to work against. South Texas, 3 million acres; central Gulf, 5.1 million acres; southern California, that takes us up to about next July, potential, 1.5 million acres, and Cook Inlet, 2.5 million acres.

Let me mention first what is going on in Cook Inlet. There is an argument, there is a question there of ownership, who owns it. Uncle Sam or the State of Alaska. We are in negotiation with the State of Alaska on the possibility—because the ownership question is at issue—of putting the subject of who gets the revenues in an escrow agreement much like it was done in Louisiana. So that is a possibility.

We still have to bite the bullet on the Gulf of Alaska and the Middle Atlantic question. These are the two areas in our 1975 schedule,

these are the two areas where we see potential. We have considerable environmental problems.

BALTIMORE CANYON

Mrs. HANSEN. This is Baltimore Canyon?

Mr. WHITAKER. That would be the Baltimore Canyon.

Let me define the Baltimore Canyon. I do not know where it got the name, the Baltimore Canyon.

Let me define it as the most favorable area of New Jersey and Delaware, about 60 to 100 miles off the coast and about 70 miles south of Long Island.

Mrs. HANSEN. Yes; but the feeling by those States is that they do not want platforms, pipelines, and drilling rigs in the Baltimore Canyon area.

Mr. WHITAKER. I would agree with you that once you leave the gulf area, in terms of psychological impact, you are dealing with a basically new problem.

Mrs. HANSEN. You have and will continue to have the same problem in southern California.

Mr. WHITAKER. Yes; we have it, but they have been there before, in Santa Barbara and you all know what happened. That was the problem; psychological impact; there is no question we have a real problem here in terms of environmental impact, both offshore and onshore. What we have to do is find out whether we do or do not lease in a given area. Until we set up some sort of a schedule which drives the budget cycle, which drives the entire investigative process, we cannot answer the question.

I think we have made a strong presentation that that is where we are going to fill our clean energy gap, if we are going to fill it at all. So we think it is right that we go forward with those studies.

Mrs. HANSEN. With the understanding that those States and the environmental groups all participate in these discussions?

Mr. WHITAKER. Precisely. Secretary Morton will soon be meeting with the Governors of the Atlantic States——

Mrs. HANSEN. He should also meet with the legislatures of those States that will be effected.

Mr. WHITAKER [continuing]. On this problem. We have to start somewhere. Mr. Carter has had discussions with the technical people on the Governors' staff in each of the Middle Atlantic States.

We have also had extensive discussion with Governor Egan's office in Alaska on this matter, and also extensive discussions and public hearings in California.

ACRES LEASED TO DATE

Would someone answer Congressman Yates' question about precisely what has been leased to date?

Mr. EDWARDS. For calendar year 1974 we have leased 1.5 million acres in the gulf. Including the October 16 sale next week, which will have 1.4 million acres offered in it, we will have offered 5 million acres.

Our proposal for fiscal year 1975, we are projecting to offer 9.4 million acres, and we are estimating that, based on what our track record has been on past sales, we would probably have leases on 4.7 million

of that. We are projecting for calendar year 1975, in line with our goal of leasing 10 million acres, to offer 19 million acres.

Mr. WHITAKER. Offer, not sell.

Mr. EVANS. Why do we go back and forth between calendar and fiscal year in your figures?

Mr. EDWARDS. That is the way the question was asked.

Mr. WHITAKER. On a calendar-year basis in 1975, if the entire program were carried out, we would offer south Texas, 3 million; central Gulf, 5.1 million; southern California, 1.5 million; Cooks Inlet, 2.5 million; Gulf of Alaska, 3.5 million; mid-Atlantic, 3.5 million; total offered, 19.1 million acres; best guess leased: 7 to 10 million acres.

OPEC PARTICIPATION

Mr. YATES. I would hope, and I must say I would expect, that after this hearing this morning, the Secretary, and possibly the President, would take action to prevent any kind of participation by that selfish cartel known as the OPEC from participating in our bidding, because you, yourself, on page 1 of your statement, say that, and I quote: "First, as events demonstrated last winter, independence in our foreign policy can be jeopardized by control or attempted control over critical commodities. More recently, we have been threatened by additional price increases, production cutbacks by Kuwait to maintain high prices, and impending further nationalization of American firms operating in foreign countries supplying American markets."

It just does not make sense to me, where you have countries like the OPEC producing countries that have literally placed the other countries of the world in a very tenuous and critical economic condition, being given the opportunity, with the extra funds that they are collecting, to come into our shores and to buy our own oil. That does not make sense to me.

Mr. WHITAKER. Congressman Yates, I assure you that if there is a bid on the OCS—and we do not know of one now—that includes one of the Middle East countries as a bidder, I would certainly be before this committee to take that issue up.

Mr. YATES. We know that some of the companies that do business with the Middle Eastern countries have been very subservient to their wishes. We know that happened during the Israeli war when they were asked to and they did certain things.

The question that comes to my mind is whether, if they are approached to represent some of the Middle Eastern countries or some of the OPEC countries, even to participate in the bidding, that they might do so and I would hope that you would make sure that the OPEC countries would not be permitted to participate in any respect in bidding for our oil.

Mr. WHITAKER. I do not want to give you the assurance of what our policy would be, in the event that would happen, unilaterally from this Department, Congressman. I recognize what you are saying. I do give you——

Mrs. HANSEN. You still have the State Department to deal with.

Mr. WHITAKER. I still have the State Department to consider and other elements of the Government. I cannot unilaterally say if that happened that the Government policy would be to exclude Arab nations.

I recognize what you are saying. I can say unilaterally, if that was happening I would be the first to inform you and then the bullet would have to be bitten.

Mr. YATES. I would say, speaking as one member of the committee, I am serving notice now that I would expect the Secretary, the Department and the President, to consider this possibility. I do not know whether you have done it. The only one you talked about is Shell. There may be others who may be acting as representatives, or may be in the future, for some of the OPEC countries. I think that ought to be checked very, very carefully so that the threat of further domination by this oil-producing cartel does not exist into the lands of the United States.

Having said that, we now return to the leasing. I am glad we have Mr. Ligon as a witness—not as a witness, but as a spectator who might become a witness.

Mr. WHITAKER. Sounds like he is going to be a witness very soon.

SHORTAGES OF MATERIALS FOR DEVELOPMENT OF WELLS

Mr. YATES. On page 182 of part 1 of the current fiscal year hearings for this year, you made the statement:

> We have had a lot of problems with these limitations and we have been working with several industries to try to mitigate some of their problems. I am referring to shortages of domestic tubular goods with regard to pipe, casing and tubing that are absolutely necessary for the completion and development of wells now being drilled. We hear daily that there are hundreds of wells that are ready to be drilled if the companies could get the necessary materials.
>
> Mr. YATES. What is holding it up?
>
> Mr. LIGON. There are several things:
>
> First, there is just not enough being produced by the steel companies. We have discussed this with the steel companies and their responses provided several reasons: (1) first of all, we have been exporting much of the tubular products because we are getting better prices in Europe and other places for it, and (2) the price controls in the United States do not allow us to sell at a profit. It is our fiduciary responsibility to maximize profit as businessmen call it.

EXPORT CONTROLS

> Mr. YATES. I was under the impression that there are laws on the books passed by Congress that would permit the President in time of short supply to put export controls on the shipment of items in short supply.
>
> Why is that not being done?
>
> Mr. LIGON. That is very true. As a result I think there are now export limitations being applied for many of the tubular products that we are talking about, specifically.

Mr. YATES. Is that true? What export controls are being placed on the shipment of items that are needed for our own domestic needs?

Mr. LIGON. I do not know of any other, other than the imposition that Secretary Whitaker pointed out a moment ago. The Defense Production Act for certain materials, which includes tubular goods in Alaska, for the construction of the pipeline projects, specifically.

Mr. YATES. So that our domestic producers are competing with all the other countries of the world for the pipe that is in short supply?

Mr. LIGON. That is true, but I think since that time there has been a lot of progress that has been made.

For one thing, the steel manufacturers are producing at higher levels of tubular goods than they were certainly at that time.

Second, there has been a voluntary allocation system set up that

really has a pretty high record with regard to placement of tubular goods available in the market, with projections that indicate that we are going to be in much better shape than we have been—we have actually improved the amount in the marketplace each quarter during this calendar year.

DEPLETION ALLOWANCE

Mr. YATES. But Mr. Ligon, is that true? I had a meeting the other morning with some independents who are objecting to any removal of the depletion allowance. They were horrified by the prices they have to pay for the steel pipe at the present time. They said it is something like $9 a foot as opposed to a price of $2 or $3 a foot last year.

Mr. LIGON. In the explanation that I gave you that you just read from the transcript of the prior hearings, we indicated that one of the reasons why they were not producing more—and you have indicated it verbally here this morning—was because of the relative profitability of it versus other products.

Mr. YATES. Yes.

Mr. LIGON. Price controls were lifted on those items as a result of that.

As Dr. McKelvey indicated, the relative profitability was much higher in other things and there is certainly nothing inconsistent with that. But to get increased domestic production of those particular items, controls were removed and, as a result of it, producers are paying higher prices. But also, the steel mills are producing more tubular goods in the meantime to fulfill their needs.

Mr. YATES. They are not producing nearly enough to take care of our needs.

Mr. LIGON. That is true. That is the reason we have this voluntary allocation program.

I guess I am trying to say that I think we have made tremendous progress since the first quarter of this calendar year in that area.

Mr. YATES. I think my time is up.

Mrs. HANSEN. I know it is.

Mr. McKAY?

TOTAL LEASING POLICY OF INTERIOR DEPARTMENT

Mr. McKAY. Mr. Whitaker, I believe in our testimony last spring there was indication that there was going to be a review of the total leasing policies of the Interior Department. Did that include the OCS or was that just public lands of the West on coal?

Mr. WHITAKER. It includes both. We are reviewing our policy.

Mr. McKAY. At what stage is that review at the present time?

Mr. WHITAKER. Let me first do oil.

We have had public hearings and proposed rulemaking on several issues that have to do with oil leasing.

The first is the issue of whether we prohibit joint bidding among the major companies, defined as a company that has total proven reserves of in excess of 5 billion barrels.

The record has been completed, the ball is now back in our court to make a decision on that. We hope to make a decision as the next

step, which is to put in into final proposed rulemaking within 2 or 3 weeks.

Mr. McKay. Among that review, was there not to be considered also the policy of front end versus royalty payments as part of the payoff?

Mr. Whitaker. Yes. The issue was presented in Senate hearings as to whether we should go to the new procedure of royalty bidding instead of bonus bidding and a fixed royalty, to have a modest fixed bonus and a high royalty.

As we indicated in our testimony, what we are doing is trying an experiment on that in our next sale, October 16. Looking at the track record on what happens from that sale, we will have a better understanding of that issue.

The third thing we are doing in our regulations is the question of disclosure of geophysical and geological information.

The idea there is perhaps we can increase competition if we make the oil companies reveal certain data, after they win a lease in a sale. If there is an adjacent tract for a future sale, its potential will be better known to the public.

Mr. McKay. When do you expect to have these proposals, changes in the procedures, jelled? Do you have a time frame?

Mr. Whitaker. I think we will be able to go to final rulemaking on the question of joint bidding of the majors and the question of disclosure of geophysical and geological data to the public after a sale of a lease within——

Mr. McKelvey. By the end of the year.

Mr. Whitaker. By the end of the year.

The idea is to try to get into calendar year 1975 with a fixed rule on this question.

ROYALTY VERSUS SET BIDDING

Mr. McKay. Does that relate also to your royalty versus set bidding?

Mr. Whitaker. I am not sure on that question whether we would have it.

Mr. Gaskins, do you think you would have an analysis completed which would make a recommendation one way or the other by the end of this year?

Mr. Gaskins. We will have a tentative analysis complete by the end of the year. But part of the question with royalty bidding is to see how rapidly the companies develop. One of the anticipated problems with royalty leases is, there may be an inhibition to rapid development of the resources.

I think we will have an interim proposal at the end of the year to continue with this experiment, and perhaps explore alternative bidding systems as well.

Mr. McKay. Will this apply equally with coal and oil in that time frame?

Mr. Whitaker. No, sir. With regard to coal, we are in the process of thinking through should there be competitive lease sales on coal in the West? We are looking over the supply and demand problem there. We are looking over the terms that should be offered for such leases, the royalty, for example.

We are in the process of completing a programmatic environmental impact statement on that issue.

Finally, we are in the process of completing what is known as the northern Great Plains study of the upper five tier States where most of the strippable coal is in the west, to look at the potential development scenarios; for example, should there be mine mouth generation or are we short enough on water in any of those areas that the coal should be exported out-of-State?

Is the cost of impoundment of water enough that we think there should be a policy to export that coal out of those areas?

When I use the words "we think," that is a recommendation that the Federal Government makes to the Governors and we have a process ongoing, in consultation with the Governors and their technical advisers in those States, relative to those various developments.

COAL PERMITS AND LEASES

Mr. McKay. Are you still issuing permits and leases on coal in the present policy?

Mr. Whitaker. No, sir.

Mr. McKay. Are you on a moratorium?

Mr. Whitaker. We have in effect a de facto moratorium, unless there are some exceptions that I cannot think of, where we grant no new coal leases. We are doing impact statements on areas currently being developed. Those impact statements center around the question of an adequate mining plan for development to insure good reclamation, et cetera.

Mr. McKay. I noted also, speaking about steel and the capability there, that some of these companies are concerned strictly with profit, even to their own detriment sometimes. United States Steel, which operates a mill in my State, quit making roof bolts.

Mr. Whitaker. Yes.

Mr. McKay. I am told that was one of those less profitable items; it was profitable but it was less profitable. So they stopped making them. So did all other steel companies. The net result was that they had a crisis to get the coal out of their own mine to make the steel. So they have since modified it, but only to the extent that they get enough bolts for their own mine.

Mr. Whitaker. The Secretary held a meeting on the roof bolt question, I guess you could define it as jawboning. We were able, as far as I could tell, to get over that crisis, so there are adequate roof bolts. If there are not, then I have not been getting the flack lately.

Mr. McKay. If the steel company owns the coal mine, I am sure they got over it.

NATIONALIZATION

You indicated a great interest in connection with these leases. Is that interest coming because of the profitability or do you have any indications that it is because of the threats of nationalization or other overseas factors which make domestic resource development more attractive?

Mr. Whitaker. Well, it could be the threat of nationalization. I cannot quantify it.

Mr. McKay. Do you have any indications that that may be so?

Mr. Whitaker. No, sir, I do not have indications.

There are situations where nationalization—that is a broad term—specifically the Kuwait Government has assumed a 60-percent interest in the Kuwait Oil Co., which was owned equally by Gulf and British Petroleum. You could see that as a threat.

Second, in Venezuela concessions held by Gulf and Exxon are to expire in 1983. The President of Venezuela has stated that he will cancel these concessions at a much earlier date. That is a threat.

In Saudi Arabia the Government has been taking over increasingly larger shares of Aramco crude. Now Aramco is owned by Mobil, Standard of California, Exxon, and Texaco. The Government currently controls 60 percent of the crude with the announced intent of increasing this percentage over time.

In Libya the Government this year has taken over 51 percent of Exxon's crude. So there does seem to be a trend that way. I do not make my argument that we should expand the OCS leasing on that basis, however. I make it on the basis that is the only way we can fill this clean energy gap in the next few years; not few years, 10 to 15 years.

Mr. McKay. All of these are factors that play on your argument that you let the thing flow free.

Mr. Whitaker. Yes, sir.

Mr. McKay. And what is going to happen there? I suppose there are other nations with potential oil developmet which are enticing those companies; Africa, Indonesia, other places which may be pulling against you?

Mr. Whitaker. That is right.

Mr. McKay. On the counterbalance as it relates to the Middle East; is that not true?

Mr. Whitaker. Yes.

And we are competing in the world marketplace for attractive oil prospects and we have attractive oil prospects, and therefore, it is in the national good to go forward on those.

PROJECTED DEMAND IN 1985

Mr. McKay. In line with your indications that we need to become independent, you are looking at what, 5, 10 years under your proposed program hopefully to arrive at that goal?

Mr. Whitaker. I am looking at, as I think I said in my testimony, that by 1985—we now get 1 million barrels a day out of the OCS in the Gulf of Mexico—that we could increase that to 2 or 3 million barrels a day. If we did, that would be 15 percent of our projected demand in 1985.

Mr. McKay. Which would still give you 15 to 18 percent short of your imported commodities now, even if you got that capacity?

Mr. Whitaker. No, no.

Mr. McKay. We are importing about 33 percent, are we not, of our oil?

Mr. Whitaker. Yes, sir.

My objective is to not increase imports, but, if I can, decrease them. There is no way we can decrease imports unless we find more domestic oil.

Mr. McKAY. Nobody argues with you on that. All I am talking about is whether we are arriving at that self-sufficiency. Your projections indicate with all you intend to do, that 1985 or 1990 is the nearest date that you can reduce that foreign dependency by 15 percent of our present intake.

Mr. WHITAKER. That is right. I do not see under any current scenario we get to the point where there are no imports, if that is the thrust of your question. If you define self-sufficiency as absolutely no imports——

Mr. McKAY. The Arabs supply us 5 or 6 percent of our foreign oil.

Mr. WHITAKER. A couple of years ago. It is higher than that now. It is 7 percent. But our foreign oil is 36 percent.

Mr. McKAY. You are still talking about 15 percent that they could control, and if the Arabs could control us with 6 percent and throw us into an inflationary tailspin, 15 or 18 percent can do that again. So we are not self-sufficient, nor likely to be.

Let me just ask this one question. You indicated, I believe, some of our environmental concerns, and the interactions of groups and bodies that are going to project those environmental concerns.

What kind of a lag time factor do you put on that, aside from the need to get out there with the oil rigs and start drilling?

What kind of lag time do you see in getting those things done so the companies can bid and you can proceed?

Mr. WHITAKER. A considerable lag time.

Mr. McKAY. Could you put a figure on it?

Mr. WHITAKER. From the beginning to end of our NEPA process, what is an average date, Frank?

Mr. EDWARDS. It has been running 10 months plus. The ideal situation would be to have 15 months, ideal, that is, in order to get baseline studies initiated.

Mr. McKAY. History indicates that you are probably going to go to 15 to 24 months rather than 10 months, if the environmental impact studies I have seen are any guide. They always need another 6 months, another 6 months. So you may go to a time frame far in excess of 1990.

Mr. WHITAKER. No, sir; that is speculative. Unless there is a "firm leasing schedule," there is no way I can proceed. If I do not set a firm schedule there is no way I am going to achieve 10 million.

Mrs. HANSEN. Mr. Long.

Mr. LONG. The Department's statement offers many "assurances" about the proposed drilling program: that enough capital and production will be available, that development of the leases will be prompt, and so on.

However, a House Government Operations Committee report suggests that many aspects of the offshore leasing program have been mismanaged to date. Their report, as summarized in an article in the Baltimore News-American which I submit for the record, indicates that industry representatives have dominated the preparation of standards to regulate offshore oil development, and that oil spills, wildlife destruction, and inadequate safety standards have resulted.

What assurances can the Department give use that such management problems are not continued or magnified under an expanded leasing program?

[The article follows:]

[From the News-American, Sunday, Oct. 6, 1974]

U.S. OFFSHORE OIL STUDY CITES PERIL TO MARYLAND COAST

WASHINGTON—(NNS)—In a sharply critical report bound to intensify congressional debate over the Ford administration's plans to launch extensive offshore drilling in the Atlantic, a key House committee charges that Federal agencies responsible for regulating oil production in the Gulf of Mexico are doing an ineffective job of enforcing safety and antipollution laws.

Interior Under Secretary John C. Whitaker, in a memo to Department officials, has ordered a "firm" plan to lease "all the promising areas of the Atlantic" to oil companies next year.

His directive reflects Interior's sense of urgency to comply with the administration's effort to find oil offshore to ease U.S. dependence on foreign oil. The first area to be leased is expected to be Baltimore Canyon Trough—a deep trench in the sea floor running along the New Jersey, Delaware, and Maryland coasts some 60 miles from shore.

The report, made public by the House Committee on Government Operations following a 2-year investigation, revealed major inadequacies in five areas of Federal enforcement.

Thousands of miles of submerged oil and gas pipelines along the outer Continental Shelf are not being inspected because two Federal agencies—Interior Department's Geological Survey and the Transportation Department's Office of Pipeline Safety—cannot decide which has regulatory authority.

Raising "serious questions of conflict of interest," the Geological Survey, with help from the oil industry's public relations arm—the American Petroleum Institute—established three industry-dominated committees to assist in developing safety and antipollution standards, employee training rules, and Government-sponsored research projects for offshore oil production.

Excluded from membership on the committees are representatives "from labor, small business, or the public."

"Inadequate" regulations issued by the Interior Department governing the issuance of rights-of-way for oil and gas pipelines have resulted in the destruction or damage of thousands of acres of valuable coastal marshes in Louisiana.

The regulations contain no requirements for minimizing damage to natural resources, nor any provision for the review of pipeline applications by the affected states or the public. The report urges other coastal states to exercise state power to prohibit pipelines from crossing their prime estuaries.

Chronic pollution from numerous small oil spills occurs in the Gulf of Mexico because of the Geological Survey's ineffective enforcement of its outer continental shelf regulations and antipollution orders. The main reason for this is that the agency doesn't have enough inspectors or adequate training programs for them.

Wildlife coastal habitat is being destroyed because of poor law enforcement by two federal agencies. Unregulated filling and dredging of estuaries that are flooded frequently or periodically is taking place due to the Army Corps of Engineers' narrow interpretation of the term "navigable waters" in the Federal Water Pollution Control Act.

And top Interior Department officials are constantly overruling recommendations of the Department's Fish and Wildlife Service to the corps that would safeguard biologically valuable estuaries.

The report, based on an investigation by the Government Operations Committee's 12-member Conservation and Natural Resources Subcommittee, zeroed in on the oil industry's role in preparing standards for offshore drilling.

"This practice of giving industry-dominated committees the lead role in preparing regulatory standards and conducting research for their operations," the report said, "raises serious questions of conflict-of-interest and leads to public doubt about the adequacy of the standards and research."

"This snug relationship between the Geological Survey and the industry it regulates must be halted," subcommittee chairman Henry S. Reuss, D-Wis., asserted in a statement accompanying the report. "Such heavy reliance on industry suggests that the survey is more interested in not offending the oil and gas lessees operating on the Outer Continental Shelf than in regulating them effectively."

Seven subcommittee members, in a statement appended to the report, declared that the Federal agencies responsible for enforcing offshore drilling regulations "must change their ways" and the oil-development laws strengthened "before any large-scale expansion of Outer Continental Shelf leasing takes place in the Atlantic or elsewhere."

In calling for a moratorium on lease sales in new coastal areas, the seven congressmen—four Democrats and three Republicans—are posing what could develop into serious opposition in Congress to the Ford administration's plan to boost offshore leasing from the current rate of about 1 million acres a year to 10 million acres by 1975.

Environmental fears that oil production along the mid-Atlantic coast might ruin recreation areas and other valuable property were reflected in the views of the seven subcommittee members.

The Congressmen who issued the joint warning were Representatives Gilbert Gude, R-Md.; Dante B. Fascell, D-Fla.; Floyd V. Hicks, D-Wash.; John E. Moss, D-Calif.; Leo J. Ryan, D-Calif.; Frank Horton, R-N.Y., and Guy Vander Jagt, R-Mich., the subcommittee's ranking Republican.

An aide to subcommittee chairman Henry Reuss said Reuss supported their statement opposing Atlantic leasing at this time.

Mr. GASKINS. Geological Survey undertook, as a joint effort with the National Aeronautics and Space Administration and the National Academy of Engineering, a set of studies on OCS lease management. A summary report was issued in May 1973 with 15 recommendations for improving Survey's management of OCS leases. Among the areas covered by these recommendations were the following:

Comprehensive review and revision of all OCS orders.

Development of offshore safety and antipollution standards.

Quarterly failure-analysis reports from all operators on subsurface safety devices.

Improved accident investigation procedures and publication of all reports on major accidents.

Revised inspection procedures and more consistent enforcement of OCS regulations and orders.

Development of safety and antipollution training and motivation programs for personnel working offshore.

Action has been initiated to implement each of the 15 recommendations and Survey fully expects these program improvements to keep pace with increased development of the OCS.

Substantially more resources are also being committed to Survey's mineral lease management program. Positions have been increased by approximately 40 percent between fiscal year 1974 and fiscal year 1975 and the budget by approximately 50 percent.

Fiscal year and positions:	*Budget*
1974—211	$6,515,000
1975—293	9,896,000

We recognize the need for increased efforts to insure that the OCS will be developed in a safe and environmentally sound manner. With a thoroughly revised lease management program, continuing program review and increased commitment of resources to these efforts, responsible development of the OCS should be achievable.

Mr. LONG. The Department claims that the oil industry, utility companies, and other investors have enough capital to bid appropriately high amounts for oil leases.

If oil companies are awash with capital, does it not suggest that petroleum pricing policies are taking advantage of the consumer?

Mr. GASKINS. The Department does not mean to assert that oil companies are awash with capital. We simply feel that, between retained earnings and the capital market, there are and will be funds available for good investments. OCS leases, on average, should be good investments at anticipated long-run market prices for oil—which should fall below current levels as domestic production of oil, gas, and alternative energy resources increase.

The last point is crucial. It is clear that the OPEC countries, because of their share of world oil production and their capacity to dip into enormous proven reserves for expanded output, can effectively determine the short-run world price for oil. This leverage has been exercised with painful effectiveness over the last year.

We will be vulnerable to the cartel's actions so long as we are heavily dependent on imported oil—approximately 35 percent of the petroleum products we consume are either imported directly or processed from imported oil. The only way we can undercut OPEC's market power is through increased development of our domestic energy resources—development that will not take place at pre-embargo prices.

At the same time, we recognize the burden on consumers if all domestic and imported oil that we use is priced at world market levels. That is why the two-tier system was instituted, to provide an incentive for increased production and development of new prospects while limiting and deferring inventory profits on production that would have occurred in the absence of increased prices.

Easing the transition into a new era of increased energy costs is a continuing concern, even as we focus on efforts to increase longrun domestic supplies.

Mr. LONG. Recent press reports indicate that most utilities do not even have enough capital to build needed power plants. Where will they get funds to invest in oil leases, and who would develop those leases? Are utilities going into the oil business?

Mr. GASKINS. There is no evidence of utilities bidding directly on OCS tracts during recent sales. It is not inconceivable, however, that utilities—natural gas distributors in particular—have and will put up some money for bidders in exchange for rights for production payments in the future. If the tract proves to be productive, they will have secured longrun supplies at attractive prices.

This money would be from funds routinely budgeted for securing of longrun supplies on a prepayment basis, an approach that may be essential in times of domestic shortages. We do not anticipate that utilities will be moving into the oil business nor do we see money being diverted from investment in powerplants.

Mrs. HANSEN. The committee will adjourn until Thursday, October 10, 1974. Thank you Mr. Whitaker for a very informative session.

Mr. WHITAKER. Thank you.

THURSDAY, OCTOBER 10, 1974.

Mrs. HANSEN. The committee will come to order.

We will resume where we left off last Tuesday. Mr. McKay?

CHANGE IN FIRING OF ELECTRIC GENERATORS

Mr. MCKAY. Madam Chairman, I think maybe I can proceed with one here. In relation to your time, the President in his message indicated you wanted to accomplish the transfer from oil and gas gen-

eration for electric powerplants by 1980. Is that a realistic goal? Do you have facts to show that it is physically possible for the electric companies to convert, if they are willing to proceed? Can you foresee getting the materials? Do you have any evidence that you can get the coal mines opened and the coal transporters to these powerplants?

Mr. CARTER. These are certainly very tough questions, Congressman McKay. The FEA blueprint study is considering all of those issues. The coal task force of that study has given some consideration to them. I think it is a question really of what priorities are assigned to the effort. It is physically possible with the right kind of priorities being assigned. There are obviously going to be some real difficulties.

We will have to do a considerable amount of detailed planning to achieve that objective.

Mr. MCKAY. I ask that question because the President said that he is going to accomplish this by 1980. How long does it take, for example, to change the firing of electric generators from coal to gas, just that fact, if you can get the material?

Mr. CARTER. I do not know the answer to that. Does anyone here have a technical answer to that?

Mr. MCKAY. I think we had some testimony that those which previously had been coal fired could be transformed in 6 months. But it is another matter for those which had not been previously coal fired. And then we the factor of environmental impact. How are you going to meet the requirements of Mr. Train's Office?

My second question here is on transportation. If I recall correctly we have had considerable comment about the fact that we are short coal cars, and that our rails need updating. On top of that, I think the testimony indicated that it takes from 1 to 5 years to open up a coal mine, particularly if it is deep mine. If the strip mining bill passes you may be precluded from much of your strip mining potential. In light of those facts, are we setting realistic goals?

Mr. CARTER. Certainly our thought is that it is a realistic goal. It is a difficult goal to attain.

I am sorry that today I am just not up to the difficult task of explaining this.

Mr. MCKAY. Would you get us some information if you don't have it?

Mr. CARTER. I certainly will, Congressman.

[The information follows:]

1. Facilities can be made available for transporting (rail or barge), storing (30–60 day supply), and handling coal at the plant.
2. Coal hoppers, crushers, and pulverizers can be retrofitted to existing plants.
3. An entire dust-collection system, including hoppers, can be retrofitted to existing plants.
4. Coal burners and associated piping can be retrofitted to existing plants.

If these criteria can be met, retrofitting a plant would require about 1 year.

Presumably this means converting oil- and gas-fired utility boilers to coal firing. Again, some assumptions are essential. If existing oil- and/or gas-fired powerplants, which are not equipped to store, handle, and burn coal, are being considered, the criteria listed above must, as a minimum, be met. If existing powerplants designed originally to burn coal or oil, coal or gas, or all three fuels, are being considered, returning to coal firing would require upward of a year. If, when the plant went exclusively to oil or gas firing the coal transportation, storage, handling, and associated facilities war dismantled, it would probably require 18 months to convert back to coal.

Mr. MCKAY. I will yield at this point.

OCS LEASE REVENUES

Mrs. HANSEN. I think there was an estimate from the Joint Economic Committee that you expected revenues of about $6 billion from OCS leasing. How realistic is that $6 billion figure? Dr. Vogley in his testimony before the Permanent Select Committee on Small Business this spring said that the production delays in Alaskan waters could amount to 10 years and the Atlantic, 8 years, the eastern California 4 years and later sales, 3 years. Please explain to the Committee if you feel this $6 billion figure is realistic considering the problems you have with adequate supplies of drilling equipment, pipe, refineries, and the related problems of transportation?

Mr. CARTER. Madam Chairman, for fiscal 1975 which we are in, we will have a sale in the next week or two and then we have a sale scheduled for January, if it proceeds. We have had a couple of other sales that we have talked about as possibly being held within that fiscal year, one in southern California and one in the middle of the Gulf. Whether either one of them will be held is a question. I certainly would not think that both of them would be. But even with the two sales, I don't know what our projections are. Darius, do you have a figure for that?

Mr. GASKINS. I think Frank has the exact figures. They are roughly $1 billion for next week's sale, $3 billion for the Texas sale and the California sales is in the range of $3 billion.

OCS OIL PRODUCTION

Mrs. HANSEN. After a sale is made and the moneys are in the Treasury, how long is it before the oil is in production?

Mr. GASKINS. In the case of south Texas that is relatively close to onshore facilities.

Mrs. HANSEN. Is that within 200 meters?

Mr. GASKINS. Yes.

Mrs. HANSEN. What is the production time in this area?

Mr. GASKINS. I think at least in 3 years.

Mr. RADLINSKI. It would be 3 to 8 years. The 3 years would be for initial production, but for full production it would be closer to 8 years.

Mrs. HANSEN. I assume that is one of the leases that can be in production the fastest?

Mr. RADLINSKI. Yes.

CUT IN OIL IMPORTS

Mrs. HANSEN. So actually when you talk about cutting our oil imports we are almost from 3 to 8 years away. Isn't this correct?

Mr. CARTER. Yes.

Mrs. HANSEN. You know, the whole OCS leasing program sounds better than it actually is.

I understand the complications. This committee well understands the complications. We understand that you may drill 10 holes and find that 9 are dry. You also have to prepare an environmental impact statement which takes about 10 months.

Mr. CARTER. Right.

Mrs. HANSEN. How long does it take to install a pipeline?

Mr. CARTER. It depends on how far out it is.

Mrs. HANSEN. Use as an example, the Texas sale at 200 meters.

Mr. CARTER. I would not expect those pipelines to take a very long period of time.

Mrs. HANSEN. Such as?

Mr. RADLINSKI. Depending on the distance just a matter of a few months. But one thing has been left out. After you do the drilling you have to build the production platform.

Mrs. HANSEN. I understand.

How long does the drilling take?

AVAILABILITY OF RIGS

Mr. RADLINSKI. If the rigs are available, the drilling can start within a month after the lease is consummated.

Mrs. HANSEN. Use the Texas sale as an example. How many rigs do you think will be available if the sale is consummated?

Mr. RADLINSKI. I cannot quantify that.

Mrs. HANSEN. You must have some idea.

Mr. CARTER. There are considerable.

For those waters there should be no great problem with rig availability because all of the existing rigs in the gulf should be able to operate in that area.

Right now in the United States there are 32 rigs capable of drilling in less than 100 feet; 31 capable of drilling in 100 to 300 feet; 11 capable of drilling in 300 to 600 feet and 10 capable of drilling in over 600 feet, for a total of 84 drilling rigs.

Mr. YATES. What depth are you talking about for these leases?

Mr. CARTER. Right now there are idle in the Gulf of Mexico 12 rigs: 10 in the Louisiana area and 2 in the Texas area.

Mr. YATES. With what capability?

Mr. CARTER. I do not know the capability of those rigs. Let me just say that all of these rigs generally are owned by drilling companies. The oil companies are the people that they contract with. They are mobile. They are placed in the areas where there is the greatest likelihood of finding oil. They are not going to pay the going rate for a rig and utilize the rig in an area that is not their most promising area.

Mrs. HANSEN. As determined by their own geologists?

Mr. CARTER. That is correct. So that with the availability of rigs, and some of them idle, I would not anticipate any great slowdown in the drilling in this area.

PIPE AVAILABILITY

Mrs. HANSEN. What is the situation in regard to pipe availability?

Mr. CARTER. I do not know the mileage of pipe that will be required here. But the size of this pipe—Rad, what are we talking about, 24-inch pipe and the gathering pipe much smaller?

Mr. RADLINSKI. Yes.

Mr. CARTER. I do not know that there is any anticipated shortage of this kind of pipe. The shortage in tubular goods is more in new rig and platform production in anticipation of drilling in much deeper and more troublesome areas than it is in the drilling in the Gulf of Mexico. Does anyone know that we have a projected pipe problem

for collecting the oil in the Gulf of Mexico? I think your problems there are much less than they are in the other areas because you have an existing system.

Mrs. HANSEN. That is why I deliberately picked that area.

Mr. YATES. Plus the fact that the testimony before us earlier this year was that there is no pipe available for transmitting the oil from the platforms to the mainland.

Mr. LINDGREN. I think the Under Secretary indicated the other day that we are projecting that the pipe situation will be resolved by the end of 1975. So at the time they would start drilling on this area, at least our projections would indicate that the pipe situation will be resolved.

Mrs. HANSEN. I do not think that you are going to cut imports within 3 years, do you?

Mr. CARTER. No; I agree with you. We are not.

IMPORT SITUATION

Mrs. HANSEN. It appears that your expanded program is predicated on a structure that is not realistic. The impact of oil imports on inflation is not going to be changed for at least 3 years because you are not going to reduce the importation of oil until you start producing additional oil from the OCS.

Mr. CARTER. We anticipate that the production, the domestic production, will continue to decline for another couple of years in the United States. There is nothing we can do about that.

Mrs. HANSEN. I understand. We have now gotten to the point. It sounds good to say we are going to cut down on imports.

The prediction that inflation is going to come to a crashing halt is predicated partly upon the import situation. Your import situation cannot possibly be affected for 3 years, at the minimum.

Mr. CARTER. The only places you can look to have an immediate effect on the import situation, and it is not very large, is on Elk Hills.

Mrs. HANSEN. What proportion of the import would be affected?

Mr. CARTER. Very small. I think you are talking about a maximum of 160,000 barrels a day within about a 60- to 90-day startup period.

Mrs. HANSEN. Your goal is to cut imports 1 million barrels a day. 160,000 barrels a day is not a very large portion of that amount. How long will Elk Hills produce 160,000 barrels a day?

Mr. CARTER. I believe for a considerable period of time. Within about a year or 2 years we estimate it could be up to producing 260,000—

Mr. RADLINSKI. Five to 8 years.

Mr. CARTER. How long would it take to get it to its MER?

Mr. RADLINSKI. It would take 1 year to 18 months by Navy's calculations to get a production of around 250,000 barrels a day.

Mr. YATES. What happens if you have an emergency such as you had in the Middle East?

Mr. CARTER. You will not get any less oil out of the Elk Hills if you start pumping it now and keep pumping it for a period of 8 years. At any point in time during that 8 years you are not going to get less out of it in an emergency because you are pumping it. It will produce only at a certain rate.

DEFENSE EMERGENCY

Mrs. HANSEN. If we use as you propose Pet–4 and Elk Hills oil reserves for domestic use, are you saying to any of your bidders, if the United States has a defense emergency, are you prepared to replace the Navy's oil?

Mr. CARTER. If it is true, as I believe it is, that you are not in any way, for the period of time that you are going to be operating, taking away the capacity of that area to supply oil to the Navy——

Mrs. HANSEN. But the defense of the United States is going to last somewhat longer than 8 or 10 years.

Mr. CARTER. Within that time frame if you can bring Pet–4 onto development, certainly the Navy and Defense Establishment will have more oil available to it than it will if you leave Pet–4 in its present condition.

Mrs. HANSEN. The reserves in Pet–4 have been set aside for the defense of the United States in the case of an emergency. You have to have some reserve somewhere for the defense of the United States which is going to last far beyond the time of 8, 10, or 12 years.

Mr. RADLINSKI. Wouldn't all of our U.S. oil production be available to the military forces?

Mrs. HANSEN. That is what I am asking you.

Mr. LINDGREN. You have the Defense Production Act which can be utilized to utilize oil produced from any field, be it under lease from the Federal Government or not. The Outer Continental Shelf Lands Act, under which all our leases are issued, provides that at the time of war or as the President prescribes, this is in the act. When the President shall so prescribe the United States shall have the right of first refusal to purchase at the market price all production from the Outer Continental Shelf. So the United States can purchase up to 100 percent production of the OCS.

Mrs. HANSEN. I think you and the Defense Department should integrate your planning in such a way that the United States is completely protected at all times.

LIMITATION OF ENERGY

As I mentioned Tuesday morning, every time you build new homes you have an increase in energy use. Now obviously you have limitations on where you obtain that energy. Hydroelectric energy is about at its limit. Coal has not gone into swift production. You have the possibility of a coal strike or a transportation strike.

You have all these possibilities you have to look at. You are still working on geothermal and on solar energy. So you get down to the practicalities of oil. I just think the average American does not grasp the fact that if stringent conservation measures are not adopted and put in use during this 2-year period, you are not just going to have inflation, but you are going to have to increase imports.

I just do not think the American people understand this yet.

Mr. WYATT. This is assuming no new war in the Middle East.

Mrs. HANSEN. Yes. You are assuming no new war in the Middle East and assuming that Canada does not increase her export tax. You are assuming a lot of things.

Mr. CARTER. You are giving very eloquent expression to the frustration we all feel in this area.

BUDGET CEILING

Mrs. HANSEN. Congress has been asked to limit fiscal year 1975 expenditures to $300 billion. We have had budget ceilings before. The Office of Management and Budget in the past has placed you in the predicament of having to cut back funding for natural resources. With a new budget ceiling you are going to be in the same predicament. You are going to be cutting back on natural resource management. Then you are going to get more and more behind.

Mr. CARTER. It is a risk I do not think we can afford.

Mrs. HANSEN. The Bureau of Land Management does not have enough now to run a sheep ranch decently. It does not have enough money to do all the title work necessary on oil explorations. I think the Interior Department will agree.

Mr. CARTER. I have to watch the eye contact around the table.

Mrs. HANSEN. This is an area where you need to be very serious. You are dealing with the fate of this country.

OBJECTIVE OF 10-MILLION-ACRE PROGRAM

Mr. CARTER. Madam Chairman, let me elaborate on that at little bit. As we look at what is required to try to meet the objective of the 10-million-acre program and to expand in future years into the other frontier areas to which we have to turn if we are going to have to find and produce large amounts of oil, we are going to have manpower and budgetary problems which we will be discussing with OMB shortly and hopefully with the committee. It is necessary, as you point out, to get into this problem now and to plan to open these resources for development. While it is a problem the country has now of importing 6.4 million barrels a day at an annual cost of $23 billion, if we do not take these steps by about 1980. We can be importing as much as 8 to 10 million barrels of oil a day at a cost of around $30 to $35 billion. So we have to begin and work as effectively as we can to avoid the future problem.

Mrs. HANSEN. Supposing in our effort to make the budget reasonably solvent, you force the price of sales down, so that you eventually hurt the revenue structure of the United States?

FIVE YEAR LEASE

Are you going to have an acceleration of development to such an extent that a few groups that are able to make the bids will be in the position of having all these tracts tied up, so there will be no development because they cannot obtain rigs, et cetera, for a wide variety of reasons? A lease is issued for a 5-year period, but you can extend.

Mr. LINDGREN. It can be extended by suspending operations.

Mrs. HANSEN. Do you have to produce any oil within the 5 years?

Mr. CARTER. You have to discover it. These are difficult questions. Let me tell you what our estimation is. You can look back in 5 years and we may prove to be wrong. But our economists would argue that as long as you have competition and as long as there are a number of people who want to get into the oil business on the OCS, each tract you offer ought to bring market value, whether you are offering 1,000 tracts or 5,000 tracts.

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As a noneconomist, I have a feeling that the more you offer, your price per acre is going to go down somewhat. I think that as long as it does not go down a great deal and as long as we are sure that we are getting fair market value and that we have competition in the bidding for those tracts, that we should not pursue a policy of trying to maximize the Federal Government's revenue in the leasing programs that we now contemplate.

It seems to me that our objective is to find oil and gas for the Nation.

Mrs. HANSEN. That is right, but I do not want to see you offer so many tracts that you receive very low bids.

Mr. CARTER. We will not do that.

Mrs. HANSEN. And then let these people with the low bids just sit there without going into production.

Mr. CARTER. What we expect is to conduct a very comprehensive preevaluation and postevaluation procedure. We expect this committee and others in the Congress to be watching us like hawks on this issue.

LEASING OF OCS TO SMALL OIL COMPANIES

But on the question of whether certain areas are going to be tied up or not by a few small operators, we met with environmentalists and oil company representatives and others about 8 or 9 months ago in trying to put together the outline of the kind of leasing and exploration program that would make sense to increase our supply of oil and gas. All of the small oil companies we talked to said that the best thing we could do to protect their interests was to increase the acreage we offered. Because when we offered a small amount of acreage they were much less able to get into the OCS business because of the competition of the majors; and that what they wanted was a lot of acreage offered, so they could hopefully be able to get a bid. They do not like to now go through the cost of planning for a lease sale which is a substantial cost. They have to pay for the credit they have to have to put the money on the line, and they have to pay for the research work.

If they cannot be pretty sure of buying something they will just drop out. There will undoubtedly be some times, when you lease a vast amount of acreage, when some of it is not being as vigorously drilled as other areas. That is particularly going to be so when you have three sales in a year and then a big discovery is made in the third sale area.

People are going to take their available rigs and move over to the third sale area and develop it up very fast and slow down the effort on the first two. My answer to that is that is desirable because that is what will produce oil and gas, maximizing the effort in the most promising areas.

I think that the lease provisions will assure that you do not run into a situation such as coal where people are sitting on coal leases for many years and doing nothing.

Mrs. HANSEN. Those are disgraceful.

Mr. CARTER. We are mindful of that. We think the 5-year term will assure that. Certainly the high cost of buying the leases is an incentive to develop it as soon as you practically can and get your money back. We do not think that the problem is as substantial as it is in the coal areas.

DEVELOPMENT OF LEASES

Mrs. HANSEN. You understand some of these companies are operating in the Near East and it would not hurt them particularly to hang on to a resource here if they can sell more over there.

Mr. LINDGREN. There are several things in the lease that we think give us the power to insure that the leases are properly developed. First the 5-year term, during that term we have the authority to require drilling operations on the lease. Insofar as extensions of the lease beyond the 5-year term, of course any lease that is in production is extended indefinitely by the fact of production. The only circumstances under which we can extend a lease without production on it is in the interest of conservation of the resource and proper development of the field.

It would be a development-related extension and not an extension at all related because the company would like to sit on the lease. We think the difference between the coal situation and the offshore is night and day as far as companies sitting on it.

We have the authority to insure that they will not.

Mrs. HANSEN. Some of these companies own both coal and oil.

Mr. LINDGREN. But they are operating under different statutes.

Mr. YATES. Are you saying that all your leases which have gone beyond 5 years are now producing?

Mr. LINDGREN. No. We are not saying that.

We are saying they are in production or under suspension orders. Those suspension orders are related to proper development of the field. A lease may be suspended if it is impossible to lay in a pipeline for purposes of transportation. But they are development-of-field-related suspensions or environmental reasons. We have had leases suspended for environmental reasons like the Santa Barbara Channel.

Mrs. HANSEN. Are you going to have more fracases in the southern California channels such as Santa Barbara?

Mr. CARTER. Do you mean more spills or people opposed to it?

Mrs. HANSEN. You know people there are very afraid.

Santa Barbara taught them quite a lesson.

The next scheduled sale is going to be in California.

Mr. CARTER. Yes. We are in the process of studying now whether we can or cannot hold a sale out there this year. We hope we can but the study is not completed.

OCS LEASE MANAGEMENT PROGRAM

Mrs. HANSEN. What guarantee do you have that there will not be another Santa Barbara?

Mr. RADLINSKI. There is no guarantee, but considerable measures have been taken since Santa Barbara to prevent that.

I have a three-page statement here on the measures that have been taken.

Mrs. HANSEN. Please insert the statement in the record.

[The information follows:]

October 1974

U.S. Geological Survey

OCS Lease Management Program

The Geological Survey has made the following changes in its OCS lease management program since the Santa Barbara blowout on January 28, 1969, to insure better environmental protection and resource management:

- o The number of inspectors has increased from 7 to 43; 18 more are being hired in FY 75. The total inspection staff (including supervisors, engineers, and supporting staff, as well as inspectors) will have been increased from 12 in 1969 to 126 during FY 75.

- o Six new OCS Orders and 6 revised Orders have been issued (1 new and 3 revisions are currently in process). These include more stringent requirements for:

  - Casing depths and cementing practices
  - Blowout preventer equipment and mud monitoring instrumentation
  - Remotely-actuated subsurface safety valves
  - A reporting procedure for all safety valve failures
  - The completion of oil and gas wells
  - Pollution and waste disposal
  - Installation and operation of platforms, including safety and pollution control equipment
  - Oil and gas pipelines

  (Public participation in the development of OCS Orders has been made possible by publication of notices and draft Orders in the Federal Register.)

- o At the request of the USGS, safety management studies were made by a team of specialists from National Aeronautics and Space Administration (NASA) and a committee of the National Academy of Engineering (NAE), as well as by a USGS team of analysts, and responses were made to the recommendation in 15 categories as follows:

  1. Failure Reporting and Corrective Action
  2. Accident Investigation and Reporting
  3. Information Exchange
  4. Research and Development
  5. Standards and Specifications
  6. Systems Analysis
  7. Engineering Documentation
  8. Wearout Prevention
  9. Training and Certification
  10. Motivation Program
  11. Lease Management Program
  12. Inspection Procedures
  13. OCS Order Development
  14. Standardization of Forms
  15. Safety and Advisory Committees

- Additionally, the recommendations of a technology assessment of Outer Continental Shelf oil and gas operations by an interdisciplinary team under the aegis of the Science and Public Policy Program at the University of Oklahoma were reviewed and implementation actions are being taken in the following four additional categories:

    16. Memorandum of Understanding with OSHA
    17. Memoranda of Understanding on pipelines
    18. Memorandum of Understanding on discharge standards
    19. Subsea production systems

- Similarily, recommendations from the CEQ Report, OCS Oil and Gas - An Environmental Assessment have been reviewed and appropriate follow-up actions are being taken.

- A Review Committee to serve as an independent audit of the effectiveness of USGS operations and procedures was established under the aegis of NAE.

- At the request of the USGS, three cooperative committees have been established with API on offshore safety and anti-pollution research, standards, and training. One of the results of these committee actions has been the development and issuance of detailed specifications for subsurface safety valves and a recommended practice for design, installation, and operation of subsurface safety valve systems. Additionally, a facility for testing of subsurface safety valves is being constructed in Houston, Texas, and a joint Government-Industry committee has been formed to conduct quality assurance inspections at the plants of manufacturerers of such devices.

- A "Safety Alert" system was established to immediately notify all operators of failures and accidents in order that they can take appropriate actions to prevent recurrences.

- Contracts were let for systems analysis studies for application to OCS operations; requirements for such analyses are currently being prepared.

- Inspection procedures were standardized and systematized to prevent arbitrary actions by inspectors and to gather data for guidance in making changes or additions to procedures and regulations. During the first eight months of 1974, 2,300 enforcement actions were taken as a result of these inspections. (A platform of 20 wells now has about 300 safety devices.)

- Regulations were issued requiring environmental assessments of drilling and production proposals, as well as for the preparation of Environmental Impact Statements.

- The Offshore Operators Committee and the Western Oil and Gas Association responded favorably to a request to establish safety committees.

- The USGS Conservation Division was reorganized to insure more responsiveness to safety and pollution control management. This has resulted in:

  - more clearly defined lines of authority
  - better coordination
  - faster response
  - new field units with responsibility for new requirements

- Accident investigation procedures were established with the requirement that reports of major accidents be made available to the public.

- Operators are now required to submit contingency plans for oil spill containment and cleanup prior to any lease operations. Large amounts of boom and absorbent materials, power boats, and other oil containment devices are now available both in the Gulf of Mexico and off the Pacific Coast through cleanup companies supported by a consortium of oil companies involved in offshore operations.

- A Notice has been issued that will require OCS operators to provide helicopter refueling stations on the OCS when needed by the USGS in the conduct of its inspection and lease management activities.

- A map showing unstable bottom conditions in the Mississippi Delta area has been issued as a safety alert notice and studies of these conditions are continuing.

- The Survey participates in the planning and conduct of environmental baseline studies prior to and after lease sales to determine the effect of drilling and production on the marine environment.

Since the Santa Barbara oil spill, 4,815 new wells were drilled on the OCS, four of which resulted in accidents that caused a major oil spill (over 10,000 gallons). All of these occurred in the Gulf of Mexico. In the Santa Barbara Channel, 240 wells were drilled without incident.

The total of all major accidents from both drilling and production was 15, but only nine of these resulted in any significant oil pollution. During the past five-year period the number of fixed structures on the OCS increased from 1,575 at the beginning of 1969 to 2,041 at the first of September, 1974.

INCREASED INSPECTION

Mr. RADLINSKI. Increases in our inspection force, new OCS Orders, more safety requirements, advisory committees, et cetera.

Mrs. HANSEN. I might say your increase in inspection is due to the fact that this committee overrode OMB decision and provided additional funds for inspectors.

Mr. RADLINSKI. I know that.

Mr. LINDGREN. We are also meeting with the State Lands Commission of California which controls their OCS in working out additional changes in regulations or requirements that might be necessary.

Mr. CARTER. We told the State that to the extent there are differences in their regulations and our regulations we would adopt their regulations where they were more stringent and that we would engage in a study with them to see whether regulations more stringent than either of ours were required to assure the safety of development in that area.

SOUTHERN CALIFORNIA OFFSHORE LEASING

Mrs. HANSEN. I have a clipping from the Los Angeles Times of September 29, 1974. It says: "The Federal Government probably will not wait until a coastline plan is adopted before deciding to lease southern California offshore sites for oil drilling, a U.S. Senate committee was told Saturday. Department of Interior officials said they would base their decision in part on the State coastline plan, but not wait until it is adopted by the State coastline commission and the legislature. State and local officials have asked the Federal Government to put off any decision on whether to lease 1.6 million offshore acres from Santa Barbara County to Dana Point until after the plan is completed.

"The seven cities along this coast, haunted by the memory of a massive oil spill in 1969 in Santa Barbara, are preparing to resist what is seen as a unilateral decision in Washington to allow drilling for oil of south California."

You had better tell us what you are going to do.

Mr. CARTER. What we have done in recognition of this as a problem is meet with the coastal zone people in California, meet with the State lands people. We have held meetings with State and county government.

In the preparation of our environmental impact statement we have invited all of these people to appoint experts to work with us on a full-time basis looking over our shoulder as to how we are doing that work and to make input into the environmental impact study. We have reviewed all of the draft material on their coastal zone plan that we have received. We have given them our comments. We have told them what we would like to do is work along together in the hopes that they can complete their energy section of that plan by the time we get ready to make a decision on a leasing program and that we could thereby avoid any conflict. But we have told them that we cannot agree in advance that we will make no decisions until their plan is completed because by agreeing in advance to delay we would be giving that group a veto over a decision that is important on a national basis rather than just on a local basis.

ENVIRONMENTAL STATEMENT ON 10 MILLION ACRES

Mrs. HANSEN. What is the status of the programmatic environmental impact statement for the 10-million acre program?

Mr. CARTER. We are very near publication of a draft of that statement. It has been under preparation.

Mrs. HANSEN. After publication it is reviewed by whom?

Mr. CARTER. It will be reviewed by anybody who wants to read it. We will hold public hearings. They can make their input either by appearing at the hearings or supplying written comments to us. It will be reviewed by all of the concerned State, local and Federal agencies and then a final will be prepared.

Mrs. HANSEN. What is the status of your environmental impact statement preparation for each sale?

Mr. CARTER. The one for the sale next week has been completed and a decision made to go ahead.

Mrs. HANSEN. Did this have any opposition?

Mr. CARTER. No, I don't think there was any significant opposition.

Mrs. HANSEN. This is the Gulf of Mexico sale.

Mr. CARTER. Yes, ma'am.

Where are we on the south Texas environmental impact statement?

Mr. EDWARDS. The draft EIS for the south Texas sale went to CEQ and public hearings were held September 27 in Corpus Christi. We are now evaluating those comments from the hearing and other written statements and getting ready to prepare a final statement. On the east Texas sale No. 38 it is scheduled to start this month. We are preparing that draft looking hopefully to get a draft to CEQ during December.

On the southern California sale, we have started the draft as Mr. Carter indicated. We have invited people to work with us on this. We are projecting that the draft will be prepared by the end of December.

ORIGINAL LEASING SCHEDULE

Mrs. HANSEN. Your original schedule called for only one frontier sale; according to a recent newspaper report you are now preparing for sales in Alaska and the Atlantic in 1975.

Mr. EDWARDS. Could I ask which original schedule you are talking about?

Mrs. HANSEN. The one on page 1013 in part 4 of our hearings for fiscal year 1975. I asked Mr. Berklund what is the current leasing schedule. He said:

> The schedule as established right now is as follows: The first sale is planned in south Texas for January, and it will be from 3 to 4 million acres in size. Southern California will be the next sale in April.

Mr. CARTER. As Secretary Whitaker mentioned——

Mrs. HANSEN. By the way, what happened to Mr. Berklund?

Mr. CARTER. He had been traveling and he wanted to come up here but since he was not here for the first part of the hearings and did not have a record available, he thought Mr. Edwards should continue to represent the Bureau, so he would not say anything inconsistent with what some of us said the last time.

Mr. WYATT. Let the record show that this member of the committee is very delighted that Mr. Berklund is still the Director of the Bureau of Land Management.

Mrs. HANSEN. Let the record show that I am, also.

Mr. MCKAY. I think my previous letter makes that obvious.

Mr. CARTER. Thank you. I will pass that on to Mr. Berklund with my own expressions along the same line.

Mr. WYATT. You might pass it along to some other people over there, too.

LEASE SCHEDULE FOR 1975

Mr. CARTER. As Secretary Whitaker pointed out, our present thinking about a lease schedule for 1975 is that we should look toward the south Texas, central gulf, southern California sales and in addition a sale in Cook Inlet which may well be conducted by the State rather than us since we have a dispute over title and they are winning.

Then one in the Gulf of Alaska and one in the Middle Atlantic.

Mrs. HANSEN. The Federal Government receives no part of the revenues for the sale in Cook Inlet?

Mr. CARTER. It is going to depend on what the Supreme Court does in the next week or two.

There is a cert petition before them. If they deny cert, they will have no more role to play.

PROCESSING COOK INLET OIL

Mrs. HANSEN. In what refineries will the Cook Inlet oil be processed? I understand the State will not provide any protection against spills.

Mr. CARTER. That is not what the State tells us. Certainly if the sale is conducted under an agreement with us the State will provide the same kinds of protection that we would provide.

Mrs. HANSEN. What is the shipping point for the Cook Inlet oil?

Mr. CARTER. Now the Cook Inlet oil goes to the Washington area.

Mrs. HANSEN. That is Cherry Point. From what point are they shipping it from Alaska?

Mr. CARTER. Right in Cook Inlet there is a pier and gathering lines and a tanker berthing area where they take that oil out.

Mrs. HANSEN. Where does the Cherry Point oil go?

Mr. CARTER. Do you mean what is the market for it?

Mrs. HANSEN. Yes.

Mr. CARTER. I do not have personal knowledge about that, Madam Chairman. I think it is right in that area that it is consumed, in the Washington, Seattle, Puget Sound area.

Mr. RADLINSKI. West coast, as far as we know.

Mrs. HANSEN. Is there any distribution of that oil from Cherry Point into the California market? Washington has a refinery and California has refineries but Oregon has no refineries. Cherry Point oil goes into the Washington-Oregon distribution areas.

Mr. RADLINSKI. As well as California.

Mrs. HANSEN. I am wondering what portion of it goes to California and if you increase the production in Alaska, will Cherry Point be able to process all the oil. You probably do not have the vaguest idea.

Mr. RADLINSKI. No.

Mrs. HANSEN. That is why I am beginning to wonder what kind of economists we have.

My next question is: If Cherry Point cannot handle all of this oil, where does it go? Does it go to one of the California refineries or are you thinking in terms of diverting across the Rockies at some point so you get into the mid-continent which is having its own difficulties with oil?

Mr. CARTER. There have been a lot of discussions of what to do with the excess, if we ever get there, of Alaskan oil. Once the Trans-Alaska Pipeline is on stream and if the Gulf of Alaska is developed and produces a substantial amount of oil and if Cook Inlet is developed——

Mrs. HANSEN. That is 10 years away.

Mr. CARTER. Well, we could run into a situation near 1985 where you have more crude oil on the west coast than the west coast could consume. Sometime before that plans would have to be made for systems to deliver that oil to the market areas where it is required.

TOTAL ENERGY PACKAGE

Mrs. HANSEN. Don't you think the time has come in the energy field that you put a total package together predicated upon your energy sources, demand, and the market? You should at least have some kind of an idea what direction you are going in the matter of pipelines, refineries, and conservation measures which are essential, instead of the crisis kind of energy programs that we have had in the past.

Mr. CARTER. Yes, Madam Chairman. I think that in looking at the objectives——

Mrs. HANSEN. I have been chairman of this committee for 8 years, and I have not found anybody who has an overall plan.

Mr. CARTER. There are several things that get in the way of the Government producing a plan to accomplish all of those objectives.

Mrs. HANSEN. Such as?

Mr. CARTER. Change of people in the Government over a long time period is one.

Mrs. HANSEN. Most of the technicians in this Government really are not political people. They do not come and go with elections. It is just you top hands who seem to disappear.

GOVERNMENT PRODUCTION OF OIL

Mr. CARTER. Another more fundamental problem we have is that the Government does not own the oil and produce it.

Mr. YATES. It would be better if it did, would it not?

Mr. CARTER. I do not believe so.

Mrs. HANSEN. Private industry has an obligation to this Government. They should be lending their knowledge and expertise to the Government.

Mr. CARTER. We have shared that view. In the trans-Alaska pipeline——

Mrs. HANSEN. I will yield to Mr. McKay.

Mr. MCKAY. You have leased, I think, according to your testimony, 10 million acres of the gulf since 1954 to the present. I think in your testimony last spring it was indicated, that of those tracts drilled only about one in eight produced any oil.

Can you confirm or deny that?

Mr. CARTER. I would suspect that it is higher than that. I would like for somebody who knows more than I do to comment.

Mr. MCKAY. It seems to me the anticipated oil production was much greater than actual production.

Mr. CARTER. There are some dry holes, Congressman.

PRODUCTIVE ACREAGE

Mr. MCKAY. My question is if there are as many as I am made to understand that maybe the 10-million-acre lease is not going to produce as many.

Mr. VETTERICK. We have produced 2,200 leases. Of those 714 leases are in production covering 3 million acres. So roughly one-third of the acreage is productive.

Mr. MCKAY. Has the other been drilled and found not productive?

Mr. VETTERICK. There are total in effect about 1,300 leases at the present time. Of the 2,100, some have expired. Of the 1,300, as I said, 714 are productive. That means there are about 575 leases now not in production.

Mr. MCKAY. Is that because there is nothing there?

Mr. EDWARDS. In most cass that is true. Most have been drilled and they have not been found productive.

Mr. MCKAY. So you are running 50-percent success.

Mr. CARTER. Probably about 30.

Mr. MCKAY. Did you crank that 30 percent into the anticipation?

Mr. CARTER. Yes, sir.

I think we may be getting a little better, but it is probably in the same ball park.

Mr. RADLINSKI. Thirty percent.

Mr. YATES. You are going to have to offer 18 million acres to lease 10 million.

Mr. CARTER. Our objective is not 10 million producing acres; it is to lease 10 million acres so that that will be available for the exploration and development on those leases where there are discoveries.

Mr. MCKAY. On those leases that are now not productive or have expired, have they expired strictly because people had drilled and there is nothing there, or did they expire because odds weren't high enough; what are the elements that caused the expiration of leasing?

Mr. CARTER. I would think in probably 9 cases out of 10 holes were drilled and it was found there was no oil. There may be some cases where you have three leases in a row and they all look like the same structural arrangement and they drill a hole in one, it is dry, and they say, "What is the use of drilling in the other two?"

CAPPED WELLS

Mrs. HANSEN. Congressman Dingell accuses you of having a lot of capped wells.

Mr. YATES. For gas, I think that is true.

Mrs. HANSEN. For gas.

Mr. CARTER. We gave him some figures on how many were capped. I am sorry I do not have a copy of that paper. We gave him a very elaborate discussion and explanation of it. We would be happy to provide it to this committee.

[The information was filed with the committee.]

NUMBER OF TRACTS

Mr. YATES. How many tracts will there be in your 10 million acres?

Mr. CARTER. There are about 5,200 acres per tract.

Mr. GASKINS. 2,000, 1,700 roughly.

Mr. YATES. 1,700 acres to a tract?

Mr. GASKINS. No. 5,000 acres to a tract, about 2,000 tracts in the 10 million acres.

Mr. EDWARDS. Not all tracts are the same size. The maximum they can be is 5,760 acres, but some are smaller than that because of convergence of survey lines or dividing lines between States. So you can have fractional size tracts.

Mr. YATES. Can I have an answer?

Mr. EDWARDS. They are roughly 5,000 acres in size.

Mr. YATES. How many tracts will there be?

Mr. EDWARDS. Approximately 2,000.

Mr. YATES. 2,000 tracts?

Mr. EDWARDS. Yes.

Mr. YATES. How many drilling rigs will you need for each tract?

Mr. CARTER. This will vary.

What we are going to try to do is, through our information, lease structures rather than go out and lease tracts that are not contiguous. We are going to try to lease all of the tracts that cover a structure.

Mr. YATES. What does that mean? Do you mean certain geologic formation?

Mr. CARTER. That is right, a geological formation which may cover say 10 tracts.

Mr. YATES. How many acres will there be in that?

Mr. CARTER. They vary.

Mr. YATES. All right. Give me an approximation.

Mr. CARTER. Well, some structures it may take 10 tracts to cover them, some may be smaller than 1 tract.

Mr. YATES. How many acres will be in the structure?

Mr. EDWARDS. It could be 50,000, it could be larger, it could be smaller.

Mr. YATES. Let's go on——

Mr. CARTER. We did not make the structures.

Mr. YATES. Pick a structure and tell me how many drilling rigs you will need.

Mr. CARTER. If we unitize, which we are considering, the exploration of the structure, then many less drilling rigs will be required to explore it.

Mr. YATES. Many less than what?

Mr. CARTER. To explore that structure than would be the case if you did not have unitized exploration.

Mr. YATES. What is the minimum of drilling rigs you would need?

Mr. CARTER. One.

Mr. YATES. For an entire structure?

Mr. CARTER. Sure, to explore it.

Mr. YATES. How long would it take to explore that structure with one drilling rig?

Mr. CARTER. It depends on how deep you drill, it depends on the geologic conditions that you have to go through in drilling your holes.

Mr. YATES. How many structures are there that require only one drilling rig?

Mr. CARTER. I do not know. You have to look at a map.

IDLE RIGS

Mr. YATES. Let's go back to your earlier testimony where you say you think you had idle rigs, 22 idle, what you have testified earlier today.

Mr. CARTER. I thought I said 12.

Mr. YATES. Ten and twelve. Did he not say 10 and 12?

Mr. VETTERICK. No.

Mr. YATES. What is the answer?

Mr. VETTERICK. Twelve.

Mr. YATES. All right. You have 12 idle rigs. How deep will those rigs drill?

Mr. EDWARDS. Of those 12, it is variable. They can go as deep as 1,500 feet, but not all of them can go that far.

Mr. YATES. Break it down for me for the record.

Mr. CARTER. We can, but not right now.

(The information follows:)

MOBILE DRILLING RIGS CURRENTLY NOT WORKING (AUGUST 1974)

Company	Rig	Drilling depth rating (feet)	Water depth rating (feet)	Reason for not working
Texas:				
Diamond M. Drilling Co	Mr. Gus	25,000	180	Under repairs.
Mecom	No. 4	10,000	40	For sale.
Louisiana:				
Offshore Co	Delta	15,000	25	Idle.
Sea Drilling Co	Seadrill 2	18,000	35	Do.
Do	Seadrill 3	18,000	35	Do.
Odeco	St. Louis	20,000	30	Remodeling.
Zapata	Topper III	25,000	300	Reoutfitting.
U.S. Pacific:				
Fluor Drilling	Caldrill 1	6,000	(1)	Available.
Golden Lane Drilling Co	Goldrill 4	12,000	600	Remodeling.
Associated Marine Services, Inc	M. V. Heron	1,500	600	Idle.
Do	La Ciencia	1,500	600	Do.

[1] 5,000-plus feet.

Mr. YATES. The information we get is that most of those are rigs that will go down to 30 or 40 feet, when you talk about the availability of such rigs you are not giving the committee the entire picture, because rigs that only go down 30 or 50 feet cannot be used for your leases, can they?

Mr. CARTER. We are talking about two or three different things. One is, in how deep water a rig can operate. Another is, how deep a hole you are going to drill, regardless of how deep the water is.

Mr. YATES. That is correct.

Mr. CARTER. When you talk about a rig that will operate only in 100 feet, you are talking about the depth of the water. It probably could drill 15,000 feet in that depth of water. But in most of the

frontier areas we are talking about, say the Atlantic, most of the rigs that are operating in the Gulf of Mexico will be able to operate there.

Mr. YATES. You mean most of the 12?

Mr. CARTER. And the ones that are not idle. Drill companies may well move some of the drills now occupied to the Atlantic to drill there.

Mr. YATES. Are you telling the committee you have enough rigs to take care of the 10 million acres?

CONSTRUCTION OF RIGS

Mr. CARTER. No. What we are telling the committee is that there are rigs available to explore our anticipated lease schedule, that you will run into rig availability problems, certainly in Alaska; that rigs do not exist to explore that area adequately because it requires new rigs. Some are under construction.

I think three are under construction on the west coast now.

Mrs. HANSEN. Build them so they will go under the bridges next time. Do you remember what happened on the Columbia River?

Mr. CARTER. Yes.

Mrs. HANSEN. The rigs became stuck on the Columbia River because they could not go under a bridge.

Mr. CARTER. If you have discoveries, then the availability of rigs to fully and promptly develop an area can be a very serious problem of getting it done fast enough.

Mr. YATES. Do you have enough rigs on hand now to explore 3 million acres rather than 10 million acres?

Mr. RADLINSKI. Can I answer that?

First off, Congressman, you know there are jack-up rigs and there are floating rigs. Now a floating rig can drill in great depths of water. They just drilled off the coast of Africa in 2,000 feet of water. Some of the jack-up rigs in the Gulf of Mexico can work in 200 feet of water.

Mr. YATES. What is the answer to my question: Do you have enough rigs on hand to exploit and to drill 3 million acres?

Mr. RADLINSKI. There are enough we think to drill 10 million acres.

Mrs. HANSEN. I think this should be clarified—not every acre of these acreages are geologically feasible for drilling; is that not the point?

Mr. RADLINSKI. That is true.

Mr. YATES. That is correct.

Mrs. HANSEN. You may have a very small area of the terrain where you do your drilling and obtain your major production. Is that not correct?

Mr. CARTER. Yes.

Mr. YATES. That is right. But they have already set aside what they consider to be the most productive areas.

I yield to the gentleman.

Mr. WYATT. I would like to ask a few questions if I could, in a little different vein.

Madam Chairman, I apologize if I am plowing ground again. I have been ill the last couple of days.

Mrs. HANSEN. That is all right.

CONSERVATION AND ENERGY GOALS

Mr. WYATT. Perhaps some of this has been covered, perhaps not, also.

I am very, very much disturbed about the goal of conservation. I do not think it is big enough. I am also disturbed about the short term and also the long term on the energy production goals that we have.

I frankly think there is a very strong possibility of a new war in the Middle East which is going to result in a new embargo. Even if there is not, we cannot economically survive in this country with $23 million-plus deficit in Middle East oil.

I am convinced that oil prices are going to go up, keeping pace with worldwide inflation. The recent small increase we had is a small sample. I think from now on you are going to have an increase in price that is going to be equivalent to the worldwide inflation rate. So therefore, your $23 billion figure is going to go up substantially.

What I am concerned about, and Secretary Carter, you may not be the right one to put this question to, but any light you can throw on it will be helpful I think.

I am concerned about the Executive Department structure to deal with the question of conservation of the use of energy and also the structure to deal with alternative sources of energy in this country.

INTERAGENCY CABINET LEVEL GROUP

The President in his speech set the goal of saving, 1 million barrels a day, and set up the new agency to do it with Secretary Morton as its head. What is your understanding, does this mean Secretary Morton is going to be kind of the energy czar?

We have had so much proliferation of authority, of responsibility, and of effort, and no real concentrated authority and concentrated effort on the overall problems in both areas.

Mr. CARTER. The Executive order on the agency is in preparation, Congressman Wyatt. I take it that we are going to have an interagency cabinet level group which will coordinate all of the energy-related and conservation-of-energy-related activities by all of the departments and agencies in the Federal Government under the control and chairmanship of Secretary Morton.

Mr. WYATT. Then your understanding is that this new board is going to be charged with the responsibility of finding alternative energy sources, alternative to the Middle East and also be in charge of the conservation of the use of energy in this country.

Mr. CARTER. He would coordinate the efforts of the other agencies.

In the President's message he also said he wanted Secretary Dent to meet with industry leaders to try to pursue voluntary efforts by industry to engage in conservation practices. I would anticipate that Secretary Morton would want to play a part in and have the Energy Board coordinate that effort.

The President also asked the Secretary of Transportation to do

some work with him, with the automobile industry, to discuss methods of saving energy in transportation.

Mr. WYATT. Will these efforts be under this new board, under Secretary Morton?

Mr. CARTER. I cannot give you an answer on what the final details of authority are, because I simply do not know.

Mr. WYATT. Do you know if the OMB will be represented on this board?

Mr. CARTER. I do not know the answer to that. I would expect that the OMB, either in a staffing capacity or membership, would be on the board because the budgetary function of the executive branch is so important to the capacity to deliver.

Mr. WYATT. It depends on whether the program lives or dies, both in conservation and alternative sources?

Mr. CARTER. Yes.

Mrs. HANSEN. If you will yield a minute, why is it, for the last 20 years to my knowledge, there has been no coordination or attempt at coordination by the Office of Management and Budget to foresee and plan ahead for our energy needs.

We have pointed out to you, Dr. Pecoria's statement, I am sure he warned your department that the choices were narrowing, your options were being limited every single day, and the planning had to be done. Yet year after year there has been no adequate budgetary preparation.

You now have a crash program. At the same time we have a crash program for mass transit and a crash program to cut budgets.

Mr. WYATT. Madam Chairman, what disturbs me is I do not think we have a crash program.

The word "coordination" disturbs me very, very deeply as a private citizen, which I will become very shortly along with Madam Chairman.

AUTHORITY FOR ENERGY DECISIONS

What I think is the crying need in this situation is someone with final authority to set short-term goals and long-term goals and with real authority to put them into effect and not someone that is trying to coordinate all kinds of efforts, all kinds of disjointed bits of authority between the various agencies that have been directed to work on this problem.

The problem of imports is going to destroy this country economically, it is just as plain as plain can be. I think beyond that we are going to have a real crisis as to oil in the very foreseeable future.

I do not think just a board set up with a man to coordinate the existing efforts is going to be sufficient. I am making these remarks pointedly and purposefully for the record in the hope that this board will become an agency of the Executive Department with real teeth in it, to make decisions and then to implement them. That is why it is important that the OMB have a voice in it and be represented so that, hopefully, they will be told what they have to do, along with the other agencies that will have to be told when the decision is made, what has to be done.

We cannot drift on. I see absolutely no evidence of any real urgency, at the very top of the Government, of the problem that we have here.

I have some hope that this new agency being set up will fill that bill. I am not encouraged so far by what I have heard of it.

Mr. CARTER. I will certainly pass on those views promptly, Congressman Wyatt, to the Secretary and to others involved in setting up the board.

Mr. WYATT. Thank you very much.

Thank you, Madam Chairman.

Mrs. HANSEN. I have arrived at one conclusion; nobody is telling the full story, what you had better say is that for the next 3 years you have to conserve energy and you are still going to be short of oil.

Mr. WYATT. And you may be way behind even if you do that.

Mrs. HANSEN. Way behind. Mr. Carter, I do not see much if any diminution in the use of energy by the people of the United States.

[Discussion off the record.]

RESTRICTIONS ON ENERGY CONSUMPTION

Mrs. HANSEN. I think that the first job Secretary Morton has to do is impose some very drastic restrictions on energy consumption.

Mr. CARTER. I will certainly pass that on to him. We all share the feeling that you have expressed.

Mrs. HANSEN. I know the problems.

Mr. YATES. But nobody from the administration is expressing it.

Mrs. HANSEN. I do not think anybody has made it clear that you are 3 years away from even a minor correction of this problem.

Mr. CARTER. Congressman Yates, I would be happy to supply copies of a number of speeches that the Secretary, the Under Secretary, our Assistant Secretary, and I have been making on this point in a number of different forums, pointing out what the energy situation is, and is going to be.

Mr. YATES. What has happened as a result of your speeches? They do not seem to be having much effect.

Mr. CARTER. We still wind up with considerable opposition to any energy development program in the particular area where it is likely to have an impact. There is great concern by people.

Mr. WYATT. The speeches really have not produced much results.

Mr. YATES. That is just what I said.

Mr. WYATT. Hopefully they should have, but they have not.

Really, we are pleading with you, we need some drastic action, somebody is going to have to bite the bullet and face the angry mobs.

Mrs. HANSEN. We do not blame the Secretary, we do not blame your Department. We think you have done very well, given the amount of resources that OMB traditionally has provided you. But somebody is supposed to be reaching the American people and telling them the brutal facts, because it has not been plainly stated that we could not immediately expect a million barrel a day curtailment in oil imports. Somebody somewhere has to get this through plainly.

Mr. YATES. I would like to see copies of those speeches. Will you send those over?

Mr. CARTER. Yes.

[The information was filed with the committee.]

Mrs. HANSEN. I have heard some of the speeches.

The American people have not been told that for at least 3 years, no matter what you do in the way of development and in the way of production, we are not going to reduce imports by even a small fraction. You also are not going to be able to convert the necessary number of

plants to coal within 3 years. You also have to solve your railroad transportation problems.

Mr. YATES. Have you really taken a grip on the problem?

Mrs. HANSEN. No.

Mr. YATES. Do you think we have?

Mr. CARTER. I certainly think, Congressman Yates, that we have seen the magnitude of the problem and have expressed——

Mr. YATES. And it is——

Mr. CARTER [continuing]. Several times that we are undertaking the studies necessary to try to get a more precise fix on what the economic and environmental factors involved in the solution are, and we are going to have to come up shortly with further specific programs as a result of the FEA's blueprint studies, as a result of trying to assess such things as the 10-million-acre proposal.

SHORT RUN ENERGY PROBLEM

But we have said, and this is about everybody in the administration, time and time and time again that in the short run the energy problem in the United States is going to be helped, not solved, but helped, in two ways. That is, you have to increase the production of oil and gas and you have to decrease consumption. To increase production there are about three things you have to do.

You have to get into the areas where there is oil and gas, that is Alaska and the OCS.

Every time we talk about getting into the productive areas, you get much, much, much more opposition than you do support. We spend a lot more time in congressional committees explaining why we would dare to consider going into a place like PET–4 or a place like the Atlantic or a place like southern California or the Gulf of Alaska, then we do explaining why we are not there.

It is very tough to get a grip on the problem and start really solving it when you do not know whether you are going to get down the road where it takes about a year to do all of the studies required by law before you can make the decisions to get something done. During that period of time you have a natural oil seep hit the beach at Santa Barbara and you hold your breath wondering whether somebody dumped a barrel of oil from somewhere off a rig, and you are back in the soup trying to convince the public that you are really doing an adequate job of policing the operation.

We think we are; we think that the programs we are advocating to you are the way to go, but it is refreshing to come up here and have people express the same concerns and views that we share, because so many of the places we go to talk, the views are quite contrary.

HISTORY OF PET–4

Mr. YATES. I would like to ask a question.

Do you know the history of the discovery of PET–4 by any chance? Does anybody know that?

Mr. CARTER. I know a little bit, probably not as much as Mr. Radlinski.

Mr. LANTZ. PET–4 was set aside back in 1922 or 1923.

Mr. YATES. How did they find it, who found it?

Mr. LANTZ. The Geological Survey recommended the location. At that time there was no activity there, it was just a great big open place.

Mr. YATES. I know.

Mr. LANTZ. There were some seeps reported in the area.

Mr. YATES. Oil seeped to the surface?

Mr. LANTZ. Seeps had been reported; yes.

Mr. YATES. And the Government found the oil seeps and said, we will keep this for the Navy?

Mr. LANTZ. It was set aside under the same concept that the other three PET reserves were set aside.

Mr. YATES. It was not discovered by private industry?

Mr. LANTZ. No.

ELK HILLS RESERVE

Mr. YATES. What about Elk Hills?

Mr. LANTZ. That was set aside in 1912.

Mr. YATES. How was that discovered?

Mr. LANTZ. Oil had not been discovered there at that time, the Secretary of the Navy——

Mr. YATES. Somebody found there was oil there?

Mr. LANTZ. No. Secretary Meyer, Secretary of the Navy at that time, asked the USGS for an area which was public lands that might contain—I think 500 million barrels of oil. The USGS had a good many geologists in San Joaquin Valley which was an early oil area and Elk Hills was an obvious anticline, but it had not been drilled.

Mr. YATES. Was this discovered by Government geologists?

Mr. LANTZ. Actually, it was set aside by Geological Survey geologists. There were some arguments about some of the land and oil interests that eventually evolved into Standard Oil Co. of California thought they owned some land in it and they actually drilled the first wells.

Mr. YATES. But after it had been set aside?

Mr. LANTZ. After it had been set aside.

Mr. YATES. They were drilling it on the fringe, were they not?

Mr. LANTZ. No. They were drilling on railroad lands, that is the old railroad land grant, where they got checkerboard sections to support railroad construction. Some of these lands were actually in the Elk Hills Reserve. There was also a school land section that had passed to the oil companies. The industry drilled on lands they owned, or thought they owned and developed the production at Elk Hills.

Mr. YATES. All right. I will return to this.

Mr. Evans has some questions.

ABILITY TO LEASE 10 MILLION ACRES

Mr. EVANS. Madam Chairman, I am as concerned today as I was when we put out the original committee report about the ability of Interior to rationally, reasonably, and properly handle leasing of 10 million acres. I am concerned about the protection of our national assets, the enforcement of lease requirements, your ability to get agreements from States for pipelines, refineries, and other onshore facilities, the leasing of tracts for a fair price to the United States, and the development of the leases.

Much conversation has already taken place about the availability of rigs, manpower, other questions. I questioned the Secretary about the availability of capital. My staff did a brief study of some of the sales that have been held in the past, recent sales, as recent as 1972 and 1973. There was a total of 89 tracts that were bid on. You had a total presale evaluation of $146 million, but the total bid was $1.049 billion on those 89 tracts.

CAPITAL REQUIRED FOR FRONTIER AREA

What kind of capital do you see is going to be required?

Mr. GASKINS. We are currently working on this problem. Let me at the very outset connect this with some of the other statements. We recognize that when we go into a frontier area like the Gulf of Alaska there will be a long period after leasing before the companies get a return. And during that period the company does not get any return on their investment. For that reason, they cannot afford to pay as much.

So we anticipate there will be substantial reduction in bonuses paid when you buy a prospect which you cannot develop for 8 to 10 years. For that reason we think it is quite misleading to talk about the extremely high bonuses in the Gulf of Mexico, where you can start to get return on investment in 1, 2, 3 years; to extrapolate from that to Alaska, a region where we know you have to transport the oil further and produce it under much more adverse conditions, where you have to wait a substantial period of time before you can get a return.

RATIONALE FOR LEASING GULF OF ALASKA

Mrs. HANSEN. Why offer tracts in the Gulf of Alaska when, by your own testimony that it is 10 years away from production at this time? If you cannot develop it, why not wait?

I want to know your reasoning?

Mr. CARTER. Our goal is to get the most oil as rapidly as we can. Even though in some cases it may take us 10 years to get the oil in some areas, to make it available as rapidly as possible we have to lease it now. No one is going to develop Alaska until we take the initial steps of leasing land.

Mrs. HANSEN. The leases expire after 5 years. You are going to have to be extending each lease.

Mr. YATES. Suppose they do not produce in 5 years, what happens to the lease?

Mr. GASKINS. It has to be producible.

Mr. YATES. He is talking 10 years.

Mr. GASKINS. If they have made a discovery on the land and are moving with reasonable diligence to produce it, I assume it is extended.

Mr. CARTER. The lease goes on if they have a discovery.

INFORMATION ON THE GULF OF ALASKA

Mrs. HANSEN. As you are well aware, in the conference last year on a supplemental item, we had the question of the *Millard Freeman*

going into Alaska to do the preliminary work. I believe Senator Hollings' committee is working on this. You have to have a lot of very preliminary information because, as you stated the other day, you have the seismic problem in Alaska and you have the tremendous problem of your fish resources. That is in addition to your transportation, refinery, and pipeline problems.

It does not look to me as if you are going to be prepared legitimately in the Gulf of Alaska with enough adequate information to offer for sale at this time.

Mr. Radlinski?

Mr. RADLINSKI. Madam Chairman, our marine geologists are in the Gulf of Alaska at this moment. They have been up there all September working with the University of Washington using its ship, gathering geological and geophysical data necessary for an environmental assessment.

Further, I met with the Gulf of Alaska Offshore Operators Committee recently and made an arrangement with them for the release of certain types of proprietary data that we could make public in an environmental impact statement. Breaking with tradition the operators have agreed to do this.

Mrs. HANSEN. Why is it not possible to develop these areas in a more orderly fashion so you have more information available?

Mr. RADLINSKI. The reason is that we must get 10 million acres under lease but we are running out of areas to lease. The best areas in the Gulf of Mexico have been leased.

Mrs. HANSEN. I understand.

BID PRICES IN GULF

Mr. RADLINSKI. As a matter of fact, bid prices in the gulf of Mexico are going to go down, as we get into more marginal areas.

Mrs. HANSEN. But I hate to see the bid price reduced on one of your better prospects.

Mr. YATES. Why is 10 million picked as the magic figure? I know former President Nixon picked it. He said we are going to develop 10 million acres. Was that based on your studies or was that a figure taken out—or was it based on Mr. Carter's studies?

Mr. CARTER. It is a figure that represents a dramatic increase in the leasing program in order to try to solve the energy problem.

Mr. YATES. What is it based on——

Mr. CARTER. In a reasonable time frame——

Mr. YATES [continuing]. Besides hope?

Mr. CARTER. It is based on what our expectation is of the outer limit, of the amount that we can administer and that the industry can absorb and produce in a diligent fashion. One thing is clear, 10 million acres are not going to be leased, it is going to be 10.5 million or 11 million or it is going to be less, but you have to have an objective that you begin to put your men and your money to work on, and you talk to the Appropriations Committees about it in order to plan.

You cannot plan without some kind of an objective.

SUPPLEMENTAL APPROPRIATION

Mr. EVANS. That raises a question in my mind. Are you going to come in requesting a supplemental for this leasing program?

Mr. CARTER. It is possible, Congressman Evans.

Mr. EVANS. Do you think it is beyond doubt that you will have to ask for a supplemental? Do you have enough people on board to do all these things you have to do?

Mr. CARTER. You see, what we can do for this year, I believe we are fairly well structured to take care of. But if you look toward the years in the future and you look at the kinds of studies we have concluded are necessary from a sound management point of view, and also in order to satisfy the public's legitimate concern, we may require supplemental funds.

Mrs. HANSEN. I think there is something else in this situation and I think you mentioned it, around the edges, yesterday.

Are you not trying to keep drilling rigs from going into the North Sea, and to stimulate the production of pipe?

Mr. CARTER. Yes. We hope that by announcing the leasing program, industry can make plans in advance so that the wherewithal for delivering on the program will be there. It takes about 18 months to 2 years to produce a rig capable of drilling in the Gulf of Alaska after the company starts trying to make it. Now it takes another several months to get your place in line with the fabricators so that you can even get your order being operated on.

Mr. WYATT. Mr. Secretary, let me interrupt just a moment if I can. I was a little while ago asking for action, rather than speeches. In fact, what you are doing here, in setting this goal and trying to get this program launched, is a very definite action, it is one of a number of actions that must be taken if we are going to try to alleviate our supply problems; is that not correct?

Mr. CARTER. Yes, sir, it is, Congressman Wyatt.

We certainly think that we have exercise the same kind of foresight that chairman was mentioning to see what the problems are going to be 6, 8, 10 years from now if we do not take this action now.

The fact that we cannot solve the problem next month does not keep us from wanting to solve it 6, 8, 10 years from now.

EXTENSION OF LEASES AFTER 5 YEARS

Mr. EVANS. Getting back to the leases themselves, what does a company have to do within the 5-year period in order to extend the lease after the 5 years?

Mr. LINDGREN. The basic requirement is that it must have a producible lease. That is the first thing it must do is discover oil on the lease.

Mr. EVANS. If they have drilled and discovered no oil, the lease lapses after 5 years?

Mr. LINDGREN. That is correct.

Mr. EVANS. Now, tell me what unitized exploration means?

Mr. EDWARDS. Unitized exploration requires those leases that appear on a structure to be drilled with one exploratory well, so to speak, to determine whether or not that structure is producible.

Mr. EVANS. So you have tracts that are adjacent to each other?

Mr. EDWARDS. Yes.

Mr. CARTER. Owned by different companies, and we put out an

order and say, "You guys get together and come up with a plan where you have only one exploring operation going on instead of a couple."

Mr. EVANS. So if a well is hit on one unitized exploration, it serves to extend the 5-year period for the other units that are included within that?

Mr. CARTER. Yes.

Mr. EVANS. Whether there has been any drilling on it or not? Why do you do this?

Mr. CARTER. It will save costs in terms of rigs in an effort to find out where the oil is.

LEASE POLICY

Mr. EVANS. It seems to me the only thing you do is just simply forgive those who had leases on other tracts the expenditure of drilling to find out if they have oil on their tracts and still extend their lease for another 5 years. Why is this good policy?

Mr. EDWARDS. With the investment that they have in the bonus in the lease to begin with, if there is oil in that structure, they are going to want to start to drill their tracts to get the return. They do not want to wait——

Mr. EVANS. Could this not be used to avoid the expense of drilling on a tract and to get an automatic lease extension by unitizing an undeveloped tract with one that has been drilled and is producing oil?

Is this not a disincentive to greater exploration?

Mr. CARTER. Well, we have the authority under the leases to—you may want to elaborate on this—to assure that that does not happen. We have seen no situation so far where people with an oil lease are inclined to sit on producible oil. The case may be a little bit different with gas, but in the case of oil, this is new oil, and it is not controlled in price. So the incentive is to produce it and sell it, because if you have an oil well with a 30-year productive capacity, you are not gaining anything by stopping or by waiting to begin production except extending your return at the end of the 30 years and most people will not make the economic decision to forgo collecting $10.50 a barrel now on the hopes that at the end of the 30 years they are going to get something else out there.

UNITIZATION

Mr. EVANS. The reason I raise the question is because I would hate to have a policy that allowed unitization and which resulted in a situation in Outer Continental Shelf oil and gas leases that would be anywhere near the tragic circumstance we have with coal leases. For practically nothing, companies have gotten coal leases and sat on them for years. I am advised that if the Department wanted to get tough and did get tough, these coal leases could and probably should have been canceled because of a lack of any development activity.

Mr. LINDGREN. If I may follow through on unitization—and I am beginning to start talking geology—as soon as I got a little bit off base, Mr. Radlinski will interrupt.

One of the basic reasons for unitization is that the geologic structures are no respecter of the arbitrary lines—square blocks that we draw on a map. We go to utilization as a method of economically, but also in a geologically proper fashion, developing that structure.

As I understand it, one exploratory hole may well tell us a lot about a number of leases and there is no point, if two adjacent blocks are held by two separate competing companies, that two holes should be dropped down if one might suffice. Unitization gets us to that extent.

By the same token, unitization in production can eliminate wells that are drilled simply because you have different companies holding two leases that are sitting on exactly the same pool of oil and it allows the block or the structure to be developed in a geologically proper fashion rather than one based on arbitrary lines.

Mr. EVANS. I can understand your explanation, but would it also allow a situation to develop where two leases could be unitized and the new unitized lease would be extended, effectively extending the two original leases, while drilling and production took place on only one of the two original lease tracts, leaving the other lease undeveloped?

Mr. LINDGREN. No. The tract would be properly developed. Then what happens is that since oil, again, will flow back and forth across the arbitrary boundary line between leases, they are essentially operated as a unit in terms of the technical operations that take place, as well as the accounting for who is entitled to what revenue from what lease.

Basically, it is a kind of method of merging the two leases together so that a given pool of oil is operated as a single unit, which it is geologically, rather than two separate leases which are artificial legal creations.

Mr. RADLINSKI. It also simplifies lease management because we have fewer platforms to be concerned with. It is better from an environmental protection standpoint because you have less opportunity for failure.

Mr. EVANS. Speaking of platforms, are you having difficulty getting permission to handle helicopters on these platforms?

Mr. RADLINSKI. No.

Mr. EVANS. Have you ever had?

Mr. RADLINSKI. No.

Mr. LINDGREN. We require complete access to the platform in the lease.

BASELINE ENVIRONMENTAL STUDIES

Mr. EVANS. Last spring, when we acted on your budget request, the committee was under the impression that it was appropriating funds for studies of leasing areas. If these studies could not be carried out before a firm leasing schedule is established, what is the Department doing with the funds the committee appropriated for the baseline environmental studies?

Mr. CARTER. We are beginning those baseline environmental studies. We have them underway. Maybe you want to tick down the various studies that we have underway and that we are planning.

Mr. EDWARDS. All right. As mentioned previously, we have already started work in the Gulf of Alaska. NOAA is coordinating the studies for the Gulf of Alaska and, as Mr. Radlinski indicated, they have people in the area already collecting geological data.

We are in the process of developing and issuing contracts for literature surveys, to determine the present state of knowledge concerning the environmental aspects of given areas, and socioeconomic data. We are

working toward doing literature surveys in the southern California area, Cook Inlet, the Aleutian shelf area, among others.

Mr. EVANS. Are these studies designed to be finished before the leasing begins or are you going to go ahead concurrently? Are you going to lease and then complete the baseline studies?

Mr. EDWARDS. Literature surveys are designed to be initiated before the environmental studies.

Mr. EVANS. When are they designed to be completed?

Mr. EDWARDS. In addition to the baseline, which is just determining what is out there now, we are planning a continuing monitoring program; that is to monitor the environment and the changes, if any, that occur out there during the process of exploration and development. So really, for completion of the study, it goes all through the process of exploration and development and followup afterwards.

The initial baseline studies, that is determining just exactly what is out there before drilling, should be pretty well completed before we go to leasing, but we would have a continuation of a monitoring study on those various elements during the operation of exploration and development.

Mr. EVANS. You do not mean to say that as a result of these studies you will have all knowledge about what is under the ocean in these areas before you would let the leases, do you?

Mr. EDWARDS. No, we do not anticipate that at all. We are doing a sampling, trying to determine as best we can, in the areas we expect to have drilling, what is there. Then we want to determine what might be the impact of development. That is the reason for the monitoring to see what goes on in the area during that time. If we have difficulty, of course we will hold up operations until we can iron those out.

Mr. EVANS. Since it is the Department that offers the tracts for lease, I assume it is also the Department that has the responsibility for securing understandings and agreements with States which may be involved. Is that correct?

Mr. CARTER. To the extent any are required; yes, sir.

Mr. EVANS. To what extent are they required?

Mr. LINDGREN. The only area in which agreement for development is required with the State is an area where we are in a jurisdictional dispute with that State. Right now that is the Atlantic seaboard where we have that jurisdictional dispute going and at Cook Inlet.

Mr. EVANS. Is the only area in all this 10 million acres that you are thinking about offering for lease where you have to make arrangements or reach understandings with States?

Mr. LINDGREN. In terms of drilling on the outer continental shelf, that is correct. States of course control access of pipelines within the 3-mile limit.

RIGHT-OF-WAY AGREEMENTS

Mr. EVANS. Whose responsibility is it to secure those right-of-way agreements with States?

Mr. LINDGREN. Those rights-of-way are secured by either the operator, whoever is going to build the pipeline, they secure the right-of-way.

When there has been difficulty, we have met in the past with States, but we have not——

Mrs. HANSEN. They have to go through their Natural Resources

Departments, depending on the State. In our State, for example, it is the Commissioner of Natural Resources who controls all the tidelands.

Mr. CARTER. That is right. But Congressman Evans, I would not want you to get the impression that because this is all we are required by law to do that this is all that we do. We do a great deal more in recognition of the fact that the States have a legitimate interest. It is, after all, the people living in those areas who are concerned. We are doing quite a lot to try to increase the communications both ways and to try to assure that the States have as much opportunity as possible to plan in advance for the impact.

COASTAL ZONE ACT

Mr. EVANS. Does not the Coastal Zone Management Act of 1972 require you to do this in terms of coastal zone planning?

Mr. CARTER. No, sir.

Mr. EVANS. I beg your pardon?

Mr. CARTER. No, sir.

Mr. EVANS. It does not?

Mr. CARTER. It does not, to my knowledge, limit in any way the authority of the Secretary of the Interior. Indeed, his responsibility is to develop the Outer Continental Shelf.

What it does do is place within the executive branch and specifically in NOAA the authority and responsibility to work with the States and provide money for the development of planning procedures, not the plans, but planning procedures, whereby the States are to develop coastal zone plan.

Mr. LINDGREN. When a State has adopted a coastal zone plan that meets the requirements of the Federal Coastal Zone Act, then certain procedures are triggered for any action that will have a substantial—I cannot remember the statutory words exactly—impact on the coastal zone.

Then there are requirements that there be discussions back and forth. There is a certification requirement, but that is not absolutely binding. It does force us into certain procedures at that time. Those action-forcing events, I do not believe there are any coastal zone plans in effect at the time, either along the Atlantic, California or elsewhere.

Mr. EVANS. So while this has not interferred with your lease plans so far, it might down the road be something you will have to dicker with.

Mr. LINDGREN. It takes us in the direction in which we are going, which is a much more intense dialog between us and the State.

We are already going in that direction everywhere we are looking at possibly offshore leasing, in terms of all of the onshore impacts, in terms of the impacts on the coastal waters of the actions that we take; but in the final analysis, the decision whether to proceed or not, even under the Coastal Zone Act, rests with the Secretary of the Interior as far as actions are taking place on the federally controlled OCS. The States control the pipelines within the 3-mile limit and totally within their States the questions of refinery siting and all of the onshore facilities.

We are now working, before we are under any mandate, to work with the States on these questions and talk with them about all of these various impacts; exactly how the Coastal Zone Act is going

to affect our relationships under the Coastal Zone Act we will not really know until the plans are in place.

We are trying to do all of the planning that is contemplated.

Mr. CARTER. And we are working with the coastal zone people in NOAA to try to get them into our process at a very early phase.

In overly simplified terms, we reached the judgment some time ago that getting into these frontier areas to conduct some lease programs was kind of an uphill political fight. People are skeptical about the safety of OCS development in these frontier areas.

We concluded that in order to get the program underway we had to make all of our thoughts and information as public as possible and get involved with the people with legitimate interests, like the coastal zone planners, fishermen, and so on.

Mrs. HANSEN. The committee will adjourn until 2 p.m.

AFTERNOON SESSION

Mrs. HANSEN. The committee will come to order.

Mr. Yates.

CORE DRILLING

Mr. YATES. Is there such a thing as core drilling to determine whether coal exists in a particular location?

Mr. RADLINSKI. Yes.

Mr. YATES. Why shouldn't you do the same with respect to the lands under the Gulf of Mexico?

Mr. RADLINSKI. We do.

Mr. YATES. Do you?

Mr. RADLINSKI. No. The permittees do.

Mr. YATES. Why shouldn't the GS do it?

Mr. RADLINSKI. We will do it under certain circumstances where we are gathering information with respect to determining what resources are there.

Mr. YATES. You mean to determine whether there is manganese and other metals or oil?

Mr. RADLINSKI. Basically to determine what the geologic structure is. There is only one way to determine whether there is oil. That is exploratory drilling.

Mr. YATES. How much does exploratory drilling cost? I know that it varies from structure to structure, but why didn't the GS hire one of the drilling companies much the same as the leasee does?

Wouldn't that bear on the amount you would expect to get in your leasing?

Mr. RADLINSKI. OCS drilling costs up to $2 to $3 million in the Gulf of Mexico and up to $10 million in Alaskan waters.

Mr. YATES. And you do not have the money to do it?

Mr. RADLINSKI. I think it would ruin the competitive system. If the Government were in the drilling business they would take the choice leases to drill on. Private industry would be at a disadvantage.

Mr. YATES. But you are expecting a certain bid asked upon the data that you have at the time of the bid, correct?

Mr. RADLINSKI. Yes, sir.

Mr. YATES. If you knew there was oil in the particular location that is the subject of the bid you would be in a position to expect much more, wouldn't you?

Mr. RADLINSKI. I will repeat we never know for sure if there is any oil. A most promising area was the Destin Dome. There have been two wells drilled there both dry. I can imagine what the committee would say if we did that.

Mr. GASKINS. When you drill a hole you either find oil or not. If the prospects were 50–50, and we drilled the holes, yes on the half we found oil we would sell them for more money but on the ones we did not, we would not get any money.

Mrs. HANSEN. Several years ago you had a marine mining group. They had discovered some very promising prospects along the coast of California, Oregon, and in some other areas. You can guess what happened. There weren't any immediate rewards and manganese and such things were not considered of great importance that particular year. So OMB dispensed with that outfit in rapid style.

Mr. YATES. What does a lessee do after it acquires a lease, does it hire a drilling company to drill?

Mr. RADLINSKI. Most often they hire drilling companies. Some of the bigger companies can do their own drilling. There are some companies which specialize in offshore drilling, though.

Mr. YATES. The Government could do it just as well as a private company, could it not?

Mr. RADLINSKI. I don't know that it could do it just as well because the private companies have far more expertise available to them to determine the best places to drill.

Mr. YATES. Can you describe that for the record? What expertise do the private companies have that you don't have?

Mr. RADLINSKI. They have geologists, geophysicists, petroleum engineers, et cetera. While we have similar people with similar backgrounds we do not have the experience in drilling that private industry has.

Mrs. HANSEN. Will you yield?

Mr. YATES. Sure.

Mrs. HANSEN. Could the Government, under its salary ceiling, compete with some of these private companies?

Mr. RADLINSKI. I think not. We would not get the best engineers and geologists because they would stay with private industry where they can get more money there.

MAXIMIZING THE PRODUCTION OF OIL

Mr. CARTER. Congressman, we went through a program, a study here, about 6 months ago. I would be happy to provide the committee for the record with a report of that study. We considered several alternatives for trying to identify the frontier areas in which we should concentrate leasing in order to maximize production of oil.

[The report follows:]

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Memorandum

MAY 24 1974

To: Secretary
Under Secretary

Through: Jared G. Carter

From: Darius W. Gaskins, Jr.

Subject: OCS - Summary of consultations with Industry and Environmental Organizations

We recently met with representatives of the following companies:

Amoco	Exxon	Murphy Oil
Citgo	General Crude Oil	Phillips
Columbia Gas	Gulf	Shell
Continental Oil	Husky Oil	Sun Oil
Dow Chemical	Mobil	Texaco

and environmental organizations:

Center for Law and Social Policy	NRDC
Environmental Policy Center	National Wildlife Federation
The Institute of Ecology	Sierra Club
National Audubon	Sport Fishing Institute

to obtain their views on the alternative exploration programs we had been considering and on some other matters. Briefly, the programs are:

1. Sale in 1975 in several frontier areas covering a limited number of leases and requiring unitized exploration.

2. Company exploratory drilling on structures through one-year leases in limited number of frontier areas, followed by a preference lease if a discovery is made. All data to be made public.

3. Federal exploratory leasing program, all data being made public immediately.

4. Federal stratigraphic drilling program, all data being made public immediately.

This is a summary of their answers to the main questions put to them.

Question 1: Would any of the proposed exploration programs get petroleum faster than the planned ten million acre two-tier leasing program?

There was not a single company which thought that any of the proposed programs would add much to the current ten million acre program. A typical comment was: "We believe pre-lease drilling is wholly unnecessary, would delay the programs, and further would not be very effective because the best structures are usually large and complex, and they require a considerable exploration program involving many wells to define their potential." We were told repeatedly that a few holes even when drilled on structure would not condemn an area if they turn out to be dry and not significantly increase the speed of initial exploration if shows of hydrocarbon appear. Specific examples noted were:

- About 200 holes were drilled in the North Sea before the first major oil discovery was made.
- About 65 holes have been drilled off Nova Scotia without finding commercial quantities of hydrocarbons.
- With the exception of Prudhoe Bay, many unsuccessful holes were drilled on the Alaskan North Slope.

This is not to say that some companies would not like more information on frontier OCS basins. One major, e.g., said that 30 holes if drilled on structure would really give us a lot of information. The Oregon/Washington case was cited as an example where a few holes told a lot about that area. And if one of the proposed exploration programs had to be selected, this company would prefer alternative 1. But they, as well as all the other companies, would rather proceed under our planned accelerated leasing program and drill the holes in the course of exploring their tracts acquired at regular lease sales.

One other major company stated a preference if one of the programs had to be adopted. Their view was that if data must be made public, the government may as well drill the wells, and so they opted for alternative 3. All the other companies, majors and independents, did not favor any of the proposed programs.

One independent company was fearful that such exploration programs could destroy the independents' offshore business since the government may as a result be selling known oil deposits. This would favor the integrated companies and bring in large end users who would simply outbid the independents. The company argued that the independents make their money by finding and selling crude oil.

The representatives of the environmental organizations did not have very firm opinions on the programs. To the extent that preferences were stated, they favor

- an exploratory drilling program financed and operated by the government over any company-financed program;
- delaying the ten million acre leasing program until the results of the government exploration program are known;
- baseline studies before any lease sales take place, or at least before production begins, followed by a comprehensive monitoring program.

Question 2: Would a stratigraphic drilling program in frontier areas be useful in guiding lease sales toward the most promising structures? In particular, are you going to participate in the stratigraphic program of the "Sun group?"

There was no agreement on the merits of stratigraphic drilling. Most of the majors indicated that stratigraphic data would not add much to geophysical information. "Stratigraphic data is of minimal value if one has good geophysical data. The latter will indicate where the structures are and that's where we will drill." It was apparent that they would prefer less commonly available information before lease sales rather than more. As one of them put it, publicly available data just drives up bid prices.

Three of the independent companies argued that stratigraphic data for frontier areas would be quite useful since we lack definite knowledge about sedimentary structures. In their view, stratigraphic information can be used to guide lease sales toward the most promising tested structures. One large independent company would join the Sun group although they think it is a waste of time and money, because "the positive indications don't prove anything and the negative indications don't downgrade expectations." One of the majors stated that they would join the Sun group merely to protect themselves, while another definitely would not. The other companies did not commit themselves.

Question 3: Are there significant advantages, particularly with respect to rig-years saved, in unitizing the exploration efforts in frontier areas?

Most companies were either mildly for or mildly against unitization. Some believed that unitization would result in considerable savings in the number of exploratory wells drilled and, given the shortages of rigs, drilling pipes, casings, etc., significantly increase the rate of development in frontier areas. All companies, however, would prefer voluntary to imposed unitization, saying that far more voluntary units would exist if the government had not practiced checkerboard leasing in the past. Unitization is said to entail problems with respect to allocating exploration costs fairly among the participants, and agreeing on the drilling plan and the drilling operator.

Question 4: What are your views about the Department's planned accelerated leasing program?

The companies, large and small, universally approved of accelerated leasing. Some stated that the oil industry has a large spare capacity to explore and develop much more acreage than in the past. Some believed that the industry can respond to sales of 10-15 million acres per year, while others suggested smaller numbers. All companies emphasized the importance of announcing sales frequently and regularly as far into the future as possible; this would make their planning efforts and those of their contractors far easier.

Almost all companies--majors and independents--took the opportunity to make the following points:

- They like the present bidding system and do not want any significant changes. Except for two independents, no company likes royalty bidding. The two companies favor some form of royalty bidding to ease the front money problem. Many of the companies prefer to see a general reduction in the level of bonuses paid, but "although a bonus bidding system has a front money problem, the other alternatives have worse disadvantages."

  Two of the independent companies stated that a royalty bidding system would encourage speculative land acquisitions, and bring in such end users as utilities and airlines who would simply outbid all but the very largest of the independents. They favor the current bidding system and a large-scale leasing program because "this would satiate the majors and leave a lot of good acreage for the smaller companies."

  Four companies, while acknowledging that such a system would probably not be feasible in the U.S., stressed the desirability of the British system in which tracts are allocated on the basis of work commitments and fixed profit sharing.

- They would like us to establish clear guidelines about our bid rejection system so that all participants know which criteria are being used. "Why doesn't the government state the minimum bid it will accept for each tract in advance of a lease sale?" Some companies are quite upset about any bid rejections. "We can't understand why you reject bids. After all, we are bidding in an auction."

- With respect to our proposed ban on joint bidding by the largest companies, some of the majors
  1. wanted to know how we arrived at the cutoff point of 5 billion barrels, and
  2. did not think it was desirable to prohibit joint bidding by the majors.

One major company suggested that instead of a ban against joint bidding, the government might impose an upper bound on the number of tracts a company can acquire in any one sale.

All of the independent companies favored joint bidding "but if joint bidding has to be limited, then the largest companies should be prohibited from bidding jointly."

- Bright spot analysis was said to be an important new tool in geophysical exploration, primarily in locating and identifying gas deposits. "Bright spot techniques may increase confidence to as much as 75 percent on existence of hydrocarbons, but we still will not know volumes."

Although we talked to only a relatively small number of companies, we believe that we did have a representative sample and that the answers would not change much if more companies were canvassed. In appraising the responses of the companies to our questions, we must remember that they basically are satisfied with the terms and conditions of offshore leases, and will therefore reject any modifications which are going to change the familiar pattern of doing business unless the modifications are clearly in the best interests of the industry. Despite this recognized bias, it is doubtful whether any of the exploration programs which had been proposed would add much to our accelerated leasing program. Notwithstanding the somewhat negative attitude of the majors toward the Sun Oil stratigraphic drilling program, there is no good reason why we should not approve this project. We are presently examining all aspects of unitization and will have a staff paper on this topic in the near future.

/Sgd/

Darius W. Gaskins, Jr.

cc:
AS/E&M
Dr. Gaskins (2)
Mr. Enzer

HEnzer:bm:5/28/74

Mr. CARTER. One of the things we gave consideration to was a Government-financed drilling program to explore various areas. Some of the reasons that we elected not to go that route were that we thought that probably we could not move and act as fast as industry can. The Government contracting mechanisms are not as flexible and as responsive as private contracting mechanisms.

We were also not sure, the point Mr. Gaskins was making, we were not always sure what we would learn. If you drill in a certain area and you don't find oil, that doesn't prove there is not oil there. Over 50 wells were drilled in the North Sea, I am told, before oil was found. If we drill a couple of wells out in the mid-Atlantic area and they cost us $15 million apiece, we would not have proven that there is not oil in the mid-Atlantic area.

DRILLING IN THE NORTH SEA

Mr. YATES. Tell me what the arrangement was for drilling those wells in the North Sea.

Mr. CARTER. I assume, and this is based on some familiarity with the English law, that the Government had granted the kind of permit that they do, which is an exploration permit over a very large area, to a company and the company goes in and explores. They are committed to do a certain amount of exploration in a certain limited time and they would hire a drilling company to do the drilling for them. Then if they find oil, they can keep a certain amount of the area that they had the exploration permit over and turn that into a production lease and go ahead and drill on it. But they would have had to have spent a certain amount of money in a certain period and they would do it by private contract with drilling companies.

Mr. YATES. Does the English Government retain a royalty right then?

Mr. CARTER. Yes.

Mr. RADLINSKI. And rental.

Mr. CARTER. They have a negotiated arrangement.

Mr. GASKINS. They are currently negotiating with the companies. They are regretting their decision to allow the companies to have such a large share of the oil. They say they want to buy into the companies.

My interpretation is that they were regretting the fact that they did not have competitive bidding. They had arms-length negotiations between British civil service and the oil companies.

Mr. YATES. Isn't it a fact that most of the oil-producing countries are retaining a greater percentage of the oil than goes to the producing company?

Mr. CARTER. That is probably true, but I do not think it is true that other countries are getting a greater percentage of the total income produced by the OCS. We did another study not too long ago in which we looked at what we had received so far from all of the oil produced on the OCS in the last 20 years.

It turned out to be something in the neighborhood of 70 percent of all of the income produced from the OCS that has been returned to the Federal Government in the form of bonus payments or royalty.

Now, of course, that percentage will go down with time because as the oil continues to be produced from a producing lease the 16⅔-percent royalty is all you are getting, but the bonus on top is a substantial amount. We get bonuses as Mr. Gaskins has pointed out on all the dry holes, which are on about two-thirds of the leases. We collect on those that you would not if you did not have our system of lease sales.

Mr. YATES. Doesn't it make more sense to concentrate on 3 million acres than 10 million acres and get your rigs into the 3 million acres before you start producing?

Mr. CARTER. I suppose it would, sir, if you could be sure you knew which 3 million acres had oil on it.

Mr. YATES. But you do know which acreage is the most promising.

Mr. CARTER. No.

Mr. YATES. I went to New Orleans and they told me the most promising was off the coast of Florida.

Mr. CARTER. That is where they drilled the dry holes.

Mr. YATES. But they are still drilling. They will probably find it.

Mr. CARTER. I do not know that.

Mr. GASKINS. They have taken the rigs off that tract.

Mr. YATES. Have they surrendered that lease?

Mr. GASKINS. They have not.

Mr. YATES. They will come back, won't they?

Mr. GASKINS. I hope so.

Mr. EDWARDS. They may have to convince their budget people that they ought to go back and drill there further.

Mr. YATES. If they have such an investment, I would think they would not give it up so easily.

Well, the thing that concerns me and I am sure it does the other Members of the committee, is that we just don't want to turn over the people's resources to the oil companies just to let the oil companies hold it and decide how much of that oil should come out. It is conceivable that even if they strike it they might decide that they can have much more profitable marketing by deferring production.

PRODUCTION REQUIREMENTS UNDER THE LEASE

Mr. EVANS. If the gentleman will yield, what if anything do your leases provide about the situation the gentleman just mentioned, where a company gets a lease to drill a hole and oil is discovered? Do these leases require production?

Mr. CARTER. I would like to get my colleagues to give you a two-part answer, one what the leases within the law provide from Mr. Lindgren and if Mr. Gaskins would explain the economics of it from an oil company's point of view, you really get a picture of why we think we have a hold of this problem.

Mr. YATES. May a copy of your lease be put in the record?

[The information follows:]

Form 3300–1
(February 1971)
(formerly 3380–1)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OIL AND GAS LEASE OF SUBMERGED LANDS
UNDER THE OUTER CONTINENTAL SHELF LANDS ACT

Office	
Serial Number	
Cash Bonus	
Rental Rate	
Minimum Royalty Rate	Royalty Rate

This lease is made and effective as of (hereinafter called the Effective Date) by and between the United States of America (hereinafter called the Lessor), by the , Bureau of Land Management, its authorized officer, and

(hereinafter called the Lessee). In consideration of the cash payment heretofore made by the Lessee to the Lessor and in consideration of the promises, terms, conditions and covenants contained herein, the parties hereto agree as follows:

Sec. 1. Statutes and Regulations. This lease is made pursuant to the Outer Continental Shelf Lands Act of August 7, 1953 (67 Stat. 462; 43 U.S.C. Secs. 1331, *et seq.*) (hereinafter called the Act). This lease is subject to all the provisions of the Act and to all the terms, conditions and requirements of the valid regulations promulgated by the Secretary of the Interior (hereinafter called the Secretary) thereunder in existence upon the effective date of this lease, all of which are incorporated herein and, by reference, made a part hereof. This lease shall also be subject to regulations hereafter issued by the Secretary pursuant to his authority under section 5(a)(1) of the Act to prescribe and amend at any time such rules and regulations as he may determine to be necessary and proper in order to provide for the prevention of waste and for the conservation of the natural resources of the Outer Continental Shelf, and for the protection of correlative rights therein, which regulations shall be deemed incorporated herein and, by reference, made a part hereof when promulgated.

Sec. 2. Rights of Lessee. The Lessor hereby grants and leases to the Lessee the exclusive right and privilege to drill for, mine, extract, remove and dispose of oil and gas deposits, except helium gas, in or under the following-described area of the Outer Continental Shelf of the United States:

containing approximately acres (hereinafter referred to as the leased area), together with:

(a) the nonexclusive right to conduct within the leased area geological and geophysical explorations in accordance with applicable regulations;

(b) the nonexclusive right to drill water wells within the leased area and to use water produced therefrom for operations pursuant to the Act free of cost, provided that such drilling is conducted in accordance with procedures approved by the Regional Oil and Gas Supervisor of the Geological Survey (hereinafter called the "Supervisor"); and

(c) the right to construct or erect and to maintain within the leased area all artificial islands, platforms, fixed or floating structures, sea walls, docks, dredged channels and spaces, buildings, plants, telegraph or telephone lines and cables, pipelines, reservoirs, tanks, pumping stations, and other works and structures necessary to the full enjoyment of the rights granted by this lease, subject to compliance with applicable laws and regulations.

Sec. 3. Obligations of Lessee. The Lessee agrees:

(a) *Rentals and royalties.* (1) To pay rentals and royalties as follows:

Rentals. With respect to each lease year commencing prior to a discovery of oil or gas on the leased area, to pay the Lessor on or before the first day of each such year, a rental of per acre or fraction thereof.

Minimum royalty. To pay the Lessor at the expiration of each lease year commencing after discovery a minimum royalty of per acre or fraction thereof or, if there is production, the difference between the actual royalty required to be paid with respect to such lease year and the prescribed minimum royalty, if the actual royalty paid is less than the minimum royalty.

Royalty on production. To pay the Lessor a royalty of percent in amount or value of production saved, removed, or sold from the leased area. Gas of all kinds (except helium and gas used for purposes of production from and operations upon the leased area or unavoidably lost) is subject to royalty.

(2) It is expressly agreed that the Secretary may establish minimum values for purposes of computing

royalty on products obtained from this lease, due consideration being given to the highest price paid for a part or for a majority of production of like quality in the same field, or area, to the price received by the Lessee, to posted prices, and to other relevant matters. Each such determination shall be made only after due notice to the Lessee and a reasonable opportunity has been afforded the Lessee to be heard.

(3) When paid in value, royalties on production shall be due and payable monthly on the last day of the month next following the month in which the production is obtained. When paid in production, such royalties shall be delivered at pipeline connections or in tanks provided by the Lessee. Such deliveries shall be made at reasonable times and intervals and, at the Lessor's option, shall be effected either (i) on or immediately adjacent to the leased area, without cost to the Lessor, or (ii) at a more convenient point closer to shore or on shore, in which event the Lessee shall be entitled to reimbursement for the reasonable cost of transporting the royalty substance to such delivery point. The Lessee shall not be required to provide storage for royalty taken in kind in excess of tankage required when royalty is paid in value. When payments are made in production the Lessee shall not be held liable for the loss or destruction of royalty oil or other liquid products in storage from causes over which the Lessee has no control.

(b) *Bonds.* To maintain at all times the bond required prior to the issuance of this lease and to furnish such additional security as may be required by the Lessor if, after operations or production have begun, the Lessor deems such additional security to be necessary.

(c) *Wells.* (1) To diligently drill and produce such wells as are necessary to protect the Lessor from loss by reason of production on other properties or, in lieu thereof, with the consent of the Supervisor, to pay a sum determined by the Supervisor as adequate to compensate the Lessor for failure to drill and produce any such well. In the event that this lease is not being maintained in force by other production of oil or gas in paying quantities or by other approved drilling or reworking operations, such payments shall be considered as the equivalent of production in paying quantities for all purposes of this lease.

(2) After due notice in writing, to diligently drill and produce such other wells as the Secretary may reasonably require in order that the leased area or any part thereof may be properly and timely developed and produced in accordance with good operating practice.

(3) At the election of the Lessee, to drill and produce other wells in conformity with any system of well spacing or production allotments affecting the area, field, or pool in which the leased area or any part thereof is situated, which is authorized or sanctioned by applicable law or by the Secretary.

(d) *Payments.* To make all payments to the Lessor by check, bank draft or money order payable as indicated herein unless otherwise provided by regulations or by direction of the Secretary. Rental, royalties, and other payments shall be made payable to the United States Geological Survey and tendered to the Supervisor, *except* that filing charges, bonuses, and first year's rental shall be made payable to the Bureau of Land Management and remitted to the Manager of the appropriate field office of that Bureau.

(e) *Inspection.* To keep open at all reasonable times for the inspection of any duly authorized representative of the Lessor, the leased area and all wells, improvements, machinery and fixtures thereon and all books, accounts, and records relative to operations and surveys or investigations on or with regard to the leased area or under the lease.

(f) *Conduct of operations.* To conduct all operations under this lease in accordance with applicable law and regulations.

(g) *Indemnification.* To indemnify and save the Lessor harmless against and from any and all claims of any nature whatever, including without limitation claims for loss or damage to property or injury to persons, caused by, or resulting from, any operation on the leased area conducted by or on behalf of the Lessee; provided that the Lessee shall not be held responsible to the Lessor under this subsection for any loss, damage, or injury caused by, or resulting from: (1) any negligent action of the Lessor other than the exercise or performance of (or the failure to exercise or perform) a discretionary function or duty on the part of a Federal agency or an employee of such an agency, whether or not the discretion involved is abused; or (2) the Lessee's compliance with an order or directive of the Lessor against which an appeal by the Lessee under 30 CFR 250.81 is filed before the cause of action for such a claim arises and is pursued diligently thereafter.

(h) *Equal Opportunity Clause.* The Lessee agrees that, during the performance of this lease:

(1) The Lessee will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Lessee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Lessee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Lessor setting forth the provisions of this Equal Opportunity clause.

(2) The Lessee will, in all solicitations or advertisements for employees placed by or on behalf of the Lessee, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The Lessee will send to each labor union or representative of workers with which Lessee has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Lessor, advising the labor union or workers' representative of the Lessee's commitments under this Equal Opportunity clause, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Lessee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Secretary of the Interior and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Lessee's noncompliance with the Equal Opportunity clause of this lease or with any of said rules, regulations, or orders, this lease may be canceled, terminated or suspended in whole or in part and the Lessee may be declared ineligible for further Federal government contracts or leases in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, as amended, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Lessee will include the provisions of Paragraphs (1) through (7) of this subsection 3(h) in

every contract, subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, as amended, so that such provisions will be binding upon each contractor, subcontractor or vendor. The Lessee will take such action with respect to any contract, subcontract or purchase order as the Secretary may direct as a means of enforcing such provisions including sanctions for noncompliance; *provided, however,* that in the event the Lessee becomes involved in, or is threatened with, litigation with a contractor, subcontractor or vendor as a result of such direction by the Secretary, the Lessee may request the Lessor to enter into such litigation to protect the interests of the Lessor.

(i) *Certification of nonsegregated facilities.* By entering into this lease, the Lessee certifies that Lessee does not and will not maintain or provide for Lessee's employees any segregated facilities at any of Lessee's establishments, and that Lessee does not and will not permit Lessee's employees to perform their services at any location, under Lessee's control, where segregated facilities are maintained. The Lessee agrees that a breach of this certification is a violation of the Equal Opportunity clause in this lease. As used in this certification, the term "segregated facilities" means, but is not limited to, any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. Lessee further agrees that (except where Lessee has obtained identical certifications from proposed contractors and subcontractors for specific time periods) Lessee will obtain identical certifications from proposed contractors and subcontractors prior to the award of contracts or subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause; that Lessee will retain such certifications in Lessee's files; and that Lessee will forward the following notice to such proposed contractors and subcontractors (except where the proposed contractor or subcontractor has submitted identical certifications for specific time periods): Notice to prospective contractors and subcontractors of requirement for certification of nonsegregated facilities. A Certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a contract or subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each contract and subcontract or for all contracts and subcontracts during a period (i.e., quarterly, semiannually, or annually).

(j) *Assignment of lease.* To file for approval with the appropriate office of the Bureau of Land Management any instrument of transfer of this lease, or any interest therein, required to be filed under applicable regulations, within the time and in the manner prescribed by the applicable regulations.

Sec. 4. Term. This lease shall continue for a period of 5 years from the effective date of this lease and so long thereafter as oil or gas may be produced from the leased area in paying quantities, or drilling or well reworking operations, as approved by the Secretary, are conducted thereon.

Sec. 5. Cooperative or Unit Plan. Lessee agrees that, within 30 days after demand by Lessor, Lessee will subscribe to and operate under such cooperative or unit plan for the development and operation of the area, field, or pool, or part thereof, embracing lands subject to this lease as the Secretary may determine to be practicable and necessary or advisable in the interest of conservation. Where any provision of a cooperative or unit plan of development which has been approved by the Secretary, and which by its terms affects the leased area or any part thereof, is inconsistent with a provision of this lease, the provision of such cooperative or unit plan shall govern.

Sec. 6. Reservations to Lessor. All rights in the leased area not expressly granted to the Lessee by the Act, the regulations, or this lease are hereby reserved to the Lessor. Without limiting the generality of the foregoing, such reserved rights include:

(a) *Geological and geophysical exploration; rights-of-way.* The right to authorize the conduct of geological and geophysical exploration in the leased area which does not interfere with or endanger actual operations under this lease, and the right to grant such easements or rights-of-way upon, through, or in the leased area as may be necessary or appropriate to the working of other lands or to the treatment and shipment of products thereof by or under authority of the United States, its Lessees or Permittees.

(b) *Leases of sulfur and other minerals.* The right to grant leases of any mineral other than oil and gas within the leased area or any part thereof. No lease of other mineral shall authorize or permit the Lessee thereunder unreasonably to interfere with or endanger operations under this lease.

(c) *Purchase of production.* In time of war, or when the President of the United States shall so prescribe, the right of first refusal to purchase at the market price all or any portion of the oil or gas produced from the leased area, as provided in Section 12(b) of the Act.

(d) *Taking of royalties.* The right to determine whether royalty will be taken in the amount or the value of production.

(e) *Helium.* Pursuant to Section 12(f) of the Act, the ownership of and the right to extract helium from all gas produced under this lease.

(f) *Suspension of operations during war or national emergency.* Upon recommendation of the Secretary of Defense, during a state of war or national emergency declared by the Congress or President of the United States after August 7, 1953, the authority of the Secretary to suspend any or all operations under this lease, as provided in Section 12(c) of the Act: *Provided,* That just compensation shall be paid by the Lessor to the Lessee.

(g) *Restriction of exploration and operations.* The right, as provided in Section 12(d) of the Act, to restrict from exploration and operations the leased area or any part thereof which may be designated by and through the Secretary of Defense, with the approval of the President, as, or as part of, an area of the Outer Continental Shelf needed for national defense; and so long as such designation remains in effect no exploration or operations may be conducted on the surface of the leased area or the part thereof included within the designation except with the concurrence of the Secretary of Defense; and if operations or production under this lease within any such restricted area shall be suspended, any payments of rentals and royalty prescribed by this lease likewise shall be suspended during such period of suspension of operations and production, and the term of this lease shall be extended by adding thereto any such suspension period, and the Lessor shall be liable to the Lessee for such compensation as is required to be paid under the Constitution of the United States.

Sec. 7. Directional Drilling. A directional well drilled under the leased area from a surface location on nearby land not covered by this lease shall be deemed to have the same effect for all purposes of this lease as a well drilled from a surface location on the leased area. In such circumstances, drilling shall be considered to have

been commenced on the leased area when drilling is commenced on the nearby land for the purpose of directionally drilling under the leased area, and production of oil or gas from the leased area through any directional well surfaced on nearby land or drilling or reworking of any such directional well shall be considered production or drilling or reworking operations (as the case may be) on the leased area for all purposes of this lease. Nothing contained in this paragraph is intended or shall be construed as granting to the Lessee any leasehold interests, licenses, easements, or other rights in or with respect to any such nearby land in addition to any such leasehold interests, licenses, easements, or other rights which the Lessee may have lawfully acquired under the Act or from the Lessor or others.

Sec. 8. Surrender of Lease. The Lessee may surrender this entire lease or any officially designated subdivision of the leased area by filing with the appropriate office of the Bureau of Land Management a written relinquishment, in *triplicate*, which shall be effective as of the date of filing. No surrender of this lease or of any portion of the leased area shall relieve the Lessee or his surety of the obligation to make payment of all accrued rentals and royalties or to abandon all wells on the area to be surrendered in a manner satisfactory to the Supervisor.

Sec. 9. Removal of property on termination of lease. Upon the termination of this lease in whole or in part, or the surrender of the lease in whole or in part, as herein provided, the Lessee shall within a period of 1 year thereafter remove from the premises no longer subject to the lease all structures, machinery, equipment, tools, and materials in accordance with applicable regulations and orders of the Supervisor; *provided, however*, that the Lessee may continue to maintain any such property on the leased area for whatever longer period it may be needed, as determined by the Supervisor, for producing wells or for drilling or producing on other leases.

Sec. 10. Remedies in case of default. (a) Whenever the Lessee fails to comply with any of the provisions of the Act, or of this lease, or of the regulations issued under the Act and in force and effect on the effective date of this lease, the lease shall be subject to cancellation in accordance with the provisions of Section 5(b) of the Act; *provided, however*, that the 30-day notice provision applicable to non-producing leases under Section 5(b)(1) of the Act shall also apply as a prerequisite to the institution of any legal action by the Lessor to cancel this lease while it is in a producing status. Nothing in this subsection shall be construed to apply to, or require any notice with respect to, any legal action instituted by the Lessor other than an action to cancel the lease pursuant to Section 5(b) of the Act.

(b) Whenever the Lessee fails to comply with any of the provisions of the Act, or of this lease, or of any regulations promulgated by the Secretary under the Act, the Lessor may exercise any legal or equitable remedy or remedies which the Lessor may have, including appropriate action under the penalty provisions of Section 5(a)(2) of the Act; *however*, the remedy of cancellation of the lease may be exercised only under the provisions of Section 5(b) and Section 8(i) of the Act.

(c) A waiver of any particular violation of the provisions of the Act, or of this lease, or of any regulations promulgated by the Secretary under the Act, shall not prevent the cancellation of this lease or the exercise of any other remedy or remedies under paragraphs (a) and (b) of this section by reason of any other such violation or for the same violation occurring at any other time.

Sec. 11. Heirs and successors in interest. Each obligation hereunder shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors, or assigns, of the respective parties hereto.

Sec. 12. Unlawful interest. No member of, or Delegate to, Congress, or Resident Commissioner, after his election or appointment, or either before or after he has qualified, and during his continuance in office, and no officer, agent, or employee of the Department of the Interior, except as provided in 43 CFR 7.4(a)(1), shall be admitted to any share or part in this lease or derive any benefit that may arise therefrom; and the provisions of Section 3741 of the Revised Statutes (41 U.S.C. Sec. 22), as amended, and Sections 431, 432, and 433 of Title 18 of the United States Code, relating to contracts made or entered into, or accepted by or on behalf of the United States, form a part of this lease so far as the same may be applicable.

THE UNITED STATES OF AMERICA

_____
(Signature of Lessee)

By _____
(Authorized Officer)

_____
(Signature of Lessee)

_____
(Title)

_____
(Signature of Lessee)

_____
(Date)

_____
(Signature of Lessee)

If this lease is executed by a corporation, it must bear the corporate seal

Mr. LINDGREN. I am reading from the regulations issued by the Secretary regulating the Geological Survey's regulations. These regulations are incorporated in and are a part of every lease. I am referring specifically to 30 CFR section 250.33–B.

> The lessee shall promptly drill and produce such other wells as the supervisor may reasonably require in order that the lease may be properly and timely developed and produced.

Mr. EVANS. Who is the supervisor?

Mr. LINDGREN. An official of the Geological Survey. He is the regional supervisor, in accordance with good operating practices. This is the requirement. If they do not do it, we have the power to require them to produce and we have the power to prevent them from just sitting on the lease.

Mr. EVANS. What is the economic side?

Mr. GASKINS. When anyone has an asset that can be spread over time, sold today or held and sold later on, they make a decision on when is the best time to sell it. Generally we argue that they benefit society by using their judgment about when it is the best time to sell it. Now we are looking at prices of oil which are in excess of $10 a barrel at the current time. The oil companies seem to indicate that they are not at all sure that in the long run the price of oil, say, 5 years from now, will be substantially higher than that. To hold the oil in the ground means they get no return on the investment for the 5 years they hold it. In order for a company to decide to hold oil in the ground today they would have to get an increase in the price of oil of 10 percent every year.

Mr. EVANS. Ten percent of what?

Mr. GASKINS. They are continually in the financial markets and they have to pay 10 percent to the banks or 10 percent to the shareholders for their money. So to hold an asset they have to expect its price to go up 10 percent a year and that is a very unreasonable projection. That is why we think it is no coincidence that there seems to be no evidence that people are holding oil in the ground. The price of oil is at an all-time high. We fully expect rational oil companies to take advantage of that and sell it now.

Suppose we get into a situation 20 years from now where by happy coincidence the price of oil has fallen to $2 a barrel. If that were to occur, conceivably the companies might try to hold oil in the ground because they would expect the price to come back up. If that occurs they are probably doing the right thing.

Mrs. HANSEN. On their capital, what is the interest rate at the present time?

Mr. GASKINS. The prime rate is in excess of 10 percent. I used 10 percent so as not to overstate the case.

Mrs. HANSEN. Is it profitable for them to not go ahead and produce if they are paying this rate of interest?

Mr. GASKINS. If the barrel of oil is not going to be worth 10 percent more next year, the rational thing to do is to produce it right now. By holding it in the ground they do not get 10 percent on their investment. By producing it now they can get the money and lend it out at 10 percent.

Mr. YATES. It depends on how much they make over a number of years.

INVESTMENTS AND THE FUTURE

Mrs. HANSEN. Looking at the foreseeable future, can you anticipate that they would not want to get their investment out as quickly as possible?

Mr. GASKINS. If I had a crystal ball and knew what the future price of oil was, I could possibly make money in the futures market trading for it. But it is certainly clear that the current oil price is very high.

There are arguments that would cause you to believe that the price might come down. We know there are record exploration activities going on around the world. Everybody is responding to the high prices set by the OPEC nations.

Mrs. HANSEN. This takes me back to what I mentioned earlier. I do not want to see you let leases go for very low bids.

Mr. GASKINS. Concerning the question of letting them go low, the major reason the bids will be low in the Gulf of Alaska has little to do with the price of oil. I was not conditioning my response on the price of oil. I was conditioning my statement that the price would be low on the fact that it would cost them a lot to get it out and it would take up to 10 years before they would have the bulk of production on stream.

Mrs. HANSEN. You mean that anytime you sell it is going to take 10 years?

Mr. GASKINS. In that neighborhood to get major, maximum production.

Mrs. HANSEN. How do you reconcile that figure with your 5-year lease?

Mr. GASKINS. The normal trajectory for an oil field is that it starts producing in a relatively short period of time and as you drill more holes the production goes up. In Alaska the initial production may occur as early as 5 or 6 years but the peak will take 10. I think that if the area supervisor saw that the companies were moving to produce as rapidly as they could he would allow an extension on the lease.

EARTHQUAKE HAZARDS

Mrs. HANSEN. Suppose you have a major earthquake in Alaska?

Mr. CARTER. So far what we believe from experience in earthquake zones is that it should be possible to engineer against earthquake risks with down hole shutoff valves and with the proper engineering of the platforms. The problems are not as tough as engineering San Francisco and Los Angeles. We went through the thought process, in approving engineering designs for the trans-Alaska pipeline, of how you engineer against these problems. We believe it is more durable there than it is in a place like a crowded city where you are building structures that are more complicated and difficult than a drilling platform.

CONSERVATION OF OIL

Mr. YATES. Mr. Carter, may it not be in the national interest to conserve oil? Suppose we lease out the 10 million acres, isn't it conceivable that it may be to our national interest not to have the oil produced.

Mr. CARTER. It is conceivable, Mr. Yates, but I do not believe it is so, because anything you can make out of petroleum crude that comes out of the ground I am told by petroleum engineers you can make from

oil out of oil shale or from coal, whether you are talking about petrochemicals, food products, medicines. Anything you can make out of petroleum crude you can make from coal and oil shale, and we have a great deal of that. For a lower cost now and much less environmental costs now we can supply the Nation's energy needs with petroleum; and if you don't use the petroleum you will have to go to one or two courses of action. You either have to go to higher cost, economically and environmentally, for energy, or you are going to have to go to an imposed change in lifestyle.

You are either going to have the energy or you are not. If you cannot get it from oil, you are going to get it from something else that costs more.

Mr. YATES. You are making an argument for conservation. Why shouldn't we husband an irreplaceable resource?

Mr. CARTER. I am saying, conserve all we can, but not husband. Don't use any more than you absolutely have to, to keep our existing economy and way of life going.

Mrs. HANSEN. Husbanding is setting aside at the expense of economy.

Mr. CARTER. That is correct. Husbanding it is keeping it under wraps, even though you need it.

Mr. YATES. I thought husbanding was strict conservation.

Mr. CARTER. We have a difference in words. I was against looking up oil reserves and not developing them because we will need them later on.

Mr. YATES. I see that at least one of the large combinations has thrown up its hands and said it was not economically feasible.

Mr. CARTER. That is a question of economics. The reason it is not economically feasible is that we do have the availability of oil and gas to turn to. If you do not go to the oil and gas, you are going to force people to go to these higher cost items which have more environmental damage and more economic cost.

ENVIRONMENTAL COSTS

Mrs. HANSEN. What is the present cost in environmental protection on energy, on a Btu basis?

Mr. CARTER. I do not know how to answer that, Madam Chairman. With natural gas, of course, it is very low. With crude oil produced on shore, it is very low. It is not very costly for the environmental protection offshore compared to other forms of energy.

Mrs. HANSEN. Such as coal?

Mr. CARTER. Coal or oil shale, probably nuclear. When you get to the environmental cost of some of these substitutes, they are extremely high. How they figure out on a Btu basis, say, the stack gas scubbers, I couldn't say.

Mrs. HANSEN. Before next year, I think you should figure out your environmental costs. You have oil, nuclear energy, geothermal, and all these other forms of energy. I think you should be very frank to the American people and show them what the costs are going to be if you move this way or if you move that way.

Mr. EVANS. Would you yield?

Mrs. HANSEN. Yes.

Mr. EVANS. Have you reviewed and do you understand the proposal by Occidental for production of oil shale in situ?

Mr. CARTER. I have reviewed it and I think I understand it fairly well. I do not want to represent myself as an expert on it.

Mr. EVANS. I was briefed by them about a week ago. I do not know anything about the technicalities, but this was certainly an enthusiastic and encouraging briefing from the standpoint of protecting the environment as we produce energy.

They say they will use little water. After they get the first room opened up and go into production, they produce enough low Btu gas to not only supply their energy needs but they believe they can sell 300 megawatts a year.

It sounds great. There is an awful lot of oil shale in that part of the country. It would just seem to me that if this is good enough for them to put their money into and if it works, in line with the chairman's comments, wouldn't this be something that would pay you to look into and test because you might have oil at less cost there than offshore?

Mr. CARTER. We want to explore this. Several facts have to be kept in mind. One is, Occidental had an opportunity to bid on the tracts that were offered for sale. If their system was as economic as they said it was, they should have been bidding a great deal more than they did for the right to develop those lands.

Mr. EVANS. Does Occidental have any Federal leases?

Mr. CARTER. No. It has a small amount of private property. They bid $25 million on one of the Utah tracts that went for about $76 million.

Mr. EVANS. How much land do they have?

Mr. CARTER. I do not think they have very much. We have gone over the figures but it is not enough to put in a commercial full-scale operation. They have asked us to enter into an arrangement under which we would just give them land as a subsidy for developing their process and we have refused that, saying that they had the chance to bid in. As a matter of fact, they have the chance to sell their process if they want to, and if it is that good, to people who own the other leases. But apart from whether it is as proven as they say, I think the process ought to be given an opportunity to prove up in the future because I do not think that any of us are going to be comfortable with going to full-scale oil shale development of the open pit mining method until we have a confident feeling about the in situ process.

Mr. EVANS. What are you doing for your own edification to determine what their system is?

Mr. CARTER. We are talking with our Bureau of Mines and BLM, talking with the people in the AEC and FEA about getting a program developed, maybe through a lease arrangement limited to development by the in situ process, as a means of encouraging in situ development. We have also talked with Occidental about the possibility of plugging into their test, which is going on now, putting men on the site and buying equipment to monitor it to get a better fix on what its real potential is.

Mr. EVANS. You are doing this now?

Mr. CARTER. We are assessing what kind of program we should adopt. We have not made decisions.

Mrs. HANSEN. Can you make decisions before you have some answers on the whole water situation in that area?

Mr. EVANS. They say they don't need water, don't leave waste, and produce more excess electricity than they use in the process.

Mr. CARTER. There are two problems beside the question of its economic efficiency. One is that if you are in an area where there are water aquifers which you rubberize. You don't know what effect you have on the water in the ground. Another problem is that you may not get a very high percentage of the total oil in the shale out. For the next 50 or 100 years we may or may not be willing to leave 45 percent of the oil in the ground while we high grade it with the in situ process. We have to be concerned now whether or not that is a wise course to adopt. We do not have a very good fix on what percentage of efficiency the in situ process would have.

Mr. EVANS. It would strike me a wise thing to look into it at the earliest possible moment.

Mr. CARTER. We share that view and we are looking into it.

DRILLING BY THE SOVIET UNION

Mrs. HANSEN. Mr. Radlinski, what is the Soviet Union doing on their Siberian coastline?

Mr. RADLINSKI. As far as I know the Soviets have done some exploratory drilling offshore Siberia but they have no production of petroleum offshore. They have plenty of gas and oil onshore. The only Soviet production of oil offshore is in the Caspian Sea. There is an extensive operation there.

Mrs. HANSEN. They do not need oil and gas now.

Mr. RADLINSKI. They don't need to go to the expense of drilling offshore because they have so much onshore. Their technology is far behind ours. Under the new energy agreement they want to learn more about offshore drilling technology from the United States.

I have been in the U.S.S.R. with a delegation and the Soviets have had a delegation over here. The exchange goes very slowly and for the most part it has been in one direction so far.

Mrs. HANSEN. If we were to reduce our oil imports by 1 million barrels a day, what does that do in terms of actual money, based on current prices of oil, to the balance of payments?

Mr. CARTER. That is about $12 a barrel times 365 million. So that would be about $4 billion that we would save annually. What is our current deficit in the balance of payments?

Mrs. HANSEN. I do not know what the overall deficit is. We are paying about $23 billion a year for imported oil.

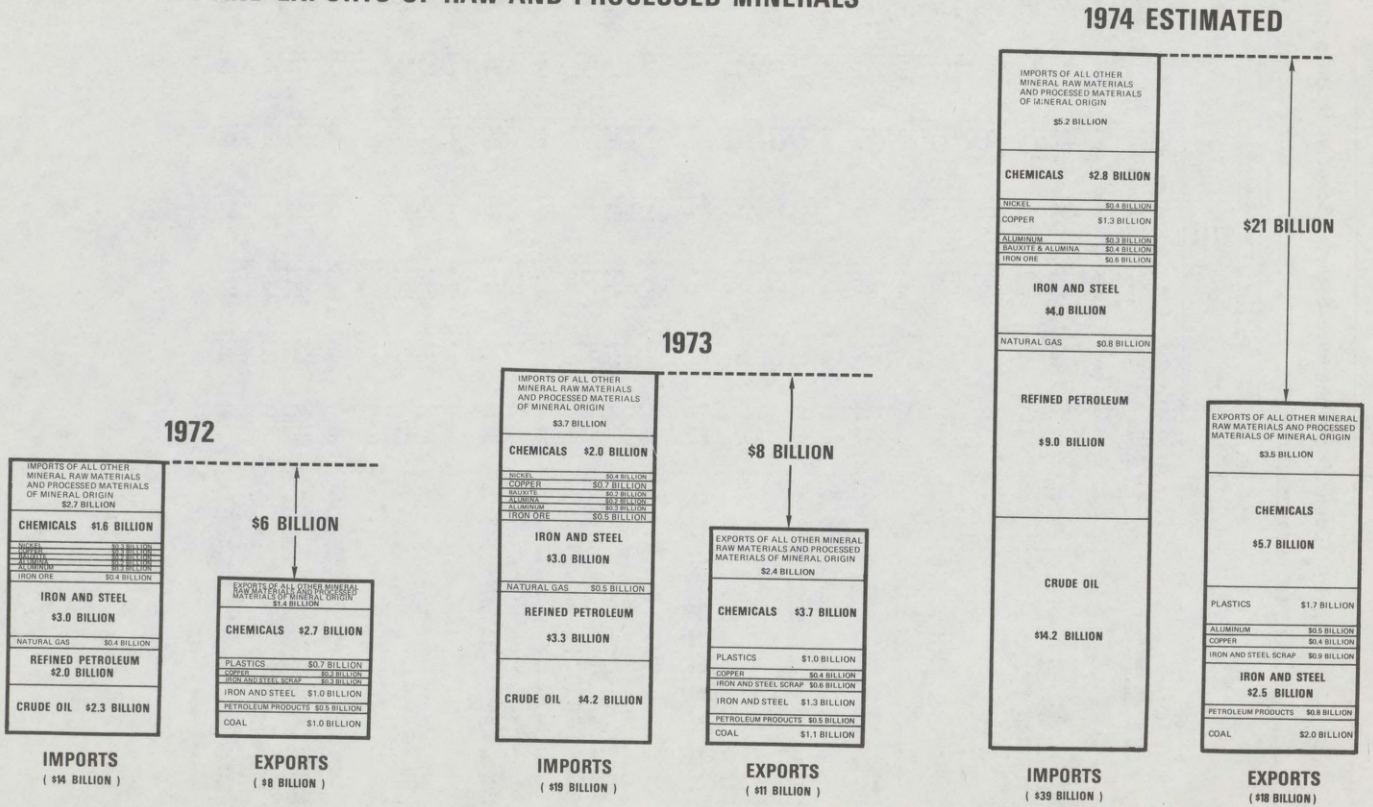
Mr. GASKINS. I can supply that.

TOTAL EXPORTS BY UNITED STATES

Mrs. HANSEN. Please insert in the record what our total exports are. Also include what our total imports are. You cannot see this without the whole picture.

[The information follows:]

U.S. IMPORTS AND EXPORTS OF RAW AND PROCESSED MINERALS



SOURCE: U.S. DEPARTMENT OF COMMERCE, BUREAU OF CENSUS AND U.S. BUREAU OF MINES (F.O.B. VALUES)

1974 ESTIMATE BY BUREAU OF MINES BASED ON JANUARY THRU AUGUST DATA.

Table E-6. Domestic Merchandise—Selected Schedule B Commodity

(In millions of dollars. The overall area totals include data on Special Category shipments. Such shipments are combined and shown at the end of the table.)

Line No.	Commodity description	Total, all areas	Western Hemisphere					Other Western Hemisphere
			Canada	20 Latin American Republics				
				Total	Central American Common Market	Latin American Free Trade Association	Other	
1	GRAND TOTAL	70 223.0	14 805.7	8 836.7	615.9	7 634.2	586.5	992.7
2	AGRICULTURAL COMMODITIES	17 676.4	1 034.5	1 483.0	96.0	1 277.8	109.2	209.4
3	NONAGRICULTURAL COMMODITIES	52 546.6	13 771.2	7 353.6	519.9	6 356.4	477.3	783.3
4	FOOD AND LIVE ANIMALS	11 930.8	794.1	1 203.5	84.0	1 037.5	82.1	194.4
5	MEAT AND MEAT PREPARATIONS, INCL. POULTRY	444.2	79.2	18.3	.4	11.3	2.6	44.3
6	DAIRY PRODUCTS AND EGGS	55.9	11.6	15.9	.8	12.0	3.0	6.4
7	GRAINS AND CEREAL PREPARATIONS	8 495.1	89.9	983.2	60.8	874.6	47.8	73.4
8	WHEAT AND WHEAT FLOUR	4 151.1	.1	723.0	34.2	669.1	19.7	31.8
9	WHEAT--UNMILLED	4 042.7	(Z)	708.0	32.8	657.0	18.2	24.7
10	WHEAT FLOUR	108.4	.1	15.0	1.3	12.1	1.5	7.0
11	BARLEY, CORN, GRAIN SORGHUMS, RYE, AND OATS--UNMILLED	3 624.0	49.9	212.2	20.5	182.2	9.6	21.1
12	BARLEY--UNMILLED	188.0	-	15.1	(Z)	15.1	(Z)	(Z)
13	CORN--UNMILLED	2 836.9	49.4	159.1	19.6	130.3	9.1	20.4
14	GRAIN SORGHUMS	468.6	.5	35.9	.9	35.0	.1	.4
15	RICE	541.2	20.3	11.8	.1	.3	11.5	12.8
16	FRUITS, NUTS, AND VEGETABLES, EXCEPT OIL NUTS	968.3	354.3	70.6	3.8	54.3	12.5	18.0
17	ANIMAL FEEDS, EXCL. UNMILLED CEREAL	1 265.7	59.1	30.7	8.0	17.4	5.2	30.3
18	BEVERAGES AND TOBACCO	1 008.5	13.5	47.2	1.1	30.6	15.5	26.3
19	TOBACCO--UNMANUFACTURED	681.2	4.8	7.4	.2	4.6	2.6	4.2
20	CIGARETTES AND OTHER TOBACCO MANUFACTURES	289.0	3.7	37.8	.6	24.9	12.3	17.1
21	CIGARETTES	249.9	2.5	32.9	.6	22.4	9.9	16.1
22	CRUDE MATERIALS, EXCEPT FUEL--INEDIBLE	8 383.6	685.1	448.8	9.6	430.2	9.0	11.9
23	HIDES AND SKINS, EXCEPT FUR SKINS--UNDRESSED	377.0	17.8	45.6	(Z)	45.6	.1	.1
24	SOYBEANS, EXCEPT CANNED OR PREPARED	2 757.4	70.2	42.2	(Z)	40.2	1.9	(Z)
25	SYNTHETIC RUBBER	195.8	32.6	37.0	.8	36.2	.1	.2
26	LOGS AND LUMBER	1 295.7	139.3	22.8	.1	22.3	.5	5.3
27	PAPER BASE STOCKS--PULPWOOD, WOODPULP, ETC.	488.8	23.7	73.9	3.4	69.4	1.1	.4
28	WOOD PULP	420.3	10.9	65.2	3.1	61.2	.9	.4
29	RAW COTTON, EXCL. LINTERS AND WASTE	929.0	59.0	4.6	.5	4.0	.1	1.0
30	METAL ORES, CONCENTRATES, AND SCRAP	1 080.8	102.3	98.7	.3	94.1	.2	.1
31	IRON ORE AND CONCENTRATES	37.9	32.9	.1	-	.1	-	-
32	IRON AND STEEL SCRAP, EXCL. TINNED CIRCLES, ETC.	598.5	27.1	78.8	(Z)	78.6	.2	(Z)
33	NONFERROUS METAL ORES AND SCRAP, EXCL. URANIUM	443.7	41.6	15.8	.3	15.5	(Z)	.1
34	MINERAL FUELS, LUBRICANTS, AND RELATED MATERIAL	1 670.5	359.9	234.3	6.9	222.1	5.3	12.9
35	COAL, COKE, LIGNITE, AND RELATED PRODUCTS	1 052.0	272.1	68.7	(Z)	68.7	(Z)	2.2
36	ANTHRACITE AND BITUMINOUS COAL	1 013.7	253.1	62.2	(Z)	62.2	(Z)	.1
37	PETROLEUM AND PRODUCTS	518.0	73.0	115.5	6.8	103.4	5.3	10.6
38	FUEL OIL--DISTILLATE	25.7	.1	15.2	(Z)	14.9	.2	1.0
39	FUEL OIL--RESIDUAL	23.6	10.6	7.7	-	6.5	1.2	2.9
40	LUBRICATING OILS	173.5	20.9	38.8	4.1	32.4	2.4	4.5
41	ANIMAL AND VEGETABLE OILS, FATS, AND WAXES	684.0	23.5	121.5	8.4	95.0	18.0	8.0
42	TALLOW, ANIMAL, NOT SUITABLE FOR HUMAN CONSUMPTION	287.2	.3	36.3	6.3	25.8	4.3	3.6
43	SOYBEAN OIL--CRUDE AND REFINED	151.4	6.6	39.2	1.5	32.4	5.3	2.1
44	COTTONSEED OIL--CRUDE AND REFINED	86.0	2.8	26.7	.1	25.5	1.2	.5
45	CHEMICALS	5 748.4	844.4	1 164.5	99.2	994.3	71.0	88.8
46	CHEMICAL ELEMENTS AND COMPOUNDS	2 337.2	392.0	460.4	33.1	419.7	7.5	35.6
47	ORGANIC CHEMICALS	1 509.8	172.2	338.4	27.7	305.8	5.0	10.2
48	INORGANIC CHEMICALS	543.9	108.8	121.1	5.4	113.2	2.5	25.3
49	MEDICINALS AND PHARMACEUTICAL PREPARATIONS	626.0	56.1	117.0	11.1	78.0	27.9	8.7
50	FERTILIZERS--MANUFACTURED	406.5	17.7	160.6	15.3	135.1	10.2	2.8
51	PLASTIC MATERIALS	1 027.9	229.1	165.9	17.0	140.3	8.6	7.7
52	MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIALS	7 161.3	2 054.3	1 082.1	124.7	851.7	105.7	181.0
53	TIRES AND OTHER MISCELLANEOUS RUBBER ARTICLES	221.5	119.4	24.9	3.8	15.7	5.3	3.6
54	PAPER AND MANUFACTURES, INCL. NEWSPRINT	919.0	193.0	182.1	43.9	117.8	20.3	27.4
55	KRAFT CONTAINER BOARD LINERS	250.9	4.8	50.8	26.5	19.5	4.9	6.7
56	TEXTILES, EXCL. FIBERS AND CLOTHING	1 224.7	300.6	134.6	24.3	79.9	30.4	42.2
57	YARN AND THREAD	271.3	61.9	39.2	8.4	28.5	2.3	3.4
58	COTTON FABRICS--WOVEN, EXCL. NARROW OR SPECIAL FABRICS	262.6	47.7	16.3	2.6	6.3	7.4	7.3
59	SYNTHETIC FABRICS--WOVEN, EXCEPT NARROW WOVEN	242.3	43.3	33.6	5.7	18.8	9.1	11.2
60	MADE-UP TEXTILE ARTICLES, EXCL. CLOTHING	217.6	64.2	16.4	1.8	10.0	4.6	10.1

See footnotes at end of table.

Groupings and Commodities, by World Areas: 1973, Cumulative to Date

designation "Special Category" and thus are excluded from the other commodity data for individual areas. X–Not applicable. Z–Less than one-half of rounded unit)

Western Europe					Commu-nist areas in Europe	Asia					Australia and Oceania	Africa	Special Category	Line No.
OECD countries				Other Western Europe		Communist areas in Asia	Japan	Other Asia						
Total including "Other OECD"	EEC countries							Near East	South Asia	Asia, n.e.c.				
	Total	Original EEC countries	United Kingdom											
20 642.0	16 379.5	12 377.5	3 444.5	266.0	1 792.8	689.2	8 176.1	2 730.0	927.3	5 651.5	1 734.9	2 301.1	(X)	1
5 638.6	4 526.3	3 709.1	616.0	115.7	1 394.9	574.5	2 997.1	470.2	562.7	1 857.3	83.0	578.5	(X)	2
15 003.4	11 853.3	8 668.3	2 828.5	150.3	398.0	114.7	5 179.0	2 259.8	364.6	3 794.3	1 651.8	1 722.6	(X)	3
3 160.4	2 504.9	2 086.6	352.7	96.8	1 176.9	410.1	1 817.4	353.2	510.7	1 154.1	36.9	435.0	(X)	4
157.8	148.7	119.0	29.3	.7	.6	-	126.0	5.1	(Z)	12.7	2.4	1.0	(X)	5
5.7	4.0	2.5	1.3	.1	-	-	5.3	1.0	.2	8.2	1.0	.6	(X)	6
1 698.8	1 251.1	1 082.9	165.7	58.7	999.3	410.1	1 326.7	313.5	508.0	1 033.7	3.8	408.9	(X)	7
302.0	214.7	189.7	25.0	53.5	629.3	277.7	404.8	192.9	388.3	521.4	.7	273.4	(X)	8
299.2	213.8	188.8	25.0	53.4	629.3	277.7	404.8	146.1	369.1	504.0	(Z)	254.2	(X)	9
2.8	.9	.9	(Z)	.2	-	-	(Z)	26.8	19.2	17.4	.7	19.2	(X)	10
1 313.6	980.6	852.9	126.1	5.0	369.9	132.4	915.4	73.6	71.7	168.8	(Z)	55.4	(X)	11
34.3	22.9	21.0	1.9	4.1	12.2	-	10.9	1.3	-	49.2	-	1.1	(X)	12
1 191.4	889.6	765.1	124.2	.7	302.9	132.4	647.8	29.4	.6	115.4	(Z)	32.7	(X)	13
39.8	26.4	25.3	(Z)	.2	2.6	-	251.5	42.9	71.0	3.8	(Z)	20.8	(X)	14
76.9	51.2	37.3	13.2	.1	-	-	.1	43.8	(Z)	308.4	2.5	64.4	(X)	15
319.7	244.6	158.3	73.6	1.1	10.4	-	121.8	5.9	.1	43.0	15.4	8.2	(X)	16
805.8	715.7	659.4	17.9	35.7	163.5	-	104.7	8.7	(Z)	17.6	4.8	4.8	(X)	17
562.4	446.1	245.9	153.4	7.9	6.1	1.4	116.2	57.3	1.4	104.5	33.0	31.2	(X)	18
442.6	371.0	179.5	147.4	1.3	2.6	1.4	101.2	2.9	.5	71.6	23.0	17.8	(X)	19
101.9	59.9	54.0	3.6	6.5	3.5	-	13.3	54.0	.8	31.8	5.5	13.1	(X)	20
76.8	42.8	37.9	2.8	6.2	2.6	-	11.3	53.6	.8	31.2	3.9	12.1	(X)	21
3 056.1	2 507.2	2 135.0	270.7	10.1	210.4	171.9	2 473.6	112.5	24.4	887.7	114.1	87.4	(X)	22
68.7	53.8	42.9	10.5	5.1	57.2	.4	150.1	1.9	-	28.8	.1	1.2	(X)	23
1 440.3	1 208.8	1 073.0	47.8	-	102.8	43.4	715.9	78.2	-	167.1	6.1	3.3	(X)	24
82.1	74.5	61.2	13.1	.1	(Z)	(Z)	15.6	2.0	1.0	10.1	11.3	3.6	(X)	25
211.7	185.9	159.4	23.0	.3	1.2	(Z)	833.0	3.9	.1	23.6	50.7	3.8	(X)	26
213.4	195.4	154.2	41.0	3.4	6.7	.2	96.2	2.7	6.8	38.4	12.8	10.2	(X)	27
194.0	177.5	139.6	37.7	3.3	6.7	.2	79.9	2.6	6.8	27.9	12.4	10.2	(X)	28
159.1	107.8	90.7	16.7	.4	20.1	100.5	178.6	1.7	3.2	379.8	1.0	19.9	(X)	29
329.9	234.1	191.8	42.0	.3	2.4	24.2	370.5	.5	1.6	145.4	3.3	5.6	(X)	30
.2	.1	.1	(Z)	-	-	-	4.8	-	-	(Z)	(Z)	-	(X)	31
114.9	37.6	28.4	9.2	-	-	24.2	235.6	(Z)	.7	114.4	2.6	.2	(X)	32
214.8	196.3	163.2	32.8	.3	2.4	-	130.1	.5	.9	31.1	.7	5.3	(X)	33
461.2	367.2	317.7	46.2	4.1	6.1	(Z)	499.1	12.7	7.5	33.7	18.1	21.0	(X)	34
294.5	227.8	207.8	20.0	2.4	5.9	-	400.2	.1	.2	4.6	1.1	(Z)	(X)	35
284.9	219.0	199.0	19.9	2.2	5.9	-	399.6	(Z)	.1	4.4	1.1	(Z)	(X)	36
166.6	139.3	109.9	26.1	1.6	.2	(Z)	63.7	12.5	7.3	29.1	17.0	20.9	(X)	37
8.6	8.6	2.6	4.9	-	-	-	.5	(Z)	-	(Z)	.3	(Z)	(X)	38
.4	.4	(Z)	.1	-	-	-	1.7	-	-	-	.1	(Z)	(X)	39
44.3	38.2	27.4	9.6	.1	.1	(Z)	18.7	7.0	6.0	19.0	4.1	10.0	(X)	40
187.8	154.2	126.7	26.9	11.3	19.2	19.2	74.8	28.4	47.0	41.2	7.4	94.7	(X)	41
94.8	74.7	67.3	7.1	2.4	.5	1.3	48.3	8.4	16.0	33.4	(Z)	41.9	(X)	42
5.1	1.9	1.9	(Z)	8.8	-	17.9	2.6	16.2	30.9	1.6	1.9	18.5	(X)	43
13.2	9.4	6.3	3.1	-	2.7	-	5.7	.1	-	.4	.9	33.0	(X)	44
1 890.5	1 556.5	1 220.9	302.1	14.1	30.4	7.9	629.4	119.2	105.7	469.5	211.9	172.2	(X)	45
882.4	715.2	565.4	139.7	5.3	16.7	2.6	290.5	21.7	23.5	129.8	90.4	56.4	(X)	46
619.1	516.8	411.6	101.1	4.6	8.9	2.3	130.4	15.0	15.8	91.3	65.9	35.5	(X)	47
139.6	109.7	79.1	24.7	.7	7.8	.3	47.4	6.3	4.3	38.1	23.6	20.7	(X)	48
254.7	199.9	170.1	26.3	1.5	3.8	(Z)	83.3	28.5	5.0	35.2	14.0	18.1	(X)	49
34.9	31.1	29.3	1.0	4.6	(Z)	4.8	20.5	6.2	60.1	68.7	14.7	10.9	(X)	50
311.9	268.2	196.2	62.0	1.0	4.1	.5	97.3	18.1	3.5	123.4	44.2	21.3	(X)	51
1 936.2	1 604.0	1 145.8	390.9	10.1	51.9	9.1	597.7	188.5	60.0	548.2	209.1	233.0	(X)	52
30.4	22.4	15.8	4.8	.1	3.9	(Z)	4.2	8.1	.6	9.7	9.5	7.1	(X)	53
310.4	274.7	200.8	64.3	1.4	1.2	2.4	33.0	22.4	1.1	52.0	40.5	52.2	(X)	54
132.6	124.7	88.3	31.2	.9	-	2.4	3.7	12.3	.1	19.1	.5	17.0	(X)	55
332.4	281.5	190.1	81.0	2.9	12.5	.1	120.5	30.3	6.5	115.6	71.2	58.2	(X)	56
63.3	61.2	44.4	15.8	(Z)	9.1	-	20.9	8.7	5.4	46.4	8.8	4.1	(X)	57
89.8	80.2	60.6	15.8	2.2	(Z)	-	49.3	4.9	(Z)	17.9	13.5	13.5	(X)	58
71.6	61.6	25.6	33.1	.3	.1	-	12.1	7.4	(Z)	27.6	12.7	22.2	(X)	59
51.8	31.3	24.2	5.9	.1	(Z)	.1	24.7	4.4	.4	9.8	28.4	7.0	(X)	60

Table E-6. Domestic Merchandise—Selected Schedule B Commodity

(In millions of dollars. The overall area totals include data on Special Category shipments. Such shipments are combined and shown at the end of the table under th

Line No.	Commodity description	Total, all areas[1]	Western Hemisphere					
			Canada	20 Latin American Republics				Other Western Hemisphere
				Total	Central American Common Market	Latin American Free Trade Association	Other	
	MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIAL--CONTINUED							
1	NONMETALLIC MINERAL MANUFACTURES, N.E.C.--CEMENT, BRICK, GLASS, GEMS, ABRASIVES, REFRACTORIES, ETC.	810.1	209.1	63.1	5.3	52.2	5.7	12.0
2	IRON AND STEEL, INCL. PIG IRON AND FERROALLOYS	1 300.8	436.1	332.0	17.4	301.6	13.0	30.3
3	IRON AND STEEL MILL PRODUCTS	1 258.3	423.1	328.2	17.3	298.1	12.8	30.3
4	WIRE RODS, BARS, STRUCTURALS, AND PILING	174.2	85.1	42.1	2.4	36.5	3.2	4.1
5	UNIVERSALS, PLATES, INCL. TINPLATE, AND SHEETS	381.9	71.3	145.9	4.0	137.4	4.6	1.5
6	TUBES, PIPES, AND FITTINGS	344.7	87.8	62.5	4.1	55.2	3.2	22.8
7	NONFERROUS BASE METALS AND ALLOYS, WROUGHT OR UNWROUGHT (EXCLUDING PRECIOUS METALS, URANIUM AND THORIUM)	950.3	193.1	141.1	4.0	133.9	3.1	3.6
8	COPPER AND ALLOYS--BLISTER, REFINED, AND MILL SHAPES	383.5	53.4	52.4	.9	50.8	.7	.8
9	ALUMINUM AND ALLOYS--PRIMARY AND MILL SHAPES	345.5	96.1	57.2	1.9	53.6	1.7	2.4
10	METAL MANUFACTURES, N.E.C.--CONTAINERS; WIRE CARLE AND FENCING; NAILS, NUTS, AND BOLTS; TOOLS, CUTLERY, AND HOUSEHOLD WARE; ETC.	1 110.6	420.6	167.7	22.3	125.0	20.4	50.3
11	FINISHED STRUCTURAL PARTS AND STRUCTURES, N.E.C.	192.5	44.6	35.3	3.9	26.0	5.4	28.1
12	TOOLS FOR USE IN THE HAND OR IN MACHINES	288.3	83.0	46.7	3.8	40.6	2.3	2.7
13	MACHINERY AND TRANSPORT EQUIPMENT	27 841.7	8 695.6	3 691.7	209.7	3 292.9	189.1	293.9
14	MACHINERY--ELECTRIC AND NONELECTRIC	17 129.7	4 099.2	2 592.9	150.6	2 315.0	127.3	207.6
15	NONELECTRIC MACHINERY, INCL. AIRCRAFT ENGINES	12 099.0	3 043.1	1 761.5	114.6	1 562.4	84.5	139.6
16	POWER GENERATING MACHINERY, INCL. ENGINES AND PARTS	2 218.4	705.0	230.8	13.2	205.5	12.0	16.3
17	AIRCRAFT ENGINES, INCL. MISSILE TURBINES AND PARTS	686.8	68.1	45.7	3.9	39.4	2.4	3.3
18	ENGINES AND TURBINES	221.5	16.9	18.8	2.5	14.5	1.8	2.7
19	MILITARY	45.8	(X)	(X)	(X)	(X)	(X)	(X)
20	NONMILITARY	175.7	16.9	18.8	2.5	14.5	1.8	2.7
21	PARTS AND ACCESSORIES	465.3	51.3	26.9	1.3	25.0	.6	.6
22	AUTOMOTIVE ENGINES	350.5	318.7	9.5	.3	9.1	.1	.2
23	AUTOMOTIVE ENGINE PARTS	227.7	128.4	49.7	1.6	47.2	.9	.7
24	OTHER POWER GENERATING MACHINERY AND PARTS	953.5	189.8	126.0	7.5	109.7	8.7	12.1
25	AGRICULTURAL MACHINERY AND PARTS AND TRACTORS, EXCL. TRACTOR PARTS	987.1	406.7	169.4	13.3	145.6	10.5	10.8
26	TRACTORS--TRACKLAYING WHEEL TYPE, EXCEPT INDUSTRIAL TYPE	641.2	217.5	135.1	9.2	118.5	7.4	8.1
27	TRACTORS--CONTRACTORS' WHEEL TYPE	108.8	18.5	21.5	1.3	18.5	1.7	2.2
28	OFFICE MACHINERY AND COMPUTERS	2 084.8	336.5	156.2	2.6	147.2	6.4	5.4
29	ELECTRONIC COMPUTERS AND PARTS, EXC. TAPE	1 716.6	253.6	100.6	.7	95.6	4.3	3.5
30	METALWORKING MACHINERY, INCL. METALWORKING MACHINE TOOLS	488.9	84.5	110.8	1.4	108.2	1.2	1.9
31	METAL-CUTTING MACHINE TOOLS	205.5	31.4	51.9	.4	51.0	.5	.5
32	METAL-FORMING MACHINE TOOLS	145.4	26.0	30.6	.5	29.7	.3	.6
33	METALWORKING MACHINERY, N.E.C.	138.1	27.2	28.3	.5	27.4	.4	.8
34	TEXTILE, SEWING, AND LEATHER MACHINERY	374.7	59.2	80.7	8.6	68.1	4.0	2.9
35	MACHINES FOR SPECIAL INDUSTRIES, N.E.C., AND PARTS (EXCL. CONSTRUCTION)	472.6	98.1	115.7	12.1	96.7	7.0	7.0
36	CONSTRUCTION, EXCAVATING AND MINING MACHINES, AND RELATED MACHINERY AND PARTS (EXCL. CONTRACTORS' WHEEL TYPE TRACTORS BUT INCL. INDUSTRIAL TYPE)	2 094.6	484.1	357.4	22.2	322.2	13.0	31.3
37	CONSTRUCTION, MAINTENANCE, EXCAVATING AND LEVELING MACHINES AND PARTS	567.8	149.2	111.3	9.2	98.0	4.1	9.9
38	COAL-CUTTING, MINING, AND WELL-DRILLING MACHINES AND PARTS	547.8	53.9	93.2	1.9	90.4	.8	6.3
39	INDUSTRIAL TRUCKS, TRACTORS, PORTABLE ELEVATORS AND PARTS	149.9	53.2	22.5	1.8	20.2	.5	1.4
40	OTHER NONELECTRIC MACHINERY, APPLIANCES, AND MACHINE PARTS, N.E.C.	3 377.8	869.0	540.5	41.1	469.0	30.4	64.1
41	PUMPS FOR LIQUIDS, PARTS AND ATTACHMENTS	326.7	84.5	53.3	5.7	44.6	3.0	8.5
42	AIR AND GAS COMPRESSORS AND PARTS	205.2	36.9	48.8	1.6	46.1	1.1	5.1
43	CENTRIFUGES, FILTERING, AND PURIFYING MACHINES FOR LIQUIDS, AIR, AND GASES, AND PARTS	182.0	37.9	28.2	1.1	24.9	2.1	2.9
44	AIR-CONDITIONING AND REFRIGERATING EQUIPMENT	581.2	140.0	74.4	7.1	58.4	8.8	17.5
45	PARTS AND ACCESSORIES FOR METALWORKING MACHINE TOOLS	126.7	31.2	16.4	.3	15.8	.2	.5
46	ELECTRIC MACHINERY, APPARATUS, AND APPLIANCES	5 030.7	1 056.1	831.4	36.0	752.6	42.8	68.0
47	ELECTRIC POWER APPARATUS AND SWITCHGEAR	1 065.7	245.0	233.1	15.9	203.7	13.4	22.0
48	GENERATORS	258.5	14.9	68.6	7.2	58.0	3.4	9.7
49	TRANSFORMING, CONVERTING, AND TRANSMISSION APPARATUS	237.0	46.5	74.7	4.3	63.8	6.6	6.2
50	RADIO, TV, AND OTHER TELECOMMUNICATIONS EQUIPMENT	1 037.9	227.8	226.6	7.0	208.0	11.6	13.3
51	HOUSEHOLD ELECTRICAL APPLIANCES	223.4	83.4	36.2	4.6	26.4	5.2	8.2

See footnotes at end of table.

Groupings and Commodities, by World Areas: 1973, Cumulative to Date—Continued

...ation "Special Category" and thus are excluded from the other commodity data for individual areas. X—Not applicable. Z—Less than one-half of rounded unit)

Total (excluding "Other OECD")	Western Europe				Communist areas in Europe	Asia				Australia and Oceania	Africa	Special Category	Line No.
	OECD countries			Other Western Europe		Communist areas in Asia	Japan	Other Asia					
	EEC countries							Near East	South Asia	Asia, n.e.c.			
	Total	Original EEC countries	United Kingdom										
273.3	197.6	167.4	28.1	.5	1.5	(Z)	77.7	14.9	1.8	125.7	20.6	9.8	(X)	1
257.2	153.1	101.8	47.6	1.1	23.6	(Z)	15.4	45.9	37.1	100.9	19.4	51.8	(X)	2
149.3	143.5	93.1	46.7	1.1	22.3	(Z)	10.5	45.8	37.0	100.4	19.0	51.2	(X)	3
11.4	10.0	6.2	3.0	.4	(Z)	-	1.6	2.5	1.2	19.8	2.1	3.9	(X)	4
67.6	49.9	41.9	6.6	.3	11.3	-	.7	2.8	29.6	33.1	6.0	11.9	(X)	5
48.0	34.4	15.5	17.6	.4	10.1	(Z)	5.1	36.7	2.6	35.3	5.5	29.9	(X)	6
363.9	337.5	257.7	72.5	1.7	.6	3.5	153.5	8.7	9.1	51.9	9.2	10.5	(X)	7
168.6	162.4	137.0	24.2	(Z)	.1	-	76.0	2.7	3.8	22.9	1.9	.7	(X)	8
97.3	89.2	58.5	25.3	1.6	(Z)	3.4	41.9	4.8	4.8	23.1	5.1	7.8	(X)	9
237.1	192.3	123.6	62.1	1.3	2.6	.1	38.5	51.8	3.2	66.7	30.2	40.4	(X)	10
30.8	27.0	16.4	9.3	.7	1.1	(Z)	2.2	19.3	.5	19.0	2.2	8.6	(X)	11
84.7	69.8	48.5	19.5	.2	1.0	(Z)	11.9	12.1	1.3	14.9	13.0	16.8	(X)	12
7 340.3	5 770.1	4 101.9	1 486.8	104.1	270.1	48.8	1 494.8	1 103.7	134.1	1 901.5	750.1	1 077.1	915.9	13
4 236.5	4 217.5	2 974.0	1 117.9	50.4	258.4	9.5	1 193.4	692.2	88.1	1 496.5	499.7	651.6	53.8	14
3 675.6	2 974.4	2 125.6	762.3	43.1	236.7	4.2	781.4	523.5	62.5	833.9	409.6	530.4	53.8	15
621.2	519.5	390.0	120.5	3.8	2.2	3.9	157.4	110.9	15.9	141.8	83.8	71.6	53.8	16
331.3	293.6	226.8	62.2	1.8	.1	3.9	70.4	33.1	3.1	29.8	27.7	14.6	53.8	17
84.5	77.0	62.7	12.5	1.5	.1	3.0	17.0	5.9	.3	13.8	6.2	5.0	(X)	18
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	45.8	19
84.5	77.0	62.7	12.5	1.5	.1	3.0	17.0	5.9	.3	13.8	6.2	5.0	(X)	20
246.8	216.6	164.1	49.7	.3	(Z)	.9	53.4	27.2	2.8	16.0	21.5	9.6	8.0	21
10.7	8.7	7.2	1.4	(Z)	.1	-	.2	4.6	.4	1.4	3.7	1.1	(X)	22
18.1	14.5	4.7	9.7	.1	(Z)	-	1.0	10.3	1.2	8.6	4.8	4.9	(X)	23
261.1	202.7	151.2	47.2	1.9	2.0	-	85.8	63.0	11.1	102.1	47.6	51.0	(X)	24
148.1	103.6	80.1	20.8	9.7	37.4	(Z)	32.7	26.9	1.2	40.1	44.2	66.8	(X)	25
70.8	38.5	27.1	10.2	1.3	33.3	-	25.3	20.7	1.1	37.0	35.2	55.8	(X)	26
20.4	12.6	6.9	5.5	.1	.7	-	5.4	5.0	.3	6.1	10.7	18.0	(X)	27
1 109.5	947.2	659.5	256.3	5.9	12.6	(Z)	235.9	17.8	1.4	106.8	65.3	31.6	(X)	28
947.1	810.8	565.7	216.1	5.6	12.0	(Z)	208.5	14.4	.8	89.5	56.0	25.1	(X)	29
153.7	117.2	91.5	23.3	4.9	36.3	-	44.8	10.2	3.0	20.8	9.6	8.5	(X)	30
50.6	37.8	27.5	9.4	1.7	28.8	-	24.4	2.8	1.9	5.6	4.5	1.5	(X)	31
44.2	35.6	23.6	10.6	1.5	5.2	-	15.8	3.2	.5	12.1	3.6	2.1	(X)	32
58.9	43.8	40.4	3.3	1.6	2.3	-	4.6	4.2	.6	3.1	1.5	4.9	(X)	33
114.3	86.2	58.0	25.0	1.5	3.6	-	22.4	8.1	2.3	57.4	7.4	14.9	(X)	34
162.4	121.2	80.5	32.1	1.0	2.4	(Z)	23.6	5.5	1.1	15.8	21.3	18.5	(X)	35
485.5	356.8	258.7	93.1	8.6	75.3	.1	46.5	158.0	15.2	172.4	94.4	165.8	(X)	36
114.0	78.4	60.1	17.0	2.3	5.2	-	12.5	30.8	3.6	31.1	38.7	59.2	(X)	37
122.8	77.2	46.5	29.4	4.6	1.1	(Z)	5.2	94.2	4.6	88.3	23.7	49.8	(X)	38
47.2	42.8	31.6	10.4	(Z)	.6	-	1.0	2.9	.3	6.5	7.8	6.4	(X)	39
880.8	722.8	507.3	191.2	14.7	66.7	.1	218.1	186.0	22.4	278.8	83.6	152.7	(X)	40
93.9	50.4	33.8	14.8	.7	18.9	-	15.0	27.8	2.5	27.6	6.6	17.4	(X)	41
41.0	32.7	23.7	8.5	2.3	16.8	-	2.5	12.6	2.4	15.8	3.9	17.0	(X)	42
55.3	45.1	35.8	7.5	.6	1.6	(Z)	12.1	13.0	1.0	12.9	5.2	11.3	(X)	43
127.7	99.4	74.8	22.1	1.5	.6	.1	33.1	60.1	3.6	68.6	13.4	40.8	(X)	44
52.7	47.7	27.6	19.1	.1	1.7	-	11.3	1.0	2.1	5.9	2.1	1.7	(X)	45
1 560.9	1 243.1	848.4	355.6	7.3	21.7	5.3	412.0	168.6	25.6	662.6	90.1	121.2	(X)	46
257.2	205.2	138.5	59.6	.8	.7	.1	97.4	55.6	7.1	91.7	12.7	42.3	(X)	47
29.7	15.2	9.9	4.1	(Z)	(Z)	(Z)	44.6	27.7	2.1	42.8	2.4	15.9	(X)	48
52.8	45.6	30.7	12.3	.2	.1	(Z)	8.7	10.7	1.7	24.2	2.8	8.4	(X)	49
287.4	222.5	138.1	74.0	1.5	2.1	4.2	56.3	38.6	4.0	129.8	17.9	28.4	(X)	50
32.7	27.6	18.3	8.8	.1	.1	-	23.1	16.3	.2	9.9	6.8	6.4	(X)	51

Table E-6. Domestic Merchandise—Selected Schedule B Commodity

(In millions of dollars. The overall area totals include data on Special Category shipments. Such shipments are combined and shown at the end of the table under the

Line No.	Commodity description	Total, all areas[1]	Western Hemisphere					Other Western Hemisphere
			Canada	20 Latin American Republics				
				Total	Central American Common Market	Latin American Free Trade Association	Other	
	MACHINERY AND TRANSPORT EQUIPMENT--CONTINUED							
1	TRANSPORT EQUIPMENT	10 712.1	4 596.5	1 098.8	59.1	977.9	61.8	86.3
2	RAILWAY VEHICLES AND PARTS	218.9	34.2	86.9	.5	85.6	.8	.6
3	AUTOMOBILE AND OTHER ROAD MOTOR VEHICLES AND PARTS (PARTS EXCLUDE TIRES, ENGINES, AND ELECTRICAL PARTS)[2]	5 998.7	4 083.8	704.4	44.0	621.0	39.3	41.3
4	TRUCKS AND BUSES--COMMERCIAL, COMPLETE, NEW	643.0	475.9	70.8	14.2	47.5	9.1	4.8
5	TRUCKS--COMMERCIAL, UNASSEMBLED, NEW	87.3	3.3	32.4	.7	31.1	.6	.6
6	TRUCKS, BUSES, AND SPECIAL PURPOSE VEHICLES, EXCL. TANKS AND PASSENGER CARS--MILITARY, NEW OR USED	64.4	-	(Z)	(Z)	-	-	-
7	PASSENGER CARS, EXCL. MILITARY--ASSEMBLED, NEW	1 627.0	1 411.8	30.2	4.3	17.1	8.9	11.4
8	PASSENGER CARS, EXCL. MILITARY--UNASSEMBLED, NEW	137.0	.3	127.4	.1	126.8	.5	.7
9	PASSENGER CAR AND TRUCK PARTS AND ACCESSORIES, EXCL. MILITARY, NEW, FOR REPLACEMENT	452.6	159.9	118.1	6.0	106.5	5.5	4.4
10	PASSENGER CAR AND TRUCK PARTS AND ACCESSORIES, EXCL. MILITARY, NEW, FOR ASSEMBLY	2 148.7	1 834.1	157.8	1.7	155.6	.5	.8
11	PARTS AND ACCESSORIES AND WHEEL AND TRACK-LAYING TRACTORS AND CONTRACTORS' OFF HIGHWAY WHEEL TRACTORS	457.3	119.6	92.0	6.5	80.2	5.3	7.4
12	AIRCRAFT AND PARTS (PARTS EXCLUDE TIRES, ENGINES, AND ELECTRICAL PARTS)	4 124.0	379.1	232.3	7.4	222.1	2.8	20.7
13	AIRCRAFT--COMMERCIAL, COMPLETE, NEW AND USED	2 315.0	280.7	174.8	6.1	167.1	1.6	17.3
14	AIRCRAFT--MILITARY, COMPLETE, NEW AND USED	790.7	(X)	(X)	(X)	(X)	(X)	(X)
15	PARTS AND ACCESSORIES FOR COMMERCIAL AND MILITARY AIRCRAFT	1 018.3	98.4	57.5	1.3	55.0	1.1	3.4
16	SHIPS AND BOATS	254.8	17.6	63.6	4.8	42.5	16.2	21.9
17	WARSHIPS OF ALL KINDS	7.0	(X)	(X)	(X)	(X)	(X)	(X)
18	OTHER SHIPS, BOATS, AND FLOATING STRUCTURES	247.8	17.6	63.6	4.8	42.5	16.2	21.9
19	MISCELLANEOUS MANUFACTURED ARTICLES	3 950.7	883.4	544.8	38.3	443.8	62.7	93.5
20	PLUMBING, HEATING, AND LIGHTING FIXTURES	108.3	46.2	16.5	2.0	10.6	3.9	4.3
21	FURNITURE	100.7	49.1	15.0	1.1	9.5	4.3	10.2
22	CLOTHING, EXCL. FOOTWEAR	278.2	30.6	115.9	12.5	88.4	15.0	27.8
23	SCIENTIFIC, MEDICAL, OPTICAL, PHOTOGRAPHIC, AND MEASURING AND CONTROLLING INSTRUMENTS	1 214.5	258.0	153.4	7.1	137.9	8.4	11.9
24	CAMERAS--STILL AND MOTION PICTURE	61.3	6.3	2.9	(Z)	2.2	.7	.4
25	SIGHTING AND FIRE CONTROL EQUIPMENT	4.2	(X)	(X)	(X)	(X)	(X)	(X)
26	OTHER SCIENTIFIC, MEDICAL, OPTICAL, PHOTOGRAPHIC AND MEASURING AND CONTROLLING INSTRUMENTS	1 149.0	251.7	150.5	7.1	135.7	7.7	11.5
27	PHOTOGRAPHIC SUPPLIES--SENSITIZED FILM, PAPER, ETC.	417.2	40.8	43.1	1.0	36.7	5.4	2.7
28	MUSICAL INSTRUMENTS AND PARTS--PHONOGRAPHS, TAPE RECORDERS, PHONOGRAPH RECORDS, ETC.	355.0	54.6	43.0	2.1	39.1	1.8	3.2
29	BOOKS, PERIODICALS, AND OTHER PRINTED MATTER	392.8	190.4	37.1	2.5	30.7	3.9	6.3
30	MISCELLANEOUS PLASTIC ARTICLES	228.9	80.6	31.4	3.2	23.9	4.3	7.7
31	TOYS, SPORTING GOODS, AND AMUSEMENT EQUIPMENT	308.7	58.7	35.6	2.2	24.8	8.5	5.2
32	OFFICE CABINETS AND FILES; STATIONERY SUPPLIES	81.1	11.5	11.4	1.1	8.2	2.0	1.1
33	JEWELRY, WATCHES, AND CLOCKS	151.0	18.4	9.9	.8	7.4	1.6	4.9
34	COMMODITIES AND TRANSACTIONS NOT CLASSIFIED ACCORDING TO KIND	1 843.5	437.0	243.4	28.8	188.6	26.0	79.6
35	TANKS, ARMORED VEHICLES, ARTILLERY WEAPONS, MACHINE GUNS, SMALL ARMS, MISSILES, ROCKETS, AMMUNITION AND PARTS	634.7	(X)	(X)	(X)	(X)	(X)	(X)
36	MILITARY APPAREL AND FOOTWEAR	8.7	(X)	(X)	(X)	(X)	(X)	(X)
37	MISCELLANEOUS GOODS FOR RELIEF OR CHARITY	25.8	(Z)	5.3	1.5	2.8	1.0	.3
38	LOW-VALUE SHIPMENTS	1 091.2	427.0	222.7	25.8	172.8	24.2	77.2
39	SPECIAL CATEGORY	(X)	14.7	54.8	5.1	47.6	2.2	2.4

[1]Includes data for "Unidentified Countries" which are not included in area totals. See statement in "Special Announcements" section of the January 1973 issue of Report FT 990.

[2]See the statement regarding "automotive" trade in "Special Announcements" section.

Groupings and Commodities, by World Areas: 1973, Cumulative to Date—Continued

designation "Special Category" and thus are excluded from the other commodity data for individual areas. X–Not applicable. Z–Less than one-half of rounded unit)

Western Europe					Commu-nist areas in Europe	Asia					Australia and Oceania	Africa	Special Category	Line No.
OECD countries				Other Western Europe		Communist areas in Asia	Japan	Other Asia						
Total including "Other OECD"	EEC countries							Near East	South Asia	Asia, n.e.c.				
	Total	Original EEC countries	United Kingdom											
2 103.7	1 552.6	1 128.0	368.9	53.8	11.8	59.3	301.4	411.5	46.0	405.0	250.4	425.6	862.1	1
10.2	4.6	4.1	.2	5.3	(Z)	-	1.0	8.7	7.7	6.7	2.6	54.8	(X)	2
472.7	353.6	273.2	70.6	7.7	10.5	.6	88.3	205.5	16.7	101.2	97.3	104.3	64.4	3
16.0	6.6	3.4	.5	-	.3	-	.4	40.8	2.3	9.3	1.8	20.5	(X)	4
5.3	3.1	3.0	(Z)	-	.3	-	.1	30.2	.7	6.5	2.9	5.1	(X)	5
(Z)	-	-	-	-	-	-	-	-	-	-	-	-	64.4	6
50.2	33.7	28.2	2.8	(Z)	(Z)	(Z)	54.2	58.1	.3	4.8	2.7	3.2	(X)	7
5.3	4.4	4.2	.2	-	(Z)	-	.7	1.6	(Z)	(Z)	(Z)	1.0	(X)	8
55.7	35.7	27.1	8.1	.7	1.0	-	4.9	31.4	3.3	28.3	28.0	17.0	(X)	9
86.3	67.7	47.3	20.1	(Z)	.1	-	3.4	6.6	3.7	3.9	36.5	15.3	(X)	10
151.9	146.5	117.4	27.6	.7	7.7	-	14.2	4.3	3.2	24.0	18.4	14.0	(X)	11
1 503.7	1 090.0	825.2	219.3	39.9	.6	58.7	208.6	185.0	21.3	277.7	147.9	257.9	790.7	12
1 031.8	699.5	515.7	153.3	38.3	-	53.3	125.8	63.4	6.5	204.6	97.5	220.9	(X)	13
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	790.7	14
471.9	390.6	309.5	66.1	1.5	.6	5.4	82.8	121.6	14.8	73.1	50.4	37.1	(X)	15
109.0	100.4	22.5	77.8	.9	(Z)	-	2.4	8.8	(Z)	16.5	1.2	6.1	7.0	16
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	7.0	17
109.0	100.4	22.5	77.8	.9	(Z)	-	2.4	8.8	(Z)	16.5	1.2	6.1	(X)	18
1 434.7	1 126.0	734.3	349.1	5.2	18.1	.9	408.1	86.2	15.5	190.5	145.4	99.2	25.1	19
20.8	17.2	12.8	4.1	.1	(Z)	-	4.8	3.5	.1	6.7	2.4	2.9	(X)	20
14.0	11.7	7.9	3.4	(Z)	.1	(Z)	2.3	4.0	(Z)	2.1	1.8	2.0	(X)	21
46.0	32.3	27.1	4.2	.3	.7	-	14.2	8.5	.8	17.5	5.2	10.5	(X)	22
496.9	414.0	279.8	120.2	2.3	5.9	.1	112.8	31.8	4.9	47.0	38.3	31.3	19.9	23
18.4	15.6	11.2	4.0	(Z)	(Z)	-	12.1	.6	(Z)	2.3	1.5	1.0	15.7	24
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	4.2	25
478.6	398.3	268.6	116.2	2.3	5.9	.1	100.7	31.1	4.9	44.8	36.8	30.2	(X)	26
211.0	146.8	116.0	25.1	.1	.2	(Z)	57.2	8.6	3.5	21.6	15.8	12.5	(X)	27
163.5	138.6	85.4	50.2	.4	1.9	.7	34.9	3.6	1.4	15.4	23.4	8.9	(X)	28
81.7	73.6	29.2	38.4	.6	.6	(Z)	17.1	4.2	2.7	11.8	30.6	9.7	(X)	29
64.0	55.6	37.5	16.8	.1	6.0	-	16.6	3.4	.9	6.3	7.0	4.9	(X)	30
93.5	76.6	58.3	15.8	.1	(Z)	(Z)	85.6	3.6	.5	14.2	7.7	4.0	(X)	31
21.6	16.8	9.6	6.5	.2	.1	-	10.9	5.6	.1	13.6	2.8	2.3	(X)	32
75.3	24.7	17.3	6.1	.6	.1	-	14.7	1.6	.1	21.5	2.5	1.3	(X)	33
218.1	169.0	110.0	48.6	2.1	3.5	(Z)	35.5	32.4	10.8	65.2	32.1	40.4	643.3	34
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	634.7	35
(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	8.7	36
2.3	2.0	.1	(Z)	(Z)	.5	(Z)	(Z)	2.7	5.1	6.1	.2	3.2	(X)	37
177.4	134.7	94.6	32.7	2.0	3.0	-	32.1	28.1	4.9	50.1	30.9	35.7	(X)	38
394.4	174.1	152.7	17.0	.2	(Z)	(Z)	29.6	635.9	10.2	255.5	176.7	9.9	1 584.3	39

Table I-7. General Imports-Selected Schedule A Commodity Groupings

Note: See Special Announcement on page XII concerning the exclusion of crude petroleum imports from all country or other geographic area totals beginning with data for November 1973.

(In millions of dollars. Z-Less

Line No.	Commodity description	Total, all areas	Western Hemisphere				
			Canada	20 Latin American Republics			Other Western Hemisphere
				Total	Central American Common Market	Latin American Free Trade Association	Other	
1	GRAND TOTAL	69 121.2	17 442.9	7 600.1	685.1	6 478.3	436.7	1 737.7
2	AGRICULTURAL COMMODITIES	8 450.0	529.5	3 014.6	581.2	2 151.5	281.9	28.3
3	NONAGRICULTURAL COMMODITIES	60 671.2	16 913.4	4 585.5	103.9	4 326.8	154.8	1 709.4
4	FOOD AND LIVE ANIMALS	7 986.2	740.5	3 106.7	600.4	2 216.0	290.3	80.6
5	CATTLE, EXCEPT FOR BREEDING	192.4	85.6	103.5	.2	103.3	-	(Z)
6	MEAT AND PREPARATIONS	1 668.0	102.0	334.8	142.4	178.2	14.2	.3
7	MEAT--FRESH, CHILLED, OR FROZEN	1 122.5	90.9	210.1	142.4	53.6	14.2	.3
8	BEEF--FRESH, CHILLED, OR FROZEN	1 014.9	48.2	204.6	140.2	50.3	14.0	.1
9	OTHER MEAT--CANNED, DRIED, ETC.	545.5	11.0	124.7	.1	124.6	-	.1
10	DAIRY PRODUCTS AND EGGS	285.1	41.2	4.4	.1	4.3	.1	(Z)
11	FISH, INCL. SHELLFISH, AND PREPARATIONS	1 387.4	300.7	278.0	35.1	221.3	21.7	53.8
12	FISH--FRESH, FROZEN, DRIED, SALTED, ETC.	1 219.7	281.3	266.7	34.7	210.5	21.5	52.3
13	FISH--CANNED AND PREPARED	167.7	19.3	11.3	.4	10.8	.1	1.5
14	GRAINS AND ANIMAL FEEDS	180.1	103.2	17.0	(Z)	15.5	1.5	.5
15	FRUITS, NUTS, AND VEGETABLES, EXCEPT OIL NUTS	985.0	45.1	511.6	148.0	340.4	23.1	2.2
16	FRUIT--FRESH, AND EDIBLE NUTS, EXCEPT OIL NUTS--FRESH AND DRIED	411.4	17.5	260.5	145.7	101.0	13.9	.4
17	BANANAS--FRESH	192.6	(Z)	192.6	142.2	38.5	11.9	(Z)
18	COCOA OR CACAO BEANS	212.0	.5	79.6	3.2	56.3	20.2	1.3
19	COFFEE--RAW OR GREEN	1 565.9	-	1 067.1	215.1	810.1	41.9	1.5
20	TEA AND MATE	69.3	4.6	3.2	-	3.2	-	-
21	SUGAR--CANE OR BEET	917.7	-	513.5	44.4	324.9	144.3	14.6
22	BEVERAGES AND TOBACCO	1 213.1	235.2	69.9	8.4	52.8	8.7	7.3
23	ALCOHOLIC BEVERAGES--WHISKEY, BEER, WINE, ETC.	996.1	232.2	14.3	(Z)	14.2	.1	4.0
24	WHISKEY AND OTHER DISTILLED SPIRITS	648.7	227.5	9.8	-	9.8	(Z)	4.0
25	TOBACCO--UNMANUFACTURED	187.2	1.6	52.0	6.5	37.1	8.5	.2
26	CRUDE MATERIALS, EXCEPT FUELS--INEDIBLE	4 987.9	2 877.1	568.8	35.9	511.7	21.2	151.6
27	HIDES AND SKINS, EXCEPT FURSKINS--UNDRESSED	83.9	17.1	1.4	.1	1.2	.1	.3
28	FURSKINS--UNDRESSED	77.1	14.3	1.9	-	1.9	-	-
29	OILSEEDS, OIL NUTS, AND OIL KERNELS--COPRA, ETC.	64.2	6.3	9.6	4.5	5.2	(Z)	-
30	CRUDE (NATURAL) RUBBER, EXCL. CHLORINATED	344.5	-	.7	-	.7	(Z)	(Z)
31	LUMBER--SAWMILL PRODUCTS	1 493.0	1 390.9	54.1	12.4	41.6	.1	.9
32	PAPER BASE STOCKS--WOOD PULP, PULPWOOD, ETC.	676.9	638.3	.1	(Z)	.1	-	4.2
33	WOOD PULP	654.9	622.8	.1	-	.1	-	-
34	TEXTILE FIBERS AND WASTE	235.6	8.2	30.7	.1	29.8	.9	(Z)
35	RAW COTTON, EXCL. LINTERS AND WASTE	6.4	-	2.0	-	2.0	-	-
36	WOOL AND OTHER ANIMAL HAIR, EXCEPT ON THE SKIN	122.4	.3	19.1	-	19.0	.1	(Z)
37	WOOL, EXCEPT ON THE SKIN--UNMANUFACTURED	79.3	.2	7.1	-	7.1	-	(Z)
38	JUTE AND OTHER VEGETABLE FIBERS	21.5	.1	6.3	-	5.5	.8	(Z)
39	INDUSTRIAL DIAMONDS AND OTHER NATURAL ABRASIVES	79.7	.7	.3	-	.3	-	(Z)
40	CRUDE MINERALS, N.E.S.--ASBESTOS, QUARTZ, ETC.	220.2	106.6	43.8	(Z)	43.7	(Z)	5.9
41	METAL ORES, CONCENTRATES, AND SCRAP	1 290.7	567.9	362.2	13.0	330.9	18.3	136.2
42	IRON ORE AND CONCENTRATES	533.8	311.9	186.6	-	186.5	(Z)	-
43	NONFERROUS BASE METAL ORES AND CONCENTRATES	506.8	135.3	104.2	6.9	79.8	17.5	135.4
44	MINERAL FUELS, LUBRICANTS, AND RELATED MATERIALS[1]	8 101.0	1 834.3	1 543.0	.3	1 528.8	13.8	1 286.9
45	PETROLEUM AND PRODUCTS[1]	7 548.5	1 388.2	1 488.8	.3	1 474.6	13.8	1 286.1
46	PETROLEUM--CRUDE[1]	4 230.8	1 107.3	520.7	-	520.7	-	35.8
47	PETROLEUM PRODUCTS, INCL. PARTLY REFINED	3 317.6	280.9	968.0	.3	953.9	13.8	1 250.2
48	FUEL OIL	2 753.2	210.5	884.1	.3	881.2	2.6	1 032.0
49	GAS--NATURAL AND MANUFACTURED, PROPANE, ETC.	492.8	417.7	54.2	-	54.2	(Z)	.9
50	ANIMAL AND VEGETABLE OILS AND FATS	254.6	4.1	42.5	(Z)	42.1	.4	.1
51	COCONUT OIL	81.7	(Z)	-	-	-	-	(Z)
52	CHEMICALS	2 436.7	554.3	94.2	2.5	87.5	4.1	114.5
53	CHEMICAL ELEMENTS AND COMPOUNDS	1 303.6	269.9	38.7	(Z)	38.7	(Z)	96.1
54	ORGANIC CHEMICALS	629.8	52.9	25.7	-	25.7	(Z)	5.6
55	URANIUM OXIDE	61.4	54.2	-	-	-	-	-
56	MEDICINAL AND PHARMACEUTICAL PREPARATIONS	164.3	4.0	13.3	.6	11.8	.9	11.4
57	FERTILIZERS--MANUFACTURED	279.9	220.3	8.2	-	8.2	-	4.5
58	MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIAL	13 198.3	3 102.8	874.6	11.1	816.9	46.6	23.6
59	LEATHER	137.1	5.7	45.3	.4	44.5	.4	(Z)
60	PLYWOOD, VENEERS, AND OTHER WOOD--WORKED	529.5	75.3	28.9	1.9	27.0	(Z)	.2

See footnotes at end of table.

and Commodities, by World Areas: 1973, Cumulative to Date

than one-half of rounded unit)

Western Europe					Communist areas in Europe	Asia					Australia and Oceania	Africa	Unidentified countries	Line No.
OECD countries				Other Western Europe		Communist areas in Asia	Japan	Other Asia						
Total including "Other OECD"	EEC countries							Near East	South Asia	Asia, n.e.c.				
	Total	Original EEC countries	United Kingdom											
18 988.7	15 507.8	11 204.6	3 642.1	173.2	518.6	65.8	9 644.8	1 143.8	581.9	6 338.2	1 553.6	2 350.5	981.4	1
1 559.6	1 119.1	746.2	81.0	43.7	112.7	24.7	57.2	88.9	142.9	999.9	1 086.0	761.8	-	2
17 429.1	14 388.7	10 458.4	3 561.1	129.4	405.8	41.1	9 587.7	1 054.9	439.0	5 338.2	467.5	1 588.7	981.4	3
1 138.6	763.2	369.9	86.6	26.9	99.5	6.0	273.6	49.0	130.5	552.2	1 040.6	741.6	-	4
2.9	2.8	(Z)	1.3	-	-	-	.2	-	-	(Z)	.1	-	-	5
318.9	318.0	122.2	.2	22.4	83.6	.3	2.1	(Z)	4.7	.7	798.2	.1	-	6
19.0	18.9	.1	.2	-	.1	.2	2.1	(Z)	4.7	.7	794.5	(Z)	-	7
18.6	18.6	(Z)	.2	-	-	-	-	-	-	-	743.4	-	-	8
299.9	299.1	122.1	(Z)	22.4	83.5	.1	(Z)	(Z)	-	(Z)	3.7	.1	-	9
173.2	133.3	84.4	3.8	.7	3.4	.1	(Z)	.1	-	.3	61.7	(Z)	-	10
257.7	97.1	20.8	24.8	.1	5.9	1.0	229.2	10.3	24.9	77.8	77.8	70.3	-	11
210.5	92.6	19.0	23.6	(Z)	5.4	.8	171.1	7.9	22.5	61.7	75.9	63.5	-	12
47.2	4.5	1.9	1.2	.1	.4	.2	58.1	2.3	2.4	16.1	1.9	6.8	-	13
43.1	39.4	14.6	17.4	(Z)	.1	.1	9.2	.7	.1	2.3	1.5	2.3	-	14
172.7	43.9	40.3	2.8	3.4	4.2	1.9	21.9	33.6	37.5	100.9	12.3	37.9	-	15
20.3	5.1	4.6	.4	(Z)	(Z)	.9	.4	22.9	37.1	16.9	6.0	28.5	-	16
-	-	-	-	-	-	-	-	(Z)	(Z)	(Z)	-	-	-	17
.3	.3	.3	-	-	-	-	-	-	-	.4	5.7	124.1	-	18
8.0	6.9	6.9	-	-	-	-	-	.2	15.1	34.0	17.1	422.9	-	19
5.4	5.0	4.2	.9	(Z)	(Z)	.6	1.2	-	27.8	12.4	.1	13.8	-	20
.8	.8	(Z)	.5	-	-	-	-	-	10.8	287.5	58.1	32.4	-	21
838.8	671.5	321.5	341.2	11.6	2.3	.7	5.0	11.9	(Z)	18.6	.8	10.9	-	22
733.4	655.9	310.6	337.9	.7	2.1	.2	5.0	1.4	(Z)	.9	.8	1.0	-	23
405.6	400.7	61.6	335.0	.2	1.0	.1	.1	.2	-	.2	(Z)	.1	-	24
87.1	3.5	3.5	-	10.9	.2	.5	-	10.5	(Z)	17.2	-	6.9	-	25
382.3	258.8	152.8	54.9	5.7	18.7	16.5	60.4	45.2	43.7	456.4	153.0	208.7	-	26
7.2	4.6	3.6	1.0	-	.4	.1	.5	30.3	1.3	.8	17.4	7.2	-	27
49.2	21.3	5.9	.3	(Z)	7.3	.1	.1	(Z)	.4	(Z)	3.2	.7	-	28
1.0	.7	.7	(Z)	.1	.3	(Z)	(Z)	.1	(Z)	45.6	.3	.8	-	29
-	-	-	-	-	-	-	-	-	4.3	298.4	-	41.0	-	30
2.7	2.0	.7	.8	(Z)	(Z)	(Z)	1.2	(Z)	.1	37.4	.8	4.9	-	31
21.5	1.2	.8	.4	-	.1	-	(Z)	-	-	(Z)	(Z)	12.8	-	32
20.4	.3	.1	.3	-	-	-	(Z)	-	-	-	-	11.7	-	33
70.2	63.7	33.9	29.3	.1	.2	8.0	22.2	5.0	9.5	11.3	59.6	10.5	-	34
-	-	-	-	-	-	-	-	-	1.9	-	-	2.5	-	35
24.9	24.6	6.1	18.0	.1	-	3.6	.6	5.0	1.7	.3	59.5	7.2	-	36
6.0	5.8	.6	4.7	.1	-	.1	-	3.5	.3	.1	55.9	6.1	-	37
3.2	3.2	3.0	.2	-	-	-	(Z)	-	4.4	7.2	-	.4	-	38
45.3	44.5	13.3	10.1	(Z)	1.1	-	2.9	.4	(Z)	-	(Z)	28.9	-	39
43.1	23.8	14.3	3.6	.7	(Z)	.3	5.5	(Z)	2.4	.3	.2	11.3	-	40
39.3	12.5	7.8	3.4	-	6.0	.2	5.0	.2	4.0	40.8	59.9	69.0	-	41
4.6	.2	.2	-	-	-	-	-	(Z)	(Z)	.6	5.8	24.4	-	42
8.1	1.4	.7	.3	-	6.0	.2	3.2	(Z)	3.2	35.8	45.1	30.2	-	43
514.9	440.1	409.6	29.7	.3	93.0	.4	21.6	728.8	1.8	231.5	2.9	900.1	941.4	44
475.4	401.1	376.3	24.0	.3	92.4	.4	21.5	725.6	1.8	231.0	2.6	892.8	941.4	45
8.7	7.9	6.9	1.0	-	3.7	-	(Z)	624.5	.8	180.6	.4	806.8	941.4	46
466.7	393.2	369.3	23.1	.3	88.7	.4	21.5	101.1	1.0	50.4	2.2	86.0	-	47
382.0	322.7	302.1	19.9	.3	71.7	-	2.4	74.2	(Z)	17.0	1.3	77.7	-	48
8.8	8.3	3.1	5.2	-	-	-	.1	3.2	-	.5	.3	7.3	-	49
52.2	33.5	31.2	1.1	(Z)	(Z)	.7	2.3	(Z)	9.3	133.2	2.1	7.8	-	50
(Z)	(Z)	(Z)	-	-	-	-	-	-	(Z)	81.6	-	-	-	51
1 178.8	1 003.4	776.1	197.9	7.2	19.4	8.2	238.7	12.9	7.5	28.4	151.1	21.5	-	52
589.6	526.6	420.8	94.2	5.3	8.6	.6	156.6	1.7	1.9	3.5	118.7	12.4	-	53
403.6	355.9	295.4	49.2	3.7	5.8	(Z)	126.3	.6	1.8	2.4	.9	.5	-	54
(Z)	(Z)	(Z)	-	-	-	-	-	-	-	-	-	7.2	-	55
107.5	84.8	53.4	23.8	1.0	3.2	.1	14.1	6.6	1.3	1.0	.5	.1	-	56
43.2	30.1	29.9	.1	-	-	-	1.0	2.3	.3	(Z)	(Z)	.2	-	57
4 411.5	3 683.8	2 642.2	965.1	44.2	191.2	21.0	2 441.3	194.3	343.9	1 000.2	131.3	418.3	-	58
66.0	59.8	38.6	21.1	3.2	.1	.5	2.6	.2	10.3	1.3	1.6	.4	-	59
31.7	9.1	7.6	1.2	.3	1.3	(Z)	55.8	.1	(Z)	330.7	.9	4.1	-	60

Table I-7. General Imports-Selected Schedule A Commodity Groupings

Note: See Special Announcement on page XII concerning the exclusion of crude petroleum imports from all country or other geographic area totals beginning with data for November 1973.

(In millions of dollars. Z-Less

Line No.	Commodity description	Total, all areas	Western Hemisphere					Other Western Hemisphere
			Canada	20 Latin American Republics				
				Total	Central American Common Market	Latin American Free Trade Association	Other	
	MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIAL--CONTINUED							
1	PAPER, PAPERBOARD, AND MANUFACTURES THEREOF	1 456.8	1 267.5	19.5	(Z)	19.5	.1	.1
2	PAPER AND PAPERBOARD	1 383.0	1 251.8	8.4	-	8.3	.1	(Z)
3	STANDARD NEWSPRINT PAPER	1 184.8	1 132.6	-	-	-	-	-
4	TEXTILES, EXCL. FIBERS AND APPAREL	1 568.1	41.1	110.0	3.3	102.7	4.0	1.0
5	YARN AND THREAD	261.6	3.9	18.5	.2	18.3	(Z)	(Z)
6	COTTON FABRICS, EXCL. NARROW OR SPECIAL FABRICS--WOVEN	306.8	2.8	38.2	2.5	35.3	.4	.3
7	OTHER WOVEN FABRICS--JUTE, WOOL, SILK, ETC.	601.9	8.5	8.8	(Z)	8.8	(Z)	.4
8	FABRIC WHOLLY OF JUTE--WOVEN	201.6	.2	.1	-	.1	-	.4
9	WOOLEN AND WORSTED FABRICS--WOVEN	38.4	.2	3.2	-	3.2	(Z)	-
10	GLASS, GLASSWARE, POTTERY, AND CHINA	520.7	67.2	12.3	(Z)	12.2	.2	(Z)
11	GEM DIAMONDS	826.6	.4	10.4	-	10.3	.1	.1
12	IRON AND STEEL, INCL. PIG IRON AND FERROALLOYS	3 008.6	253.2	131.6	(Z)	92.0	39.6	.1
13	IRON AND STEEL MILL PRODUCTS	2 769.0	215.9	80.5	(Z)	80.5	(Z)	.1
14	WIRE RODS, BARS (INCL. REINFORCING), STRUCTURALS, AND PILING	761.2	46.1	53.5	(Z)	53.5	-	(Z)
15	UNIVERSALS, PLATES, AND SHEETS	1 327.6	68.6	12.9	-	12.9	-	(Z)
16	TUBES, PIPES, AND FITTINGS	395.6	57.7	10.1	(Z)	10.1	(Z)	(Z)
17	NONFERROUS METALS, EXCL. ORES AND SCRAP	2 449.4	870.7	397.7	2.9	393.6	1.2	4.8
18	PRECIOUS METALS--SILVER AND PLATINUM	455.0	39.2	137.7	2.9	134.8	-	-
19	COPPER AND ALLOYS--BLISTER, REFINED, AND MILL SHAPES	674.6	214.9	218.2	-	218.2	(Z)	(Z)
20	NICKEL AND ALLOYS--PIGS, INGOTS, AND MILL SHAPES	376.1	241.6	1.1	-	-	1.1	-
21	ALUMINUM AND ALLOYS--PRIMARY AND MILL SHAPES	286.5	194.7	.7	(Z)	.7	-	4.8
22	TIN AND ALLOYS--PRIMARY AND MILL SHAPES	198.8	.1	6.6	-	6.6	-	-
23	METAL MANUFACTURES, N.E.S.	1 427.5	265.3	31.9	.4	31.2	.2	.4
24	MACHINERY AND TRANSPORT EQUIPMENT	20 969.6	7 008.7	665.7	1.9	654.7	9.1	21.5
25	MACHINERY	9 909.2	1 872.5	582.1	1.8	571.2	9.0	21.4
26	MACHINERY--NONELECTRIC	5 438.1	1 517.0	140.6	.2	137.1	3.3	1.8
27	POWER GENERATING MACHINERY, INCL. ENGINES--NONELECTRIC	1 473.9	681.8	35.7	(Z)	35.6	.1	(Z)
28	TRACTORS AND AGRICULTURAL MACHINERY	490.8	323.7	1.3	.1	1.3	(Z)	(Z)
29	AGRICULTURAL TYPE TRACTORS, EXCL. PARTS AND ACCESSORIES	107.5	26.3	.1	-	.1	-	-
30	OTHER TRACTORS--CONTRACTORS', TRUCK TRACTORS, ETC.--AND PARTS	-	-	-	-	-	-	-
31	OFFICE MACHINERY AND COMPUTERS	904.6	124.0	72.5	(Z)	70.1	2.5	1.4
32	TYPEWRITERS AND PARTS	154.9	8.0	1.2	-	1.2	-	(Z)
33	METALWORKING MACHINES AND MACHINE TOOLS	187.9	14.0	.3	-	.3	-	-
34	TEXTILE, SEWING, AND SHOE MACHINERY	625.2	16.9	4.7	(Z)	4.7	(Z)	(Z)
35	OTHER MACHINERY--NONELECTRIC	1 755.8	356.5	26.1	.1	25.2	.7	.3
36	MACHINERY, APPARATUS, AND APPLIANCES--ELECTRIC	4 471.1	355.6	441.5	1.6	434.2	5.7	19.6
37	RADIO, TV, AND OTHER TELECOMMUNICATIONS EQUIPMENT	2 057.0	119.4	190.8	1.0	189.3	.5	3.6
38	RADIO RECEIVING SETS	548.3	28.5	15.9	-	15.9	(Z)	-
39	TELEVISION RECEIVING SETS	536.8	1.3	24.1	-	24.0	.1	-
40	TRANSPORT EQUIPMENT	11 060.4	5 136.2	83.6	(Z)	83.5	.1	.1
41	AUTOMOBILES, BUSSES, AND TRUCKS, INCL. SPECIAL PURPOSE VEHICLES	7 090.8	3 243.8	20.2	-	20.2	(Z)	(Z)
42	PASSENGER CARS--NEW	6 479.2	2 762.9	8.2	-	8.2	(Z)	-
43	AUTOMOBILE, BUS, TRUCK, AND SPECIAL PURPOSE VEHICLE PARTS (EXCL. ENGINES, TIRES, AND ELECTRICAL)	2 125.3	1 557.2	35.0	(Z)	35.0	(Z)	(Z)
44	AGRICULTURAL TRACTOR PARTS	184.1	38.5	1.7	-	1.7	-	-
45	MOTORCYCLES, MOTOR SCOOTERS, AND PARTS	609.0	1.0	.9	(Z)	.9	-	(Z)
46	AIRCRAFT AND PARTS (EXCL. TIRES, ENGINES, AND ELECTRICAL)	554.5	240.7	14.3	(Z)	14.3	(Z)	(Z)
47	MISCELLANEOUS MANUFACTURED ARTICLES	8 184.0	449.4	463.6	18.1	412.6	32.9	21.6
48	CLOTHING, EXCL. FOOTWEAR	2 153.9	62.4	177.0	15.7	147.3	14.0	14.4
49	FOOTWEAR--RUBBER, LEATHER, AND OTHER	1 079.2	16.6	120.0	.1	118.1	1.9	.2
50	SCIENTIFIC, MEDICAL, OPTICAL, PHOTOGRAPHIC, MEASURING, AND CONTROLLING INSTRUMENTS	669.8	23.4	5.5	(Z)	5.5	(Z)	.1
51	WATCHES, CLOCKS, AND PARTS	333.6	1.4	1.0	(Z)	.6	.4	(Z)
52	MUSICAL INSTRUMENTS AND PARTS, INCL. PHONOGRAPHS, TAPE RECORDERS, PHONOGRAPH RECORDS, ETC.	943.9	3.2	19.8	.9	18.2	.7	(Z)
53	PRINTED MATTER	229.2	41.9	10.3	.1	10.1	.2	.3
54	TOYS, SPORTING GOODS, AND AMUSEMENT EQUIPMENT	655.1	38.7	40.1	.1	29.4	10.6	2.8
55	ARTWORKS, COLLECTORS' ITEMS, AND ANTIQUES	348.6	19.3	11.0	.3	10.2	.5	1.0
56	COMMODITIES AND TRANSACTIONS NOT CLASSIFIED ACCORDING TO KIND	1 789.8	636.5	171.1	6.4	155.1	9.5	30.1
57	U.S. GOODS RETURNED	1 279.0	529.9	122.8	4.8	110.7	7.3	28.2
58	SHIPMENTS UNDER $251 (ESTIMATED)	368.7	59.3	39.5	1.5	36.3	1.8	1.8

[1] See Special Announcement on page XII concerning the exclusion of November 1973 (and subsequent month's) crude petroleum imports from all country or other geographic area totals.

[2] See the statement regarding "automotive" trade in "Special Announcements" series.

and Commodities, by World Areas: 1973, Cumulative to Date—Continued

than one-half of rounded unit)

Western Europe						Asia								
OECD countries								Other Asia						
Total including "Other OECD"	EEC countries			Other Western Europe	Communist areas in Europe	Communist areas in Asia	Japan	Near East	South Asia	Asia, n.e.c.	Australia and Oceania	Africa	Unidentified countries	Line No.
	Total	Original EEC countries	United Kingdom											
127.8	33.6	20.1	12.2	(Z)	2.4	(Z)	23.4	(Z)	.3	11.1	1.7	2.9	-	1
108.3	17.6	9.0	8.5	(Z)	2.3	(Z)	4.4	(Z)	(Z)	3.4	1.5	2.9	-	2
52.2	-	-	-	-	-	-	-	-	-	-	-	-	-	3
608.2	524.9	395.0	103.3	2.2	12.9	9.9	300.7	33.2	273.9	152.1	2.4	20.6	-	4
197.5	175.5	131.4	35.9	-	(Z)	.3	23.4	3.7	3.1	4.7	1.5	5.0	-	5
69.9	57.6	53.3	4.2	1.3	3.6	6.7	41.0	3.6	45.3	87.4	(Z)	6.9	-	6
181.5	160.3	110.3	40.4	.7	5.8	.5	174.8	5.6	197.1	16.4	.2	1.6	-	7
4.6	1.5	1.1	.4	-	-	-	(Z)	(Z)	195.6	.6	-	(Z)	-	8
22.2	19.3	5.4	13.5	-	.6	(Z)	9.3	(Z)	.1	2.7	(Z)	(Z)	-	9
222.5	191.7	130.7	44.2	1.0	20.1	1.1	168.6	1.3	.3	23.7	2.0	.7	-	10
456.2	454.3	225.3	228.2	-	17.3	(Z)	.4	139.7	23.1	1.5	(Z)	177.6	-	11
1 308.6	1 144.6	956.3	187.6	8.3	18.5	-	1 080.0	.8	10.7	90.8	45.3	60.8	-	12
1 248.6	1 118.6	932.4	185.8	5.2	18.4	-	1 070.2	.8	5.5	90.8	19.2	13.8	-	13
442.7	390.3	313.4	76.8	2.2	7.5	-	189.4	(Z)	2.9	7.5	.1	9.2	-	14
573.8	542.4	487.7	54.7	1.8	7.5	-	594.7	(Z)	(Z)	50.7	14.1	3.4	-	15
87.3	78.2	60.1	17.9	1.1	2.3	-	198.0	.8	2.2	31.5	4.5	.1	-	16
565.9	460.8	237.3	222.4	19.7	104.1	8.0	99.2	1.9	.2	171.7	56.7	148.8	-	17
153.2	147.8	12.0	135.8	-	76.0	-	24.2	-	-	.1	-	24.6	-	18
155.1	136.5	110.8	24.8	7.8	1.4	-	37.3	1.9	.1	.4	2.3	35.9	-	19
89.9	44.7	9.8	35.0	-	10.5	-	-	-	-	-	12.1	20.9	-	20
56.6	42.9	38.1	4.8	4.3	.1	-	5.4	(Z)	-	.4	(Z)	19.5	-	21
5.7	.9	.9	4.8	-	-	7.8	(Z)	-	(Z)	169.7	8.3	.4	-	22
440.4	339.7	250.1	71.0	6.9	12.6	.2	548.9	3.4	8.3	104.7	3.6	.8	-	23
6 997.8	6 103.8	4 631.8	1 367.8	17.6	32.1	.4	4 745.6	18.4	1.9	1 426.6	28.8	4.4	-	24
3 561.8	2 962.0	1 950.6	911.9	16.8	20.6	.4	2 446.3	13.2	1.2	1 346.8	21.9	4.2	-	25
2 760.0	2 314.3	1 478.8	800.8	3.3	16.7	(Z)	883.9	6.7	.9	87.4	16.7	3.1	-	26
635.9	577.9	179.1	396.0	(Z)	.1	-	116.8	.7	(Z)	.6	2.0	(Z)	-	27
126.9	123.3	76.2	44.7	.2	5.6	-	20.3	.3	.1	6.6	3.9	1.8	-	28
65.5	65.5	35.7	29.8	.2	5.6	-	9.8	(Z)	-	-	-	-	-	29
-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
321.8	267.6	202.5	62.8	.7	.1	(Z)	324.0	.9	(Z)	58.2	.8	(Z)	-	31
113.5	100.5	67.0	33.5	.6	.1	(Z)	31.2	-	(Z)	.1	(Z)	-	-	32
142.6	106.9	81.8	24.3	1.2	3.7	(Z)	23.9	.1	.5	1.0	.4	.2	-	33
492.5	400.0	306.3	91.1	.1	3.6	(Z)	96.3	1.9	(Z)	9.1	.1	(Z)	-	34
1 040.3	838.5	632.7	182.6	1.1	3.5	(Z)	302.7	2.7	.2	11.9	9.4	1.0	-	35
801.7	647.7	471.8	111.1	13.5	3.9	.3	1 562.4	6.5	.3	1 259.5	5.2	1.1	-	36
85.7	64.8	41.7	14.0	5.0	1.4	.3	1 081.2	.6	(Z)	608.7	.2	.1	-	37
7.2	6.2	3.0	.3	-	(Z)	(Z)	271.3	.1	-	225.1	-	.1	-	38
.5	.5	.4	.1	-	-	.3	275.7	-	-	234.9	-	-	-	39
3 436.0	3 141.8	2 681.2	455.9	.8	11.5	(Z)	2 299.3	5.3	.7	79.7	7.0	.2	-	40
2 496.3	2 305.9	2 169.2	136.7	(Z)	2.4	-	1 327.9	(Z)	-	.1	(Z)	(Z)	-	41
2 463.9	2 274.1	2 141.2	132.8	(Z)	-	-	1 244.1	-	-	(Z)	(Z)	(Z)	-	42
227.3	204.0	172.4	30.8	.2	.1	-	302.9	.5	.1	1.5	.5	.1	-	43
142.0	141.9	94.9	46.5	-	.1	-	1.8	(Z)	-	-	(Z)	-	-	44
83.7	60.3	28.9	31.3	-	5.8	-	508.5	-	-	9.1	(Z)	(Z)	-	45
259.5	258.7	81.2	177.1	-	.2	-	29.2	4.6	-	.4	5.6	(Z)	-	46
2 902.5	2 088.6	1 563.0	461.6	57.7	59.4	11.2	1 756.4	60.6	36.1	2 345.2	11.5	8.8	-	47
331.8	255.4	201.1	48.9	14.3	16.1	1.6	248.1	31.5	20.1	1 233.7	.6	2.1	-	48
675.0	429.8	408.2	10.2	8.1	18.6	.2	22.6	.2	3.3	213.3	.1	1.0	-	49
265.4	219.7	187.2	28.0	.2	2.6	.1	338.5	2.1	1.7	28.5	1.8	(Z)	-	50
247.4	76.3	63.8	12.4	.1	(Z)	(Z)	56.6	1.1	-	25.9	(Z)	(Z)	-	51
180.6	154.6	63.6	89.9	.1	.8	.1	655.0	.3	.2	83.4	.1	.2	-	52
141.9	125.3	57.4	66.2	.6	.9	(Z)	21.7	2.8	.2	7.1	.8	.5	-	53
205.1	143.1	116.5	24.5	2.7	1.9	.3	137.6	.6	2.5	219.8	2.6	.4	-	54
278.6	228.2	119.0	107.9	.3	3.1	5.6	12.6	5.4	1.8	6.4	1.2	2.3	-	55
571.2	461.1	306.5	136.2	1.9	3.0	.8	99.8	22.7	7.0	145.9	31.3	28.4	40.0	56
367.5	289.4	191.7	86.4	1.6	1.9	.3	61.8	20.1	2.3	90.1	27.7	24.8	-	57
131.8	107.4	69.0	31.8	.3	.9	.4	32.2	2.0	4.0	51.1	2.8	2.7	40.0	58

STATEMENT OF CONGRESSMAN JOHN DINGELL

Mrs. HANSEN. At this point in the hearings we will place in the record a statement by Congressman Dingell who is on the Small Business Committee. We would ask the Department to make comments on his statement.

[The statement and comments follow:]

STATEMENT OF REPRESENTATIVE JOHN D. DINGELL

Madam Chairman, members of the subcommittee. I want to thank you for providing me an opportunity to appear before you today as you consider the requests of the Department of the Interior which would provide funding for immediate implementation of a greatly expanded Outer Continental Shelf leasing program.

During the hearings which I chaired before the Select Committee on Small Business Subcommittee on Activities of Regulatory Agencies, the inability of the Department of the Interior to administer a 1 million acre per year leasing program was demonstrated. The prospect of this Department managing a 10 million acre per year leasing program I find appalling.

Numerous specifics may be cited in support of my conclusion that Interior has demonstrated its inability and incompetence with respect to its existing program. With respect to assuring that the Government has received "fair value" for the tracts it leases, the subcommitee's investigation indicated that the Department of the Interior was incapable of assesing the value of OCS tracts—indeed, the Department of the Interior was incapable of even remotely approximating an estimated value of these tracts. As an example, let us look at a single lease sale, the December 20, 1973, lease sale. In that sale, tract No. 32–6 had a pre-sale evaluation of $38,833 established. The high bid on that tract was $32,232,000. Industry's evaluation was thus 826 times greater than the Department of the Interior's evaluation. Interior would have willingly leased this tract for something in the order of $32,000. Keep in mind the fact that these oil companies are not known for their altruism. On tract 32–83 the pre-sale evaluation was set at $11,899,566 by the Department. The high bid was $211,997,600. That is a difference of over $200 million on a single tract.

A further peculiarity occurs during this lease sale. The pre-sale value of $144,000 is the only pre-sale value which is an even thousand dollar figure. Moreover, this value is the sole figure to appear as a pre-sale value for more than one tract. This figure in fact appears as the pre-sale value for 35 of the 89 tracts which were bid upon. This figure is clearly a "phantom number." Testimony indicated this value was applied in those instances in which either a lower value was indicated by the Interior Department's data or no other estimate was established.

The bidding on some of the tracts on which a $144,000 per-sale evaluation was established is enlightening. On tract 32–84 the high bid was $91,767,700, a bid 637.3 times greater than the $144,000 pre-sale value. On tract 32–77 the high bid of $76,827,600 was 533.5 times greater than the tract's $144,000 pre-sale value.

These examples, it is true, are just that, instances of under-evaluation. But that does not mean the examples are isolated. Let us look at Interior's aggregate performance on this same lease sale. The cumulative pre-sale evaluation of the 89 tracts bid upon was $146,051,158. The aggregate of the high bids on these 89 tracts was $1,491,617,118. Thus the aggregate underevaluation of these tracts was in excess of $1 billion, 300 million ($1,345,565,930) and the total of the high bids was 1,100 percent higher than the aggregate of the pre-sale values.

The cumulative effect of underevaluation is even more startling when the examination is confined to the 35 tracts on which the $144,000 pre-sale value was placed. On those tracts the disparity between the high bids and pre-sale values was roughly six times worse than the underevaluation of all tracts—that is, the disparity between the high bids and the $144,000 pre-sale estimate on these tracts was approximately 6,000 percent.

A further problem results from the prevalence of single bids on some tracts. Interior claims that the disparity between high bids and its presale evaluations is not so serious in view of the fact that competition allegedly keeps the bids high.

Perhaps Interior should talk to the Federal Trade Commission or the Justice Department or even some committees here in the Congress before relying too heavily on competition in the oil industry.

The existence of large numbers of single bids on tracts effectively rebuts the argument that competition mitigates the need for accurate presale evaluation. This is particularly true of the fact that most single bids are accepted. For example, on the December sale, 19 out of 21 single bids were accepted.

In those instances in which single bids were received on a tract, some even more interesting things happen. In the June 19, 1972, OCS lease sale, tract No. 419 had a presale value of $1,017,504. The high bid of $515,000 was accepted by Interior despite the fact that it was a single bid. Yet Interior claims it relies on competition as justification for not improving its evaluation procedures.

Mr. Chairman, I do not believe it is necessary to belabor the point further to establish the fact that Interior has demonstrated its incompetence and inability to administer a modest leasing program of 1 million acres per year. Before the Congress acquiesces in allowing such a grandiose expansion of the leasing program as that proposed by Interior, we must receive proof, not assurances, but hard demonstration, that Interior can administer such an expanded program. Such proof must clearly include a demonstration of present ability to administer its present programs.

Related to Interior's incompetence in establishing reliable presale evaluations is the question of the agency's determination to remove the obstacles to accurate tract evaluation. Specifically, the Department claims its inability to prepare accurate evaluations is not related to incompetent personnel, but rather, to a scandalous lack of data. The solution to this latter problem and thereby the possible solution to the related problems of which the lack of data is the alleged root cause, has been within Interior's immediate grasp. However, dereliction and lack of any real determination to correct its own inadequacies led to the stifling of any attempts to correct the problem. Since 1971 Interior has had draft regulations in existence which would have provided the Department with the data necessary to make more accurate presale evaluations. It was only after my subcommittee pointed out the fact that these regulations had stagnated within Interior for 3 years that the Department moved toward enactment of these regulations. This subcommittee might pursue the question of what changes have been made to guarantee that similar delays do not cripple administration of the expanded lease program.

Finally, this subcommittee must demand proof that expanded leasing will take into account the availability of drilling rigs, pipe, equipment, and skilled manpower. This subcommittee must demand proof that an expanded leasing program will not—

(1) Deplete the capital resources of the industry;

(2) Result in reduced high bids to capital depletion; or

(3) Result in classification of more leases as "producible, shut-in" because of the industrywide shortage of production equipment.

The Congress cannot permit the industry to obtain valuable tracts for a fraction of their value only to have the companies sit on these leases without producing from them. The hearings before my subcommittee demonstrated a cavalier approach to classification of leases as "producible, shut-in." The poor supervision of existing leases, the literal rubberstamping of oil company requests for extensions, and the lack of inspection of production operations gives me great concern that the companies which obtain these leases will not produce from them within the immediate future.

This raises the question whether the expanded leasing program is nothing more than an attempt to circumvent congressional proposals to create a Federal Oil and Gas Corporation whose purpose it would be to assure energy production from these same leases.

The reason I have called for proof that such factors as I have outlined will be considered results from the following with respect to the question of the availability of drilling equipment, pipe, and so forth:

Mr. DINGELL. Are you going to have some kind of backlog of undrilled leases?

Mr. VOGELY. The important point, Congressman Dingell, is that we do not believe drilling capacity is fixed. We think drilling capacity can be very greatly expanded, and in the national interest should be expanded. We do not think that these acres will be out there undrilled.

Mr. DINGELL. What assurances do you have on that point?

Mr. VOGELY. None, sir.

Another which I will only briefly touch upon is the extent to which Interior's blind reliance upon bonus bidding and its permissive acquiescence in the collusion of joint venture bidding has contributed to the anticompetitive structure of the industry to the detriment of energy consumers. Regulations preventing the abuses in joint venture bidding we have witnessed in the past must be implemented and enforced before any expanded leasing is permitted.

Finally, what relationship exists between our energy needs and the 10 million acre figure? My subcommittee has been unable to uncover any analysis that is not an after-the-fact justification of the 10 million acre figure, a figure which was apparently established without any predecision analysis.

The several matters to which I have alluded call into serious question the wisdom of Interior's plans to lease 10 million acres per year and I believe this plan must be evaluated in the cold light of day by other than Interior Department personnel.

Interior must prove that it has rectified its past inadequacies before the Congress can authorize it to undertake a program which, if administered in the manner of past Interior lease programs, will provide little or no immediate relief to our Nation's energy shortage but carries significant environmental dangers and grave anticompetitive potential.

DEPARTMENT'S RESPONSE TO CONGRESSMAN DINGELL

On the figure of 10 million acres per year, the basic substance of the accelerated leasing program has to be placed in proper perspective. At the close of 1973, this country faced an Arab oil embargo and extraordinary price increases in the world oil market. Given our obvious vulnerability to the concerted efforts of the OPEC oil cartel, the President made clear his interest in achieving maximum domestic production of oil and gas as soon as possible.

With no expectation of major new finds onshore in the lower 48 States, increased domestic production meant looking to the OCS and the Arctic. To get maximum production from the OCS over the next 10 to 15 years, we would have to offer an opportunity for development of the best prospects as soon as possible.

Leasing minimal acreage each year over an extended period of time certainly delays development and increases the probability that the best prospects will never be found. On the other hand, providing an opportunity for development in each major region of the OCS as soon as possible increases the probability that the best prospects will be found and production brought on line soon enough to have a substantial impact on our reliance on imports over the next 5 to 15 years.

For these reasons, the Department decided to move ahead faster on opening up the OCS for development. Ten million acres was not selected as the single most appropriate rate of leasing, but rather as a target to generate momentum for the accelerated leasing effort. Furthermore, the Department is not committed to the 10 million acre target or any other particular target of acreage to be leased beyond 1975.

As for industry's capacity to handle the accelerated leasing program, we do know that the capacity to develop the OCS and process and distribute its oil and gas will never be forthcoming if opportunities for development are not provided. If the pace of the leasing program does get out ahead of industry interest and capacity, we would expect competition to lag in the lease sales and bids to fall below acceptable levels, in which case leases will not be sold.

This last point leads to the issue of the Department's ability to insure that fair market value is received for any and all OCS leases. Beginning with OCS sale No. 33 last March, the Department put in use a new tract and bid evaluation system.

A range of values, based upon a distribution of reserve estimates and projected oil and gas prices, is estimated for each tract to be offered. The mean or average value is used as the standard against which bids are evaluated. In no case is a value of less than $25 per acre—the $144,000 figure to which Congressman Dingell referred—set for any tract. This is to provide some protection against lease acquisition by parties that have neither the intent nor the resources to work the lease.

All high bids greater than 83.3 percent of the estimated mean value of a given tract are accepted. The percentage is used because any tracts not sold really cannot be reoffered for another 2 years—it takes that long to go through the entire process of preparing a sale. Using a 10-percent discount rate, a dollar of bonus money received 2 years hence would only be worth 83.2 cents today.

High bids of less than 83.3 percent of estimated mean value may be accepted

only if bidding on the tract was highly competitive and all bids clustered around the high bid figure. Such high bids would never be accepted if there were only one or two bids received on the tract.

As indicated below, substantial numbers of high bids have been rejected since the new evaluation system was initiated.

	Number of tracts receiving bids	Number of tracts leased	High bids rejected
OCS Sale No. 33	114	91	23
OCS Sale No. 34	123	102	21
OCS Sale No. 35	49	19	30

The new evaluation system can play an important role in helping the Department to meet its responsibility for receiving fair market value for OCS leases. The most important aid in meeting this responsibility, however, is the competitive auction.

Bidders enter a sale with a best estimate of tract values. They also have expectations regarding the competition they will have to face. The more competition that is expected, the greater is their incentive to bid the full value of what they think a tract is worth.

To help foster competition, the Department will publish before the next sale a regulation banning joint bidding among oil companies who produce more than a specified amount in barrels of oil and natural gas liquids per year. This action is being taken because the Department feels that:

Major oil companies have the resources, bidding alone or jointly with nonmajors, to bid on essentially the same number of tracts regardless of whether or not they may bid jointly among themselves.

In searching for various bidding consortia, an informal information network may emerge particularly for the majors. Information can be gained on the prospective competition for particular tracts, allowing companies to devise bidding strategies to acquire tracts with minimum competition, and lower bids.

In addition, the Department will publish before the next sale new regulations on data disclosure. Included will be a provision for public disclosure within 1 year of collection for geologic data collected by leaseholders. This will help to undercut the informaiton advantages held by those companies who have drilled previously in an area being opened for a lease sale.

Finally, a royalty bidding experiment was being held in OCS sale No. 36 to test the proposition that independents are placed at a competitive disadvantage in the bonus bidding system because of the high front-end costs. The results of the experiment are being reviewed and other alternative bidding systems are also being assessed. A decision on the next steps to be taken on this issue should be reached before the next sale.

NUMBER OF DRILLING RIGS

Mrs. HANSEN. An industry spokesman has made this statement. He said the oil industry is going to need at least 500 more rigs than now exist by 1985. We just cannot build them. This was published in the Wall Street Journal on May 10.

Mr. CARTER. I don't know for sure, one, whether they will need 500 by 1985; or two, whether they can or they cannot build them. I cannot believe, though, that our industrial capacity is so inflexible that given the proper incentive that within 10 years it is not possible to build them. I think that would mean about another 150. I think worldwide there are now available some 315 rigs.

Madam Chairman, I could put in the record a fairly comprehensive record we have prepared on the rig availability.

Mrs. HANSEN. Would you please.

Mr. CARTER. Yes.

[The information follows:]

R.H. Lawton
5/27/74

Offshore Drilling Rig Situation

U.S. Offshore Mobile Drilling Rig Activity

Since April 1972 there has been little change in the number of mobile rigs actively working in U.S. coastal areas, including both state and OCS waters. The major change in activity is a shift of areas being explored. In April 1972 all 55 active mobile drilling rigs were operating in Louisiana coastal waters.

As shown in Table 1, 58 rigs were operating in U.S. waters during April 1974. The number of rigs drilling off Louisiana has declined from 54 just six months ago to 39 in April. Greater interest is now concentrated in the Texas offshore area where 17 mobile rigs are now working, compared to 6 only six months ago and none working in April 1972. There are two drillships classified as operating off the Pacific coast; however, these rigs are involved in drilling far offshore on mineral investigation contracts and should not be considered in the actual oil and gas exploration count. Offshore Alaska has no mobile rig activity.

Table 1

OCS Mobile Drilling Rig Activity

Location	April 1974		October 1973		April 1973		April 1972	
	Active	Idle	Active	Idle	Active	Idle	Active	Idle
Gulf of Mexico	56	12	60	7	63	5	55	7
Louisiana	(39)	(10)	(54)	(6)	(60)	(4)	--	--
Texas	(17)	(2)	(6)	(1)	(3)	(1)	--	--
Pacific Coast	2	7	4	4	0	6	0	8
Total	58	19	64	11	63	11	55	15

For the two year period since April 1972 the actual number of rigs considered to be available for drilling in U.S. waters has increased by seven to 77 mobile units. Of this total, 19 are presently classified as idle -- ten off Louisiana, two off Texas and seven off the Pacific coast. Idle rigs include those available for contract, moving between areas or undergoing major repair.

Of the increased number of rigs available, only one is known to have been returned to U.S. waters from foreign operations. This rig was moved from the North Sea to drill for a major company in the Gulf of Mexico. One more rig is tentatively scheduled to be returned to U.S. waters from the North Sea. It is an older rig not necessarily designed for North Sea conditions -- eventhough it drilled the Ekofish discovery off Norway and has been active since. The owner is negotiating to replace the unit and return it to calmer waters in the Gulf of Mexico.

Foreign Offshore Mobile Drilling Rig Activity

Table 2 shows an increase of about 36 percent in active foreign drilling during the past two years. The most noticeable change in drilling activity is the shift to the North Sea, the Middle East and Southeast Asia. As can be seen the North Sea drilling has more than doubled in the past two years, and has increased by nearly 30 percent in the past six months.

The largest increase in drilling is in the Middle East where the active rig count jumped from one rig in 1972 to 30 rigs in April 1974. Generally, drilling activity in other foreign areas has remained fairly constant except in the Caribbean where rig numbers have declined from eleven to one over the past two years.

Table 2

Foreign Mobile Drilling Rig Activity

Location	April 1974		October 1973		April 1973		April 1972	
	Active	Idle	Active	Idle	Active	Idle	Active	Idle
Africa	18	1	15	1	17	1	16	3
Australia	7	0	7	0	6	0	5	0
Canada	3	7	10	3	4	7	3	7
Caribbean	1	0	2	0	3	1	11	2
Celtic Sea	2	0	0	0	0	0	0	0
Japan	2	0	2	0	2	0	3	0
Mediterranean	7	1	9	2	13	0	9	1
Mexico	3	0	3	0	3	0	0	0
Middle East	30	1	25	2	18	6	1	1
North Sea	37	2	29	4	20	1	16	2
South America	20	5	17	3	16	5	20	2
Southeast Asia	24	2	20	3	20	1	16	4
Total	154	19	139	18	122	22	110	22

Mobile Rigs Under Construction Worldwide

As shown in Table 3, 134 mobile drilling rigs are under construction throughout the world as of April 1974. Of these rigs, 16 are drillships and 75 are semisubmersible units, all designed for rigorous region operations such as in the North Sea and off eastern Canada. These are the types of units required for deepwater drilling beyond 200 meters, along the northern Atlantic and in weather and water conditions encountered in in the Gulf of Alaska.

The construction figures include not only new units but conversion of existing ships to drillships and modification of drilling rigs to operate in deeper water.

Of the total number of rigs listed, 50 are being constructed in U.S. shipyards. Asian shipyards are building 22 units; otherwise, nearly all of the remaining foreign rig construction is located in European facilities. Table 3 also shows that of the rigs now under construction 58 units (20 in U.S. shipyards) are scheduled for completion in the remaining months of 1974; 46 are expected to be completed during 1975; and the remaining 30 rigs are to be completed in 1976 or later. At least 11 of the 20 U.S. units to be completed this year are presently contracted for foreign waters. Work areas for the other nine rigs have not been announced and presumably they could remain in U.S. waters.

Table 3

Mobile Rigs Under Construction as of April 1974

Rig Type	Total Number	Completion Rate 1974	1975	1976 or later
Semisubmersibles				
U.S. shipyards	26	11	9	6
Foreign shipyards	49	21	13	15
Total	75	32	22	21
Jackup				
U.S. shipyards	18	6	6	6
Foreign shipyards	25	11	12	2
Total	43	17	18	8
Drillships				
U.S. shipyards	6	3	3	0
Foreign shipyards	10	6	3	1
Total	16	9	6	1
Total Rigs				
U.S. shipyards	50	20	18	12
Foreign shipyards	84	38	28	18
Total	134	58	46	30
% in U.S. shipyards	(37)	(34)	(39)	(40)

Worldwide Rig Availability

New Construction

Contractors estimate that the current worldwide mobile drilling rig construction capacity (excluding some conversions) is about 50 rigs per year. More shipyards must be built or converted before the output can be increased appreciably. U.S. shipyards capable of building mobile rigs are full with 50 rigs under construction and there is now a minimum wait of one year before new contracts will be accepted.

Construction of mobile offshore drilling rigs requires a minimum of 18 months to two years for completion, depending on type. Thus, with the backlog of orders a contractor must wait at least 30 months for delivery from the time the contract is signed. All new contracts now accepted are for 1977 delivery. Therefore, under existing conditions, it can be anticipated that about 300 rigs will be available worldwide after this year, with the number increasing to slightly over 400 by the end of 1976.

With proper incentives -- such as a firm accelerated OCS lease program -- additional shipyards could be converted to build drilling rigs (especially now that demand for tanker construction has declined). Conversion would take 15 months to two years, but this will only take place if there is evidence that the long-term demand for rigs will continue. Rig demand will be dictated by the worldwide exploration programs of the oil companies eventhough most rigs are owned by independent contractors. Normally, the oil companies contract the rigs for a specific term which historically has been two years but now is being increased to four or five years in many instances. Some oil companies reportedly are now considering ten year contracts to obtain a lower rental rate. Because of the high cost of rigs and the uncertainty of offshore exploration,

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rig owners seldom place an order for a new rig unless they have a work contract. This is why it is possible to know tentatively where a rig will work before it is completed.

Rig availability By Type

The operating capabilities of drilling rigs is another factor that will govern the exploration schedules for an accelerated OCS leasing program. All current domestic offshore oil and gas drilling is confined to the Gulf of Mexico. Many of the operating rigs in this area will not be capable of working in most of the new regions included in the accelerated program. As of April 1974, 31 rigs available in U.S. waters are limited to drilling in water depths of less than 100 feet and of this number 14 cannot operate in waters over 50 feet.

An NPC interim report on rig availability shows that by the end of 1974 an expected 84 rigs will be available for U.S. offshore drilling. Of this number, 52 will be capable of operating in water depths over 100 feet, but only 21 can work in water over 300 feet. The report forecasts that by the end of 1976 the total U.S. rig count could reach 119 units if all rigs now in U.S. waters will remain and all units under construction and not now committed overseas can be retained in the U.S.

Table 4 provides a breakdown of the NPC data through 1976 for mobile rig count and operating capacity for rigs projected to be available in the U.S. and worldwide. It should be recognized that the NPC report does not project any rigs returning from overseas. With proper incentives, some rigs would be returned to drill on the OCS. As indicated in Table 4

Table 4

Forecast of Mobile Offshore Rig Availability

By Operating Depths

(Units at Year End)

Operating Water Depths	U.S. Offshore				Foreign Offshore			
	1973	1974	1975	1976	1973	1974	1975	1976
Less than 100 feet	31	32	32	32	38	37	37	37
100 feet to 300 feet	27	31	36	46	73	86	96	97
300 feet to 600 feet	7	11	15	14	61	61	61	60
over 600 feet	8	10	17	27	19	47	65	92
Total	73	84	100	119	191	231	259	286
Percent of Worldwide	(36)	(35)	(35)	(36)				

Source: National Petroleum Council

most foreign rigs have the deepwater capabilities necessary for new frontier areas to be leased under the accelerated OCS leasing schedule.

Disincentive for Returning rigs to U.S. Waters.

A general consensus among rig owners and oil companies is that tax laws are not favorable for moving some drilling units now located overseas to the U.S. Instead, some oil companies indicate that, if OCS leasing is expanded, they will attempt to hold new rigs built in the U.S. for drilling on the OCS rather than return overseas rigs.

Drilling contractors indicate the greatest disincentive for bringing some rigs back into U.S. waters is found in U.S. Internal Revenue Code Section 956 (Upstream Dividend Provision) passed in 1962. This law is complex and legal opinions vary as to its intent. There has been no known test of the law as it applies to drilling rigs. Tax lawyers for the drilling companies claim the problem arises where a drilling rig owned by a foreign subsidiary of a U.S. company is returned to drill in U.S. waters. Basically the tax law provides that, under certain circumstances, the U.S. shareholders of a foreign corporation are deemed to have received a dividend from the foreign corporation to the extent it has invested its earnings in certain types of U.S. property, providing that such investment exists at the end of the fiscal year of the foreign corporation. Therefore, a drilling rig registered to a U.S. - owned foreign corporation would constitute an investment in U.S. property or a constructive dividend. The amount of the deemed dividend is measured by the U.S. tax basis of the property at the end of the first fiscal year in which the investment exists, but is limited to the actual accumulated earnings of the foreign corporation which would otherwise be available for distribution as a dividend.

In effect, this law as now written could tax U.S. owners of foreign registered drilling rigs at the rate of 48 percent (U.S. corporate tax rate) of the adjusted value of the equipment. With the costs of deepwater mobile rigs ranging from $25 million to over $60 million, owners have expressed a reluctance to move foreign registered rigs to U.S. waters until this tax law is changed (industry representatives have submitted a proposed amendment to the Ways and Means Committee). However, they also indicated that they could move their U.S. registered rigs now working overseas to the OCS if the oil companies the rigs are contracted to so desire.

The actual number of drilling rigs under foreign registery that would be subject to the tax law if returned to the U.S. is uncertain. Of the 250 rigs working or available worldwide, about 85 percent are wholly or partially owned by U.S. companies and it is estimated that between 35 to 40 percent of the U.S. owned rigs are of foreign registery; thus, possibly 75 to 85 drilling rigs would fall under this tax law. In the future, the number of rigs built in U.S. shipyards but registered abroad will decline because drilling units constructed under the Title 11 Mortgage Guarantee Program, administered by the Department of Commerce, are required to be registered in the U.S. To date 13 deepwater semi-submersible rigs have been completed under this program and 8 more are presently under construction.

Expected Rig Availability for OCS Drilling

During 1971 and 1972, scheduled wildcat OCS leasing was delayed for environmental reasons. This caused a shift of oil company interest to

foreign offshore areas where high potential leases were available and as a result, 13 mobile drilling rigs were moved to foreign waters -- primarily the North Sea. The availability of leases and the success of foreign drilling have caused North Sea operations to more than double in the past year (as shown in Table 2 and discussed under foreign rig activity).

The resumption of leasing in the Gulf of Mexico in late 1972 provided sufficient quality tracts to encourage exploration, thus seven rigs (a 10 percent increase) have been added to OCS drilling. One unit has already returned from the North Sea and another may follow soon.

Industry representative indicate that with a dependable, accelerated leasing program -- including attractive prospects in new frontier areas -- they will either keep newly constructed rigs here or return U.S. registered rigs from overseas. It is their best guess, based upon historical patterns of rig movements to better prospects, that 10 percent or more of the rigs estimated for foreign operations could be available for OCS drilling. Moreover, favorable treaty agreements could encourage foreign country owners to move rigs to the U.S. and possibly stimulate foreign rig construction for use on the OCS. Therefore, in response to an accelerated leasing schedule, a reasonable estimate of the number of foreign operating rigs that would be available for OCS drilling would be 10 percent of those shown in Table 4. Probably the most optimistic case would be to divert 25 percent of the rigs to U.S. operations. The 10 percent figure nearly could be achieved by retaining for OCS drilling those U.S. constructed rigs to be completed in the remainder of 1974 and 1975 which are now contracted for foreign use.

If 10 percent of the rigs projected for foreign service were made available for U.S. drilling, it would increase the U.S. rig count by 26 (or 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.

As shown in Table 4, over 85 percent of the foreign operating rigs are capable of deepwater drilling and most are of the type required for drilling in the Atlantic and off California. Many of the units are considered acceptable for Gulf of Alaska drilling under most weather conditions.

Rig Productivity

Over the near term the availability of mobile drilling rigs will have a direct impact on the rate of development of tracts under an accelerated OCS lease schedule. One possible method to offset the anticipated shortage of drilling units, is to modify exploration practices, especially in the new frontier areas. The unitization of several untested tracts situated on a large geological structure may significantly reduce the total number of exploratory wells necessary to evaluate the prospect. Concomitantly, the drilling of more expendable tests (not intended as productive wells) can greatly increase the number of wells drilled per year per rig.

The Gulf of Mexico OCS is the only region where sufficient leasing and drilling have taken place to allow examination of the effectiveness of exploration drilling. A National Petroleum Council study of oil and gas exploration covering 5.9 million acres leased in the Gulf between 1954-1970 indicated that each exploratory well drilled evaluated an average of 2000 acres. By the end of 1970 only 550,000 acres of the total

amount leased were not considered to be evaluated. The average tract size for all lands leased was slightly under 4500 acres (a full size tract off Louisiana is 5000 acres). Therefore, 2.4 wells was the average number necessary to effectively test a tract.

The acreage evaluated by each exploratory well can vary significantly, depending on the knowledge of the area, type of geological formation and structure and position of he lease grid on the structure. The geological configuration in the Gulf of Mexico probably is among the most complex that will be found on the OCS because of the large percentage of piercement salt dome prospects. In one instance, 15 wells were drilled on a salt dome structure located within one tract in an effort to delineate the productive area. Thus, the worst case for tract evaluation in the Gulf area would be where a salt dome centered inside a 5000 acre tract would require at least ten wells for full geological evaluation. In this case one well would evaluate 500 acres.

The best case for geological evaluation can be made where four 5000 acre tracts are located on a large anticlinal structure and one well is drilled near the common corners of the blocks. For exploratory purposes this one well would evaluate 20,000 acres. Present geological indications are that such very large anticlines will be found in the Atlantic, the Gulf of Alaska and possibly off Southern California. It is the opinion of some industry representatives that in areas where large structures are identifiable and the geology is not complex, three to four wells per structure would be adequate to determine the productive potential of the prospect.

A major oil company study of the impact of unitization in new frontier areas prior to exploratory drilling indicates savings in the

number of wells required and rig utilization for both potentially productive and dry tracts. Data show that unitization of a hypothetical ten-tract structure where eight tracts indicate production would reduce the number of wells necessary to evaluate the productive potential by about 40 percent (15 wells for unitized tracts vs 24 wells for nonunitized tracts) and a 40 percent savings in rig years of operation. Anticipated total time for the exploratory drilling phase would be reduced to two years from four years (a 50 percent saving). If all ten unitized tracts were determined to be dry, the savings in exploratory wells and rig time for drilling would be reduced by one-third (10 wells for unitized tracts vs 15 wells for nonunitized tracts). Estimated total time for the exploration phase would be reduced to 1.5 years instead of 2.5 years.

Based upon the study data, with unitization, an average of .75 wells per tract per year would be drilled for the productive structure, and for the dry structure, the average would be .67 wells per tract per year or a combined average of about .7 wells per tract per year. Therefore, with a unitized program, each well could adequately evaluate as much as 5000 to 8000 acres, depending on the type of structure and geology involved. Where commercial production is assured, some additional drilling with mobile equipment should be expected before a fixed drilling platform would be set and development drilling started.

The number of wells each rig can drill per year will change for each area and for diverse geological conditions. The experience in the Gulf of Mexico has been that a mobile rig can average about 100,000 feet of hole per year. Assuming an 80 percent utilization factor each rig should average eight to ten wells per year. Estimates within

industry are that the early rate of drilling in new frontier areas would be nearer the eight wells per year rate because of the limited knowledge regarding structure, stratigraphy and formation pressures.

In new frontier areas where available data will be limited to geophysical information, the drilling of expendable exploratory wells is the most likely practice that will be initially adopted. This is the practice of drilling the well for information purposes with no intention of producing the well. Testing is held to a minimum and after logging, the well is plugged off and the rig is moved to a new location. This method of drilling has been used frequently in the Gulf of Mexico and as high as 16 wells per year have been drilled with a single rig.

Until more information on the new frontier areas can be obtained, the rate of exploration and the impact of drilling rig availability can only be assumed using the history of the Gulf of Mexico. Table 5 offers an example of possible acreage evaluation during 1976 with various estimates of rig availability and exploration practices under Gulf of Mexico geological conditions. The range of acreage evaluated, under the assumptions set forth in Table 5, would be from 1.8 million acres for nonunitized lands (based upon historical drilling practices) to 11.6 million acres (assuming unitization and expendable exploratory wells). These conditions would encompass the entire Gulf of Mexico -- including beyond 200 meters, MAFLA and South Texas.

In new frontier areas, as shown in Table 6, the range of acreage evaluated by exploratory drilling could be from 3.6 million nonunitized acres to 15.9 million acres where unitized. It is assumed that initially

all wells drilled in new frontier areas would be expendible exploratory tests with each rig drilling 14 wells annually except for the Gulf of Alaska where the rate would be reduced to 10 wells per year because of adverse weather conditions.

Table 7 offers a possible example of acreage amounts to be evaluated during 1976 under an accelerated leasing schedule where it is assumed that 25 percent of the exploratory drilling would take place in the Gulf of Mexico and 75 percent would be in new frontier areas. As shown, the acreage evaluated could range from a low of 3.2 million acres for nonunitized tracts to a high of 14.9 million acres for unitized tracts.

A more reasonable volume of acreage evaluated under Table 7 conditions would likely fall within the range of 8.5 to 11.4 million acres because existing leases in the Gulf of Mexico will not be subject to compulsory unitization. By the end of 1975 about 2.5 to 3.0 million acres leased in the Gulf of Mexico between 1970 and the end of 1974 will be untested and operators probably will continue to drill on these leases into 1976.

The examples presented in Tables 5,6 and 7 are represent potential opportunities for evaluating OCS leases contingent upon the availability of mobile drilling rigs and other equipment. It is not possible at this time to predict how many drilling rigs located worldwide will be available for future OCS drilling. However, because many of the major oil companies expected to participate in future OCS leasing also are international oil companies, it is reasonable to anticipate that they will return rigs for U.S. exploration if accelerated leasing of the OCS provides more and better domestic prospects.

Table 5

Acreage Evaluation During 1976

Exploration Drilling Gulf of Mexico Geological Conditions[1]

(Millions of Acres)

		Acres Explored Annually			
		Unitized		Nonunitized	
Rig Availability[2]	No. of Rigs	Low[6]	High[7]	Low[8]	High[9]
Most Optimistic[3]	165	7.4	11.6	3.0	4.6
Best Estimate[4]	126	5.7	8.8	2.3	3.5
Minimum Case[5]	100	4.5	7.0	1.8	2.8

1/ Based upon historical data for leasing 1954-1970; all of Gulf of Mexico -- including beyond 200 meters, MAFLA and south Texas.

2/ Based on NPC projections shown in Table 4.

3/ Table 4 U.S. offshore rig availability at end of 1975, plus 25 percent of foreign rigs returned to U.S. waters.

4/ Table 4 U.S. offshore rig availability at end of 1975, plus 10 percent of foreign rigs returned to U.S. waters.

5/ Table 4 U.S. offshore rig availability at end of 1975, with no return of foreign rigs to U.S.

6/ Assumes mandatory unitization prior to drilling; 9 wells per rig annually with each well evaluating 5000 acres.

7/ Assumes mandatory unitization prior to drilling; 14 expendable wells per rig annually with each well evaluating 5000 acres.

8/ Assumes no unitization prior to drilling; 9 wells per rig annually with each well evaluating 2000 acres.

9/ Assumes no unitization prior to drilling; 14 expendable wells per rig annually with each well evaluating 2000 acres.

Table 6

Acreage Evaluation During 1976

Exploration Drilling Only in New Frontier Areas[1/]

(Millions of Acres)

Rig Availability[2/]	No. of Rigs	Acres Explored Annually			
		Unitized		Nonunitized	
		Low[6/]	High[7/]	Low[8/]	High[9/]
Most Optimistic[3/]	165	9.9	15.9	6.0	9.9
Best Estimate[4/]	126	7.6	12.1	4.5	7.6
Minimum Case[5/]	100	6.0	9.6	3.6	6.0

1/ Assumes large anticlinal structures will be found in the Atlantic, Gulf of Alaska and Southern California and that initially expendable exploratory wells will be drilled; 50 percent of the drilling will be in the Gulf of Alaska & 50 percent in the Atlantic and Southern California.

2/ Based on NPC projections shown in Table 4.

3/ Table 4 U.S. offshore rig availability at end of 1975, plus 25 percent of foreign rigs returned to U.S. waters.

4/ Table 4 U.S. offshore rig availability at end of 1975, plus 10 percent of foreign rigs returned to U.S. waters.

5/ Table 4 U.S. offshore rig availability at end of 1975, with no return of foreign rigs to U.S.

6/ Assumes mandatory unitization prior to drilling; all wells are expendable exploratory tests, 14 wells per rig annually in all frontier areas except Gulf of Alaska where rate is 10 wells per rig annually (30 percent decrease in no. of wells drilled due to weather conditions) with each well evaluating 5000 acres.

7/ Assumes mandatory unitization prior to drilling; all wells are expendable exploratory tests -- 14 wells per rig annually except in Gulf of Alaska where rate is 10 wells per rig annually with each well evaluating 8000 acres.

8/ Assumes no unitization prior to drilling; all wells are expendable exploratory tests -- 14 wells per rig annually except in Gulf of Alaska where rate is 10 wells per rig annually with each well evaluating 3000 acres.

9/ Assumes no unitization prior to drilling; all wells are expendable exploratory tests -- 14 wells per rig annually except in Gulf of Alaska where rate is 10 wells per rig annually with each well evaluating 5000 acres.

Table 7

Expected Acreage Evaluation During 1976

Exploration Drilling in Gulf of Mexico and New Frontier Areas[1]

(Millions of Acres)

75 percent of drilling in new frontier areas

25 percent of drilling in Gulf of Mexico

		Acres Explored Annually			
		Unitized		Nonunitized	
Rig Availability[2]	No. of Rigs	Low[6]	High[7]	Low[8]	High[9]
Most Optimistic[3]	165	8.5	14.9	5.2	8.5
Best Estimate[4]	126	6.7	11.4	4.0	6.7
Minimum Case[5]	100	5.3	9.1	3.2	5.3

1/ Assumes 25 percent of exploration as shown in Table 5 and 75 percent in new frontier areas as in Table 6 (50 percent of in Gulf of Alaska & 50 percent in the Atlantic and Southern California)

2/ Based on NPC projections shown in Table 4.

3/ Table 4 U.S. offshore rig availability at end of 1975, plus 25 percent of foreign rigs returned to U.S. waters.

4/ Table 4 U.S. offshore rig availability at end of 1975, plus 10 percent of foreign rigs returned to U.S. waters.

5/ Table 4 U.S. offshore rig availability at end of 1975, with no return of foreign rigs to U.S.

6/ Assumes mandatory unitization prior to drilling; Gulf of Mexico acreage (25 percent of total) explored at 9 wells per rig annually with each well evaluating 5000 acres; new frontier areas (75 percent of total) all expendable exploratory wells -- 50 percent Gulf of Alaska

at 10 wells per rig annually evaluating 5000 acres per well and 50 percent other new frontier areas at 14 wells per rig annually evaluating 5000 acres per well.

7/ Assumes mandatory unitization prior to drilling; Gulf of Mexico (25 percent of total) at 14 expendable wells per rig annually evaluating 5000 acres each well; new frontier areas (75 percent of total) all expendable exploratory wells -- 50 percent Gulf of Alaska at 10 wells per rig annually with each well evaluating 8000 acres and 50 percent other new frontier areas at 14 wells per rig annually with each well evaluating 8000 acres.

8/ Assumes no unitization prior to drilling; Gulf of Mexico (25 percent of total) at 9 wells per rig annually with each well evaluating 2000 acres; new frontier areas (75 percent of total) all expendable exploratory wells -- 50 percent Gulf of Alaska at 10 wells per rig annually with each well evaluating 3000 acres and 50 percent other new frontier areas at 14 wells per rig annually with each well evaluating 3000 acres.

9/ Assumes no unitization prior to drilling; Gulf of Mexico (25 percent of total) at 14 wells per rig annually with each well evaluating 2000 acres; new frontier areas (75 percent of total) all expendable exploratory wells -- 50 percent Gulf of Alaska at 10 wells per rig annually with each well evaluating 5000 acres and 50 percent other new frontier areas at 14 wells per rig annually with each well evaluating 5000 acres.

EXPORT RESTRICTIONS FOR RIGS

Mrs. HANSEN. What export restrictions are currently in force for drilling rigs and production equipment?

Mr. CARTER. I do not believe there are any currently in force. That works both ways because a number of the rigs that might be available for developing our Atlantic may well be those that are actively employed now in the North Sea.

If the terms of the agreement with the British Government are not entirely to the satisfaction of the oil companies, and they are negotiating now about buy-out agreements, it may be that those companies would prefer to concentrate their efforts in our offshore area.

If we were to impose restrictions on the free movement of rigs, I think we should not be surprised if other countries, who are the flag states of those rigs or in whose waters those rigs are now operating, might also retaliate by imposing restrictions.

EXTENSION OF LEASES FOR LACK OF RIGS

Mrs. HANSEN. Could the lack of availability of drilling rigs and other equipment be used as an excuse for extending leases which would otherwise expire?

Mr. CARTER. Not under the existing law.

Mrs. HANSEN. Why?

Mr. CARTER. As Mr. Lindgren explained earlier, a lease term is for 5 years and terminates unless there has been a discovery and the well is producible. That does not mean that it is necessarily producing but there has been a discovery and it is producible.

Then the lease terminates after 5 years and there are no conditions in there which say: "Except if you do not have a drilling rig available."

Mr. EVANS. You do not contemplate putting in such an exception, do you?

Mr. CARTER. No, sir.

Our studies indicate that there is all likelihood of drilling rig availability. We are as concerned as this committee is about the problem of getting a fair market value for the leases and assuring the prompt exploration and development so that we can get the oil into our economy. We are going to do everything we can to make sure that happens.

Mr. EVANS. Is it correct that if they do not have the rigs or trained personnel, and for either or both of these reasons, they cannot drill and explore, that is tough, the lease expires at the end of 5 years?

Mr. CARTER. That is correct. Further back than that, if they are halfway intelligent corporate managers, they will not pay the money to buy the leases if they cannot foresee the wherewithal to develop them.

BIDS BELOW EXPECTATIONS

Mr. EVANS. This brings us back to the impact on your bids. If the companies are half as smart as you say they are, it will have a whale of an impact on your bids.

Mr. CARTER. If it does and the bids go down lower than we expect for the kinds of reasons we indicated, we will not sell the land. We are going to insist on a fair price. We have a procedure that we are reasonably confident with, but we will continue to monitor its effectiveness. We are not going to sell land for less than we think it is worth.

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Mr. EVANS. That puts a heavy burden on the method of evaluating your tracts. You have been developing a method of evaluating your tracts. Has this been considered?

Mr. GASKINS. The first time this was used on an experimental basis was December of 1972. It was used in parallel with the ongoing method between December of 1972 until March of 1974 when after thorough expermentation we decided it was a superior method to the method we had before. We had four sales and did certain analysis relating the two methods to see which on performed better in predicting the high and average bids. We adopted the range of values method as of March 1974.

Mr. EVANS. Have you had any sales since then?

Mr. GASKINS. Yes, sir. We had a sale on March 1974 and May 1974, and a small sale in the summer, when we tried to reoffer tracts on which we had no bids or on which we rejected bids.

Mr. EVANS. Have those sales been satisfactory and have they proved the new method is a better method?

Mr. GASKINS. It is very difficult to say since we did not use the other method simultaneously. We are sure the statistical relationship of our valuations and what the companies bid and our bid estimates were at least as good under the new method as under the old.

We know the new postsale analysis procedures resulted in substantially more bid rejections. We think that was the right thing to do. We received a lot of complaints from the oil industry. We rejected about 20 percent of the tracts. I think we will have to wait to see where the oil is and where it is not. We do not have much to compare our evaluation too. We can compare it with industry bids. Now if you look at the Destin Dome, we placed a lower value on the tracts than industry did, but history makes us look pretty good. There are other cases where we have been wrong, where we let the lease go for very little and it turned out to be good.

We are continually evaluating our system. We try to improve our ability to predict what the bids will be.

GEOLOGIC ASSESSMENT

Mrs. HANSEN. Are you constantly improving your technique so that you have a better geologic assessment of what you are putting up for sale?

Mr. RADLINSKI. Yes; not only the survey, but also industry.

Mrs. HANSEN. I do not want you to be at the mercy of industry.

Mr. RADLINSKI. The bright spot technique, for example, became common knowledge in industry before it became known throughout. Of course, you learn best from experience.

Mrs. HANSEN. But you learn from experience after the sale is made and not before.

Mr. RADLINSKI. That is correct.

Mrs. HANSEN. That can be costly.

Mr. RADLINSKI. I think Dr. McKelvey reported to you at our budget hearings that it is worse than buying a pig in a poke because you do not know whether there is a pig in there or not.

Mrs. HANSEN. I understand. That is why the committee was concerned a long time ago with providing you with enough technical

resources so that you would have at least as good answers as the industry on the areas that you are leasing.

Mr. EVANS. Would you yield there on a point?

Mrs. HANSEN. Yes.

REPORTING OF INDUSTRY DATA

Mr. EVANS. Are you requiring mandatory reporting of industry data?

Mr. CARTER. On some data we now do.

In other words, all of the down hole data on a lease. When a lessee drills a well, we require that they report all of the data that they get out of that well. But that is after a lease sale. Before the lease sale our existing regulations do not require mandatory reporting of the data.

Mrs. HANSEN. Why not?

Mr. CARTER. We have always bought in, paid for that data.

It has been available to us. It has been a budget item and we have paid for it. We have been in the process, for the last 6 months, of re-examining the question of mandatory reporting of prelease permit data. We hope in the next few weeks to come out with a draft regulation that would deal with that problem.

Mr. EVANS. In what way?

Mr. CARTER. Our initial proposal that we put out for comment required all of that data to be turned over to the Government free.

Mr. EVANS. As a condition of the permit?

Mr. CARTER. That is correct. It required that we be able to release that data to the public within a period of time, 60 days after the sale, and then be free to release the information that we got from a hole on a lease 60 days after it was obtained. There has been a good deal of concern by the companies who are in the business of conducting these data surveys—these are not the oil companies but the service companies that acquire the seismic data—that if we made the data available publicly so soon after a sale that they would be a very difficult competitive economic situation because people who did not buy the data would get it free for a second sale in the general area. They were concerned that they did not want to give anybody a free ride, that there ought to be a way to balance these interests. We would hope in our draft regulations, which we will make public very shortly, to strike a balance, put it out for comment, and then go to final regulations by, I would hope, the first of the year.

BASE LINE STATEMENTS

Mr. EVANS. Will your base line statement and environmental impact studies be completed before leasing?

Mr. CARTER. Certainly the environmental impact statements will be. That is a requirement of the National Environmental Policy Act. In almost all cases the base line studies will also be completed before leasing. There was a situation where this was not the case and it certainly could happen again.

In the so-called Mafla area the base line study was not completed before leasing, but we held up issuing drilling permits until the base line data was collected.

Mr. EVANS. Do you expect that to be your policy in the future?

Mr. CARTER. Our policy would be that the base line study would be completed before the leasing. There may be times when that cannot be done and then you would have to go ahead with getting the baseline information after the lease but prior to exploratory drilling.

Now as Mr. Edwards pointed out earlier, the base line study as such is a continuing process that has an initial collection phase and then a monitoring phase. The monitoring phase would continue for probably the life of the field.

BASE LINE STUDIES AS A CHECK ON EIS

The purpose of the base line study is really a double check on your environmental impact statement. We reach a decision that the development can take place safety, but to double check ourselves we go out and get key environmental data. You get base line studies before development of certain key environmental indicators. Then you monitor those factors after production to see whether in fact there is some adverse impact on them. If there is, you are in a position to tighten up your regulations, to make changes to protect the environment. If there is no adverse impact on them, you have a pretty good idea that you are operating right.

JOINT BIDDING BY MAJORS

Mr. EVANS. Concern has been expressed about joint bidding by the majors. What is your policy going to be on joint bidding by the majors? If a company like GM were to bid, what would your policy be there?

Mr. CARTER. On the general joint bidding question, we put out a notice that we intended to make some rules here to prohibit joint bidding by the largest companies.

We used a total reserve figure as the indicator indicating who the major companies were. We held hearings on that. We are now in the position to write up a proposed regulation and put it out for comment.

Mr. EVANS. Would this prohibit joint bidding on the part of any two of the largest oil companies of the United States?

Mr. CARTER. That has certainly been our intention. That is what we said we wanted to do. We are in the process of drafting a regulation which we will put out for comment when it is drafted.

Mr. EVANS. Is it correct to say that is your intent?

Mr. CARTER. Yes.

Mr. EVANS. All right.

Mr. CARTER. What it does is prohibit joint bidding between large oil companies, say the top five or seven, wherever the break comes. It would not prohibit those large companies from joint bidding with either smaller oil companies or someone like General Motors.

Mr. EVANS. It would not?

Mr. CARTER. It would not.

Mr. EVANS. Let's talk more about General Motors.

Do you think it is bad policy to allow a major oil company and a company like General Motors to make a joint bid? Do you see this as a problem?

Mr. CARTER. Let me ask Dr. Gaskins to comment on this.

Mr. GASKINS. No, you are doing fine. I might help out in this area.

To explain why we chose the criteria aimed at those companies who primarily produce oil and gas, you have to recognize the justification for joint bidding, in any circumstance.

There is an economic reason for combining to bid on a tract and it has to do with the tremendous risks associated with oil and gas exploration. If you are a very small company or a company that only takes one such risk over a reasonable time period, then you are at a disadvantage again in the auction because you are not able to spread your risk over a portfolio of projects. But the major oil companies do not buy only one, they buy tens and hundreds of tracts, not only in this country but around the world. So in this sense they have diversified their risks by spreading their activities around.

Now consider General Motors, if they went into the oil business—and they have not thus far—if they did it they would be buying a few tracts. They would not have a fully diversified exploration program. So if we prevented them from joining with companies that have the necessary expertise, we would be putting an unwarranted burden on General Motors. If General Motors entered in a big way, developed substantial capacity, had exploration activities around the world, they would eventually fall under our proposed guidelines.

DISCLOSURE OF INTERESTED PARTIES

Mr. EVANS. Have you required disclosure of interested parties who make these bids? If General Motors owns the company or if one of the Arab nations is involved, would that be disclosed?

Mr. CARTER. I believe that is so.

Mr. YATES. Is that true if the Arab nations has a nominee or designee?

Mr. EDWARDS. Every bidder is required to file his corporate papers with our office so we can determine if he incorporated to do business in the United States with those papers, and so forth. So the qualifications of the bidders are known ahead of time. They have to have them on file before they are allowed to bid.

As Mr. Lindgren explained the other day, anyone who is incorporated to do business in the United States is qualified to bid on a lease. As to who owns that company, that is a matter that is not required by law.

Mr. YATES. That is right.

Mr. EVANS. So an Arab nation owning a majority control of a domestic corporation could bid?

Mr. LINDGREN. Under the law, that is correct.

MAJOR OIL COMPANIES COMPETING

Mr. EVANS. Your regulations will allow the major oil companies to compete against each other, won't they?

Mr. CARTER. Of course. We want to encourage that. That is why we do not want them to bid together.

Mr. EVANS. Will these regulations be out in time to control this 10-million-acre sale we are talking about?

Mr. CARTER. We certainly hope so. Now the 10-million-acre program is not one sale.

Mr. EVANS. I understand that.

Mr. LINDGREN. Mr. Evans, it is our hope that we will be out with the formal proposed rulemaking on the joint bidding proposal fairly shortly. I am talking in terms of weeks—4, 5, 6, or 7 weeks.

Also, we would be in a position to go to final rulemaking about the beginning of the year.

Mr. EVANS. When is your next sale under this 10-million-acre schedule?

Mr. CARTER. The 10-million-acre is a calendar year objective. So the first sale would be in January. It is doubtful that the joint bidding regulation would be in effect by that time but we are going to try to have it in effect by that time.

It is possible that the steps and procedures of just drafting regulations and receiving comments, talking with people in other agencies that have an interest in this matter, that we may not get it done by then.

Mr. EVANS. You mean the date of the sale in January that has been fixed now?

Mr. CARTER. No, sir, no sir; it is a planning objective and we do not even know whether we are going to have a sale. But we have scheduled that area and we have begun the environmental impact study, we have begun the resource studies.

If everything goes according to expectation, somewhere around the time it is scheduled, we will hold the sale.

Mr. YATES. What do you mean by that area?

JANUARY SALE FOR SOUTH TEXAS

Mr. CARTER. We are talking about south Texas for the January sale.

Mr. YATES. How many acres are involved?

Mr. EDWARDS. Three million are to be offered.

Mr. YATES. How many do you expect to lease or to sell?

Mr. EDWARDS. One to 2-million acres based on past history,

Mr. EVANS. The pattern that we have seen where one or a few companies own substantial quantities of competing energy resources is a matter of concern to me. I would suppose it should be a matter of concern to you as you face these sales in the next calendar year.

Mr. CARTER. We have not so far looked into the question about qualifying bidders on the grounds of what other holdings they may have in energy-related areas.

Mr. MCKAY. Will you yield?

You indicated you will be ready for a sale in January, that is your target date. Did you not indicate earlier that there would not be any sales until the environmental impact study was completed?

Mr. CARTER. Yes, sir.

Mr. MCKAY. And did you not indicate that such a study would take at least 10 months; somewhere between 6 and 10 months as a minimum to complete that, the other day?

Mr. CARTER. Yes, sir, but we also pointed out this morning that the environmental study and the resource studies for the January-proposed sale began some time ago.

Mr. MCKAY. What is "some time ago"?

STUDIES OF PROPOSED JANUARY SALE

Mr. CARTER. When did we begin the studies on the proposed January sale?

Mr. EDWARDS. I believe that was about March or April.

The draft EIS went to the Council on Environmental Quality in August. It had to be at least 3 or 4 months before that.

Mr. MCKAY. You figure that the final environmental impact statement will be ready by January?

Mr. EDWARDS. Yes, sir. Actually, prior to that.

Mr. MCKAY. That is probably optimistic, based on any previous operation, unless somebody shortcuts it. I am wondering along the line of what he is talking about here; if it takes that long, why you will not have your policy determined as Mr. Evans was talking about.

Mr. EDWARDS. The draft statement has already been completed. So we are in the process of going through the public hearing and final statement process. So essentially all of our initial studies and analyses have been put together into a draft which is now being publicly introduced.

Mr. EVANS. Where are those public hearings held?

Are they held in the areas where you are going to be leasing?

Mr. EDWARDS. Yes, they are held in the local area. This hearing was held in Corpus Christi, which is the nearest town to the proposed leasing area.

Mr. EVANS. This will continue to be your policy?

Mr. EDWARDS. Yes. We have always held them as close to local areas as we can get them.

Mr. MCKAY. Maybe this will be higher on the priority list for those final decisions than some other projects we have tried to get action on in my area of the world. But if this takes the same course as some other approvals, you are awfully optimistic.

Mr. LINDGREN. If I may interject, Mr. McKay, in terms of OCS leasing in the gulf, which is what we are talking about for January, we have been doing that and have been preparing environmental impact statements on that region for some time. We are seeing a relatively slight change from the draft to the final based on the public comments.

When we get into frontier areas on the OCS, where we have not been before, then we start getting into all sorts of projects onshore, where we have not had the experience of preparing impact statements on very similar activities; that is when all sorts of schedules just go by the boards. But on this one, and for that reason I think we are being fairly realistic in assessing when we will be able to file a final impact statement on the gulf.

Mr. EVANS. Thank you, Madam Chairman.

SUPERVISION OF OIL WELLS

Mr. MCKAY. Could I ask one here in conjunction with this?

Mr. Evans asked a question earlier about the supervision—whether you are really getting these oil wells supervised. You in-

dicated you had one supervisor for the gulf and one for California, to review such things as whether in fact there was drilling, and renewal of leases or permits.

How many rigs or leases does each supervisor oversee?

Mr. CARTER. If I could ask the Survey to comment on that.

Mr. RADLINSKI. The term "supervisors" as it was used this morning is the title of the official in charge, as named in the OCS regulations.

Of course, he has a sizable staff to support him, including a staff of inspectors.

Mr. YATES. How many in the gulf?

Mr. MCKAY. Give us an example of one area, like the gulf or the coast.

Mr. RADLINSKI. We are in the process of hiring now in the Gulf of Mexico. We will have 52 inspectors, and 9 additional in the Santa Barbara Channel.

Mr. MCKAY. To supervise what?

Mr. RADLINSKI. There are about 2,000 platforms in the Gulf of Mexico.

Mr. MCKAY. That they have to supervise. How often would they review the condition of those 2,000 in a year's time?

INSPECTION OF PLATFORMS

Mr. RADLINSKI. We inspect every new platform and every drilling operation when it is installed and the drilling operation at least once while drilling is in process. We have a goal of inspecting what we call major platforms about every 6 months and a minor platform about a minimum of every 15 months.

The difference is that a minor platform would be unmanned and may have only one well. A major platform may have as many as 20 or 30 wells and include complex processing equipment.

Mr. EVANS. In these inspections do you use helicopters?

Mr. RADLINSKI. Yes, in the Gulf of Mexico.

Mr. EVANS. Do you use them any place else on the OCS?

Mr. RADLINSKI. We only have operations in two places on the OCS in the Gulf of Mexico and in the Santa Barbara Channel.

Platforms in the Santa Barbara Channel are only 6 miles out, so they are readily accessible by boat.

ACCESS TO PLATFORMS

Mr. EVANS. I have had information come to me that some of your inspectors have been denied access to some platforms, not being able to land on it——

Mr. RADLINSKI. I have considerable knowledge about the flap that took place, but never have we been denied access to a platform. We would cancel the lease if they denied us access.

Mr. EVANS. What was the flap?

Mr. RADLINSKI. The flap concerned the fact that when we renewed the contract for helicopter support services a year ago, the contractor who had been providing the services ever since we began using helicopters was underbid. The low bidder was new to the area, and he

was having considerable difficulty setting up refueling depots offshore, because he has to set them up on a production platform.

When we called him to task for not having refueling stations set up offshore, he reported that certain companies would not allow him access. There were extenuating circumstances. It is not a case of just allowing access. Refueling on a platform is a dangerous operation. They could not come to terms over insurance, responsibility, and so forth.

But when we interceded, the matter was resolved and the companies came to terms with the helicopter contractor. He was granted access to platforms for use as fueling points.

Mr. EVANS. Thank you.

Mr. RADLINSKI. We were never denied access.

FOREIGN INVESTORS

Mr. YATES. May I read from an article that appeared in the Wall Street Journal under the heading "White House Urges Keeping U.S. Door Open to Foreign Investors, Including the Arabs." It says this:

> The White House told Congress the United States should keep its door open to foreign investors, including the suddenly wealthy Arab oil nations.
>
> U.S. capital markets are a "natural outlet" for the surplus Arab oil money and "our vast diversified economy is a natural home for direct investment," such as construction of oil refineries, Mr. Flanigan testified. Asserting the United States "will be able to absorb large increases" in investments from oil nations, the White House official said that "we welcome investment by oil-producing nations." Though Mr. Flanigan didn't say so, Arab investment in new U.S. oil refineries might help assure a steady flow of Arab crude to America, since the Arabs presumably wouldn't want to let their refineries here run dry.

The question I should like to ask follows what I asked yesterday: Arab nations through their nominees will be allowed to bid on the leases, will they not?

Mr. CARTER. I would not want to add any more to what Under Secretary Whitaker said on that, Congressman Yates.

Mr. YATES. What did Under Secretary Whitaker say?

Mr. CARTER. He said should we run into a situation where that was happening, he would promptly bring it to the attention of the committee.

Mr. YATES. Is the answer yes or no, do you think, on the basis of what Mr. Whitaker said?

The answer is yes, they can bid? I thought he said they could, did he not?

Mr. LINDGREN. The answer is, as of right now, as a legal proposition, that they are eligible to bid, if they bid through a domestic corporation.

Mr. YATES. Right. And are they eligible to buy U.S. refineries?

Mr. LINDGREN. There is no restriction at all in buying into a refinery or having one built.

Mr. YATES. Right. And is it conceivable that their purchase of refineries might create a bottleneck in this country? After all, they are in cartel now, keeping a tight supply on the flow of petroleum, are they not?

Mr. CARTER. Certainly the question of the U.S. authority to pass laws and deal with a problem that has its location within our terri-

torial jurisdiction is quite different than it is about our authority to affect a bottleneck that originates over in their territory.

So I do not see the two related.

Mr. YATES. You do not see any danger there?

Mr. CARTER. I did not say that. I do not see the two as necessarily equal.

Mr. YATES. You do not see what is equal to what?

BOTTLENECK IN SUPPLY

Mr. CARTER. I do not think that the fact that OPEC countries are able to create a bottleneck in supply necessarily bears upon their ability to create a bottleneck in the operations of refineries or other facilities located in the territorial jurisdiction of the United States.

Mr. YATES. You mean we could expropriate if necessary; is that what you mean?

Mr. CARTER. We could pass rules and regulations governing the acts of the facilities.

Mr. GASKINS. We could apply the Sherman Act if they are a domestic corporation. We have applied it in the past.

Mr. YATES. How long does it take an antitrust case of that kind to go through the courts?

Mr. CARTER. I would think a preliminary injunction in such a case, depending on the facts, might be obtained rather quickly in a price-fixing case or a refusal to deal.

Mr. YATES. I must say that I have grave compunctions about the open door policy of permitting foreign governments through domestic companies to participate in our bidding procedures and to buy our leases: based upon the computations that I have seen in the newspapers, the amount of money that has been available to the Arab nations is extraordinarily enormous.

If they make their minds up to enter the bidding competition, nobody could outbid them, really.

Mr. LINDGREN. Only on that I would add that foreign governments are indirectly doing that today.

The Government of the United Kingdom and the Government of the Netherlands, through Shell, which is held by the Royal Dutch Shell group, are doing it now.

Mrs. HANSEN. Mr. Yates, you have Japanese capital in Alaska.

There was timber in Alaska to be taken out, a large block of it, but there was not any power for milling purposes. You correct me if I am wrong. So the bid by the U.S. company was dropped. So in came the Japanese with plenty of money, and they were able to build the powerplant. Therefore, they got the timber.

Mr. MCKAY. And they sold the pipe to Prudhoe Bay.

HOLDINGS BY OPEC COUNTRIES

Mr. YATES. I think it is unfortunate that the door is so wide open. I think you might want to consider the possible dangers that are occurring. To me, I think the policy of permitting OPEC countries to expect to increase the extent of their holdings by buying up our lands, oil-producing lands, is unforgiveable and unacceptable. I certainly would urge the Department to look into that question.

Finally, with respect to your 10 million acres, I still do not believe that you ought to lease 10 million acres. I still adhere to the committee report recommendation about 3 million acres. I think, still on the basis of testimony before the committee, that is all you could reasonably lease and exploit.

I think the dispersion of your resources may very well require the turning over of these leases, of all the lands that belong to the people, to the companies, the companies that win the bids, in the same way as the coal lands were turned over to the coal people.

I respect what you have said in citing the provisions of the lease, which say, as you said, the lessee shall properly drill and produce such other wells. What does the word "produce" mean in that instance? Bring oil up or bring a well into production?

Suppose they bring a well into production and there is no pipe to bring it to the mainland, will they have complied with their contract?

Mr. LINDGREN. Under that circumstance, there is a provision that if there is no pipe, they are unable to get it, that the lease could be, within the discretion of the supervisor, put in a state of what is called suspension. A suspension order could be lifted at a later time.

I am assuming here a circumstance in which there is a legitimate pipe shortage and not something contrived.

Mr. EVANS. What is the suspension, month-to-month?

Mr. LINDGREN. It can be for a stated duration or it can be a month-to-month. It is kind of—almost the reverse of a tenancy in a way.

Mr. YATES. What if the bidder controls the pipe, I mean controls the transmission line?

Mr. LINDGREN. I think we are talking here about the availability, the fact that there is not a pipeline in existence. For example, they go into a new area where pipeline has not been laid. It is a question of them not having the lease expire while the necessary laying of the pipe and installation of the gathering system is done.

LANGUAGE OF THE LEASE

Mr. YATES. May I go over that language with you again.

What is your interpretation of the lessee shall properly drill and produce such other wells, to bring them into production; is that what the word "produce" means?

Mr. LINDGREN. Bring them into production, oil flowing.

Mr. YATES. Oil flowing. Suppose they do not choose to send the oil to the mainland after they have brought a well in?

Mr. LINDGREN. Well, for a well to be in production, this gets down to technicalities.

Mr. YATES. That is what I am trying to find out.

Mr. LINDGREN. For the oil to be in production, once it is released from the ground and brought up, under internal pressure from within or depending on the state of the well, it has to be someplace. It is that going someplace that I would interpret as production, not just with all of the pipe in place, the valves in place, and then nothing happening.

I do not interpret that as production at all.

Mr. CARTER. I would add only, Mr. Yates, that so far in the case of oil, we do not have facts indicating that this is a problem. We will watch the matter carefully to assure that no problem develops.

Mr. YATES. Can you tell the committee about any problems that exist in connection with your leasing program?

Mr. CARTER. Yes. It takes time to get into frontier areas, in particular. For the reasons that the chairman pointed out; a number of people are not convinced that it is wise national policy to greatly expand our leasing program in areas near where they live. It is a constant education effort that is required and one where just the way the practical realities of the world operate, that you have very little organized support.

You wind up with organized opposition in areas and it is something where each program is subject to time-delaying judicial action, and the costs in terms of money and manpower of implementing a leasing program are very great. We have been experiencing that now for the last couple of years and I would expect to continue to experience that problem for the next couple of years, because people who live in frontier areas do not have the satisfactory experience with offshore development that has existed in the Gulf of Mexico.

I would say that that general framework is the major obstacle we have with a leasing program.

DEFENSE PRODUCTION ACT

Mr. YATES. The President in his speech to the Congress indicated that the Defense Production Act might be used to provide the necessary equipment to permit your program to be implemented. Has that been activated yet?

Mr. CARTER. The only instance where we have utilized the Defense Production Act, so far, is in the case of some limited items for the trans-Alaska pipeline.

Mr. YATES. Why do you not do it for the gulf? If there is a shortage of pipe and rigs and it is such a big problem, why do you not do it there?

Mr. CARTER. That is a matter that we will keep a close eye on. If it becomes necessary to assign Defense Production Act priorities in order to assure that some of the necessary equipment or facilities are available, we will not hesitate to recommend that course of action.

Mr. YATES. Thank you, Madam Chairman.

Mrs. HANSEN. The committee will adjourn now. Thank you very much. We appreciate your testimony.

Mr. CARTER. Yes, ma'am.

LIST OF WITNESSES

INDEX

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