BY THE COMPTROLLER GENERAL

Report To The Chairman, Subcommittee On Oversight And Investigations Committee On Energy And Commerce House of Representatives

OF THE UNITED STATES

Early Assessment Of Interior's Area-Wide Program For Leasing Offshore Lands

More offshore lands have been leased for oil and natural gas exploration as the result of a new Department of the Interior area-wide approach to offshore leasing. It is too early, however, to determine the full effects of this change on production, imports, prices, employment, and total government revenues. GAO's analyses indicate that competition and bid revenues for individual tracts have been reduced because of the shift to the new program. Interior believes, however, that increased leasing will encourage greater production and, ultimately, greater revenues from earlier receipt of rents, royalties, and taxes.

GAO also believes that two of Interior's competitively based bid-acceptance criteria are less appropriate for assessing bids than Interior's own independent estimates of tract value where Interior has good or excellent supporting data. GAO recommends that the Secretary of the Interior modify the bid-acceptance process to help assure that fair market value is received.

Interior has not submitted the required annual reports assessing the effects of offshore leasing on the human, marine, and coastal environments. The Congress may want to reconsider whether this legislative requirement is still needed.

UNITED STATES GENERAL ACCOUNTING OFFICE

GAO/RCED-85-66
JULY 15, 1985

Request for copies of GAO reports should be sent to:

U.S. General Accounting Office
Document Handling and Information
Services Facility
P.O. Box 6015
Gaithersburg, Md. 20877

Telephone (202) 275-6241

The first five copies of individual reports are free of charge. Additional copies of bound audit reports are $3.25 each. Additional copies of unbound report (i.e., letter reports) and most other publications are $1.00 each. There will be a 25% discount on all orders for 100 or more copies mailed to a single address. Sales orders must be prepaid on a cash, check, or money order basis. Check should be made out to the "Superintendent of Documents".

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-207556

The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

This report, prepared at your request, discusses the impact of recent area-wide sales for leasing offshore lands. The report also discusses the Interior Department's new bid-acceptance procedures for ensuring that it receives fair market value for leased offshore lands and Interior's streamlined presale planning process for providing states and others affected by offshore activities an opportunity to participate in the process. At your request, we did not obtain agency comments on a draft of this report.

Unless this report is publicly announced by you, we plan no further distribution until 30 days from the date of the report. At that time, copies will be sent to the Director, Office of Management and Budget; the Secretary of the Interior; other House and Senate committees and subcommittees having oversight and appropriation responsibilities for the offshore leasing and development program; and other interested parties.

Sincerely yours,

Shelton J. Socolar

Acting Comptroller General
of the United States

Enclosure

COMPTROLLER GENERAL'S REPORT TO THE CHAIRMAN, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS, COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES

EARLY ASSESSMENT OF INTERIOR'S AREA-WIDE PROGRAM FOR LEASING OFFSHORE LANDS

DIGEST

During the 1970's, despite rapidly increasing oil prices, U.S. offshore oil production had declined while the rest of the non-Communist world was experiencing increases. Further, the leasing policies of other countries were making more offshore acreage available and firms were increasing their efforts to locate new resources. Given these circumstances, the Department of the Interior believed that offshore leasing opportunities should be increased and that industry should be allowed greater flexibility in making leasing and exploration decisions.[1]

In 1982 Interior implemented an "area-wide" program to lease Outer Continental Shelf (OCS) lands for oil and natural gas exploration and development. The area-wide program was a significant departure from the "tract-selection" program then in operation, which had made only a limited amount of offshore lands available for lease. The area-wide program increased the number and frequency of lease sales, offered more tracts for lease in each sale,[2] and included new bid-acceptance and presale planning procedures. Entire offshore planning areas--up to 50 million acres--were offered for lease, rather than the

---

[1]Department of the Interior, Minerals Management Service, From Policy to Production, Offshore Leasing and Operations, November 1983.

[2]A tract is an administratively designated geographical area of OCS land offered for lease in a sale containing no more than 9 square miles (approximately 5,760 acres). Interior accepts industry's bids and awards leases on a tract-by-tract basis.

GAO/RCED-85-66

JULY 15, 1985

more limited number of tracts nominated by industry and offered under the prior tract-selection program.

Thus, beginning with the first area-wide sale in 1983, industry was given the opportunity to bid on any tract in a planning area except tracts deleted for reasons such as defense or environmental conflicts. In the first 18 months of the area-wide program, over 265 million acres were offered and 13 million acres were leased, as compared with 62 million acres offered and 24 million leased during the previous 29 years of OCS leasing. Interior expected that offering more tracts would lead to more exploration and earlier discoveries, thus increasing production of domestic oil and natural gas, decreasing reliance on oil imports, and moderating oil and natural gas price increases.

At the time that the area-wide program was being developed, many analysts predicted that the price of oil and natural gas would continue to climb, with some estimating world oil prices reaching $60 per barrel or more (in 1982 dollars) by the end of the century. Events over the past 2 years, however, did not lead to the forecast price increases. Instead, the price of oil has declined and the long-term outlook is uncertain.

Interior's first area-wide 5-year leasing schedule called for 41 sales through June 1987, with most in the Gulf of Mexico and offshore Alaska. Nearly the entire OCS--about 1 billion acres--was planned to be offered, although only a small percentage was actually expected to be leased. Interior is currently developing its next 5-year leasing schedule, which is intended to be flexible enough to allow for necessary adjustments in response to changing market conditions.

GAO reviewed the results of the first ten area-wide sales--which took place April 26, 1983-September 30, 1984--in response to a request from the Chairman of the Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce. GAO estimated the initial effects of the area-wide program on exploration activity, competition for leases, and bid revenues received by the government.

However, because very little oil or natural gas has been produced from leases under the area-wide program, GAO could not assess the effects on production, imports, prices, employment, or total government revenues. GAO also reviewed the area-wide program's bid-acceptance procedures to determine whether they ensure receipt of fair market value, and the program's streamlined presale planning process to determine whether it meets the needs of states and others affected by offshore leasing.

FULL EFFECTS OF AREA-WIDE LEASING UNCERTAIN

GAO found that more offshore lands have been leased and that exploration is progressing at a faster rate under the area-wide program. However, more time is needed for production to occur on lands leased under the program, and before the full effects on domestic production, imports, prices, employment, and total government revenues can be determined. For example, Interior and industry have reported that it takes 3 to 14 years after a lease sale for production to begin. (See pp. 7-17.)

GAO used multiple regression analyses to isolate the impact of key factors that affected the number and amount of bids for individual tracts leased under the area-wide program, including decreased oil prices, interest rates, and the type and location of tracts. GAO's analyses indicated that the stepped-up pace of area-wide leasing, by itself, significantly decreased competition and government bid revenues for individual tracts.

Competition, as measured by the number of bids per tract, declined from an average of 2.44 bids under the tract-selection program to about 1.65 bids under the area-wide program. GAO's analyses indicated that about one-half bid per tract of this decrease was attributable to the shift to the area-wide program. (See pp. 19-21.)

Similarly, the average bid per acre has declined from $2,624 per acre leased through the tract-selection program to $686 per acre leased under the area-wide program. GAO's analyses indicated that the shift to area-wide leasing was responsible for an average reduction in bids of $541 per acre leased. On the basis of the 13.03 million acres leased in the first ten area-wide sales, the federal government received about $7 billion (or a discounted value of $5.4 billion in 1984 dollars) less than it would have received if the same acreage were leased under the tract-selection program. (See pp. 22-26.)

The OCS Lands Act, as amended, does not require Interior to maximize government revenues for offshore leases; however, maintaining these revenues has been an important consideration of the program. Under the tract-selection program, industry's high bids usually substantially exceeded Interior's estimates of tract value. In effect, industry--because of the competitive nature of the prior program--paid a premium over Interior's estimates of tract value. However, under the area-wide program, industry has been less willing to pay a premium for tracts.

Interior believes that increased leasing will encourage greater production and, ultimately, greater revenues from earlier receipt of rents, royalties, and taxes. Although Interior has not analyzed the actual flow of government revenues from previous leases sales, it is currently developing a model to analyze the expected benefits of earlier receipt of royalties, rents, and taxes under the area-wide program. GAO acknowledges that there will be offsetting revenues but noted, that since the OCS program began in 1954, bid revenues have comprised about 67 percent ($51 billion of the total $76 billion) of the total direct revenues (bids, rents, and royalties) received by the government. The amount of taxes paid by oil companies from offshore production could not be determined. (See pp. 24-25.)

THE OCS LANDS ACT REQUIRES INTERIOR TO RECEIVE FAIR MARKET VALUE

The OCS Lands Act requires the Secretary of the Interior "to assure receipt of fair market value for lands leased. . . ." Although the act does not clearly define fair market value, Interior has said that it is the amount, in cash, for which a "knowledgeable" owner would be willing to sell a property to a knowledgeable purchaser.

GAO believes that Interior can best ensure that the government receives fair market value for tracts leased by being knowledgeable about their value. Because Interior has access--under the OCS Lands Act, as amended--to all geological and geophysical data gathered for the OCS, it is in a position to become knowledgeable about the tracts' values.

Changes in Interior's bid-acceptance process

Under the bid-acceptance process of the tract-selection program, Interior independently estimated the value of each tract before offering it for lease. This estimate was the primary criterion that Interior used to ensure receipt of fair market value. High bids that exceeded Interior's estimates were accepted and the tracts were leased. However, high bids that were less than these estimates were rejected as being too low. An Interior study has shown that when high bids were rejected, those tracts that were reoffered in subsequent sales were usually leased for higher amounts. (See pp. 28-29 and 40-41.)

Under the area-wide program, Interior changed its process for ensuring receipt of fair market value. Because of the large increase in the number of tracts offered for lease in area-wide sales, Interior decided that evaluating every tract before the sale was no longer practical and placed increased reliance on competition and the marketplace for assessing the adequacy of high bids. Accordingly, Interior adopted a two-phase bid-acceptance process. During the first phase Interior does not estimate the value of tracts. It awards leases to the high bidder for (1) wildcat and proven tracts receiving adequate competition (defined by Interior as three or more bids) and (2) tracts that Interior judges not to contain sufficient oil and natural gas resources to be profitable.[3] During the second phase, Interior estimates the value of wildcat and proven tracts not leased during the first phase (because they received less than 3 bids) and all drainage and development tracts receiving bids. In the first ten area-wide sales, Interior evaluated 1,123 (42.3 percent) of the 2,656 tracts receiving bids. (See pp. 29-31.)

GAO's concerns about Interior's bid-acceptance criteria

GAO believes that two of Interior's bid-acceptance criteria--three-or-more-bids and geometric average--should not be used as a basis for leasing tracts where Interior has good or excellent supporting data for its estimates of tract value.[4] GAO believes that, in order to become a knowledgeable seller and have increased assurance that the high bids represent fair market value, Interior should use its estimates of tract value for assessing the reasonableness of high bids in these cases.

In the first ten area-wide sales, Interior leased 305 wildcat and proven tracts under the first phase of the bid-acceptance process because it received three or more bids. By doing so, Interior did not take the opportunity to become a knowledgeable seller for 97 of the 305 tracts for which it believed it had good or excellent data to estimate the tract value. Interior's past experience shows that relying solely on the receipt of three or more bids does not ensure that the high bid will equal or exceed its estimates of fair

---

[3]There are four types of tracts--wildcat, proven, drainage, and development. Wildcat tracts are unexplored tracts and proven tracts are previously leased tracts with known oil or natural gas reserves. Drainage and development tracts are tracts that have nearby productive wells on common reserves or on the same general structure, respectively.

[4]Interior rates the quantity and quality of the geological and geophysical data it uses to estimate tract values. Although regions use somewhat different rating systems, "excellent" and "good" are generally the best ratings.

market value. For example, under the prior tract-selection program, Interior rejected the highest of three or more bids on 20 tracts because the high bids were less than the estimates. (See pp. 33-36.)

During the second phase of the bid-acceptance process, Interior uses available information to estimate the value of all drainage and development tracts and those wildcat and proven tracts not leased during the first phase of the process. If at least two bids have been received but the high bid is lower than the estimated value, Interior combines the bids with its estimate and computes a geometric average. Bids greater than this geometric average are accepted. In the first ten area-wide sales, Interior leased 20 tracts under this criterion for $65 million less than its estimates of their value, even though Interior believed its estimate was based on good or excellent supporting information. In addition, 18 of these tracts received only two bids. In effect, under the geometric average criterion, Interior gave more weight to a relatively few number of bids (because of averaging) than to its own estimates of tract value. (See pp. 36-40.)

INTERIOR STREAMLINED ITS PRESALE PLANNING PROCESS

In addition to changing the way it offers lands for lease, Interior also streamlined the presale planning process. This reduced the time allowed to prepare some planning documents and for the public to review and comment on them. During this phase Interior collects and analyzes geological, environmental, and economic data on the sale area. In addition, federal and state agencies and others provide information, including environmental and economic data, to Interior on the offshore and coastal environments. Interior is responsible for coordinating and analyzing the information, identifying data needs, and evaluating states' and public opinion on the proposed lease sale. The streamlined process has reduced the time needed to prepare for a sale from about 40 months to 20 months. (See pp. 43-46.)

GAO sent questionnaires to 128 oil and natural gas companies, 23 coastal states affected by the program, and 78 national environmental and fishery groups to solicit their perceptions on Interior's planning process. Most responded that Interior's planning documents are complete and accurate. Although Interior reduced the time allowed for public comment, most believed that they still have an adequate opportunity to participate.

ANNUAL REPORT ON EFFECTS OF OFFSHORE LEASING

Interior has not provided the Congress or the public with annual reports assessing the cumulative effects of offshore leasing on the human, marine, and coastal environment, as required by the OCS Lands Act. Interior officials question the need for the reports because information on OCS activities is disclosed in other annual reports and various environmental impact statements. The required reports may be helpful for documenting the effects of increased offshore activities and providing additional information on the benefits of the program in one source. Nevertheless, the Congress may want to review the need for such additional reporting. (See p. 54.)

MATTER FOR CONSIDERATION BY THE CONGRESS

The Congress should consider whether the annual report on the cumulative effects of offshore leasing, required by the OCS Lands Act, as amended, is still needed. (See p. 55.)

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

Interior is currently developing its next 5-year leasing schedule, which it intends to make flexible enough to respond to changing market conditions. In addition, Interior is developing a model to analyze the expected benefits of earlier receipt of royalties, rents, and taxes under the area-wide leasing program. GAO's report presents information and analyses about the effects of area-wide leasing on competition and bid revenues. While GAO recognizes that it is too early to assess many of the potential benefits of the area-wide program, GAO recommends that the Secretary of the Interior, in developing the next 5-year leasing schedule, consider the effects identified on competition and bid revenues in relation to anticipated benefits, and report his findings to the Congress. (See p. 27.)

In addition, GAO believes--particularly with the reduction in bid revenues under area-wide leasing--that two of Interior's bid-acceptance criteria (three-or-more-bids and geometric average) should not be used in place of Interior's estimates of tract value when it has good or excellent supporting data. In order to become a knowledgeable seller and have increased assurance that the high bids represent fair market value, GAO recommends that in those cases where it has good or excellent supporting data, Interior develop and use its independent estimates of tract value for assessing the adequacy of high bids. (See p. 42.)

- - - -

GAO did not obtain written agency comments on this report; however, agency officials were briefed on the report's contents and their comments were incorporated where appropriate.

Contents

ILLUSTRATIONS

ABBREVIATIONS

AEOT	average evaluation of tract
DMROV	discounted mean range of values
GAEOT	geometric average evaluation of tract
GAO	General Accounting Office
MMS	Minerals Management Service
MROV	mean range of values
OCS	Outer Continental Shelf

GLOSSARY

Area-wide lease sales -- Offshore oil and natural gas sales consisting of entire planning areas except those areas deleted by the Department of the Interior because of specific concerns. The first area-wide lease sale was conducted on April 26, 1983.

Barrel -- The standard volume measurement used in the oil industry. A barrel of oil equals 42 gallons.

Bid -- Cash paid to the federal government by the successful bidder on a lease in addition to any rental or royalty obligations specified in the lease.

Crude oil -- Liquid petroleum as it comes out of the ground. No two crude oils are exactly alike. They range from very light (high in gasoline) to very heavy (high in residual oil).

Cubic feet -- The standard unit of measurement for quantities of natural gas at atmospheric pressure.

Development -- Activities that take place following discovery of oil and natural gas in commercially producible quantities, including but not limited to geophysical activity, drilling, platform construction, and operation of all directly related support facilities. These activities all contribute to the ultimate purpose of producing the oil and natural gas discovered.

Development tract -- A tract that has nearby wells with oil and gas resources but does not have common reserves. There should be some indication that some part of the tract is on the same general structure as the proven productive wells.

Domestic production -- Oil and natural gas produced in the United States, in contrast to imported supplies.

Drainage tract -- A tract that has a nearby well capable of producing oil or natural gas; oil can be drained from the tract if and when the well is placed in production. The common reservoir is interpreted to extend under both tracts.

Environmental impact statement -- A document required by the National Environmental Policy Act of 1969 or similar state law in relation to any action significantly affecting the environment.

Exploration -- The process of searching for oil and natural gas resources. Exploration activities include (1) geophysical surveys where magnetic, gravity, seismic, or other systems are used to detect or infer the geologic conditions conducive to the accumulation of oil and natural gas and (2) any drilling, whether on or off known geological structures. Exploration also includes the drilling of a well in which discovery of oil or gas in paying quantities is made and the drilling of any additional well(s) after such a discovery needed to delineate a reservoir and to enable the lessee to determine whether to proceed with development and production.

Exploratory well -- A well drilled to an unexplored depth or in unproven territory, either in search of a new reservoir or to extend the known limits of a field that is already partly developed.

Five-year offshore leasing program -- The first step in the process of leasing offshore lands for oil and natural gas exploration. The Department of the Interior publishes and updates a 5-year plan of timetables and areas that will be offered for lease.

Lease -- A contract authorizing exploration for development and production of oil or natural gas on the land covered by the contract.

Lease sale -- The public opening of sealed bids granting companies or individuals the right to explore for and develop oil and natural gas.

Market -- A context in which goods are bought and sold, not necessarily confined to a particular geographic location.

Moratorium -- A formally announced suspension of a given type of activity, which can be initiated either by the organization(s) concerned or by legal authority.

Natural gas -- A mixture of hydrocarbon compounds and small amounts of various nonhydrocarbons (such as carbon dioxide, helium, hydrogen sulfide, and nitrogen) existing in the gaseous phase or in solution with crude oil in natural underground reservoirs.

Outer Continental Shelf (OCS) -- All submerged lands that comprise the continental margin adjacent to the United States.

Planning area -- A subdivision of an offshore region used as the initial basis for considering blocks or tracts to be offered for lease in area-wide sales.

Production -- A term commonly used for natural resources actually taken out of the ground.

Proven tract -- A previously leased tract whose lease is expired and containing known oil or natural gas reserves. Volume of reserves may or may not be known.

Rental -- The amount periodically paid by a leaseholder to a landowner for the right to use property for a purpose delineated in the lease.

Royalty -- A payment to a landowner (a governmental body or private party) by a leaseholder on each unit of resource produced. Oil and natural gas royalties are usually paid in cash as a percentage of the value of production.

Tract -- The geographic and legal extent of a single lease area; a convenient way of numbering blocks offered for lease. Tracts usually contain approximately 9 square miles.

Tract-selection sales -- Offshore oil and natural gas sales consisting of a limited number of tracts within a planning region identified and offered for lease by Interior based on industry's nomination. Offshore lease sales conducted before April 26, 1983.

Wildcat tract -- An unexplored tract that is not a drainage or development tract and whose potential for being productive is completely unknown.

CHAPTER 1

INTRODUCTION

During the 1970's, despite rapidly increasing oil prices, domestic offshore oil production had declined although the rest of the non-Communist world was experiencing increased production. Further, the leasing policies of other countries were making more offshore acreage available and firms were increasing their efforts to locate new resources. Accordingly, in 1982, the Department of the Interior implemented an "area-wide" program for leasing Outer Continental Shelf (OCS) lands for oil and natural gas exploration and production.

A significant departure from the tract-selection program then in use, the area-wide program increased the number and frequency of lease sales and offered more tracts for lease in each sale. Thus, beginning with the first area-wide sale in 1983, industry was given the opportunity to bid on any tract in a planning area--over 5,000 tracts or up to 50 million acres--except those deleted for specific environmental concerns or defense-related conflicts.[1] Interior believed that removing the limitations on the location and number of tracts would allow industry greater flexibility in making leasing and exploration decisions. This, it was thought, would lead to more exploration and earlier discoveries of oil and natural gas, thus increasing domestic oil and natural gas production, decreasing the United States' reliance on oil imports, moderating oil and natural gas price increases, and creating employment opportunities.[2]

For almost 29 years Interior had used a tract-selection program to identify and evaluate tracts offered for lease. Under the tract-selection program, companies nominated specific tracts in which they were interested. Based on these nominations and the past leasing history of the area, economic and environmental considerations, multiple-use conflicts, and the estimated potential of the sale area, Interior selected tracts to be included in the sale. Prior to each sale, Interior collected and analyzed geological, geophysical, engineering, and economic data to generate its independent estimate of the value of each tract. This value was the primary criterion for accepting or rejecting bids received for

---

[1]A tract is an administratively designated geographical area of OCS land offered for lease in a sale containing no more than 9 square miles (5,760 acres). Interior accepts industry's bids and awards leases on a tract-by-tract basis.

[2]Department of the Interior, Minerals Management Service, From Policy to Production, Offshore Leasing and Operations, November 1983.

each tract. Critics of the tract-selection program said that Interior was not offering the most attractive tracts for lease (not all the tracts nominated were offered for lease) and that the limited number of tracts in each sale (ranging from one to 544 tracts) slowed the leasing of OCS lands and kept offshore production levels low.

The area-wide program required changes in Interior's method for assessing whether or not to accept the high bid for each tract. First, Interior decided that evaluating every tract before a sale was no longer efficient because of the large increase in the number of tracts. Second, Interior decided to place increased reliance on competition and the marketplace. Thus Interior adopted a two-phase process that awards leases to the highest bidder for certain types of tracts receiving adequate competition or for tracts determined to contain insufficient oil and natural gas resources to be produced. For the remaining tracts, Interior uses a detailed discounted cash flow model--the same process previously used for the tract-selection program--to estimate the value of each tract. The high bid is compared with Interior's estimated value for each of these tracts.

In addition to changing the scope and approach to offering OCS lands for lease under the area-wide program, Interior also streamlined the presale planning process. Interior broadened the scope of some of the presale planning activities and shortened the overall timing and sequence of the presale activities, such as issuing the final environmental impact statement and the proposed notice of lease sale in the same month. The time required to complete the formal presale process has been reduced from 40 months for sales under the prior tract-selection program to 20 months for sales in the area-wide program. Opportunities for public participation are retained and all phases of the environmental impact analysis are still conducted, according to Interior, but initiated earlier in the process.[3]

VARIED LEGISLATIVE OBJECTIVES AND POLICIES

The OCS Lands Act Amendments of 1978 (Public Law 95-372) established the policies for leasing offshore lands. The legislation provides that offshore resources should be made available for expeditious and orderly development, subject to environmental safeguards, in a manner to

--achieve national economic and energy goals,

---

[3]Department of the Interior, Minerals Management Service, Pacific Index, July 1981 - March 1983.

--reduce dependence on foreign sources,

--preserve and maintain free enterprise competition, and

--insure that the public receives a fair and equitable return on the resources of the nation's OCS.

The legislation also requires that Interior provide comprehensive assistance, timely access to OCS-related information, and the opportunity for state and local governments affected by exploration and production of offshore resources to participate in federal planning decisions.

INTERIOR'S RESPONSIBILITIES IN THE OCS LEASING PROGRAM

The Secretary of the Interior is responsible for the preparation, maintenance, and periodic revision of the OCS leasing program for oil and natural gas exploration and production. The 5-year area-wide leasing schedule called for 41 offerings through June 1987, with most sales in the Gulf of Mexico and offshore Alaska. Nearly the entire OCS--about one billion acres--was planned for offering, although only a small percentage was actually expected to be leased. At the time that the area-wide program was being developed, many analysts predicted that the price of oil and natural gas would continue to climb, with some estimating world oil prices reaching $60 per barrel or more (in 1982 dollars) by the end of the century. Events over the past 2 years, however, did not lead to the forecast price increases; instead, the price of oil has actually declined and future prices are uncertain. The next 5-year leasing schedule is currently being developed which, according to Interior, is intended to be flexible enough to allow necessary adjustments in response to changing market conditions.

Within Interior, the Minerals Management Service (MMS) handles day-to-day OCS management. MMS' major responsibilities are to

--manage the leasing of federal offshore lands,

--classify and evaluate OCS resources,

--supervise development and production operations on offshore lands, and

--collect and distribute revenues from offshore leases.

OBJECTIVES, SCOPE, AND METHODOLOGY

This report responds to a request from the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, to review the results of recent OCS lease sales. We sought to identify the initial or potential effects of Interior's shift to the area-wide program on (1) exploration and production activities, (2) the nation's reliance on oil imports, (3) oil and natural gas prices, (4) employment, (5) company participation and competition, and (6) revenues to the federal government--all statutory objectives or departmental considerations for the program. Because very little oil or natural gas production has resulted from leases under the area-wide program, we could not assess the full effects on production, imports, prices, employment, or total government revenues. We were, however, able to estimate the initial effects of the area-wide program on exploration activity, competition for leases, and up-front bid revenues received by the government for leases awarded. We also reviewed Interior's new bid-acceptance procedures to determine whether they assure receipt of fair market value for OCS leases, and changes in Interior's presale planning procedures to determine whether these actions meet the needs of states and others affected by offshore leasing.

The scope of our review covers the bidding and leasing results for the first ten area-wide lease sales and 20 previous tract-selection sales (including two resales) from November 30, 1979 through September 30, 1984. We obtained data for the review from MMS' automated post-sale (POSTSAL) system, located in Reston, Virginia. We performed various assessments of the information in this data system to assure its accuracy and completeness. We also determined how the computer system generated the requested data, from preparation of source documents through final distribution and use of output. Specifically, we reviewed documentation files and input preparation instructions and interviewed Interior computer personnel and users, along with users outside of Interior. Finally, we tested the data's reliability by tracing data on ten tracts to the source documents. We found no problem with data accuracy.

We conducted our review at MMS headquarters in Washington, D.C., and Reston, Virginia, and MMS regional offices in Vienna, Virginia, and Metairie, Louisiana. We interviewed officials at the Departments of the Interior, Energy, and Justice; the National Oceanic and Atmospheric Administration; the Environmental Protection Agency; the United States Coast Guard; and the United States Council on Environmental Quality--federal agencies involved in OCS leasing programs. We also interviewed representatives from industry, state governments, environmental groups, and fishery associations to obtain their opinions on Interior's area-wide program. We reviewed Interior's budgetary records, examined bid and lease documents, and reviewed studies related to the area-wide program to obtain an overview of the OCS leasing program. Our review was conducted between January and December 1984.

To determine the effects of the area-wide program on exploration and development activities, we compared the number of wells drilled and tracts being explored between tract-selection and area-wide sales. Due to the long lead times for offshore production to occur, there has been no effect on total domestic production levels, oil imports, or oil and natural gas prices. We did, however, obtain some indication of the timing and potential effects of the area-wide program by reviewing prior lag times for OCS production and by comparing offshore oil and natural gas production with total domestic production levels since 1973. Similarly, we assessed the potential effects on oil imports by comparing offshore production statistics with total domestic consumption and import levels. To determine the potential effects on oil and natural gas prices, we compared OCS and total domestic production to worldwide market conditions and production levels. To assess the potential effects on employment, we compared OCS-related employment, in terms of direct and indirect employment estimates, with regional employment levels and reviewed related lag times for peak employment.

We measured company participation by the numbers of companies bidding in tract-selection and area-wide sales--including the number of smaller companies with limited financial resources. We classified all companies as either large or small, defining large as those companies with total assets of $5 billion or more. This included 24 domestic oil and gas firms in the Oil and Gas Journal 400 listing for 1983. We evaluated competition in terms of the number of bids received for each tract receiving bids in tract-selection and area-wide sales. We measured the effects on federal revenues by the amount of up-front bids paid to obtain each tract leased in tract-selection and area-wide sales. Although offshore federal revenues are comprised of bids, rental income for lands under lease, royalty payments from oil and gas production, and tax receipts from profits on production, insufficient time has elapsed for exploration to be completed and lands placed in production; therefore, no estimate of the effect on royalty and tax revenues could be made. Rental revenues are relatively insignificant (less than 1 percent of total OCS revenues in 1983) and were not included in our analysis.

To determine the effects of Interior's shift to the area-wide program on company participation, competition, and bid revenues, we used the statistical technique of multiple regression analysis to find the association among related variables and to measure the strength of that association. Many factors affect the level of company participation, competition, and bid revenues for each tract in OCS lease sales. Our regression analyses controlled for the influences that tract-specific and economic variables have on bidding results, allowing us to distinguish between the effects of each factor and the overall effects of the shift to the area-wide program. (A detailed description of our regression techniques and results can be found in app. I.)

Finally, we sent questionnaires to 128 oil and natural gas companies that had participated in at least one lease sale (according to Interior documents) since November 1979,[4] 23 coastal states affected by the OCS program, and 78 national environmental and fishery groups, to solicit their perceptions on the effects of Interior's area-wide program and the adequacy of Interior's presale planning process. We mailed the 229 questionnaires in August 1984; follow-up letters were sent twice during September. We received 181 responses (79 percent) as follows:

--105 out of the 128 companies (82 percent),

--21 out of the 23 states (91.3 percent), and

--55 out of the 78 environmental and fishery groups (70.5 percent).

Five questionnaires (2.2 percent) were returned as undeliverable and 43 questionnaires (18.8 percent) were not returned. Two large oil companies contacted us, stating that they were unable to complete the questionnaire because they believed the questions were too complex to be answered in a questionnaire format.

The response rates cited in this report are based on the actual responses to a particular question in the questionnaire. Organizations not involved in the program or not responding to that particular question are not included in the numbers or percentages cited in the report. Thus the response rates differ between questions and should not be compared. (See app. II for the overall results of the questionnaire.)

- - - - -

We conducted our review in accordance with generally accepted government auditing standards. We briefed agency officials on the contents of this report--including our review methodology and data sources--and incorporated their remarks into the report where appropriate. In accordance with the wishes of our congressional requester, however, we did not solicit official comments on a draft of this report from the Department of the Interior.

---

[4]To consolidate responses from subsidiaries involved in OCS activities, the questionnaire was sent to the parent company.

CHAPTER 2

FULL EFFECTS OF THE AREA-WIDE PROGRAM ARE UNCERTAIN

The full effects of the area-wide program cannot yet be measured because insufficient time has elapsed for exploration to be completed and lands placed in production. We found, however, that more offshore lands have been leased and explored under the increased pace of the area-wide leasing program. But, because very little oil and natural gas has been produced from lands leased through the program, we could not assess the effects on overall domestic production levels, oil imports, oil and natural gas prices, and employment. Due to the long lead time for production to occur it is not likely that the area-wide program, which began in 1983, will have a major impact in the near future. For example, Interior and industry have reported that it takes 3-14 years after a lease sale for production to begin.

EXPEDITED EXPLORATION AND INCREASED PRODUCTION

Interior's objectives for its area-wide leasing program were to increase oil and natural gas production, decrease U.S. reliance on oil imports, provide reasonably priced oil and natural gas, and create jobs. Interior thought that offering more tracts for lease would lead to more exploration and earlier oil and natural gas discoveries and, ultimately, to increased production, which would decrease U.S. reliance on oil imports and moderate price increases. Further, increases in exploration and production activities would create jobs.

MORE LANDS LEASED IN THE GULF OF MEXICO

In the first 18 months of the area-wide program, over 265 million acres were offered and 13 million acres were leased, as compared with 62 million acres offered and 24 million leased during the previous 29 years of the program. As shown in table 1, 80.3 percent (10.46 of the total 13.03 million acres) of the lands leased under the area-wide program have been in the Gulf.

Table 1

Comparison of the Leasing Activities
Among the Different OCS Regions
(First Ten Area-wide Sales)

Region	Number of sales	Acres offered	Acres leased	Tracts offered	Tracts leased
		----(millions)----			
Alaska	2	35.82	2.26	6,511	441
Atlantic	2	43.06	0.27	7,632	48
Gulf of Mexico	5	185.90	10.46	33,714	1,999
Pacific	1	0.77	0.04	137	8
Total	10	265.55	13.03	47,994	2,466

The area-wide program has resulted in significantly more lands being leased in the Gulf of Mexico than under the prior tract-selection program. As shown in table 2, Interior leased 623 and 406 tracts, respectively, in the first two area-wide sales in the Gulf, which is more than in any other previous sale.

Table 2

Level of Leasing in the Gulf of Mexico
by Type of Sale

Type of sale	Sale number	Number of tracts: Offered	Number of tracts: Leased	Acres leased (thousands)
Tract-selection (September 1980-April 1983)	A62	192	116	552
	62	81	67	383
	A66	212	156	800
	66	209	102	508
	67	234	115	590
	(1)69	144	56	281
	(2)69	125	11	58
Total		1,197	623	3,172
Area-wide (May 1983-July 1984)	72	7,050	623	3,090
	74	5,848	406	2,246
	79	8,868	156	898
	81	6,502	453	2,278
	84	5,446	361	1,949
Total		33,714	1,999	10,461

INCREASED EXPLORATION ACTIVITY IN THE GULF OF MEXICO

Almost all of the exploration and production of leased OCS tracts has occurred in the Gulf of Mexico. In contrast, the other three OCS regions have experienced relatively little activity. This is due, in part, to the higher resource potential, more developed infrastructure, lower risk, and lower cost of exploration and development activity in the Gulf as compared with the other three regions.

Within the Gulf of Mexico, more tracts (161) and more exploratory wells (206) have been drilled on lands leased in the first area-wide sale in the Gulf--sale 72--than in any other recent tract-selection sale, as shown in table 3. The second area-wide Gulf sale--sale 74--also has resulted in more tracts being drilled than for any other sale, except sale 72. One difficulty in making these comparisons between tract-selection and area-wide sales is in the variation in the time available for drilling activities. Approximately four years have passed since tract-selection sale A62, compared with only 1.5 years since area-wide sale 72.

Despite the shorter time since tracts were leased in area-wide sales, however, the rate of drilling for sales 72 and 74 is greater than the long-term rate of drilling on leases from previous tract-selection sales.

Table 3

Drilling Activity in the Gulf of Mexico by Type of Sale as of October 1, 1984

Type of sale	Sale number	Tracts leased	Tracts drilled	Exploratory wells drilled
Tract-selection (September 1980-April 1983)	A62	116	83	145
	62	67	41	72
	A66	156	82	131
	66	102	47	81
	67	115	44	51
	(1)69	56	28	42
	(2)69	11	6	8
Total		623	331	530
Area-wide (May 1983-July 1984)	72	623	161	206
	74	406	88	99
	79	156	0	0
	81	453	5	7
	84	361	0	0
Total		1,999	254	312

Fifty-two (59 percent) of the companies responding to our questionnaire said that increasing the number of tracts offered in area-wide sales would "greatly" or "very greatly" facilitate their exploration of OCS lands compared with the prior tract-selection program.[1] Thirty-eight companies (54 percent) said that they have "greatly" increased their exploration in the Gulf of Mexico as a result of the shift to the area-wide program. In addition, another 19 companies (27 percent) said that they experienced "some" increase in exploration in the Gulf.

---

[1]The numbers presented provide the actual responses to this particular question in our questionnaire and cannot be compared with response rates for other questions.

MORE TIME NEEDED TO ASSESS FULL EFFECTS

The full effects of the area-wide program, begun in 1983, cannot be measured because insufficient time has elapsed for exploration to be completed and production to occur. Thus it is too early to estimate the number and size of future discoveries from the area-wide program and to determine the effects on overall domestic production, imports, and prices. Also, due to the long lead time needed to explore and produce OCS leases, it is unlikely that the program will have a major impact in the near future. For example, the director of MMS recently reported that exploratory work only is done in the first few years of a lease and, in the Gulf of Mexico, actual production begins in the fourth through the eighth year, when the great majority of wells are completed.[2] The National Ocean Industries Association also reported that, in shallow areas of the Gulf, it took 3-5 years after the lease sale before production began and, in deeper waters, as long as 8-14 years.[3]

Forecasting future offshore production is very difficult because of the uncertainties associated with finding oil and natural gas on OCS lands. After leases are issued companies conduct extensive studies to evaluate whether the leases justify drilling exploration wells. They also conduct detailed environmental studies in order to get Interior's permission to explore and produce the lease. According to Interior, only about 15 percent of all offshore wells find commercial quantities of oil and natural gas--that is, sufficient resources to be profitable to develop.[4] The National Ocean Industries Association estimated that only 25 percent of offshore tracts leased will be successful, while the remaining 75 percent will be dry or non-commercial.[5]

NEED FOR INCREASED PRODUCTION FROM OFFSHORE LANDS

The nation is currently consuming oil and natural gas resources faster than industry is finding them. With the recent

---

[2]Director, MMS, letter to the governor of Texas, June 29, 1984.

[3]National Ocean Industries Association, A Preliminary Report: An Industry Perspective on the First Year of the OCS Area-wide Leasing Program in the Gulf of Mexico, June 1984.

[4]Department of the Interior, MMS, From Policy to Production, Offshore Leasing and Operations, November 1983.

[5]National Ocean Industries Association, Area-wide Leasing: National Boon or Industry Boondoggle?, October 1984.

economic upswing, according to Interior, demand is expected to increase with a concomitant increase in imports and decrease in domestic reserves. Unless large discoveries are made, this trend is expected to continue.[6] Interior concluded that a significant effort is needed to increase domestic production and lessen the gap between domestic production and consumption.

Twenty-three (26 percent) of the companies responding to our questionnaire said that increasing the number of tracts offered in each sale would "greatly" or "very greatly" contribute to increased production by them. Also, 11 and 9 companies (12 and 10 percent), respectively, said that increasing the number of sales and decreasing the time between sales, respectively, would "greatly" or "very greatly" contribute to increased production. Over one-third of the companies said that these factors would have "little or no" effect on increasing production. Additional factors such as projected increasing prices and improved regulatory environment and technology were believed by most companies to have a more significant effect on increasing production.

Gap between domestic oil production and consumption

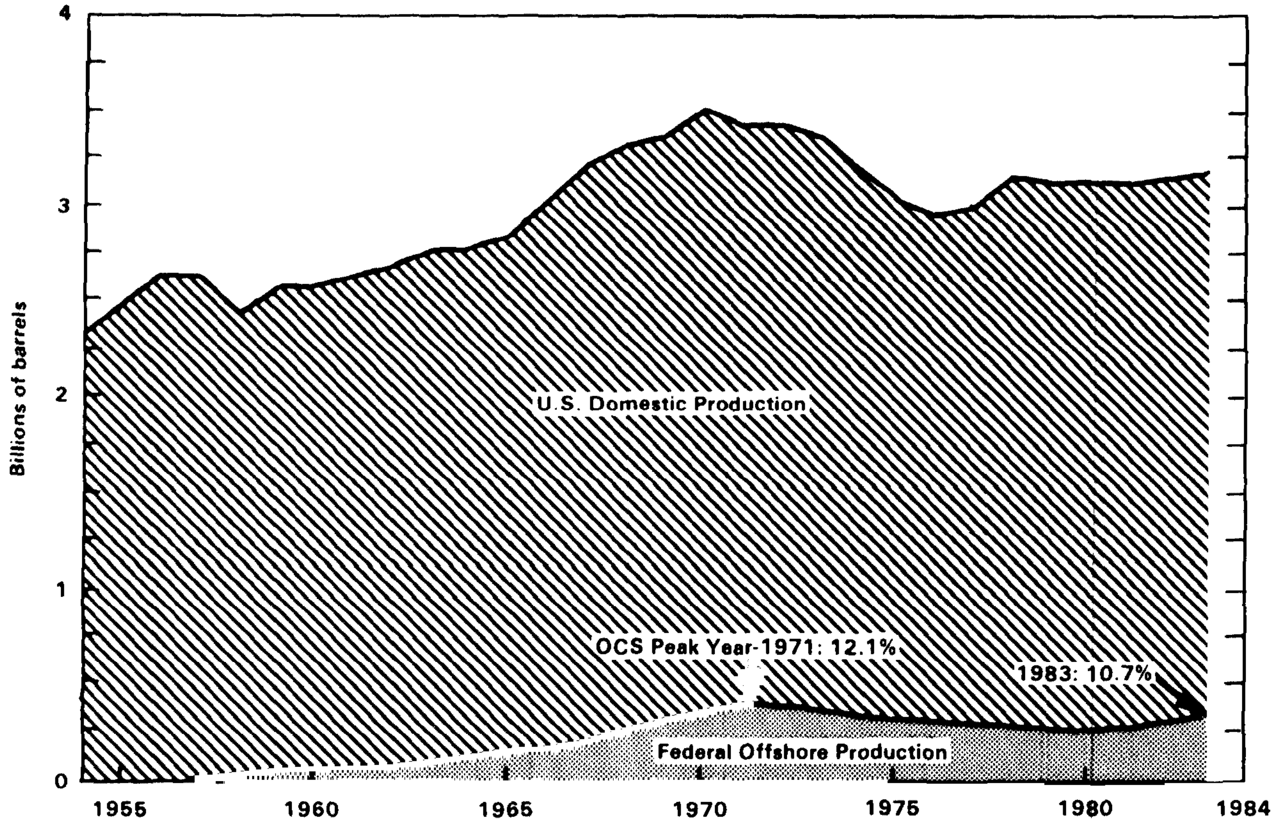
Crude oil production from federal offshore lands leased through the prior tract-selection program is a relatively small contributor to domestic production--approximately 10 percent on the average over the last 10 years. Also, as shown in chart 1, offshore oil production declined during the 1970's and provided about 11 percent of total production in 1983.

---

[6]Hearings before the Subcommittee on Panama Canal/Outer Continental Shelf of the House Committee on Merchant Marine and Fisheries, Serial No. 98-49, June 12, 1984, and June 27, 1984.

<u>Chart 1</u>

<u>Federal Offshore Oil Production as a Contributor To Total Domestic Production</u>

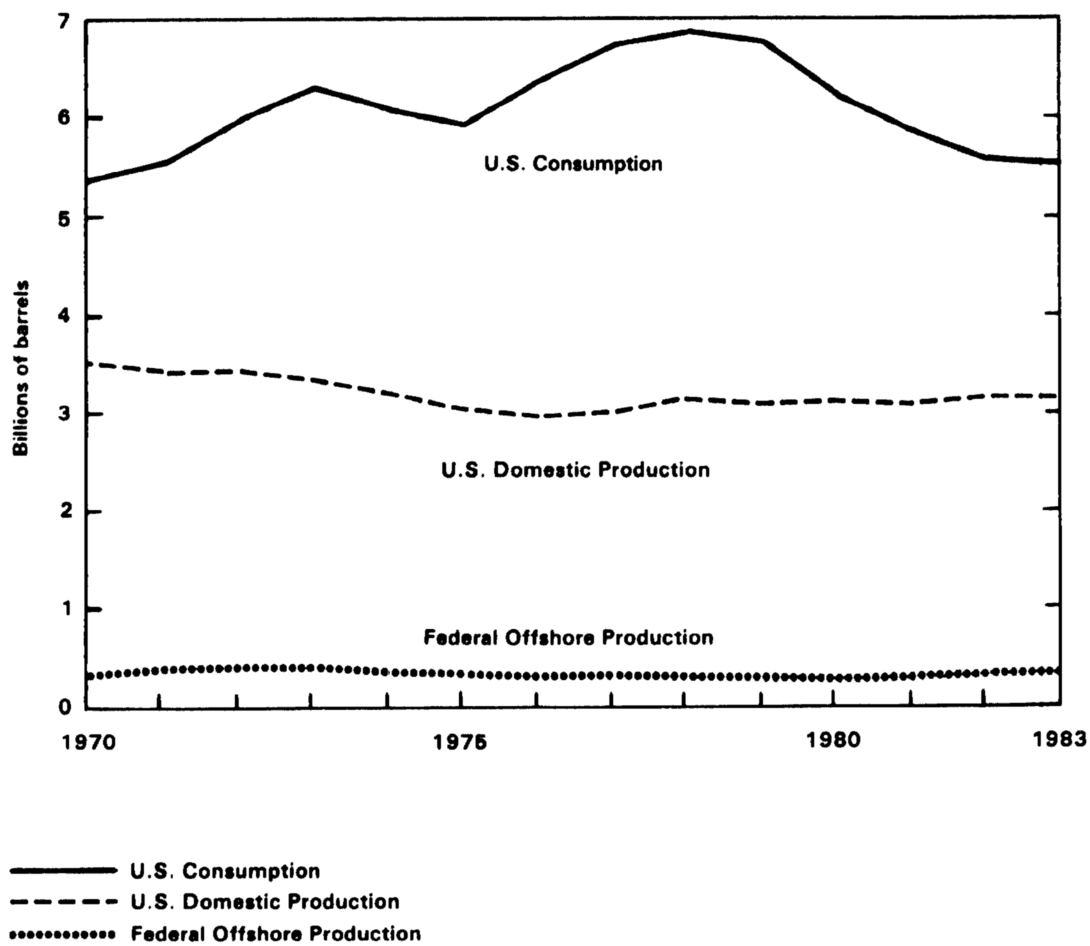


Source: Department of the Interior, Federal Offshore Statistics, September 1984.

Offshore oil production is a smaller source of supply for meeting consumption, as shown in chart 2. Offshore lands provided 341 million barrels (6.2 percent) of the total 5.5 billion barrels of oil consumed in 1983. By comparison, the United States imported 1.2 billion barrels of crude oil and 617 million barrels of refined products (33 percent of consumption) in 1983.

Chart 2

Federal Offshore Oil Production as a Source of Total Domestic Production and Consumption



Offshore oil production is also small compared with world production levels. World oil production peaked in 1979 with 23.7 billion barrels (with the United States producing 3.1 billion barrels, or 13.1 percent). Domestic OCS production accounted for 1.2 percent of total world production in 1979 and 1.7 percent of total world production in 1983. Table 4 compares OCS production with domestic and worldwide production since 1974.

Table 4

Domestic and Worldwide Crude Oil Production Levels Since 1974 (million barrels)

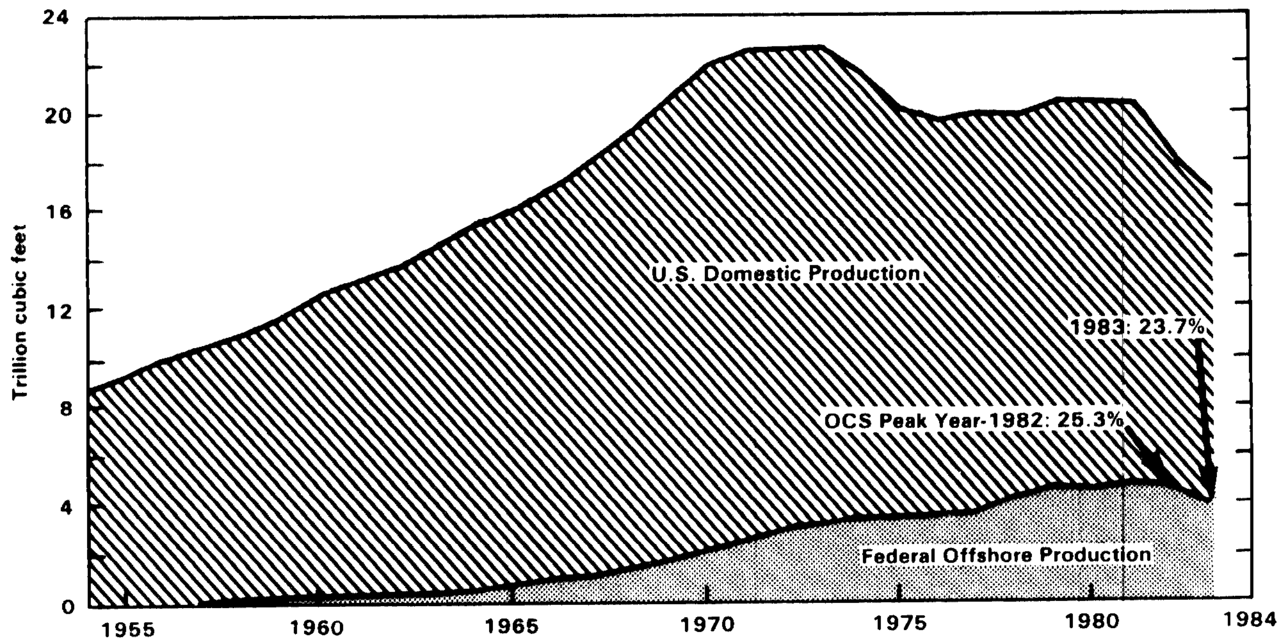
Calendar year	Domestic OCS production	Total domestic production	Worldwide production
1974	361	3,203	21,245
1975	330	3,057	20,162
1976	317	2,976	21,815
1977	304	3,009	22,607
1978	292	3,178	22,869
1979	286	3,121	23,719
1980	277	3,138	22,757
1981	290	3,129	21,265
1982	321	3,157	20,136
1983	341	3,171	19,991

Offshore natural gas production contributes to domestic production

Although offshore natural gas production is often overshadowed by concerns for increased oil production, natural gas from OCS lands is becoming a more important contributor to domestic production. Offshore gas production peaked in 1981 at 4.8 trillion cubic feet, as shown in chart 3, but declined to 3.9 trillion cubic feet (about 23.7 percent of the total domestic gas production) during 1983.

Chart 3

Federal Offshore Natural Gas Production as a Contributor to Total Domestic Production



Source: Department of the Interior, Federal Offshore Statistics, September 1984.

MORE TIME NEEDED TO DETERMINE FULL EFFECT ON EMPLOYMENT

The full effects of the area-wide program on employment cannot be assessed at this time because of the lag time between lease sales and peak employment, which Interior estimates can be 4-5 years after a lease sale.[7] Interior's environmental impact statements assessing the potential socioeconomic effects of each area-wide sale have projected that employment would increase very little in the Gulf as a result of area-wide sales. For example, the environmental impact statement for Gulf of Mexico sales 94, 98, and 102 (scheduled for 1985) projected that the effect on total employment, payroll, and population would be very low--less than 1 percent.

---

[7]Department of the Interior, MMS, Draft Environmental Impact Statement: Proposed Oil and Gas Lease Sales 94, 98, and 102, August 1984.

Although OCS exploration and production activities are not as highly labor-intensive as are other domestic industries, offshore activities do create local and regional employment. In March 1984 the MMS regional manager in the Gulf of Mexico reported that as many as 130,000 jobs in the Gulf may depend on the OCS leasing program. This represents 2 percent of the 6.3 million workers in the total labor force in the region during 1983.

In addition, industry believes that the area-wide program is more effective in promoting employment than was the previous tract-selection program. Thirty-six companies (51 percent) responding to our questionnaire stated that they had experienced "some" to a "great" increase in employment levels as a result of the shift to the area-wide program in the Gulf of Mexico. In addition, 12 companies (57 percent) involved in Alaska said they experienced "some" to a "great" increase in employment.

CONCLUSIONS

The area-wide leasing program is generally regarded by industry and Interior as an important means of determining the potential oil and natural gas available on federal offshore lands and to lessen the decrease in domestic production. This is evidenced by increased leasing and exploration, primarily in the Gulf of Mexico, since the area-wide program began. The relative lack of activity in the Alaska, Atlantic, and Pacific regions is not surprising because industry favors the Gulf due to the proven resource potential and relatively low risk associated with exploration and development in that region.

The full effects of Interior's area-wide program cannot yet be measured since insufficient time has elapsed for exploration to be completed and for lands to be placed in production. Due to the long lead time for production to occur, it is unlikely that the program will have any major impact in the near future. While we believe that new discoveries will be made on lands leased through the area-wide program, it is uncertain when industry will make enough new discoveries of sufficient number and size to markedly increase domestic production and reduce imports and prices. Similarly, more time is needed to determine the full effects on employment.

CHAPTER 3

THE AREA-WIDE PROGRAM HAS REDUCED

COMPETITION AND BID REVENUES FOR INDIVIDUAL TRACTS

The increased pace of offshore leasing through the area-wide program has decreased competition (in terms of the number of bids received for each tract) and reduced government revenues (in terms of the amount of high bids for individual tracts). The number of bids per tract has declined from an average of 2.44 bids for each tract receiving bids in tract-selection sales to about 1.65 bids for each tract receiving bids in area-wide sales. Our statistical analyses indicated that about one-half of a bid per tract of this decrease is attributable to the shift to the area-wide program. Similarly, the level of bids per acre has declined from an average of $2,624 per acre leased under tract-selection sales to $686 per acre leased under the area-wide program. Our statistical analyses indicated that changing to the area-wide program, by itself, was responsible for an average reduction in bids of $541 per acre leased, or $3.1 million for each tract leased. Although the federal government received $8.9 billion in total bids in the first ten area-wide sales, our analyses show that this was about $7 billion (a discounted value of $5.4 billion) less than would have been received if the slower pace of the prior tract-selection program had been followed. Interior expects, however, that increased leasing under the area-wide program will encourage greater production and, ultimately, greater total revenues from earlier receipt of rents, royalties, and taxes.

MAINTAINING COMPETITION AND GENERATING GOVERNMENT REVENUES ARE IMPORTANT CONSIDERATIONS

One of the purposes of the 1978 amendments to the OCS Lands Act was to preserve and maintain free enterprise competition. The amendments further require Interior to evaluate present measures and to recommend additional measures for promoting competition in offshore lease sales. A 1977 congressional report expressed concerns about declining competition and bid revenues in OCS lease sales.[1] The report stated that competition and bids were lower than anticipated by Interior and could be explained, in part, by the lack of experience in frontier areas, increased number of tracts offered in deeper waters, and the unpredictability of the leasing schedule.

---

[1]House of Representatives Report No. 95-590, Report by the Ad Hoc Select Committee on the Outer Continental Shelf, Aug. 29, 1977.

Although the OCS Lands Act, as amended, does not require Interior to maximize up-front bid revenues for offshore leases, maintaining these revenues to the government is an important consideration of the OCS program. Since the program's inception in 1954 through the end of fiscal year 1984, the federal government has received approximately $76 billion in revenues from the OCS program.

LESS COMPETITION IN AREA-WIDE SALES

The average number of bids for tracts receiving bids in area-wide sales is less than it was in previous (tract-selection) sales, except in Alaska. The number of companies participating in area-wide sales has been similar to the level of participation in prior (tract-selection) sales.

Number of bids for each tract receiving bids has declined

The number of bids per tract has declined from an average of 2.44 bids for each tract receiving bids in tract-selection sales (since November 1979) to 1.65 bids for each tract receiving bids in area-wide sales. By region, the average number of bids per tract increased from 1.78 to 2.05 in Alaska, decreased from 2.44 to 1.27 in the Atlantic, declined from 2.67 to 1.56 in the Gulf of Mexico, and decreased from 3.16 to 1.75 in the Pacific. (The average number of bids for each tract receiving bids in sales since November 1979 is shown in table 5.)

Table 5

Number of Bids for Each Tract Receiving Bids in Sales Held Between November 30, 1979 and September 30, 1984

Region	Type of sale[a]	Sale number	Number of Bids received	Number of Tracts bid on	Bids per tract	
Alaska						
	Tract-selection	BF	62	25	2.48	
		55	64	37	1.73	
		60	15	13	1.15	
		71	252	125	2.02	
		57	98	64	1.53	
		70	150	97	1.55	
		Total	641	361		1.78
	Area-wide	83	425	186	2.28	
		87	432	232	1.86	
		Total	857	418		2.05
Atlantic						
	Tract-selection	42	189	73	2.59	
		56	120	54	2.22	
		59	240	98	2.45	
		Total	549	225		2.44
	Area-wide	76	53	40	1.33	
		78	12	11	1.09	
		Total	65	51		1.27
Gulf of Mexico						
	Tract-selection	A62	506	147	3.44	
		62	268	74	3.62	
		A66	419	162	2.59	
		66	233	107	2.18	
		67	290	137	2.12	
		(1)69	151	67	2.25	
		(2)69	20	13	1.54	
		Total	1,887	707		2.67
	Area-wide	72	1,015	656	1.55	
		74	773	436	1.77	
		79	226	156	1.45	
		81	793	529	1.50	
		84	593	402	1.48	
		Total	3,400	2,179		1.56
Pacific						
	Tract-selection	53	301	81	3.72	
		68	66	35	1.89	
		Total	367	116		3.16
	Area-wide	73	14	8		1.75

[a]These tract-selection sales took place between November 30, 1979, and April 25, 1983. The area-wide sales occurred between April 25, 1983, and September 30, 1984.

Analyzing the effects of the increased pace of leasing under the area-wide program was complicated because many factors affect the number of bids per tract. Because of this, we used standard regression analyses to control the influences that tract-specific factors (quality of the tract, leasing arrangement, type of tract, and location of the tract) and economic variables (price of crude oil, interest rates, and time of the sale) have on the number of bids received for each tract. This allowed us to distinguish between the effects of these factors and the overall effects of the shift to the new area-wide program. Our regression analyses indicated that the shift to the area-wide program, by itself, resulted in an average decline of about one-half a bid for each tract receiving bids. The results of our regression analyses were stable and showed a significant negative relationship between area-wide leasing and the number of bids received for each tract. (See app. I.)

A study done for the state of Texas also suggested that the reduction in competition (number of bids per tract) was the direct result of Interior's shift to the area-wide program and was most likely caused by an oversupply of acreage offered, poor information on larger amounts of acreage, and inadequate capital and equipment with which to evaluate tracts.[2] It noted that the number of bids per tract can be expected to decline significantly when the government, as lessor, suddenly floods the market with millions of acres of previously unleased lands. Further, it noted that industry resources for evaluation become highly diffused, publicly available information becomes more restricted, and the perceived risk associated with bidding increases in area-wide sales. This, in turn, increases the likelihood of tracts receiving only one bid.

On the basis of our questionnaire results, industry appears to consider higher oil and natural gas prices as the most important factor for increasing the number of bids in a sale. Fifty-three companies (60 percent) responding to the questionnaire said that projected increases in prices were of a "very great importance" to them in increasing the number of tracts they bid for. Increased availability of capital and increased potential to boost production were also considered very important factors in increasing the number of bids in a sale. Twenty-nine companies (33 percent) said that the increased number of tracts offered for lease, as in area-wide sales, was of a "very great importance" to them in increasing the number of bids. In these cases, the level of bidding has been spread out over more tracts in area-wide sales and the number of bids for each tract receiving bids has been reduced.

---

[2]Governor of Texas letter, affidavits of Dr. Joseph Stiglitz and Dr. Jeffrey Leitzinger, May 25, 1984.

No significant change in company participation

The number of companies participating and winning leases in area-wide sales has been similar to the level of participation in previous tract-selection sales. More tracts, however, have been leased to small companies under the area-wide program than under the prior tract-selection program. Our regression analyses showed that the area-wide program had no significant effect on the percentage of small or large companies submitting high bids. (See app. I.)

LOWER BIDS FOR TRACTS LEASED IN AREA-WIDE SALES

Bids for each tract being leased have decreased under the area-wide program as compared with the tract-selection program. The average bid per acre leased has declined from $2,624 per acre in tract-selection sales (since November 1979) to $686 per acre in area-wide sales. By region, the average bid per acre leased declined from $1,793 to $664 in Alaska, from $1,619 to $299 in the Atlantic, from $3,099 to $702 in the Gulf of Mexico, and from $4,628 to $366 in the Pacific. (The level of bids per acre leased in sales since November 1979 is shown in table 6.)

Our regression analyses indicated that Interior's shift to the area-wide program was responsible for an average reduction in bids of $541 per acre leased or approximately $3.1 million for each tract leased (based on 5,760 acres in a tract) in area-wide sales. We used standard regression analyses to isolate the influences that tract-specific factors (quality of the tract, leasing arrangement, and type and location of the tract) and economic variables (price of crude oil, interest rates, time of the sale, and industry's cash flow) have on the level of bids for individual tracts. The regression results, which were stable, indicated that the number of bids received per tract had significant positive effects on the dollar amount of the high bid per acre received by Interior. These results indicated that each additional bid per tract (on average) is associated with about $1,082 increase in the amount of the high bid received for each acre of OCS land. According to this estimate and our estimate that area-wide leasing has reduced the number of bids received for each tract by about one-half a bid per tract, we estimate that the area-wide program reduced bid revenues by about $541 ($1,082 ÷ 2 = $541) per acre, or approximately $3.1 million for each tract leased. (See app. I.)

Based on the 13.03 million acres leased in the first ten area-wide sales, this decline in bids per acre amounted to $7 billion (13.03 million acres X $541 reduction per acre = $7 billion total decline). In other terms, if these OCS lands had been

Table 6

Level of Bids Per Acre Leased in Sales Held Between November 30, 1979 and September 30, 1984

Region	Type of sale[a]	Sale number	Total bids received ($ million)	Acres leased (thousands)	Bids per acre leased ($)	
Alaska						
	Tract-selection	BF	488.7	86	5,697	
		55	109.8	199	551	
		60	4.4	73	60	
		71	2,055.6	663	3,101	
		57	317.9	336	946	
		70	426.5	541	780	
		Total	3,402.9	1,898		1,793
	Area-wide	83	624.5	1,025	609	
		87	872.0	1,230	722	
		Total	1,496.5	2,255		664
Atlantic						
	Tract-selection	42	816.5	359	2,277	
		56	342.8	267	1,219	
		59	323.7	290	1,115	
		Total	1,483.0	916		1,619
	Area-wide	76	68.4	211	325	
		78	13.4	63	213	
		Total	81.8	274		299
Gulf of Mexico						
	Tract-selection	A62	2,676.9	552	4,853	
		62	1,418.0	383	3,699	
		A66	2,649.6	800	3,312	
		66	1,243.5	508	2,446	
		67	1,193.7	590	2,022	
		(1)69	609.2	281	2,166	
		(2)69	37.6	58	646	
		Total	9,828.5	3,172		3,099
	Area-wide	72	3,367.6	3,090	1,090	
		74	1,501.7	2,246	668	
		79	310.6	898	346	
		81	1,323.0	2,278	581	
		84	844.9	1,949	433	
		Total	7,347.8	10,461		702
Pacific						
	Tract-selection	53	2,047.8	321	6,379	
		68	117.9	147	669	
		Total	2,165.7	468		4,628
	Area-wide	73	16.0	44		366

[a]These tract-selection sales took place between November 30, 1979, and April 25, 1983. The area-wide sales occurred between April 25, 1983, and September 30, 1984.

leased under the slower pace of the prior tract-selection program, Interior would have received a total of $15.9 billion ($8.9 billion actually received + $7 billion reduction = $15.9 billion) instead of the $8.9 billion received in the first ten area-wide sales. However, on the basis of the rate of leasing under the prior tract-selection program, it would have taken Interior approximately 98 months to lease these OCS lands. Thus, given the time value of money, the discounted value (in 1984 dollars) of the $7 billion is $5.4 billion (on the basis of a real--inflation adjusted--discount rate of 6.5 percent).

Other factors that, according to our regression analyses, also affected bids per acre include changes in the price of crude oil, interest rates, and the quality of tracts offered. Changes in the location of the sale and leasing arrangements used to lease the tract also affected bids per acre. (See app. I.)

Interior believes that with the faster pace of leasing under the area-wide program, some--if not all--of the estimated reduction in up-front bid revenues will most likely be offset by quicker production and, ultimately, earlier receipt of rents, royalties, and taxes to the government. Direct revenues from OCS leasing consist of bids, rents, and royalties from production. Indirect revenues consist primarily of taxes on profits from the lease. The director of MMS estimates that bids historically account for 25 to 50 percent of all federal offshore revenues over the life of a lease. Rents, royalties, and taxes account for the other 50 to 75 percent. Although MMS has not analyzed the actual flow of government revenues received as a result of previous lease sales, it is currently developing a model to analyze the expected benefits of receiving royalties, rents, and taxes earlier.

We agree with Interior's position that some of the estimated reduction in bids due to the increased pace of area-wide leasing will be offset by earlier receipt of royalties, rents, and taxes which will continue for many years after a tract is placed in production. However, we noted that as of the end of fiscal year 1984, bids had comprised approximately $51 billion (67 percent) of the $76 billion in total direct revenues (bids, rents, and royalties but not taxes) received since offshore leasing began in 1954. Royalties and rents accounted for most of the other 33 percent of direct revenues. We did not attempt to determine the amount of tax revenues generated during the period because (according to Interior's documents) income tax revenues are not accounted for on a tract-by-tract basis.

Most companies said that bidding levels remained the same

Thirty-nine companies (57 percent) responding to our questionnaire said that their bidding level for a given tract value remained about the same in the Gulf of Mexico under both the tract-selection and area-wide leasing programs. However, 24 companies (35 percent) involved in the Gulf said that they decreased their bids "some" or to a "great" extent as a result of Interior's shift to the area-wide program. Six companies (30 percent) involved in Alaska said that they made "some" decrease in bidding levels as a result of area-wide sales. Five and eight companies, respectively, (63 and 78 percent) said that there was no change in bids as a result of the shift to the area-wide program in the Atlantic or Pacific.

One small company, in comments on our questionnaire, stated that it and most others have a finite amount of money to go to the sale with and, by spreading bids over more tracts, most companies will tend to bid less per acre for any given tract than would be the case if the sale was more focused, as in the tract-selection program. The company does, however, favor the area-wide program, which it believes promotes company participation and expedites exploration of OCS lands. The bottom line between the tract-selection and area-wide leasing programs, according to this company, was higher bids per acre versus quicker exploration.

Another small company commented that the lower bids per tract in area-wide sales promoted company participation. Financially, it was better able to participate in OCS sales and bid on more tracts because of the lower costs of obtaining leases in area-wide sales.

Other studies on whether area-wide sales reduced bids for each tract leased

The decline in bids for tracts leased in recent area-wide sales has caused concern among critics and advocates of the area-wide program. An internal study by analysts in MMS' Offshore Resource Evaluation Division showed that for low-valued tracts in high-cost regions, 70 percent of the decline in bids was attributable to the decline in oil prices.[3] For other tracts, 50 percent of the decline was attributable to the change in oil prices. The study did not specifically attribute the remaining decline (30 to 50 percent, respectively) in bids to other factors. However, the study did note that the reduction in the number of bids for individual tracts in area-wide sales may have affected the level of bids for each tract leased.

---

[3]MMS note, Section in Draft Policy Issue Paper on Bid Adequacy Relating to Causes of the Decline in Bonus Bids, Nov. 7, 1984.

Texas has suggested that the decline in bids per tract leased is directly attributed to Interior's shift to the area-wide program (see governor of Texas' letter, May 25, 1984). It concluded that the number of bids received for each tract is one of the most significant factors in determining the bid amount received in competitive lease sales and that bids would be expected to decrease as a result of the decline in the number of bids per tract. Further, it reported that since industry has limited amount of funds, Interior's flooding of OCS sales with thousands of tracts (compared with the relatively small number of tracts in previous tract-selection sales) would diffuse industry money over more tracts. Thus bids for each tract would be reduced.

CONCLUSIONS

We found that the shift to the area-wide program has reduced the number of bids received for individual tracts but has had no significant effect on the level of company participation. While numerous companies have won leases under the area-wide program, the level of participation has been spread out over more leases and the average number of bids received for each tract has been reduced by one-half of a bid per tract.

Although the OCS Lands Act does not require Interior to maximize the amount of up-front bid revenues received for each tract leased, maintaining the flow of these up-front bid revenues to the government is an important consideration of the program. The federal government received $8.9 billion in total bids in a significantly shorter time period through the area-wide program than it would have under the slower pace of the prior tract-selection program. However, as discussed, our analyses indicated that the shift to the area-wide program reduced bids on the average of $541 for each acre leased, or $3.1 million for each tract leased under the new program. For the first ten area-wide sales, we estimate that the shift to the accelerated area-wide leasing program resulted in a reduction of about $7 billion (a discounted value of $5.4 billion in 1984 dollars) in the total amount of up-front bid revenues to the federal government. Our analyses suggested that the discounted present value of the aggregate bids would have been $5.4 billion higher had Interior followed the pace of the prior tract-selection program.

We agree with Interior that some of this reduction in up-front bid revenues may be offset by quicker receipt of royalties, rents, and tax revenues. We noted, however, that bid revenues have comprised 67 percent of direct government revenues (bids, rents, and royalties but not taxes) generated by offshore leasing since the program began in 1954.

RECOMMENDATION TO THE SECRETARY OF THE INTERIOR

We believe that this report presents information and analyses on the effects of area-wide leasing on competition and bid revenues that should be considered in developing the next 5-year leasing program. While we recognize that it is too early to assess many of the potential benefits of area-wide leasing, we recommend, however, that the Secretary of the Interior consider the effects on competition and bid revenues in relation to the anticipated benefits, and report his findings to the Congress.

CHAPTER 4

INTERIOR SHOULD FURTHER STRENGTHEN

ITS BID-ACCEPTANCE PROCEDURES

At the beginning of the area-wide leasing program, Interior adopted new bid-acceptance procedures that placed increased reliance on competitive factors and less on its own estimates of tract values to determine the adequacy of bids. We believe, however, that two of Interior's competitively-based bid-acceptance criteria should not be used in place of Interior's independent estimates of tract value when Interior has good or excellent supporting data.[1] In order to become a knowledgeable seller and have increased assurance that the high bids represent fair market value, Interior should use its estimates for assessing the reasonableness of high bids in these cases. During 1984 Interior modified its bid-acceptance procedures to produce a more rigorous process and to enhance their credibility. We believe that these procedures, while clearly improved, need to be further strengthened to assure that fair market value is received for OCS leases.

Under the tract-selection program, industry's high bids usually substantially exceeded Interior's estimates of tract value--that is, its estimate of fair market value. In effect, industry--because of the competitive nature of the prior tract-selection program--paid a premium over Interior's estimates of tract value. However, since competition per tract has decreased under the stepped-up pace of the area-wide program, industry has been less willing to pay a premium for tracts.

INTERIOR ESTIMATED THE VALUE OF EACH TRACT UNDER TRACT-SELECTION PROGRAM

Under the tract-selection program, Interior generated two estimates of value for each tract offered for lease--the mean range of values (MROV) and the discounted mean range of values (DMROV). (The computation of these values is described in detail in app. III.) MROV is the government's estimated value for a

---

[1]Under the OCS Lands Act, as amended, companies are required to provide Interior with access to all geological and geophysical data gathered from the OCS. Interior uses these data along with engineering and economic data to estimate tracts' values to support its bid-adequacy determination. Each OCS region rates the quantity and quality of the geological and geophysical data somewhat differently. "Excellent" and "good," however, generally reflect the two best ratings.

given tract at the time of the lease sale. DMROV is the value of all expected future government revenues if the high bid is rejected in the current sale and the tract is leased at the next scheduled sale date. Interior used the lower of these two values to ensure receipt of fair market value; a high bid greater than the MROV or DMROV was accepted and the tract was leased.

Interior adopted a third criterion in 1974 for accepting bids if the high bid does not exceed the MROV and DMROV--the average of Interior's MROV and companies' bids. A high bid that exceeds this average is accepted and the tract is leased. In 1982 Interior replaced this criterion with the geometric average for the tract (GAEOT).[2] The GAEOT criterion gives greater weight to companies' bids than to Interior's estimated value of the tract because bids (two or more) are geometrically averaged with Interior's single value.

CHANGES RESULTING FROM SHIFT TO AREA-WIDE PROGRAM

With the area-wide program Interior changed its methodology to determine whether fair market value is received for OCS leases. Because of the large increase in the number of tracts offered for lease, Interior decided that evaluating every tract was no longer efficient and placed increased reliance on competition and the marketplace for assessing the adequacy of bids. In February 1983 Interior adopted a two-phase process that, without an estimate of tract value, awards leases to the high bidder for (1) tracts receiving adequate competition or (2) tracts that Interior judges not to contain sufficient oil and natural gas resources to warrant production. The remaining tracts undergo Interior's detailed evaluation as was done in the tract-selection program and the high bid is compared with the MROV, DMROV, and GAEOT for each tract. In 1984, after six area-wide sales, Interior modified its bid-acceptance procedures, concluding that competition per tract had decreased under the area-wide program, resulting in a different leasing situation from that under the prior program. Interior also made some other changes to the procedures in 1984, as described in more detail in appendix III. We have reviewed these changes and believe that they have strengthened the process in assuring the receipt of fair market value.

---

[2]The geometric average is the Nth root of the product of the bids and the MROV where N equals the number of bids plus one and is defined as follows:

$$\text{GAEOT} = \sqrt[N]{(\text{MROV}_1) \times (\text{bid}_2) \times (\text{bid}_3) \times \ldots \times (\text{bidN})}$$

Interior still relies on competitive factors to assure receipt of fair market value. Bids received are evaluated through the first phase of the process and, if necessary, through the detailed evaluation in the second phase. The first phase is composed of the following three steps:

--High bids on tracts classified by Interior as being either development or drainage tracts are referred directly for detailed evaluation.[3]

--High bids for wildcat and proven tracts judged by Interior to contain insufficient oil and natural gas resources to warrant production (nonviable tracts) are accepted.

--After screening for anomalously low bids, high bids are accepted for all viable wildcat and proven tracts receiving three or more bids and more than the average number of bids received for viable tracts in the sale.[4]

All wildcat and proven tracts that are not leased as a result of the first phase criteria, as well as all drainage and development tracts, undergo Interior's detailed evaluation. (A detailed flow chart of the process can be found in app. IV.) In the first ten area-wide sales, Interior evaluated 1,123 (42.3 percent) of the 2,656 tracts receiving bids, as shown in chart 4.

OCS LANDS ACT DOES NOT EXPLICITLY DEFINE FAIR MARKET VALUE

The OCS Lands Act, as amended, requires the Secretary of the Interior to conduct the OCS leasing program in order "to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government." One of the stated purposes of the 1978 amendments was "to insure the public a fair and equitable return on the resources of the Outer Continental Shelf." The legislation does not provide a clear definition of fair market value.[5] Interior considers fair market value as the

---

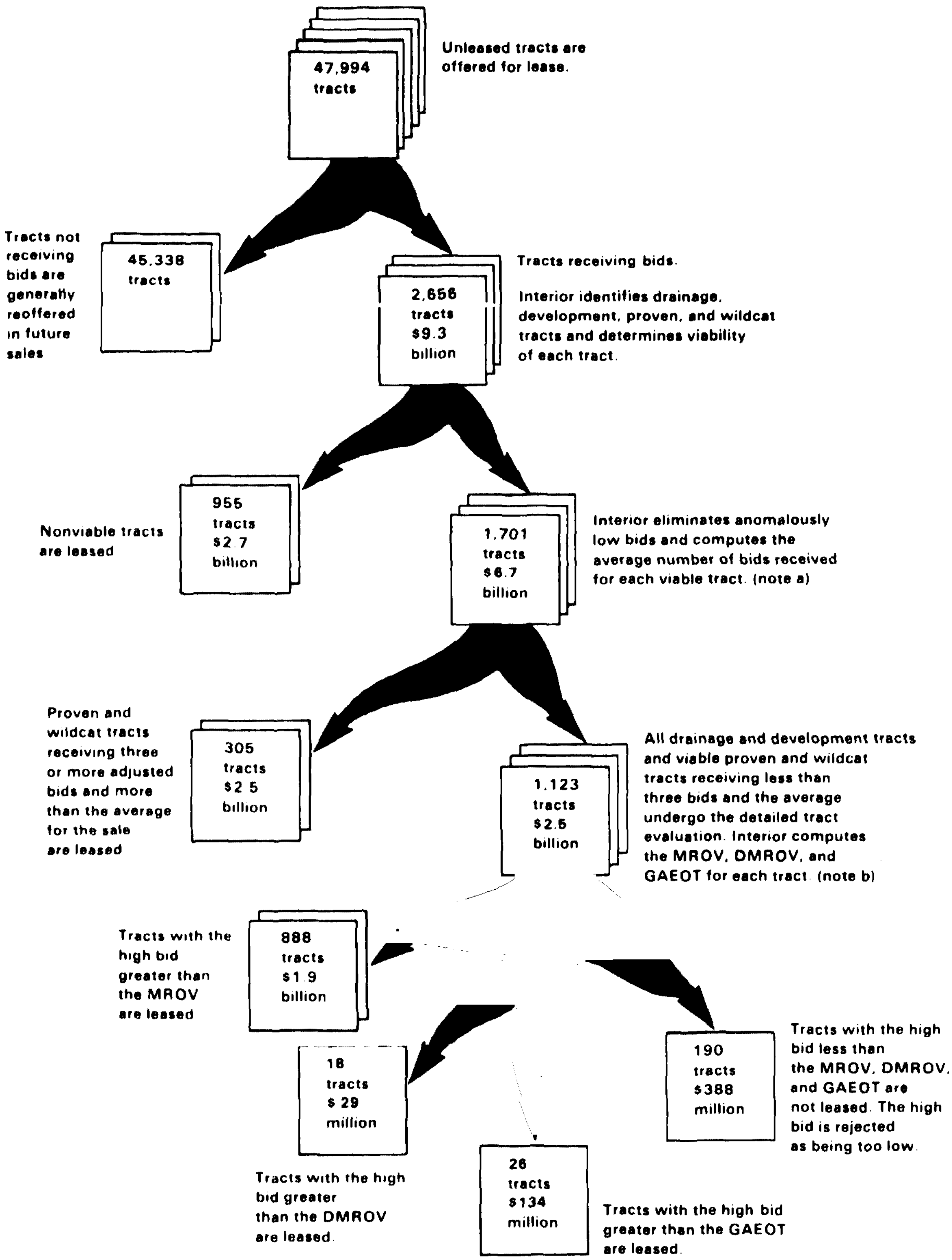
[3]There are four types of tracts--development, drainage, proven, and wildcat tracts; these are defined in the glossary.

[4]Interior defines an "anomalously low bid" as any low bid that is less than one-eighth of the next higher bid. Currently, this definition applies to only one bid per tract.

[5]Section 2(o) of the act gives a definition of fair market value. This definition, however, pertains to the federal government's purchase and disposition of royalty oil and gas and not to the value of lands leased and rights conveyed.

CHART 4

INTERIOR'S BID-ACCEPTANCE PROCESS IN THE FIRST TEN AREA-WIDE SALES



[a] Another 273 tracts were leased for $1.7 billion under the geometric mean of bids criterion--which was eliminated after six area-wide sales.

[b] One tract was leased for $1.2 million at the discretion of the Atlantic regional manager without meeting the MROV, DMROV, or GAEOT criteria.

"amount in cash . . . for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy. . . . This market value which is sought is not merely theoretical or hypothetical but it represents, insofar as it is possible to estimate it, the actual selling price."[6]

Fair market value varies substantially among the different tracts and is based on the amount of oil and natural gas resources contained in each tract, future oil and natural gas prices, costs of exploration and production, and other economic variables. We believe that to properly assure that high bids capture the value of tracts at the time and place of the lease sale--and thus to ensure fair market value--Interior should have reasonable knowledge of the underlying value of individual tracts leased. Because Interior has access under the act to all geological and geophysical data gathered for the OCS, it is in a position to be more knowledgeable about tract values than are individual firms.

In 1979, staff from the National Academy of Sciences and the U.S. Geological Survey compared Interior's presale estimates of recoverable oil and natural gas resources with estimates of resources after drilling on the lease.[7] The study concluded that Interior employed state-of-the-art techniques and that Interior's estimates were relatively accurate for those tracts on which oil or natural gas had been found. In 1980 another study compared Interior's estimated tract values in relation to number and size of bids and levels of production after lease.[8] It concluded that Interior's values were generally very conservative when compared to the high bid and somewhat conservative compared with the average bid.

<u>Concerns with relying solely on competition and the marketplace</u>

At the time of adopting new bid-acceptance procedures, Interior's OCS Fair Market Value Task Force reported that

"Implicit in the decision to increase reliance on the market to gain information for use in its [Interior's]

---

[6]Department of the Interior, <u>Procedures For OCS Bid Adequacy</u>, March 1983.

[7]<u>Science</u>, Vol. 205, <u>Oil and Gas in Offshore Tracts: Estimates Before and After Drilling</u>, Aug. 3, 1979.

[8]University of California, Los Alamos Scientific Laboratory, <u>Pre-sale Evaluations on Federal Offshore Hydrocarbon Leases</u>, March 1980.

bid evaluation decisions is the underlying assumption that the market will continue to provide a sufficient level of competition. While there is historical evidence that a high degree of competition has existed for OCS leases, there is concern that a future [area-wide] lease sale could suffer from such weak competition that the lease market would not yield any prices that would have resulted from transactions between knowledgeable, willing sellers and knowledgeable, willing buyers. Should this occur, procedures using market information to assure receipt of fair market value would be invalid. Under such circumstances it would be appropriate for the Secretary to reduce, or remove altogether, the reliance on market information for that sale."

In 1982 the Assistant Secretary for Policy, Budget, and Administration reported that, in addition to Interior's bid-acceptance procedures, the size and timing of lease sales could affect the receipt of fair market value.[9] In particular, he noted that it was possible that the increase in the number of tracts offered for lease under the area-wide program could outstrip the level of money available to industry and, thus, competition and bids could decline. He reported that evaluating tracts would assure that these changes would not provide bidders the opportunity to acquire leases for less than fair market value.

Receipt of fair market value differs from maximizing revenues

Assuring receipt of fair market value differs from maximizing up-front bid revenues for offshore leases. Under the tract-selection program, industry's high bids usually substantially exceeded Interior's estimates of tract value (MROV and DMROV)--that is, its own estimate of fair market value at the time of the lease sale. In effect, industry paid a premium over Interior's estimates of tract value because of the competitive nature of the sales in the tract-selection program. However, since competition per tract has decreased under the increased pace of the area-wide program, industry has been less willing to pay such a large premium for tracts being leased (as discussed in chapter 3).

THREE-OR-MORE-BIDS CRITERION A LESS APPROPRIATE SUBSTITUTE IN SOME CASES THAN INTERIOR'S OWN ESTIMATE

We believe that where Interior has good or excellent supporting data to evaluate tracts, its own independent estimates of tract value (MROV and DMROV) provide more assurance of receiving

---

[9]Assistant Secretary for Policy, Budget, and Administration memorandum to the Under Secretary, OCS Tract Evaluation Procedures and Fair Market Value Assurance, Jan. 7, 1982.

fair market value for OCS lands than relying solely on the receipt of three or more bids for individual tracts. Having good or excellent supporting data increases the reliability of Interior's estimates in assessing the reasonableness of high bids.

Because no detailed evaluation was conducted for the 305 tracts leased under this criterion in the first ten area-wide sales, Interior had little knowledge of tracts' resource value and was not a knowledgeable seller. Of these tracts, Interior leased 97 (for over $638 million) without conducting its own evaluation even though Interior believed it had good or excellent data with which to evaluate these tracts. With little additional effort Interior could have developed and used its own independent valuations (MROV and DMROV) to properly ensure that the high bids captured the value of the tracts at the time and place of the lease sale. In other words, Interior would become a more knowledgeable seller in those cases, thus ensuring receipt of fair market value.

We believe that relying solely on the receipt of three bids does not ensure that the high bid will equal or exceed Interior's own estimates of tract value. If the three-or-more-bids criterion had been applied to tract-selection sales, some tracts would have been leased for significantly less than Interior's estimates of their value (MROV and DMROV). For example, if the three-or-more-bids criterion had been used in the prior tract-selection sales, high bids for 20 of the 184 tracts (10.9 percent) rejected as being too low would have been accepted under this criterion for $826 million less than Interior's estimates. In one tract-selection sale, Interior rejected the highest of three bids--$7.2 million--as being too low. If Interior had relied solely on the receipt of three or more bids to ensure fair market value, the tract would have been leased for 35.3 percent of its estimated MROV ($20.4 million) or 40 percent of its DMROV ($18 million). Thus, relying solely on the receipt of three or more bids does not ensure that the high bid will equal or exceed Interior's estimates of tract value.

Effect of discontinuing the criterion in cases where Interior has good or excellent data

Discontinuing the three-or-more-bids criterion in cases where Interior has good or excellent supporting data for its evaluations would not greatly increase Interior's workload or costs because most of the required analysis is completed in preparation for the sale. Further, relatively few tracts are expected to meet this criterion in future sales.

The director of MMS expects that most analyses for tracts being evaluated will be undertaken on the basis of data available at the time bids are received.[10] However, some additional detailed analyses, including additional mapping, may be completed at the discretion of the regional managers. In cases where Interior has good or excellent data, additional data should not be needed to complete the detailed tract evaluation. Also, MMS' guidelines for bid adequacy suggest that, to ensure the objectivity of the process, as many of the critical detailed evaluation parameters as possible should be determined before the sale.[11] Thus, most of the additional workload necessary to evaluate those tracts with good or excellent data would consist of completing the computer-generated valuations. MMS estimates that this process costs $66, $88, and $143, respectively, for each tract evaluated in the first three area-wide sales in the Gulf of Mexico.

If Interior were to discontinue using the three-or-more-bids criterion in cases where it has good or excellent supporting data, relatively few additional tracts would require detailed analysis. Interior, for example, would need to have estimated the value of 97 additional tracts in the first ten area-wide sales if the three-or-more-bids criterion had not been used. Also, there has been a continued reduction in the number of tracts leased under the three-or-more-bids criterion. Furthermore, MMS expects to receive bids on fewer tracts in future sales.[12]

---

[10]Federal Register, Vol. 49, p. 12767, Notification of Procedural Changes for OCS Bid Adequacy, March 30, 1984.

[11]Director, MMS, memorandum to all regional managers, Guidelines for Bid Adequacy, April 21, 1983.

[12]Director, MMS, memorandum to the Assistant Secretary--Land and Minerals Management, Decision on Fair Market Value, March 26, 1984.

Criterion may promote undesirable or noncompetitive practices

Interior's use of the three-or-more-bids criterion allows possible undesirable or noncompetitive bidding strategies.[13] Given the recent increase in mergers and complete buy-outs of companies within the oil and natural gas industry, we found that it was very difficult to identify related companies at the time of any given sale. However, we identified ten cases in which merging companies submitted separate bids--one from each of the merging companies--for the same tract. In one case, the tract received three bids and was leased under the three-or-more-bids criterion to one of the merging companies.

We also identified three cases in which a company (competing against itself) submitted two separate bids for the same tract. In the first case, because the tract received only two bids it was referred to the second phase of the bid-acceptance process and was ultimately rejected. In the second case, the tract was determined nonviable by Interior and leased to the company submitting two bids. In the last case, the tract received four bids and was leased under the three-or-more-bids criterion to the company submitting two bids.

On July 13, 1984, Interior began eliminating all but the highest bid from any company submitting more than one bid for a tract. The low bid, whether the company bids alone or jointly with other companies, is not considered in the bid-acceptance process.

GAEOT A LESS APPROPRIATE MEASURE OF TRACT VALUE UNDER AREA-WIDE PROGRAM

Using the GAEOT criterion, Interior leased 26 tracts in the first ten area-wide sales for less than its estimates of their value (MROV and DMROV). We question the appropriateness of using this criterion for leasing tracts where Interior has good or excellent supporting information for its evaluations. In the first ten area-wide sales, Interior leased 20 tracts under the

---

[13]Some undesirable or noncompetitive practices that may occur in the OCS lease market are strategic bidding, gaming, and collusion. Strategic bidding occurs when companies take their competitors' actions into account and attempt only to exceed their rivals' bids, rather than offering the full value for the offshore lease. Gaming occurs when companies bid against Interior's procedures and criteria in an attempt to beat the system in order to obtain leases for less than fair market value. Collusion is two or more bidders acting together through a secret agreement in an attempt to lower their cost of lease acquisition.

GAEOT criterion for $65 million less than their estimated values (MROVs) even though Interior had good or excellent supporting data to estimate their MROVs and DMROVs. Interior accepted $105 million for these tracts (61.8 percent of their estimated value of $170 million [total of their MROVs] or 68.6 percent of their estimated discounted value of $153 million [total of their DMROVs]).

In one case, Interior estimated that the tract's value (MROV) was $11 million and discounted value (DMROV) was $10 million, but leased the tract for $6.6 million under the GAEOT criterion. On the basis of bids of $6.6 and $1.6 million and its own MROV, Interior computed a GAEOT of $4.9 million:

$$\sqrt[N]{(\text{MROV}_1)\text{x}(\text{bid}_2)\text{x}(\text{bid}_3)\text{x}\ldots\text{x}(\text{bidN})} = \text{GAEOT}$$

$$\sqrt[3]{\$11.0 \text{ mil. x } \$6.6 \text{ mil. x } \$1.6 \text{ mil.}} = \$4.9 \text{ mil.}$$

Since the high bid of $6.6 million is greater than the GAEOT, Interior leased the tract. Interior, in effect, gave more importance to two dissimiliar bids than to its own good supporting data and estimated MROV and DMROV. Therefore, in relying on the GAEOT criterion, Interior receives less than its estimates of tract value.

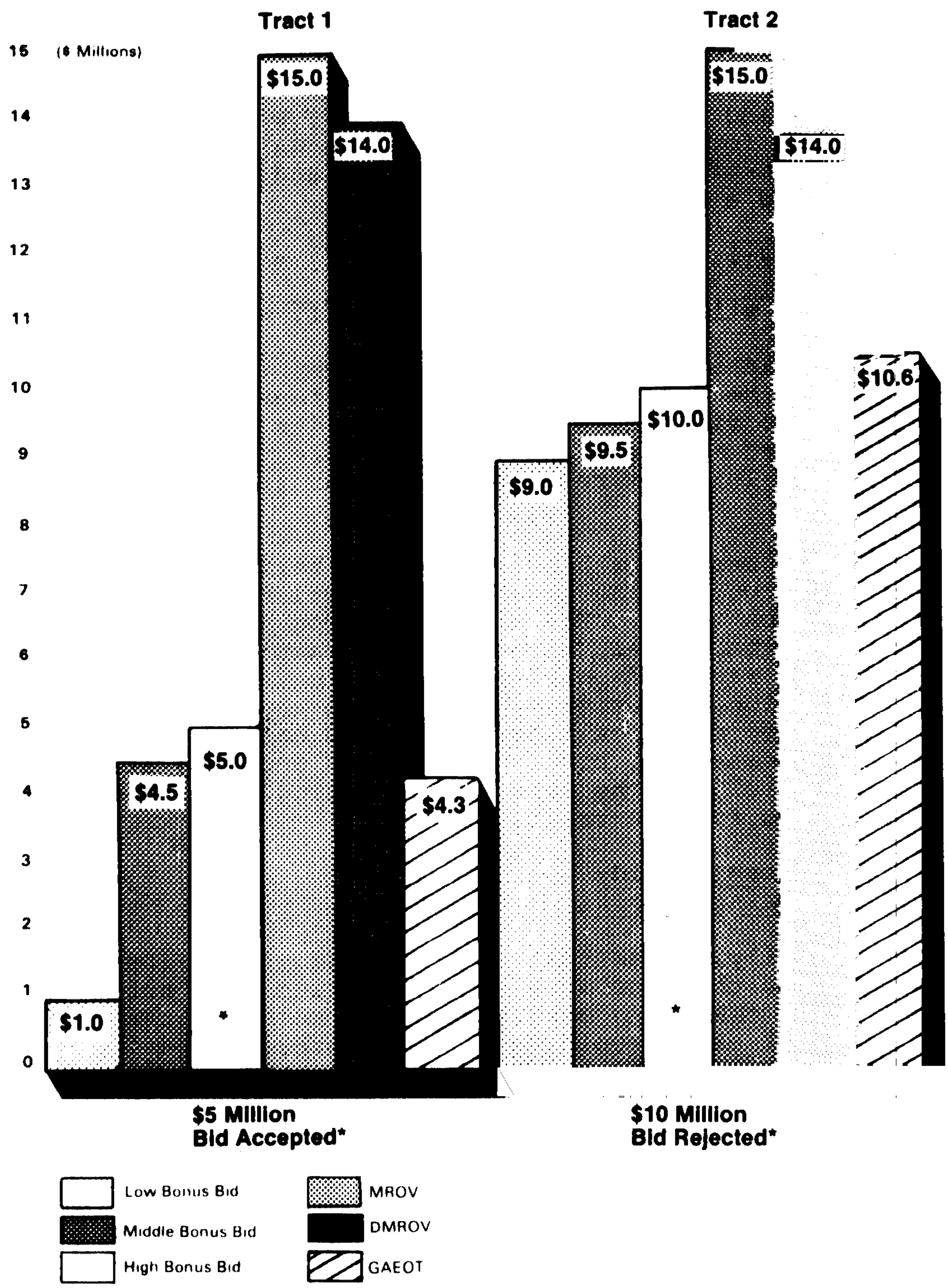
There was a basis for placing greater reliance on the competitive market through using the GAEOT criterion when there were more bids for each tract. The area-wide program, however, has diluted competition for each tract. For example, 18 (90 percent) of the 20 tracts received only two bids. In its 1977 review of the GAEOT criterion, Interior had concluded that for tracts receiving only two or three bids, the GAEOT has little meaning in assessing the adequacy of bids. Interior's analysis stated that the criterion should not be used for accepting high bids if few bids are received for the tract.

GAEOT criterion can provide questionable leasing results

Hypothetically, given that two drainage or development tracts--where the three or more bids criterion does not apply--have equal value (MROV and DMROV) and each received three bids, reliance on GAEOT alone could result in different leasing results. For example, one tract could be leased for half the bid amount received for the other--which is rejected. This hypothetical case is shown on chart 5.

Chart 5

GAEOT Formula And Its Effect On Bid-Acceptance



The regional manager of the Gulf of Mexico office reported that the criterion provides questionable leasing results because when companies' bids are close, as shown in chart 5, it is less likely that the high bid will be accepted under this criterion. Conversely, when the bids disagree significantly, it is more likely that the high bid will be accepted.[14]

Gaming or strategic bidding become more attractive

Gaming or strategic bidding practices become more attractive under the GAEOT, since the right combination of bids mathematically guarantees acceptance of the high bid and because the criterion does not apply to tracts receiving only one bid. The right combination of two or three bids could guarantee the high bidder the lease to any tract Interior offers (high bid will be greater than GAEOT). Hypothetically, three bids of $1, $2, and $5 million would guarantee that the high bid of $5 million would win the lease to any drainage or development tract valued up to $62.5 million ($\$5 \text{ mil.} \geq \sqrt[4]{\$1 \text{ mil.} \times \$2 \text{ mil.} \times \$5 \text{ mil.} \times \$62.5 \text{ mil.}}$).

We identified one case under the criterion where merging companies submitted the only bids for a tract--$2 million and $0.9 million, respectively. Interior estimated the tract to be worth $854,784, and the higher bid was accepted. However, this combination of bids would have mathematically guaranteed that the high bid would have been accepted under the criterion even if Interior had valued the tract up to $4.44 million.

As previously noted, we also identified three instances where the same company submitted more than one bid for the same tract. In the first case, the high bid came very close to being accepted under the GAEOT criterion even though the bid was significantly less than Interior's valuation (MROV and DMROV), as shown in table 7. Had the bid been about one-half of one percent ($19,416) higher, Interior would have been in the position of leasing the tract to the high bidder for $9.21 million ($13 million - $3.79 million = $9.21 million) and $8.21 million ($12 million - $3.79 million = $8.21 million) less than Interior's MROV and DMROV, respectively.

---

[14]Regional Manager, Gulf of Mexico OCS Region memorandum to the Associate Director, Offshore Minerals Management, MMS, Recommendations on the OCS Streamlined Bid Adequacy Procedures, August 12, 1983.

Table 7

Comparison of Bids With GAEOT for One Gulf of Mexico Tract

High bid:	$ 3,790,000
Low bid:	1,122,000
Interior's valuation (MROV):	13,000,000
Interior's discounted valuation (DMROV):	12,000,000
Geometric average evaluation of the tract (GAEOT):	3,809,416
Difference between rejected bid and acceptable bid (GAEOT less the high bid):	$19,416

Effect of discontinuing the GAEOT criterion when Interior has good or excellent data

Discontinuing use of GAEOT as a criterion in cases where Interior has good or excellent supporting data would not affect Interior's workload and would only slightly increase rejections of multiple bid tracts and overall costs of delayed development. Since GAEOT is generated at the final stage of the bid-acceptance process, its elimination would not affect Interior's work load because no additional work would be needed. If it had not been used in the first ten area-wide sales, Interior would have rejected 20 additional tracts where it had good or excellent supporting information. All of these tracts were in the Gulf of Mexico, where they are usually reoffered within 1 year; the overall costs of delayed development would thus have been minimal.

IMPACT ON GOVERNMENT REVENUES OF REJECTING BIDS

Interior has studied the history of tracts rejected in prior sales and noted that, on average, it has doubled the bid amount ultimately accepted. It reviewed 84 bid rejections from nine sales and noted the following results:

		($ million)
Rejected 84 high bids totaled:		203
Later leased 60 tracts for:		589
Failed to lease 24 tracts on which the rejected bids totaled:		33

Interior also noted that the average time between first rejection and subsequent sale was 12.3 months.

In addition, Interior rejected bids totaling almost $102 million for 33 tracts in area-wide sale 72. During the next sale (sale 81), Interior leased 18 of these tracts for $201 million. This amounts to an increase of over $99 million within one year. The remaining 15 tracts did not receive bids or were rejected in sale 81.

CONCLUSIONS

With the advent of area-wide leasing, Interior decided that evaluating every tract was no longer efficient because of the large increase in the number of tracts offered for lease. Interior adopted new bid-acceptance procedures, which place increased reliance upon competitively-based criteria and less reliance on its own detailed tract valuations in ensuring receipt of fair market value.

We believe, however, that by being knowledgeable about tracts' values, Interior can best ensure that the government receives fair market value for tracts leased. For tracts that Interior has good or excellent supporting data with which to evaluate, its own independent estimates of tract value (MROV and DMROV) provide more assurance of receiving fair market value than does relying solely on (1) the tract receiving three bids or (2) the geometric average of the bids and Interior's estimate. We question the use of the three or more bids criterion in these cases because the receipt of three bids in prior sales did not ensure that the high bid exceeded Interior's estimates of tract value and because Interior has not obtained reasonable knowledge of the value of the tracts leased under the criterion. With little additional effort to evaluate these tracts, therefore, Interior can use its own independent valuations to ensure receipt of fair market value.

In addition, by using the GAEOT criterion, Interior always receives less money than its estimates of tract value. There was a conceptual basis for using this criteria to assess high bids in more competitive sales because of the number of bidders and bids submitted for each tract. In area-wide sales, however, we question the appropriateness of using this criterion for leasing tracts where Interior has good or excellent supporting information for its estimates of tract values (MROV and DMROV)--particularly when the tract receives only two bids. In effect, under the GAEOT criterion, Interior has given more importance to a relatively few bids in accepting bids than to its own good supporting data and estimates of tract value.

RECOMMENDATION TO THE SECRETARY OF THE INTERIOR

We believe--particularly with the reduction in bid revenues under area-wide leasing--that two of Interior's bid-acceptance criteria (three-or-more-bids and geometric average) should not be used in place of Interior's estimates of tract value when it has good or excellent supporting data. In order to become a knowledgeable seller and have increased assurance that the high bids represent fair market value, we recommend that in those cases where it has good or excellent supporting data to estimate tracts' values, Interior should use its independent estimates of tract value for assessing the adequacy of high bids.

CHAPTER 5

INTERIOR'S STREAMLINED PRESALE PLANNING PROCESS

FOR AREA-WIDE LEASING PROGRAM

Interior has streamlined the presale planning process for the area-wide program and has reduced the time allowed to prepare some planning documents and for the public to review and comment on them. Most states, companies, and environmental and fishery groups believe that Interior's planning documents are complete and contain accurate data. Also, states and industry believe that they have adequate time to review and comment on Interior's planning process. Most environmental and fishery groups believe that they have marginal or adequate time to participate in the process.

States, interest groups, and the Congress--through litigation and leasing moratoriums--continue to express concern with Interior's area-wide program. The area-wide program includes an increased number of sales and significantly larger number of tracts offered in each sale. States and others question Interior's ability, however, to adequately assess the potential impact of area-wide lease sales. Although the results of the litigation have favored Interior's position, they affected half of the first ten area-wide sales. Similarly, areas removed from leasing because of moratoriums have increased seventy-fold since area-wide leasing began.

Although required by the OCS Lands Act, as amended, Interior has not provided the Congress and the public with annual reports assessing the cumulative effects of offshore activities on the human, marine, and coastal environment. Interior officials question the need for the reports.

CHANGES IN PRESALE PLANNING PROCESS

Interior's streamlined procedures allow certain presale planning activities to be performed simultaneously, larger environmental studies, and a phased approach for collecting data. Interior also reduced the time allowed to prepare some planning documents and for the public to review and comment on them. During this phase, Interior collects and analyzes geological, environmental, and economic data on the sale area. In addition, federal and state agencies and others provide information, including environmental and economic data, to Interior on the offshore and coastal environments. Interior is responsible for coordinating and analyzing the information, identifying data needs, and evaluating states' and public opinion on the proposed lease sale.

Interior must complete a number of major steps in planning for each area-wide lease sale. Approximately 30 to 32 months before the sale, Interior prepares a geology report, which is provided to the public, identifying the areas of resource potential and the regional characteristics of the planning area under consideration for leasing. Approximately 20 months before the sale, Interior issues a call for information in the Federal Register asking potential bidders and other affected parties to comment on areas of interest and concern. Next, Interior formally determines the part of the planning area, area identification, on which the environmental impact analysis will be focused and that will be considered for leasing. Approximately 9 to 10 months before the sale, Interior issues the draft environmental impact statement to the general public, describing the existing OCS environment, the proposed lease sale and alternatives, resource estimates, and probable environmental risks. A 60-day public comment period is generally provided for interested groups to review the draft and provide information and written comments to Interior. After these comments are received and reviewed, Interior issues the final environmental impact statement. Following publication of the final statement, Interior issues the proposed notice of lease offering, informing the public of the proposed terms and conditions of the upcoming offering. Interior also sends the proposed notice to the governors of affected coastal states, specifically asking for their recommendations on the size, timing, or location of the proposed sale. At least 30 days prior to the date of the sale, Interior publishes the final notice of lease offering, listing the tracts to be offered for lease, lease stipulations, and all terms and conditions of the offering. Finally, Interior conducts the lease offering, where the sealed bids are publicly announced and recorded. These steps are discussed in more detail in appendix V.

Chart 6 compares Interior's previous tract-selection process with its new streamlined planning procedures.

PUBLIC PARTICIPATION IN OCS PLANNING PROCESS

The OCS Lands Act Amendments of 1978 provide that state and local governments affected by offshore activities are given

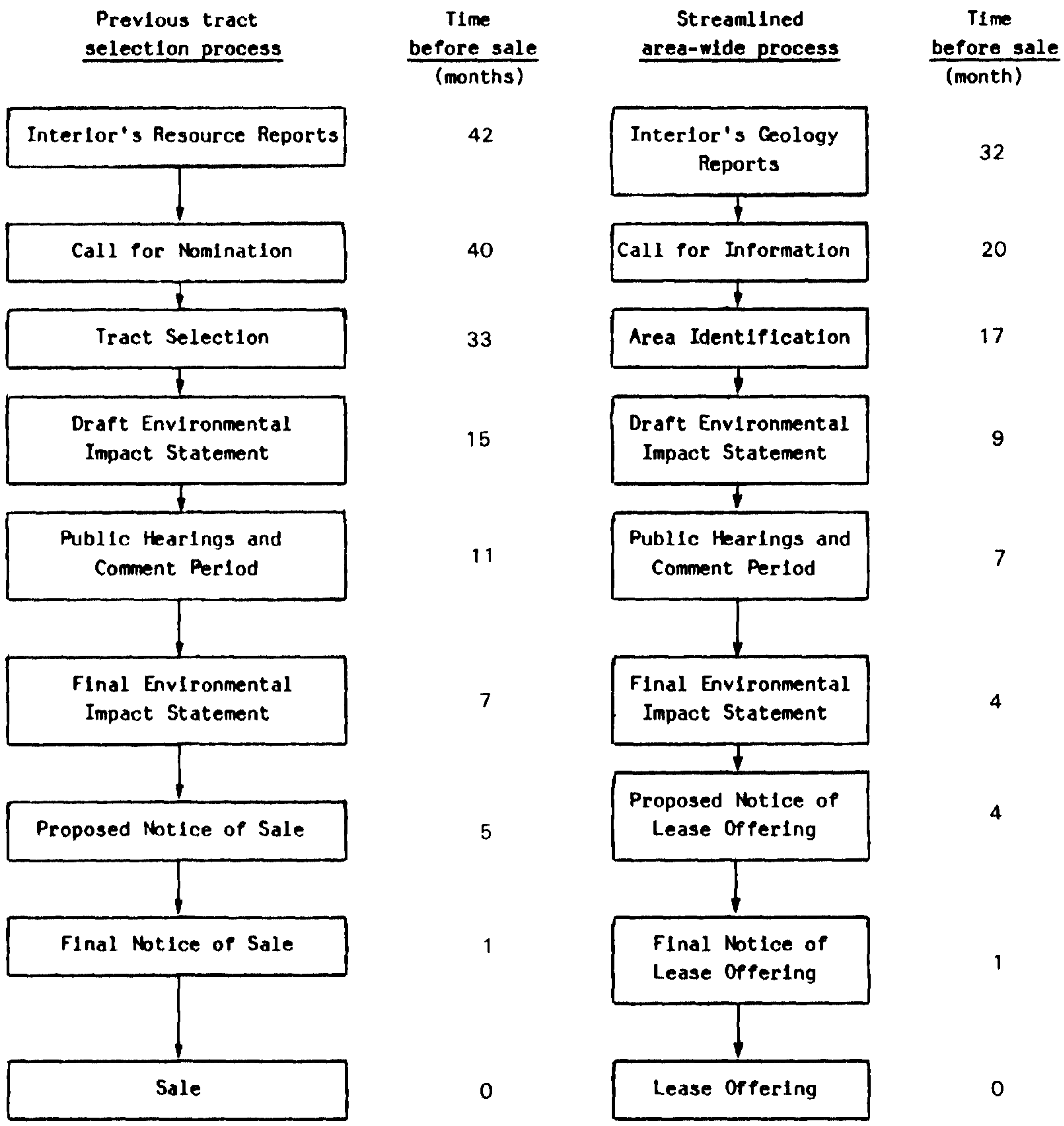
--comprehensive assistance to anticipate and plan for the effects of offshore activities,

--an opportunity to participate in policy and planning decisions, and

--timely access to information regarding OCS activities.

Chart 6

Interior's Previous and New Streamlined Planning Process



Source: Department of the Interior, The Bureau of Land Management, Final Supplement to the Final Environmental Statement, Proposed Five-Year OCS Oil and Gas Lease Schedule, January 1982-December 1986.

The OCS Land Act, as amended, also requires Interior to coordinate the size, timing, and location of proposed lease sales with affected states; develop environmental information to assess and manage the potential effects of OCS activities; monitor and identify any significant changes in the human, marine, and coastal environments; and annually report to the Congress the cumulative effects of offshore activities on the human, marine, and coastal environments.

MOST BELIEVE THAT INTERIOR'S PLANNING DOCUMENTS ARE COMPLETE AND ACCURATE

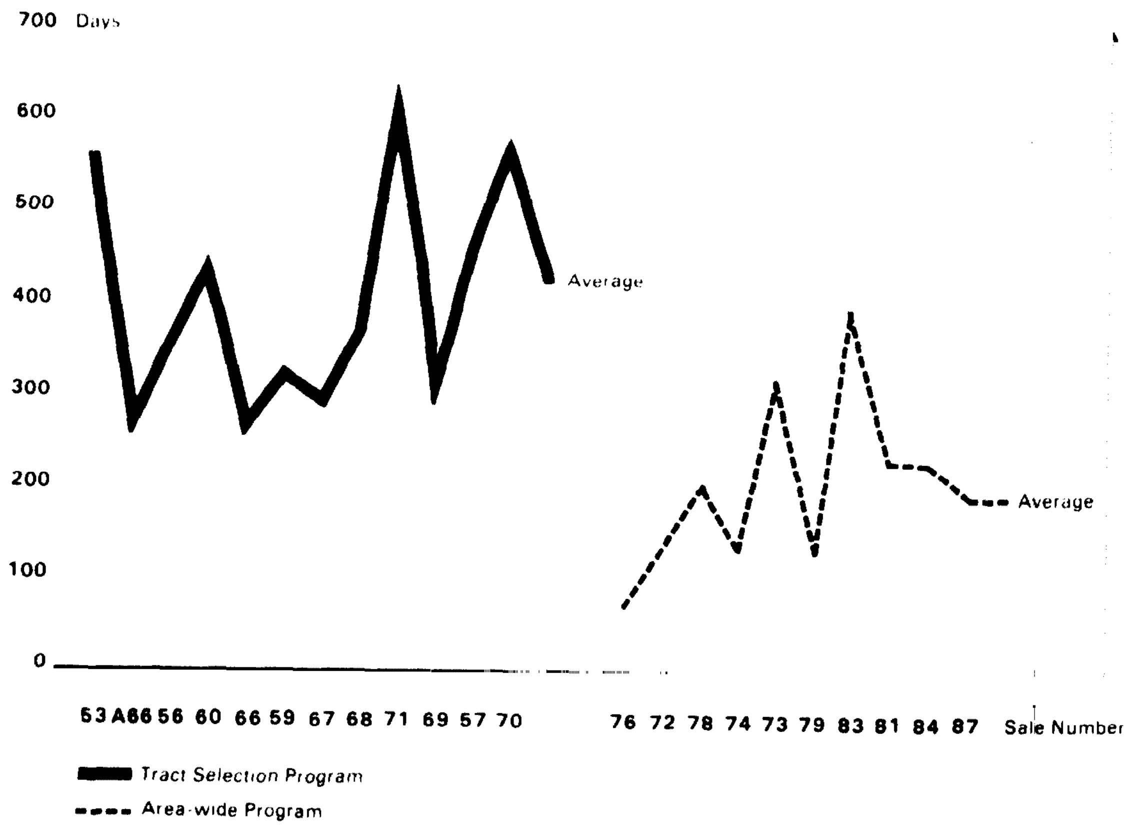
Most states, companies, and environmental and fishery groups expressed no concerns about Interior's planning documents. They believe Interior's documents are complete and contain accurate data.

Although time was reduced for planning, it appears adequate

Interior reduced the presale planning time from approximately 40 to 20 months from call for information to lease offering. With this reduction, Interior also reduced the time for preparing some of the presale planning documents. It reduced, for example, the preparation time for the draft environmental impact statements. The preparation process is initiated with Interior's public notice of its intent to prepare the draft environmental impact statement. The average time from the intent notice to the issuance of the draft statements for area-wide sales is similar to the time for tract-selection sales. However, Interior's area identification formally determines which part of the sale area will be the focus of the environmental analysis. The average time from Interior's area identification to issuance of the draft environmental impact statement for area-wide sales is 189 days, compared with 424 days for recent tract-selection sales, as shown in chart 7.

Chart 7

Comparison Of Time From Area Identification To Issuance Of The Draft Environmental Impact Statement For Selected Sales



Most states and others had no major concerns

Eleven states (52 percent) responding to our questionnaire called Interior's planning documents accurate and complete. Ten states (48 percent), however, felt that one or more documents were incomplete; two (10 percent) felt that they contained inaccurate data. The draft environmental impact statement was the document most often cited for being incomplete or inaccurate.

The state of Texas questioned a number of statements in Interior's draft environmental impact statement for sales 94, 98, and 102.[1] For example, the state took exception to the draft's

[1]Governor of Texas letter, comments on the draft environmental impact statement for sales 94, 98, and 102, Oct. 9, 1984.

conclusion that Texas ". . . does not have any vulnerable, sensitive coastal habitats likely to be contacted by an oil spill in the Federal OCS." The state, in contrast, listed a number of sensitive habitats that could be affected by oil through flood tides. Similarly, the draft environmental impact statement reported that no coastal habitats would be affected by pipelines; Texas listed two habitats that could be affected.

The state of Louisiana also expressed concern about Interior's ability to estimate the effect of area-wide lease sales.[2] For example, it pointed out that Interior's draft environmental impact statements underestimated the number of tracts leased for sales 72 and 81. The state is concerned that Interior's estimated environmental and economic impact has been "greatly underestimated" because the potential effects were projected upon a "grossly underestimated" level of leasing.

Of the 55 environmental and fishery groups responding to the questionnaire, most expressed no concerns with Interior's planning documents. Only 12 (22 percent) stated that one or more planning documents were incomplete and 11 (20 percent) thought that one or more planning documents contained inaccurate data. The draft environmental impact statement was most often cited for being incomplete or inaccurate.

Similarly, of the 105 companies responding to the questionnaire, most expressed no concerns with Interior's documents. Only two companies stated that one or more planning documents were incomplete and only four thought that one or more documents contained inaccurate data. Interior's resource report was the document most often cited.

TIME ALLOWED FOR PUBLIC COMMENT WAS REDUCED BUT APPEARS ADEQUATE

Interior reduced the time allowed for public comments on its call for information and draft environmental impact statements. Most states and companies believe, however, that they have adequate time to review and comment in these planning stages, while environmental and fishery groups believe, in general, that the time allowed is adequate or marginal.

---

[2]Governor of Louisiana letter, comments on the new OCS leasing program, Aug. 24, 1984.

Time allowed for the call for information appears adequate

Interior reduced the usual minimum comment time to respond to its call for information to 30 days for area-wide sales, compared with 60 days provided in most previous tract-selection sales. The call requests comments from states, the general public, and industry on the proposed sale. Seventeen states (81 percent) responding to our questionnaire said that they had "adequate" time to respond to Interior's call for information and four environmental and fishery groups (16 percent) responding believe that the time allowed for the call for information is "adequate" or "more than adequate." Three states (14 percent) and five environmental and fishery groups (20 percent) believe that the time allowed for the call is "inadequate" or "very inadequate". In addition, nine of the environmental and fishery groups (36 percent) believe that the time is marginal. No company expressed concern with the adequacy of the time allowed for the call for information.

Time allowed for the draft environmental impact statements appears adequate

The comment period for four out of seven draft environmental impact statements was reduced below the minimum 60-day comment period provided by Interior's departmental manual.[3] Interior reduced the comment period to 50, 53, and 56 days for some drafts. Interior officials in the environmental assessment unit informed us that as milestone dates for presale activities slipped for some sales, exemptions to the minimum comment period were given, but that Interior intends to hold to the 60-day comment period in future sales.

Twelve states (57 percent) responding to our questionnaire said that they had "adequate" time to comment on Interior's statements, compared with four states (19 percent) that said that the time provided by Interior is "inadequate". Five states (24 percent) said Interior provided "marginal" time. Nine environmental and fishery groups (36 percent) said that the time provided is "adequate" or "very adequate," while four (16 percent) called it "inadequate" or "very inadequate". Nine groups (36 percent) called it "marginal." No company expressed concern with the time allowed to comment on the draft.

---

[3]Interior consolidated data for sales 72, 74, and 79 into one draft environmental impact statement and for sales 81 and 84 into one statement.

FUNDING FOR ENVIRONMENTAL STUDIES PROGRAM HAS STABILIZED

Although the acreage being considered and actually leased has increased, Interior has not increased the funding for its environmental studies program, which is designed to provide information necessary for prediction, assessment, and management of the potential effects of OCS activities on both a regional and national basis. However, Interior believes that sufficient studies have been completed in most OCS areas, except remote planning units in Alaska, to assess the potential effects of the program. As a result, Interior has stabilized the funding for the program, as shown in table 8.

Table 8

Funding for Interior's Environmental Studies Program, Fiscal Years 1982 through 1985
($ thousands)

Fiscal year	OCS regions: Alaska	Atlantic	Gulf of Mexico	Pacific	Programmatic studies[a]	Total
1982	13,741	6,231	3,430	3,605	2,060	29,067
1983	12,612	4,342	4,042	4,307	2,584	27,888
1984	12,005	4,865	4,000	4,068	2,950	27,888
1985	11,905	4,865	3,900	4,000	3,218	27,888

[a]These are baseline studies dealing with the needs and improvement of the environmental studies program.

Some states have expressed concern that the environmental studies program has not kept pace with the area-wide leasing schedule. For example, the state of Florida has concluded that

> "One of the most serious issues [it] identified was the lack of adequate environmental studies in certain leasing areas. This continues to be one of the major pitfalls of the leasing program. It is imperative that MMS develop a systematic five-year environmental studies program which is phased to the five-year leasing schedule to ensure availability of data for environmental impact statements and Notice of Sale. Areas with little or no environmental studies should not be offered for leasing."[4]

---

[4]Governor of Florida letter, comments on the new OCS leasing program, Aug. 16, 1984.

The state of Virginia recommended that

> "The OCS Environmental Studies Program must keep pace with the leasing program. Adequate environmental information is particularly crucial in a frontier area where many of the tracts are located in unusually deep water. . . . Continuing study is needed in order to maintain the viability of Environmental Impact Statements and measures used to mitigate potential impacts."[5]

The state of South Carolina reported that

> "A well-funded, well-timed environmental studies program will significantly reduce public concern over potential adverse impacts from oil and gas exploration and development."[6]

NUMBER OF COURT CASES AND LEASING MORATORIUMS IS SIGNIFICANT

States, interest groups, and the Congress--through litigation and leasing moratoriums--continue to express concerns with Interior's area-wide program.

Litigation has involved five area-wide sales

Litigation has involved five of the first ten area-wide lease sales--sales 76, 74, 73, 81, and 84. The states of Virginia, Maryland, and New York sued to get tracts deleted from sale 76. No litigation was filed specifically for sale 74, but it was affected by litigation dealing with the sharing of revenues from tracts common to the state of Texas and the federal government. The state of California's coastal commission wanted sale 73 enjoined on the grounds that it was inconsistent with California's coastal-zone management plan. The states of Louisiana and Texas alleged that sales 81 and 84, respectively, violated the provisions of the OCS Lands Act.

Leasing moratoriums have increased

The level of leasing moratoriums has also increased over the years. The first moratorium was enacted as a provision of

---

[5]Governor of Virginia letter, comments on the new OCS leasing program, July 23, 1984.

[6]Governor of South Carolina letter, comments on the new OCS leasing program, Aug. 17, 1984.

Interior's fiscal year 1982 appropriation. Since then, the area included under moratoriums has increased from 736,000 acres to 52 million acres, as shown in table 9. Reasons for opposing OCS leasing are varied. Reduced fish catches and tourism, potential environmental damage, and interference with the Department of Defense are cited as reasons why leasing should not be permitted in some areas.

Some in industry recognize the importance in meeting the concerns of states and others during the planning process in order to reduce legal challenges and congressional moratoriums against the program. The level of participation in the program is tempered by Interior's ability to hold sales on schedule and issue leases without legal considerations. One company responding to our questionnaire stated that regardless of Interior's good intentions in offering OCS leases, industry is effectively frustrated by the negativism expressed by many state and local governments. As a result, according to the company, a tremendous amount of time and resources are wasted by industry. The company recommended that Interior make a greater effort to convince the states and others that the oil and natural gas resources of the OCS must be evaluated and produced to meet the objectives of the OCS Lands Act and its 1978 amendments.

RECENT INITIATIVES TO PROVIDE INCREASED CONSIDERATION OF STATES' AND OTHERS' CONCERNS

Interior has made some changes to the planning process in order to try to ensure early and thorough consideration of conflicts identified by affected coastal states, federal agencies, and other interested parties. These changes, which Interior has implemented on a case-by-case basis, include: soliciting more information on specific areas of interest; expanding the call for information period from 30 to 45 days; attempting to resolve as many conflicts as possible at the area identification stage; and allowing the full 60-day review period for all draft environmental impact statements.

States and other affected groups generally view Interior's changes to the presale process positively. For example, all of the states and 21 environmental and fishery groups (38 percent) responding to our questionnaire thought that one or more of Interior's changes will improve the process to a "very great extent". Interior's initiative to encourage industry to indicate areas of interest early in the planning process was cited most often as greatly improving the process.

Table 9

Moratoriums from Fiscal Years 1982 through 1984

Fiscal year	Area prohibited	Acreage affected
1982	Four basins offshore central and northern California (Point Arena, Bodega, Santa Cruz, and Eel River).	736,000
1983	An area offshore central and northern California from Morro Bay north to the Oregon border.	35,000,000
	Certain canyonhead blocks (55 total) in the mid-Atlantic.	316,800
		35,316,800
1984	An area offshore central and northern California from Morro Bay north to the Oregon border.	35,000,000
	Certain nearshore areas offshore southern California, including (a) tracts from 3 to 10 miles offshore Newport Beach south to the Mexican border, (b) tracts in the Santa Monica Bay, (c) tracts in the 3 to 6 mile band extending around the Channel Islands Marine Sanctuary, and (d) tracts comprising the Santa Barbara Ecological Preserve.	1,600,000
	Certain areas offshore Massachusetts in the North Atlantic, including tracts shallower than 60 meters in depth and certain canyon and canyon head tracts.	8,200,000
	Certain areas offshore Florida in the eastern Gulf of Mexico, including (a) tracts encompassing the seagrass beds, (b) tracts comprising the Florida Middle Grounds (coral grounds), (c) tracts south of 26° N and in water depths less than 20 meters, and (d) tracts in a 20-mile and 30-mile buffer zone offshore the west coast of Florida from Panama City to 26° N latitude.	7,400,000
		52,200,000

ADDITIONAL OPPORTUNITY TO ASSIST STATES AND OTHER AFFECTED GROUPS

An opportunity exists for Interior to assist states and other groups by completing and publishing annual reports that assess the cumulative effects of OCS leasing. Section 20(e) of the OCS Lands Act, as amended, requires Interior to submit annual reports to the Congress and make available to the general public assessments of the cumulative effects of activities conducted under this act on the human, marine, and coastal environment. Interior officials question the need for the reports and have never provided one. The chief of MMS' Offshore Environmental Assessment Division viewed the reports as redundant and administratively burdensome to develop. He further said that other annual reports contain information on OCS activities--number of wells drilled, platform information, etc.--and that cumulative effects of the program are discussed in each environmental impact statement.

We found that Interior's other reports do not assess the cumulative effects of OCS leasing on the environment. Moreover, information contained in the environmental impact statements is specific to particular sales or a few sales, rather than addressing the cumulative effects of the OCS program. We were unable to identify any document that reports the cumulative effects of OCS activities on the coastal, human, and marine environment.

CONCLUSIONS

The prospects of success for the area-wide leasing program largely are based on Interior's ability to (1) implement the program in an efficient, effective, and timely manner and (2) reduce the level of litigation and leasing moratoriums brought against the program. Interior has streamlined the presale planning process for the area-wide program and reduced some of the time-consuming analyses before each sale. Most of the states, environmental and fishery groups, and companies queried expressed no major concerns with Interior's presale planning process. Interior has also recently tried to alleviate litigation and moratoriums affecting the program through early and increased state and public participation and early identification and resolution of conflicts.

Interior has not provided the Congress with annual reports assessing the cumulative effects of the offshore program on the human, marine, and coastal environment as required by the OCS Lands Act. The required reports may be helpful for documenting the effects of increased OCS activities and providing additional information on the benefits of the area-wide program in one source. Nevertheless, the Congress may want to review the need for such additional reporting.

MATTER FOR CONSIDERATION BY THE CONGRESS

The Congress should consider whether a need exists for requiring Interior to annually assess and report on the cumulative effects of the offshore program on the human, marine, and coastal environment.

ECONOMETRIC METHODS AND RESULTS

This appendix describes the quantitative methods we used to analyze the effects of Interior's shift to the area-wide leasing program on both the level and number of bids received for each acre or tract of OCS land. We used standard statistical techniques in examining these effects. These techniques involved comparing bidding results for lands offered for lease under previous tract-selection sales with the results of area-wide sales. The sample we used to make our comparative analysis is comprised of 2,303 tracts offered between November 30, 1979, and April 25, 1984, (first eight area-wide lease sales) for which Interior had estimated values for the tracts and the tracts had received at least one bid.[1] Of these 2,303 tracts, 1,454 were offered for lease under the prior tract-selection program. This represent 32 percent of the total number of tracts offered for lease and 100 percent of the tracts receiving bids under the tract-selection program during this period. The remaining 849 tracts were offered for lease under the area-wide program. This represents 2 percent of the tracts offered for lease and 42 percent of the tracts receiving bids under the area-wide program during this period.

METHODS

Analyzing the effects of the shift to the area-wide program is difficult for two principal reasons. First, not all of the desirable data are available. For example, we did not have the data needed to compute revenues from future royalty payments and thus had to focus only on the amount of bids received by the government. Furthermore, we also had to exclude from our analysis certain tracts offered for lease in area-wide sales because Interior never estimated their values.

In addition to data limitations, analyzing the effects of the area-wide program is complicated by other factors, affecting the level and the number of bids received (e.g., oil prices), which have varied over time. Because of this problem, we used standard regression analysis, allowing us to estimate the effects of the shift to the area-wide leasing program on the level and the number of bids received per tract while controlling for the effects of other variables. Specifically, we used the following control variables in our analysis:

--Interior's estimated value of the tract,
--the bidding system used to lease the tract (i.e., sliding scale royalty, net profit share, or fixed royalty),

---

[1]Data for area-wide lease sales 84 and 87 were not available at the time we performed our analyses.

--the type of tract (i.e., wildcat, proven, drainage, or development),
--the location of the tract (i.e., Gulf of Mexico, Pacific, or other location),
--the triple-A bond interest rate,
--industry cash flow,
--the price of crude oil,
--the proportion of joint bids received, and
--the year in which the lease sale occurred.

Most of these variables were selected to control for differences in the quality and value of the tracts being offered for lease and for differences in the amount or cost of funds used for bidding.

In particular, we expect that tracts with higher estimated values will attract more bids and receive higher bids than will those tracts with lower estimated values. Interior's estimated value of the tract is based on tract-specific and economic conditions that also influence the bidding results. Interior's determination of tract value involves calculating the amount of economically recoverable oil and natural gas resources; estimating recovery factors, production profiles, exploration costs, development costs, and operating costs; and performing a discounted cash flow analysis. Interior also inputs oil and natural gas prices, water depths, after-tax discount rates, inflation rates, lag time between leasing and production, number of wells, and transportation costs in its calculation of tract value.

Similarly, because tracts located in the Gulf of Mexico or the Pacific may be more desirable than tracts located elsewhere, we expect them to receive more and higher bids. Tracts offered for lease at times when real crude oil prices are high should be more attractive than tracts offered at times when oil prices are depressed. Because differences in risk associated with the type of tract offered for lease (wildcat, proven, drainage, or development) could also affect the number and level of bids received, we also controlled for this factor.

A measure of interest rates was included to control for differences in the cost of funds. Thus, higher interest rates would be expected to decrease both the number and level of bids. Oil industry cash flow reflects the availability of one source of funds for bidding. To account for the effects of joint bidding, we also controlled for the proportion of joint bids received for OCS tracts. The type of bidding system used was also included as a control variable since this factor may affect the number and level of bids.

The names, definitions, and means of all of the variables that we use in our analysis are shown in table 1.

Table 1

Variables Used in the Analyses

Variable	Definition	Mean
RBPACRE	Real high bid per acre ($ thousands)	0.637
NOBIDS	Number of bids per tract	2.020
PCTSMALL	Percentage of small companies in high bid	43.510
RPSVA	Real presale value per acre ($ thousands)	0.334
RPCOF	Real price of foreign crude oil	10.897
BID1	Cash bonus bid, fixed royalty system	0.797
BID2	Cash bonus bid, sliding scale royalty system	0.101
BID3	Cash bonus bid, net profit share system	0.102
WILDCAT	Wildcat tract	0.852
DRAINAGE	Drainage tract	0.066
DEVELOP	Development tract	0.047
PROVEN	Proven tract	0.035
PCTJOINT	Percentage of joint bids	54.280
CAGOM	Pacific or Gulf of Mexico sales	0.632
AAA	Triple-A bond interest rate	12.900
Y79	Sale conducted in 1979	0.059
Y80	Sale conducted in 1980	0.113
Y81	Sale conducted in 1981	0.228
Y82	Sale conducted in 1982	0.175
Y83	Sale conducted in 1983	0.243
Y84	Sale conducted in 1984	0.182
AREA-WIDE	Area-wide lease sale	0.349
CASHFLOW	Cash flow of companies (lagged 1 year in $ billions)	56.916

The two basic equations that we estimated are contained in table 2. The number of bids received per tract is the dependent variable in the first of these equations. The amount of the high bid per acre (expressed in constant 1967 dollars) is the dependent variable in the second equation.

Table 2

Basic Equations Estimated in the Analyses

Independent Variables	Dependent Variable NOBIDS	RBPACRE
NOBIDS	-	*
RPSVA	*	*
RPCOF	*	*
BID2	*	*
BID3	*	*
DRAINAGE	*	*
DEVELOP	*	*
PROVEN	*	*
PCTJOINT	*	*
CAGOM	*	*
AAA	*	*
Y80	*	*
Y81	*	*
Y82	*	*
Y83	*	*
Y84	*	*
AREA-WIDE	*	*
CASHFLOW	*	*

* Indicates that the variable was included in the respective equation in at least one of the various specifications.

\- Indicates that the variable was never used in the estimated equation.

We recognize that the regression analysis results may be sensitive to the particular specification of the equations that are estimated or to the type of estimation procedure that is used. To determine whether this was a problem in this instance, we estimated several different variants of our two basic equations and used two different estimating procedures. The first of these procedures, ordinary least squares, assumes that the amount of the high bid does not affect the number of bids received. (See table 3.) The second procedure, two-stage least squares, makes no such assumption. (See table 4.)

Table 3

Alternative Specifications
For Regression Analyses
(ordinary least-squares)

Independent Variable	Base NOBIDS	Base RBPACRE	1 NOBIDS	1 RBPACRE	2 NOBIDS	2 RBPACRE	3 NOBIDS	3 RBPACRE	4 NOBIDS	4 RBPACRE	5 NOBIDS	5 RBPACRE	6 NOBIDS	6 RBPACRE
NOBIDS	-	0.366*	-	0.366*	-	0.372*	-	0.365*	-	0.390*	-	0.366*	-	0.369*
RPSVA	0.363*	0.504*	0.342*	0.506*	0.481*	0.496*	0.359*	0.505*	0.266*	0.152*	0.358*	0.506*	0.364*	0.503*
RPCOF	0.971*	0.254	0.970*	0.255*	1.058*	0.245	0.559*	0.060	0.746*	0.157	0.565*	0.031	0.936*	0.121*
BID2	0.087	0.199	0.094	0.198	0.089	0.200	0.017	0.278*	0.097	0.219*	0.025	0.242*	0.015	0.251*
BID3	-0.439*	-0.123	-0.419*	-0.120	-0.478*	-0.094	-0.438*	-0.176	-0.486*	-0.196*	-0.436*	-0.183	-0.447*	-0.142
DRAINAGE	-0.336*	0.062	-	-	-	-	-0.311*	0.049	-0.463*	0.237*	-0.311*	0.051	-0.331*	0.061
DEVELOP	0.077	-0.058	-	-	-	-	-0.019	-0.085	-0.146	-0.160	-0.021	-0.079	0.076	-0.098
PROVEN	-0.279	-0.172	-	-	-	-	-0.309	-0.178	-0.583*	-0.247	-0.312	-0.167	-0.270	-0.191
PCTJOINT	0.005*	0.002*	0.005*	0.002*	0.005*	0.002*	0.005*	0.002*	0.004*	0.002*	0.005*	0.002*	0.005*	0.002*
CAGOM	0.224*	-0.301*	0.211	0.293*	0.256*	0.282*	0.242*	0.224*	0.245*	0.224*	0.242*	0.223*	0.244*	0.280*
AAA	-0.172*	-0.088*	-0.162*	-0.086*	-0.134*	-0.086*	-0.121*	-0.034	-0.088	-0.063	-0.126*	-0.012	-0.144*	-0.296*
Y80	0.239	-0.535*	0.211	-0.538*	0.224	-0.503*	-	-	0.189	-0.560*	-	-	-	-0.135
Y81	0.270	-0.175	0.232	-0.186	0.115	-0.220	-	-	0.075	-0.232	-	-	-	-
Y82	0.319	-0.124	0.297	-0.130	0.255	-0.093	-	-	-0.083	-0.301	-	-	-	-
Y83	1.590*	0.242	1.574*	0.242	1.810*	0.226	-	-	0.761	-0.272	-	-	1.308*	-
Y84	1.970*	0.382	1.942*	0.399	2.225*	0.365	-	-	0.966	-0.200	-	-	1.659*	-
AREA-WIDE	-0.520*	-0.285*	-0.506*	-0.291*	-0.640*	-0.256	-0.032	-0.162	-0.474*	-0.176	-0.028	-0.183	-0.549*	-0.135
INTERCEPT	-7.512*	-2.117	-7.589*	-2.146	-9.009*	-2.051	-2.962*	-0.683	-4.765*	-0.533	-3.044*	-0.339	-7.223*	-0.792
CASHFLOW (-1)	-	-	-	-	-	-	-	-	-	-	0.001	-0.005	-	-
Sample:	FULL	FULL	FULL	FULL	WILDCAT	WILDCAT	FULL	FULL	FULL	FULL	FULL	FULL	FULL	FULL
Notes:									LOG(RPSVA)	LOG(RPSVA)				
Estimated loss: (billions)	$7.34		$7.14		$9.18		—		$7.13		—		$7.81	
Statistics:														
F (note a)	44.612	78.679	54.120	95.450	55.340	72.630	60.238	110.397	49.370	60.641	55.200	101.960	54.740	102.580
Adjusted RSQ (note b)	0.233	0.365	0.235	0.369	0.270	0.343	0.221	0.363	0.252	0.306	0.224	0.367	0.237	0.368

* Indicates significance of the .95 level in a two-tailed test.
\- Indicates that the variable was excluded from the regression.
[a]The "F" statistic is a measure of significance for the entire regression.
[b]The RSQ or "corrected R-squared" is the coefficient of the multiple determination corrected for the number of degrees of freedom.

APPENDIX I

Table 4

Alternative Specifications For Regression Analyses (two-stage least squares)

Independent variable	Base NOBIDS	Base RBPACRE	1 NOBIDS	1 RBPACRE
RBPACRE	1.752*	-	1.361*	-
NOBIDS	-	0.269	-	0.578*
RPSVA	-0.741	0.529*	-0.506*	0.435*
RPCOF	0.107	0.106	-(IV)	-(IV)
BID2	-0.350	0.189	-	-
BID3	-0.074	-0.061	-	-
DRAINAGE	-0.039	-0.092	-(IV)	-(IV)
DEVELOP	0.238	-0.154	-(IV)	-(IV)
PROVEN	0.291	-0.271	-(IV)	-(IV)
PCTJOINT	-0.019	0.014*	-(IV)	-(IV)
CAGOM	-0.335	0.268*	-(IV)	-(IV)
AAA	-0.014	-0.025	-(IV)	-(IV)
Y80	-(IV)	-(IV)	-(IV)	-(IV)
Y81	-(IV)	-(IV)	-(IV)	-(IV)
Y82	-(IV)	-(IV)	-(IV)	-(IV)
Y83	-(IV)	-(IV)	-(IV)	-(IV)
Y84	-(IV)	-(IV)	-(IV)	-(IV)
AREA-WIDE	0.242	-0.144	-0.248*	0.020
INTERCEPT	1.338	-1.810*	1.409*	-0.683*
Sample:	Full	Full	Full	Full
Estimated loss: (billions)	--		$5.52	
Statistics:				
F[a]	21.310	62.000	134.940	267.220
RSQ[b]	0.101	0.245	0.150	0.259

* Indicates significance of the .95 level in a two-tailed test.

\- Indicates that the variable was excluded from the regression.

[a]The "F" statistic is a measure of significance for the entire regression.

[b]RSQ or "corrected R-squared" is the coefficient of the multiple determination corrected for the number of degrees of freedom.

RESULTS

The results of our regression analyses for our first basic equation show a significant negative relationship between the area-wide leasing program and the number of bids received for each tract. Specifically, these results, which are relatively stable among the various types of equations that we estimated, indicate that shifting to the area-wide program, on average, reduced the number of bids received per tract by about one-half of a bid.[2] As expected, these regression results also indicate that significant positive relationships exist between the number of bids received for each tract and Interior's estimated value of the tract, the price of crude oil, and whether the tract is located either in the Gulf of Mexico or in the Pacific region. Also as expected, a significant negative relationship exists between the number of bids per tract and the level of interest rates. In addition, the results indicate that fewer bids per tract were received for drainage tracts and for those tracts offered for lease under a net profit sharing arrangement.

The regression results for the second basic equation show that both the number of bids received per tract and the estimated tract value per acre have significant, positive effects on the dollar amount of the high bid per acre received by Interior. In particular, these results, which are very insensitive to the particular form of the equation estimated, indicate that each additional bid per tract, on average, is associated with about a $366 increase (in 1967 dollars) in the amount of the high bid received by Interior for each acre of OCS land.[3] Expressed in terms of 1984 dollars, this amount would be about $1,082 per acre or about $6.2 million for a typical 5,760-acre tract.

---

[2]This conclusion derives from the fact that, in the number of bid (NOBIDS) equations, the estimated point coefficients of the area-wide variable that were statistically significant ranged from -0.474 to -0.640 when the ordinary least squares estimating method was used. When the two-stage least squares method was used, the estimated coefficient was -0.240 in one regression and not significantly different from zero in the other regression.

[3]This conclusion derives from the fact that, in the real bid per acre equations (RBPACRE), the estimated point coefficients of the number of bids variable are all statistically significant and range from 0.365 to 0.390 when the ordinary least squares estimating method is used. When the two-stage least squares method was used, the estimated coefficient was 0.578 in one regression and not significantly different from zero in the other regression.

These results also indicate that firms are willing to bid more per acre for tracts located in the Gulf of Mexico or the Pacific. In addition, these results show that a significant negative relationship exists between the level of interest rates and the amount of high bids received per acre, and that the presence of joint-bidding tends to increase the level of bids received per acre. Furthermore, while some of these regressions show a positive and significant relationship between area-wide sales and the level of bids received, we found this result to be quite sensitive to the form of the equation being estimated.

One of the problems with comparing the tract-selection program with the area-wide program is that (1) nonviable tracts and (2) wildcat and proven tracts with three or more bids under area-wide leasing were never given a value by Interior and, therefore, were not included in our sample. Since those tracts that receive three or more bids are likely to be valuable, including them in the tract-selection sales and excluding them from the area-wide sales sample could significantly affect the regression results. To check for this possibility, we adjusted our sample to include all drainage and development tracts under tract-selection and area-wide sales (because these tracts were always evaluated), and excluded all wildcat and proven tracts receiving three or more bids from the tract-selection sample. The regression results for this sample were essentially unchanged.

Estimated reductions in bid revenues

For the tracts in our sample, our analysis shows that a significant, negative and stable relationship exists between the shift to the area-wide program and the number of bids received for each tract. The reduction in the number of bids received is, on average, about one-half of a bid per tract under the area-wide program. Our analysis also shows that a significant, positive and stable relationship exists between the number of bids received per tract and the dollar amount of the high bids per acre received for these tracts. According to our estimates, each additional bid is worth, on average, about $1,082 per acre or $6.2 million per tract. These results suggest that, because of its effect on reducing the number of bids by one-half a bid received for each tract, the area-wide program has resulted in reductions of bid revenues of about $541 per acre ($1,082 ÷ 2 = $541), or $3.1 million per tract leased. Extrapolating this result to 13.03 million acres leased under the first ten area-wide sales implies a reduction in total bid revenues of about $7 billion ($541 x 13.03 million = $7 billion). (Applying this methodology to the different pairs of regression results in tables 3 and 4 yields a range of estimated losses from $5.52 billion to $9.18 billion.)

To account for the longer time it would have taken under the tract-selection program to lease the 13.03 million acres actually leased in the first ten area-wide sales, we assumed that this acreage would be leased at the same pace as during the prior tract-selection program. On this basis it would have taken 98 months--that is, until June 1991--to lease the same acreage. To recognize the time value of money, we discounted the $7 billion loss at 6.5 percent over 98 months, which yielded a loss in bid revenues of $5.4 billion in 1984 dollars. We derived the real discount rate of 6.5 percent by adjusting the 11.5 percent nominal yield on Treasury securities maturing in 1991 by an expected inflation rate of 5 percent.

SMALL COMPANY PARTICIPATION

We also used regression analysis to determine whether there was a significant relationship between the area-wide program and the proportion of bids submitted by small companies (companies with total assets of less than $5 billion in 1983). In our regression we again controlled for other factors that we believed could influence the extent of small company participation. These factors included the estimated value of the tract, the price of crude oil, the type of bids accepted, the type of tract offered for lease, the interest rate, and the geographic location of the tract. The results of this regression are presented in table 5.

Table 5

Small Company Participation

Independent variable	Coefficient	T-statistic
RPSVA	-1.444	-1.729
RPCOF	3.761	3.284*
BID2	2.472	0.840
BID3	-18.762	-6.948*
DRAINAGE	13.361	4.099*
DEVELOP	2.857	0.776
PROVEN	12.656	2.962*
AAA	-0.775	-1.076
CAGOM	15.739	7.960*
AREA-WIDE	3.685	1.201
INTERCEPT	1.996	0.159
Statistics:		
F Statistic[a]	22.179	
Adjusted RSQ[b]	0.084	

* Indicates that the estimated coefficient is significant at the .95 level in a two-tailed test.

[a]The "F" statistic is a measure of significance for the entire regression.

[b]The RSQ or "corrected R-squared" is the coefficient of the multiple determination corrected for the number of degrees of freedom.

These results indicate that the area-wide program had no significant effect on the proportion of bids submitted by small companies. In addition, the results show that the price of oil had a positive effect on the proportion of bids submitted by small companies and that small companies account for a higher proportion of total bids on drainage and proven tracts as well as on tracts located in either the Pacific or Gulf of Mexico.

SAMPLE QUESTIONNAIRES AND RESULTS

This appendix provides the overall results of our questionnaire. The first section of the appendix summarizes the responses received from 55 environmental and fishery associations, the second section provides the responses received from 105 companies, and the third section lists the responses received from 21 coastal states. The numbers presented provide the actual responses to the questionnaire.

ENVIRONMENTAL AND FISHERY GROUPS' RESPONSES TO OUR QUESTIONNAIRE

U.S. GENERAL ACCOUNTING OFFICE

SURVEY OF OUTER CONTINENTAL SHELF LEASING PROGRAMS ON FEDERAL LANDS

INSTRUCTIONS:

The U.S. General Accounting Office (GAO), an agency of the Congress, is reviewing the Department of the Interior's (DOI) Outer Continental Shelf (OCS) leasing program. The purpose of this questionnaire is to solicit informed opinions regarding the nature and effectiveness of different procedures for oil and gas leasing on federal OCS lands.

Part I concerns the objectives of DOI's OCS leasing program. Part II deals with DOI's coordination and consultation during the pre-sale planning process. Part III (to be answered *only* by energy-related companies) asks questions about company characteristics and OCS leasing activities.

Please complete the questionnaire and return it in the pre-addressed envelope within *10 days* of receipt. The questionnaire should take approximately 45 minutes to complete.

Throughout this questionniare there are numbers printed within parentheses to assist our key punchers in keying responses for computer analysis. Please disregard these numbers.

Mail to:

Ms. Suzann C. Ambrosio
U.S. General Accounting Office
Room W644
2401 E Street, N.W.
Washington, D.C. 20241

If you have any questions, please call Suzann Ambrosio, Mark Little, or Robert Little on (202) 634-1913.

Thank you.

1. Which of the following best describes your organization? *(Check one.)*

1. [31] Environmental Group
2. [17] Fishery Group
3. [0] Energy Exploration, Production, Service, and/or Investment Company
4. [0] State Government
5. [7] Other *(Please specify.)* ____________

2. Approximately how long has your organization been involved in DOI's OCS oil and gas leasing program? *(Check one.)*

1. [27] 0 years *(See Note below.)* (Not involved)
2. [0] Less than 1 year
3. [0] 1-2 years
4. [9] 3-5 years
5. [11] 6-10 years
6. [7] 11-20 years
7. [1] Over 20 years

NOTE: IF YOU HAVE *NOT* BEEN INVOLVED IN DOI'S OCS OIL AND GAS LEASING PROGRAM, PLEASE RETURN THE QUESTIONNAIRE IN THE ENCLOSED ENVELOPE. THANK YOU.

GAO Note: Environmental and fishery groups not involved in the OCS leasing program are not included in the responses shown on the next five pages.

PART I. The following questions concern the objectives of the Department of the Interior's OCS leasing program as stated in the Outer Continental Shelf Lands Act Amendments of 1978 (P.L. 95-372).

3. How important or not to the goals of your organization are each of the following program objectives? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Expedite exploration	0	2	2	11	11	2
2. Expedite production	0	1	3	9	14	1
3. Reduce U.S. dependence on oil imports	0	7	9	6	6	0
4. Ensure fair market value to federal government	2	8	8	4	4	2
5. Maintain company competition in OCS leasing	1	4	8	6	8	1
6. Encourage development of new technology	8	6	4	5	3	2
7. Balance development with environmental protection	26	2	0	0	0	0
8. Provide states with comprehensive assistance to assure adequate environmental protection	23	3	0	1	0	1
9. Ensure OCS resources are assessed	8	5	10	3	2	0
10. Generate federal government revenues	2	0	9	6	9	2
11. Increase national employment	1	1	8	8	9	1
12. Reduce consumer prices	5	4	2	8	7	2

4. The DOI switched the OCS lease sale program from tract selection (sales with a limited number of tracts offered) to area-wide on April 26, 1983. How effective or ineffective in meeting the following DOI program goals are the (1) area-wide program, and (2) tract selection leasing program? *(Check one box in each row under Area-wide and one box in each row under Tract Selection.)*

	Area-wide Program							Tract Selection Program						
	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	No Response	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	No Response
1. Expediting exploration	2	2	4	7	3	6	4	0	11	3	3	0	8	3
2. Expediting production	0	3	4	7	4	6	4	0	11	2	3	1	8	3
3. Reducing U.S. dependence on oil imports	0	2	3	7	4	8	4	0	8	3	3	2	9	3
4. Ensuring fair market value to federal government	0	3	0	8	11	2	4	0	13	5	2	1	3	4
5. Maintaining company competition in OCS leasing	0	4	0	7	8	5	4	1	10	6	2	1	5	3
6. Encouraging development of new technology	1	2	4	7	3	7	4	0	9	4	2	1	8	4
7. Balancing development and environmental protection	0	4	3	3	15	1	2	2	12	4	2	3	2	3
8. Providing states with comprehensive assistance to assure adequate environmental protection	0	3	2	3	16	2	2	2	8	4	3	4	4	3
9. Ensuring OCS resources are assessed	0	4	1	4	12	3	4	0	8	9	3	1	3	4
10. Generating federal government revenues	0	6	1	7	7	3	4	1	14	2	2	1	4	4
11. Increasing national employment	0	2	2	6	4	10	4	0	3	5	3	2	11	4
12. Reducing consumer prices	0	2	1	8	4	9	4	1	3	4	5	2	9	4

5. In your opinion, how important or not are the following acceptance criteria *for DOI* to use for OCS tracts? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. High competition level	4	10	7	2	0	5
2. Government tract valuation	5	10	4	2	1	6
3. Net profit share bid	1	7	10	2	1	7
4. Exploration commitment bid	3	8	9	2	0	6
5. Royalty rate bid	1	7	11	0	1	8
6. Cash bonus bid	2	5	11	1	0	9
7. Other *(Please specify.)* ______	1	0	0	1	0	26

PART II. The OCS Lands Act requires that the Department of the Interior coordinate and consult with affected states, special interest groups, and industry. The majority of this coordination and consultation occurs during the pre-sale process of assessing the environmental impacts of a sale.

6. For those sales you participate in, how frequently or infrequently does your organization comment on or participate in each of the area-wide pre-sale planning steps? *(Check one box in each row.)*

	Always or Almost Always (1)	Most of the Time (2)	About Half of the Time (3)	Some of the Time (4)	Almost Never or Never (5)	Not Applicable (Do not have opportunity) (6)	No Re-sponse
1. DOI's Resource Report	1	2	0	6	7	9	3
2. State's Resource Report	1	2	1	3	7	9	5
3. Call for Information	4	5	3	9	1	3	3
4. Scoping Meeting	3	4	3	10	4	2	2
5. Draft EIS	10	5	4	7	0	1	1
6. Public Hearing	5	3	2	12	3	2	1
7. Final EIS	8	5	3	6	2	2	2
8. Proposed Notice of Offering (Sale)	5	6	5	3	3	3	3
9. Final Notice of Offering (Sale)	5	4	5	3	4	3	4
10. Other *(Please specify.)* ______	2	0	1	2	1	0	22

7. How complete and accurate is the information provided by DOI for each step under the area wide process? *(Check one box in each row under Completeness and one box in each row under Accuracy.)*

	Completeness							Accuracy						
	Very Complete (1)	Complete (2)	Marginal (3)	Incomplete (4)	Very Incomplete (5)	No Basis to Judge (6)	No Response	Very Accurate (1)	Accurate (2)	Marginal (3)	Inaccurate (4)	Very Inaccurate (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	0	1	5	1	0	15	6	0	1	5	1	0	16	5
2. Call for Information	0	8	6	0	4	5	5	0	8	5	0	1	9	5
3. Scoping Meeting	0	4	5	2	3	9	5	0	4	5	2	1	11	5
4. Draft EIS	0	6	7	7	3	0	5	0	4	8	6	4	2	4
5. Public Hearing	0	2	6	4	1	9	6	0	2	5	4	1	10	6
6. Final EIS	1	7	8	5	3	0	4	0	7	7	6	3	2	3
7. Proposed Notice of Offering	0	7	8	1	0	8	4	0	4	10	1	0	9	4
8. Final Notice of Offering	1	6	7	2	0	8	4	1	3	11	0	0	8	5
9. Other *(Please specify)*	0	1	0	0	1	0	26	0	0	1	0	1	2	24

8. Under the area wide process, is the time period established by DOI for your organization to participate in each step generally adequate or inadequate? *(Check one box in each row.)*

	More Than Adequate (1)	Adequate (2)	Marginal (3)	Inadequate (4)	Very Inadequate (5)	No Basis to Judge (6)	No Response
1. State's Resource Report	0	2	4	1	0	16	5
2. Call for Information	0	4	9	4	1	7	3
3. Scoping Meeting	0	3	12	2	1	6	4
4. Draft EIS	1	8	9	2	2	3	3
5. Public Hearing	0	5	6	5	3	5	4
6. Final EIS	0	7	8	3	3	3	4
7. Proposed Notice of Offering	0	4	6	2	2	8	6
8. Final Notice of Offering	0	3	5	3	2	8	7
9. Other *(Please specify)*	0	0	1	0	2	0	25

9. How useful or not, are the following steps in providing your organization an opportunity to express your concerns? *(Check one box in each row.)*

	Very Great Use (1)	Great Use (2)	Moderate Use (3)	Some Use (4)	Little or No Use (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	1	2	4	2	4	13	2
2. State's Resource Report	1	1	5	1	4	13	3
3. Call for Information	1	6	7	5	2	6	1
4. Scoping Meeting	2	10	3	6	1	4	2
5. Draft EIS	8	10	5	1	2	1	1
6. Public Hearing	5	3	11	2	2	3	2
7. Final EIS	2	9	7	3	4	1	2
8. Proposed Notice of Offering	2	5	5	1	4	7	4
9. Final Notice of Offering	3	3	3	0	8	7	4
10. Other *(Please specify.)* ______	0	1	0	1	1	0	25

10. Secretary of Interior Clark recently proposed a number of modifications to the pre-lease planning process. Assuming the following are implemented, to what extent, if any, do you think the following proposed modifications will *improve* the pre-lease planning process? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Avoid those planning areas where the level of industry interest is minimal and where conflicts exist with other uses	11	7	8	0	1	1	0
2. Time the planning process to make key decisions when the area of leasing interest is defined for the draft EIS	2	7	12	1	1	4	1
3. Increase the number of public hearings	5	5	7	7	2	2	0
4. Periodically publish a list of planning milestones	3	7	9	5	2	2	0
5. Reinstitute early scoping meetings	5	8	5	6	0	3	1
6. Encourage industry to identify areas of interest at the beginning of the planning process	16	8	3	0	1	0	0
7. Improve communication with the federal agencies involved in OCS activities	8	8	7	3	0	0	2

PART III INCLUDES QUESTIONS RELATED TO ENERGY EXPLORATION, PRODUCTION, SERVICE, AND/OR INVESTMENT COMPANIES *ONLY*. IF YOU ARE *NOT* A MEMBER OF THIS GROUP, *PLEASE SKIP TO QUESTION 33 ON PAGE 13.*

33. If you have comments on any of the previous questions or on the Department of the Interior's Outer Continental Shelf leasing program, please use the space provided below or attach another sheet. (24)

Please provide below the name, title, and telephone number of the person completing the questionnaire in case we need to clarify any answers.

NAME: ______________________________

TITLE: ______________________________

TELEPHONE: (____) ______________________________

Thank you for your help!

INDUSTRY'S RESPONSES TO OUR QUESTIONNAIRE

U.S. GENERAL ACCOUNTING OFFICE

SURVEY OF OUTER CONTINENTAL SHELF LEASING PROGRAMS ON FEDERAL LANDS

INSTRUCTIONS:

The U.S. General Accounting Office (GAO), an agency of the Congress, is reviewing the Department of the Interior's (DOI) Outer Continental Shelf (OCS) leasing program. The purpose of this questionnaire is to solicit informed opinions regarding the nature and effectiveness of different procedures for oil and gas leasing on federal OCS lands.

Part I concerns the objectives of DOI's OCS leasing program. Part II deals with DOI's coordination and consultation during the pre-sale planning process. Part III (to be answered *only* by energy-related companies) asks questions about company characteristics and OCS leasing activities.

Please complete the questionnaire and return it in the pre-addressed envelope within *10 days* of receipt. The questionnaire should take approximately 45 minutes to complete.

Throughout this questionniare there are numbers printed within parentheses to assist our key punchers in keying responses for computer analysis. Please disregard these numbers.

Mail to:

Ms. Suzann C. Ambrosio
U.S. General Accounting Office
Room W644
2401 E Street, N.W.
Washington, D.C. 20241

If you have any questions, please call Suzann Ambrosio, Mark Little, or Robert Little on (202) 634-1913.

Thank you. (4)

1. Which of the following best describes your organization? *(Check one.)* (5)

   1. [0] Environmental Group
   2. [0] Fishery Group
   3. [104] Energy Exploration, Production, Service, and/or Investment Company
   4. [0] State Government
   5. [1] Other *(Please specify.)* ______

2. Approximately how long has your organization been involved in DOI's OCS oil and gas leasing program? *(Check one.)* (6)

   1. [13] 0 years *(See Note below.)* (Not involved)
   2. [0] Less than 1 year
   3. [4] 1-2 years
   4. [15] 3-5 years
   5. [17] 6-10 years
   6. [25] 11-20 years
   7. [29] Over 20 years   No response 2

NOTE: IF YOU HAVE *NOT* BEEN INVOLVED IN DOI'S OCS OIL AND GAS LEASING PROGRAM, PLEASE RETURN THE QUESTIONNAIRE IN THE ENCLOSED ENVELOPE. THANK YOU.

GAO Note: Companies not involved in the OCS leasing program are not included in the responses shown on the next 12 pages.

PART I. The following questions concern the objectives of the Department of the Interior's OCS leasing program as stated in the Outer Continental Shelf Lands Act Amendments of 1978 (P.L. 95-372).

3. How important or not to the goals of your organization are each of the following program objectives? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Expedite exploration	66	17	3	3	0	3
2. Expedite production	73	10	4	2	0	3
3. Reduce U.S. dependence on oil imports	35	21	15	14	4	3
4. Ensure fair market value to federal government	16	19	29	14	9	5
5. Maintain company competition in OCS leasing	36	23	19	7	4	3
6. Encourage development of new technology	30	21	28	6	4	3
7. Balance development with environmental protection	21	27	26	12	3	3
8. Provide states with comprehensive assistance to assure adequate environmental protection	14	14	26	23	12	3
9. Ensure OCS resources are assessed	24	25	20	14	5	4
10. Generate federal government revenues	13	11	24	29	12	3
11. Increase national employment	19	12	27	25	6	3
12. Reduce consumer prices	14	15	32	21	7	3

4. The DOI switched the OCS lease sale program from tract selection (sales with a limited number of tracts offered) to area-wide on April 26, 1983. How effective or ineffective in meeting the following DOI program goals are the (1) area wide program, and (2) tract selection leasing program? *(Check one box in each row under Area wide and one box in each row under Tract Selection.)*

	Area-wide Program							Tract Selection Program						
	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	No Response	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	No Response
1. Expediting exploration	69	11	3	0	0	5	4	3	29	32	11	7	4	6
2. Expediting production	52	25	3	1	0	7	4	4	33	22	16	4	6	7
3. Reducing U.S. dependence on oil imports	48	34	2	0	0	4	4	1	29	31	13	8	3	7
4. Ensuring fair market value to federal government	22	49	10	0	0	6	5	15	50	9	3	2	5	8
5. Maintaining company competition in OCS leasing	40	39	4	1	0	4	4	15	33	19	11	4	3	7
6. Encouraging development of new technology	32	35	7	1	0	12	5	7	31	26	7	2	11	8
7. Balancing development and environmental protection	15	45	12	2	0	14	4	9	40	17	2	1	15	8
8. Providing states with comprehensive assistance to assure adequate environmental protection	8	33	15	2	0	30	4	6	32	14	3	1	29	7
9. Ensuring OCS resources are assessed	53	24	5	0	0	6	4	5	31	26	12	7	4	7
10. Generating federal government revenues	49	30	4	0	0	4	5	8	49	14	7	2	4	8
11. Increasing national employment	36	30	10	1	0	11	4	0	25	36	10	4	10	7
12. Reducing consumer prices	32	24	13	0	3	15	5	1	20	26	12	9	16	8

5. In your opinion, how important or not are the following acceptance criteria *for DOI* to use for OCS tracts? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. High competition level	20	29	19	10	10	4
2. Government tract valuation	2	11	34	27	14	4
3. Net profit share bid	1	7	17	31	31	5
4. Exploration commitment bid	7	7	23	23	26	6
5. Royalty rate bid	7	13	19	25	24	4
6. Cash bonus bid	34	33	16	2	3	4
7. Other *(Please specify.)* ______	5	0	1	1	0	85

PART II. The OCS Lands Act requires that the Department of the Interior coordinate and consult with affected states, special interest groups, and industry. The majority of this coordination and consultation occurs during the pre-sale process of assessing the environmental impacts of a sale.

6. For those sales you participate in, how frequently or infrequently does your organization comment on or participate in each of the area-wide pre-sale planning steps? *(Check one box in each row.)*

	Always or Almost Always (1)	Most of the Time (2)	About Half of the Time (3)	Some of the Time (4)	Almost Never or Never (5)	Not Applicable (Do not have opportunity) (6)	No Re-sponse
1. DOI's Resource Report	0	5	0	15	58	11	3
2. State's Resource Report	0	3	0	11	63	12	3
3. Call for Information	10	9	4	14	45	7	3
4. Scoping Meeting	1	3	3	19	53	9	4
5. Draft EIS	1	4	3	21	50	10	3
6. Public Hearing	2	4	4	19	53	7	3
7. Final EIS	1	4	3	18	52	10	4
8. Proposed Notice of Offering (Sale)	11	9	2	16	43	8	3
9. Final Notice of Offering (Sale)	13	9	2	12	45	8	3
10. Other *(Please specify.)* ______	1	0	0	0	0	0	91

7. How complete and accurate is the information provided by DOI for each step under the area wide process? *(Check one box in each row under Completeness and one box in each row under Accuracy.)*

	Completeness							Accuracy						
	Very Complete (1)	Complete (2)	Marginal (3)	Incomplete (4)	Very Incomplete (5)	No Basis to Judge (6)	No Response	Very Accurate (1)	Accurate (2)	Marginal (3)	Inaccurate (4)	Very Inaccurate (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	6	32	3	1	1	43	6	4	27	7	2	2	43	7
2. Call for Information	15	33	1	0	0	37	6	10	37	1	0	0	38	6
3. Scoping Meeting	6	26	6	2	0	46	6	5	27	6	0	0	47	7
4. Draft EIS	9	37	7	0	0	33	6	5	35	11	0	0	35	6
5. Public Hearing	8	32	7	0	0	39	6	5	31	9	0	0	40	7
6. Final EIS	14	38	2	0	0	32	6	8	36	7	0	0	35	6
7. Proposed Notice of Offering	26	34	1	1	0	24	6	21	39	1	1	0	24	6
8. Final Notice of Offering	27	34	0	0	0	24	7	27	34	0	0	0	24	7
9. Other *(Please specify)* ______	0	0	0	0	0	1	91	0	0	0	0	0	1	91

8. Under the area wide process, is the time period established by DOI for your organization to participate in each step generally adequate or inadequate? *(Check one box in each row.)*

	More Than Adequate (1)	Adequate (2)	Marginal (3)	Inadequate (4)	Very Inadequate (5)	No Basis to Judge (6)	No Response
1. State's Resource Report	6	29	0	0	0	51	6
2. Call for Information	9	41	1	0	0	36	5
3. Scoping Meeting	7	36	1	0	0	43	5
4. Draft EIS	10	40	1	0	0	36	5
5. Public Hearing	8	42	1	1	0	35	5
6. Final EIS	10	40	1	0	0	35	6
7. Proposed Notice of Offering	10	48	2	0	1	26	5
8. Final Notice of Offering	8	50	2	1	1	25	5
9. Other *(Please specify)* ______	0	0	0	1	0	1	90

9. How useful or not, are the following steps in providing your organization an opportunity to express your concerns? *(Check one box in each row.)*

	Very Great Use (1)	Great Use (2)	Moderate Use (3)	Some Use (4)	Little or No Use (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	3	2	17	8	15	43	4
2. State's Resource Report	2	3	16	7	16	44	4
3. Call for Information	8	8	27	6	7	32	4
4. Scoping Meeting	2	2	22	12	12	37	5
5. Draft EIS	4	7	25	9	11	31	5
6. Public Hearing	5	6	21	11	12	32	5
7. Final EIS	4	7	24	12	9	30	6
8. Proposed Notice of Offering	11	15	22	7	6	27	4
9. Final Notice of Offering	13	15	21	6	6	27	4
10. Other *(Please specify.)* ______	0	0	0	0	0	1	91

10. Secretary of Interior Clark recently proposed a number of modifications to the pre-lease planning process. Assuming the following are implemented, to what extent, if any, do you think the following proposed modifications will *improve* the pre-lease planning process? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Avoid those planning areas where the level of industry interest is minimal and where conflicts exist with other uses	10	28	18	3	14	14	5
2. Time the planning process to make key decisions when the area of leasing interest is defined for the draft EIS	7	28	15	13	2	22	5
3. Increase the number of public hearings	0	2	12	10	46	16	6
4. Periodically publish a list of planning milestones	8	15	25	17	8	15	4
5. Reinstitute early scoping meetings	3	7	14	17	18	28	5
6. Encourage industry to identify areas of interest at the beginning of the planning process	21	27	18	6	2	14	4
7. Improve communication with the federal agencies involved in OCS activities	17	31	16	5	4	15	4

PART III INCLUDES QUESTIONS RELATED TO ENERGY EXPLORATION, PRODUCTION, SERVICE, AND/OR INVESTMENT COMPANIES *ONLY*. IF YOU ARE *NOT* A MEMBER OF THIS GROUP, *PLEASE SKIP TO QUESTION 33 ON PAGE 13.*

PART III. The following questions concern the characteristics and activities of energy exploration, production, service, and/or investment companies.

11. How would you characterize your company? *(Please check all categories which apply.)* (104)(110)

1. [24] Integrated oil and gas company
2. [32] Corporate energy subsidiary
3. [44] Independent exploration and production company
4. [10] Gas transmission company
5. [7] Offshore drilling company
6. [1] Private investment group
7. [1] Other *(Please specify.)* ____________

12. Approximately what is your OCS investment (i.e. including bonus levels, rentals, value of wells drilled, and platforms)? *(Check one.)* (111)

1. [47] Less than $500 million
2. [10] Between $500-$999 million
3. [26] Between $1-$10 billion
4. [4] More than $10 billion No response 5

13. Since 1980, how many OCS lease sales, if any, has your company participated in? *(Check one.)* (112)

1. [2] None
2. [9] Between 1-2 lease sales
3. [16] Between 3-4 lease sales
4. [36] Between 5-10 lease sales
5. [8] Between 11-15 lease sales
6. [7] Between 16-20 lease sales
7. [11] More than 20 lease sales No response 3

14. Approximately how many tracts, if any, are currently leased by your company? *(Check one.)*

1. [1] None
2. [18] Between 1-10 tracts
3. [25] Between 11-50 tracts
4. [23] Between 51-150 tracts
5. [11] Between 151-300 tracts
6. [10] More than 300 tracts No response 4

15. How important or not, to your company, are each of the following in determining tract value? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Oil and gas prices	71	17	1	1	0	2
2. Discount rate	33	35	16	4	1	3
3. Inflation rate	32	31	20	5	2	2
4. Reliability of geologic and geophysical data	76	13	1	0	0	2
5. Reserve potential of tract	79	10	1	0	0	2
6. Water depth of tract	36	38	15	1	0	2
7. Exploration costs	42	36	11	1	0	2
8. Production costs	46	35	8	1	0	2
9. Current federal government regulations	34	35	17	3	1	2
10. Current state government regulations	25	32	21	9	3	2
11. Other *(Please specify.)* ____________	6	1	2	0	0	83

16. How important or not, are each of the following factors to your company in *increasing* the number of *bid submissions* for an OCS lease sale? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Increased availability of capital	42	34	8	3	2	3
2. Increased lease holdings adjacent to tract(s) offered	12	29	32	14	2	3
3. Increased number of tracts offered for lease	29	33	13	12	2	3
4. Increased projected oil and gas prices	53	27	7	2		3
5. Increased pipeline and transportation infrastructure	21	31	22	10	2	6
6. Increased potential to boost production	33	36	15	3	1	4
7. Increased production and refinery capacities	7	15	29	24	14	3
8. Increased resale potential of tract(s) offered	8	5	13	18	44	4
9. Increased tax writeoffs	12	13	20	18	26	3
10. Decreased reserves held by company including long term supply agreements	17	18	25	9	16	7
11. Other *(Please specify.)* ______	2	1	0	0	0	89

17. How important or not, are each of the following factors in your company's determination of the *bid amount* submitted for an OCS tract? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Available capital	35	27	20	3	4	3
2. Company's estimated tract value	74	15	0	0	0	3
3. Expected level of competition	16	28	29	12	4	3
4. Lease term	17	33	27	8	2	3
5. Number of tracts offered for lease	12	12	31	17	17	3
6. Royalty rate	40	39	8	2		3
7. Stable tax rate	38	31	16	3	1	3
8. Other *(Please specify)* ______	1	0	0	0	0	91

18. To what extent, if any, would each of the following conditions *facilitate* your company's *exploration* of OCS resources? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Increasing the number of tracts available for OCS exploration in each sale	30	22	15	6	12	3	4
2. Increasing the number of sales	7	16	31	11	21	3	3
3. Decreasing the timing between sales	6	9	26	11	34	3	3
4. Increasing projected prices for oil and gas	45	27	9	2	3	3	3
5. Increasing exploration and development funding	32	29	10	6	7	4	4
6. Increasing production and refinery capacity	7	12	20	15	30	5	3
7. Decreasing reserves held by company (including long-term supply agreements)	13	23	23	8	14	4	7
8. Improved technology	10	38	17	14	8	2	3
9. Improved regulatory environment (including tax laws)	27	33	20	3	2	3	4
10. Other *(Please specify.)* ________	0	0	0	0	0	0	92

19. To what extent, if any, would each of the following conditions contribute to *increased production* resulting from exploration of existing OCS leases owned, or partly owned, by your company? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Increasing the number of tracts available for OCS exploration in each sale	13	10	18	12	30	6	3
2. Increasing the number of sales	5	6	19	18	36	5	3
3. Decreasing the timing between sales	6	3	20	16	39	5	3
4. Increasing projected prices for oil and gas	36	29	16	2	4	2	3
5. Increasing exploration and development funding	24	23	15	7	12	6	5
6. Increasing production and refinery capacity	6	11	18	13	35	6	3
7. Decreasing reserves held by company (including long-term supply agreements)	13	17	21	13	16	4	8
8. Improved technology	17	27	20	12	8	4	4
9. Improved regulatory environment (including tax laws)	20	24	24	7	7	5	5
10. Other *(Please specify.)* ________	1	0	0	0	0	0	91

20. To what extent, if any, do the following factors *reduce exploration* activities in your company? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Limited availability of appropriate technology	13	18	28	13	15	2	3
2. Increasing cash flow requirements for bidding	19	33	26	6	3	0	5
3. Increasing environmental regulations and requirements	30	29	24	3	1	1	4
4. Decreasing projected oil and gas prices	41	30	13	4	1	0	3
5. Decreasing oil and gas supply/demand scenario	28	29	25	4	3	0	3
6. Decreasing availability of production and refinery capacities	10	14	19	17	21	6	5
7. Unfavorable risk/return profiles for OCS projects	56	27	5	1		0	3
8. Current government regulation	13	19	36	15	4	1	4
9. Other *(Please specify.)* ______	3	1	0	0	0	0	88

21. In your opinion, to what extent, if at all, does each of the following factors contribute to delays in the start of *OCS exploratory drilling* after the lease sale? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Re-ponse
1. Coastal Zone Management consistency requirements	25	27	15	8	4	8	5
2. Availability of capital	14	17	26	19	9	3	4
3. Availability of drilling equipment	7	9	22	30	18	2	4
4. Change in projected oil and gas prices	16	24	17	22	6	3	4
5. Change in the number of lease holdings	2	8	22	30	21	4	5
6. Availability of appropriate technology	6	16	19	25	18	3	5
7. Approval of DOI's Plan of Exploration	14	15	25	21	7	6	4
8. Approval of DOI's Application for Permit to Drill	12	14	22	26	9	5	4
9. Approval of the U.S. Army Corps of Engineers' permit	13	15	22	20	13	5	4
10. Approval of the Environmental Protection Agency's permit	19	21	22	16	5	5	4
11. Other *(Please specify.)* ______	1	1	0	0	0	0	90

22. In your opinion, to what extent, if at all, does each of the following factors contribute to delays in the start of *OCS production* after OCS exploration? *(Check one box in **each** row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Coastal Zone Management consistency requirements	20	21	17	15	4	8	7
2. Availability of capital	9	20	26	13	17	2	5
3. Availability of drilling equipment	2	11	22	26	24	2	5
4. Change in projected oil and gas prices	17	28	18	16	6	2	5
5. Change in the number of lease holdings	1	7	13	27	33	4	7
6. Availability of appropriate technology	8	17	18	23	18	3	5
7. Approval of DOI's Plan of Exploration	7	10	23	21	21	5	5
8. Approval of DOI's Application for Permit to Drill	7	11	23	21	20	5	5
9. Approval of the U.S. Army Corps of Engineers' permit	7	16	24	16	18	6	5
10. Approval of the Environmental Protection Agency's permit	10	20	23	17	11	6	5
11. Other *(Please specify.)* ______	1	5	0	0	0	1	85

23. What is the current lag period (approximate months/years) between *lease date* and *exploratory drilling* on a tract for *each* of the following OCS regions? *(Enter number of months if less than one year; otherwise, enter years/months. If none, enter "0".)*

	months	years	
1.	[ ]	[ ]	Alaska
2.	[ ]	[ ]	Atlantic
3.	[ ]	[ ]	Gulf of Mexico
4.	[ ]	[ ]	Pacific

24. What is the current lag period (approximate months/years) between *exploratory drilling* and *production* on a tract for *each* of the following OCS regions? *(Enter number of months if less than one year; otherwise, enter years/months. If none, enter "0.")*

	months	years	
1.	[ ]	[ ]	Gulf of Mexico
2.	[ ]	[ ]	Pacific

It has been suggested that industry has planned/implemented changes in OCS leasing activities, in response to the Department of the Interior's shift from tract selection to area-wide lease sales.

25. Since April 26, 1983, have you bid in the *Gulf of Mexico?*

1. [71] Yes
2. [19] No *(If no, please **SKIP TO QUESTION 27.**)*

No response 2

26. In the *Gulf of Mexico*, how much of an increase or decrease, if any, has your company experienced in each of the following areas, as a result of the shift from tract selection to area-wide lease sales? *(Check one box in each row.)*

	Great Increase (1)	Some Increase (2)	Remained About the Same (3)	Some Decrease (4)	Great Decrease (5)	No Response
1. Bidding levels for a given tract value	1	5	39	22	2	23
2. Employment levels	8	28	34	1	0	21
3. Research and development expenditures for OCS technology improvements	2	26	40	0	0	24
4. Exploration activities	38	19	14	0	0	21
5. Production levels	1	22	41	3	0	25
6. Reserve inventories	6	34	27	1	0	24
7. Other *(Please specify)* ______	0	0	0	0	0	92

27. Since April 26, 1983, have you bid in the *Alaska* region?

1. [9] Yes

2. [70] No *(If no, please SKIP TO QUESTION 29.)*
   No response 3

Dup (1-3) (4) 3

28. In *Alaska*, how much of an increase or decrease, if any, has your company experienced in each of the following areas, as a result of the shift from tract selection to area-wide lease sales? *(Check one box in each row.)*

	Great Increase (1)	Some Increase (2)	Remained About the Same (3)	Some Decrease (4)	Great Decrease (5)	No Response
1. Bidding levels for a given tract value	1	3	10	6	0	72
2. Employment levels	2	10	9	0	0	71
3. Research and development expenditures for OCS technology improvements	4	7	9	0	0	72
4. Exploration activities	7	10	3	0	0	72
5. Other *(Please specify)* ______	0	0	0	0	0	92

29. Since April 26, 1983, have you bid in the *Atlantic* region?

1. [8] Yes

2. [83] No *(If no, please SKIP TO QUESTION 31.)*
   No response 1

30. In the *Atlantic* region, how much of an increase or decrease, if any, has your company experienced in each of the following areas, as a result of the shift from tract selection to area-wide lease sales? *(Check one box in each row.)*

	Great Increase (1)	Some Increase (2)	Remained About the Same (3)	Some Decrease (4)	Great Decrease (5)	No Response
1. Bidding levels for a given tract value	0	1	5	1	1	84
2. Employment levels	0	1	8	0	0	83
3. Research and development expenditures for OCS technology improvements	2	2	4	0	0	84
4. Exploration activities	1	2	4	1	0	84
5. Other *(Please specify.)* ______	0	0	0	0	0	92

31. Since April 26, 1983, have you bid in the *Pacific* region?

1. [9] Yes
2. [82] No *(If no, please* ***SKIP TO QUESTION 33.****)*
   No response 3

32. In the *Pacific* region, how much of an increase or decrease, if any, has your company experienced in each of the following areas, as a result of the shift from tract selection to area-wide lease sales? *(Check one box in each row.)*

	Great Increase (1)	Some Increase (2)	Remained About the Same (3)	Some Decrease (4)	Great Decrease (5)	No Response
1. Bidding levels for a given tract value	0	0	8	1	0	83
2. Employment levels	0	3	6	0	0	83
3. Research and development expenditures for OCS technology improvements	1	3	5	0	0	83
4. Exploration activities	1	4	4	0	0	83
5. Production levels	0	0	9	0	0	83
6. Reserve inventories	1	1	7	0	0	83
7. Other *(Please specify.)* ______	0	0	0	0	0	92

APPENDIX II

33. If you have comments on any of the previous questions or on the Department of the Interior's Outer Continental Shelf leasing program, please use the space provided below or attach another sheet. (24)

Please provide below the name, title, and telephone number of the person completing the questionnaire in case we need to clarify any answers.

NAME: ______________________________

TITLE: ______________________________

TELEPHONE: (____) ______________________________

Thank you for your help!

7/84

STATES' RESPONSES TO OUR QUESTIONNAIRE

U.S. GENERAL ACCOUNTING OFFICE

SURVEY OF OUTER CONTINENTAL SHELF LEASING PROGRAMS ON FEDERAL LANDS

INSTRUCTIONS:

The U.S. General Accounting Office (GAO), an agency of the Congress, is reviewing the Department of the Interior's (DOI) Outer Continental Shelf (OCS) leasing program. The purpose of this questionnaire is to solicit informed opinions regarding the nature and effectiveness of different procedures for oil and gas leasing on federal OCS lands.

Part I concerns the objectives of DOI's OCS leasing program. Part II deals with DOI's coordination and consultation during the pre-sale planning process. Part III (to be answered *only* by energy-related companies) asks questions about company characteristics and OCS leasing activities.

Please complete the questionnaire and return it in the pre-addressed envelope within *10 days* of receipt. The questionnaire should take approximately 45 minutes to complete.

Throughout this questionniare there are numbers printed within parentheses to assist our key punchers in keying responses for computer analysis. Please disregard these numbers.

Mail to:

Ms. Suzann C. Ambrosio
U.S. General Accounting Office
Room W644
2401 E Street, N.W.
Washington, D.C. 20241

If you have any questions, please call Suzann Ambrosio, Mark Little, or Robert Little on (202) 634-1913.

Thank you. (4)

1. Which of the following best describes your organization? *(Check one.)* (5)

   1. [0] Environmental Group
   2. [0] Fishery Group
   3. [0] Energy Exploration, Production, Service, and/or Investment Company
   4. [21] State Government
   5. [0] Other *(Please specify.)* ______

2. Approximately how long has your organization been involved in DOI's OCS oil and gas leasing program? *(Check one.)* (6)

   1. [0] 0 years *(See Note below.)*
   2. [0] Less than 1 year
   3. [2] 1-2 years
   4. [11] 3-5 years
   5. [5] 6-10 years
   6. [2] 11-20 years
   7. [0] Over 20 years

   1 No response

NOTE: IF YOU HAVE *NOT* BEEN INVOLVED IN DOI'S OCS OIL AND GAS LEASING PROGRAM, PLEASE RETURN THE QUESTIONNAIRE IN THE ENCLOSED ENVELOPE. THANK YOU.

PART I. The following questions concern the objectives of the Department of the Interior's OCS leasing program as stated in the Outer Continental Shelf Lands Act Amendments of 1978 (P.L. 95-372).

3. How important or not to the goals of your organization are each of the following program objectives? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. Expedite exploration	6	5	6	3	0	1
2. Expedite production	3	8	5	3	1	1
3. Reduce U.S. dependence on oil imports	6	7	4	2	1	1
4. Ensure fair market value to federal government	5	7	5	2	1	1
5. Maintain company competition in OCS leasing	8	5	3	2	2	1
6. Encourage development of new technology	5	8	6	0	1	1
7. Balance development with environmental protection	16	4	1	0	0	0
8. Provide states with comprehensive assistance to assure adequate environmental protection	15	5	1	0	0	0
9. Ensure OCS resources are assessed	9	7	3	1	0	1
10. Generate federal government revenues	3	6	9	2	0	1
11. Increase national employment	5	3	9	1	2	1
12. Reduce consumer prices	4	8	4	1	3	1

4. The DOI switched the OCS lease sale program from tract selection (sales with a limited number of tracts offered) to area wide on April 26, 1983. How effective or ineffective in meeting the following DOI program goals are the (1) area wide program, and (2) tract selection leasing program? *(Check one box in each row under Area wide **and** one box in each row under Tract Selection.)*

	Area-wide Program						Tract Selection Program						
	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	Very Effective (1)	Effective (2)	Borderline (3)	Ineffective (4)	Very Ineffective (5)	No Basis to Judge (6)	No response
1. Expediting exploration	2	4	10	4	1	0	0	15	5	1	0	0	0
2. Expediting production	2	1	6	5	1	6	2	10	4	0	0	4	1
3. Reducing U.S. dependence on oil imports	2	1	8	6	0	4	0	6	10	2	0	3	0
4. Ensuring fair market value to federal government	0	0	7	4	8	2	4	12	4	0	0	1	0
5. Maintaining company competition in OCS leasing	0	2	7	3	6	3	6	7	5	0	0	3	0
6. Encouraging development of new technology	1	5	9	0	0	6	0	10	6	0	0	5	0
7. Balancing development and environmental protection	0	1	8	7	4	1	5	10	6	0	0	0	0
8. Providing states with comprehensive assistance to assure adequate environmental protection	0	3	6	6	5	1	1	9	4	4	1	1	1
9. Ensuring OCS resources are assessed	1	1	8	4	3	4	3	6	8	2	0	2	0
10. Generating federal government revenues	0	2	11	3	4	1	3	11	5	1	0	1	0
11. Increasing national employment	0	2	7	3	0	9	1	3	7	1	0	9	0
12. Reducing consumer prices	0	2	6	4	1	8	0	4	5	3	0	8	1

5. In your opinion, how important or not are the following acceptance criteria *for DOI* to use for OCS tracts? *(Check one box in each row.)*

	Very Great Importance (1)	Great Importance (2)	Moderate Importance (3)	Some Importance (4)	Little or No Importance (5)	No Response
1. High competition level	9	8	4	0	0	0
2. Government tract valuation	3	11	6	1	0	0
3. Net profit share bid	0	3	10	2	3	3
4. Exploration commitment bid	2	8	5	0	3	3
5. Royalty rate bid	1	6	11	0	0	3
6. Cash bonus bid	1	8	8	1	0	3
7. Other *(Please specify.)*	1	2	0	0	0	18

PART II. The OCS Lands Act requires that the Department of the Interior coordinate and consult with affected states, special interest groups, and industry. The majority of this coordination and consultation occurs during the pre-sale process of assessing the environmental impacts of a sale.

6. For those sales you participate in, how frequently or infrequently does your organization comment on or participate in each of the area-wide pre-sale planning steps? *(Check one box in each row.)*

	Always or Almost Always (1)	Most of the Time (2)	About Half of the Time (3)	Some of the Time (4)	Almost Never or Never (5)	Not Applicable (Do not have opportunity) (6)	No Re-sponse
1. DOI's Resource Report	5	4	1	1	4	4	2
2. State's Resource Report	4	2	1	1	4	6	3
3. Call for Information	15	2	0	2	1	1	0
4. Scoping Meeting	13	3	0	4	0	1	0
5. Draft EIS	17	2	1	1	0	0	0
6. Public Hearing	11	5	0	3	1	1	0
7. Final EIS	15	3	0	1	1	1	0
8. Proposed Notice of Offering (Sale)	17	1	0	2	0	1	0
9. Final Notice of Offering (Sale)	13	3	0	1	2	2	0
10. Other *(Please specify.)*	5	1	0	0	0	0	15

7. How complete and accurate is the information provided by DOI for each step under the area-wide process? *(Check one box in each row under Completeness and one box in each row under Accuracy.)*

	Completeness							Accuracy						
	Very Complete (1)	Complete (2)	Marginal (3)	Incomplete (4)	Very Incomplete (5)	No Basis to Judge (6)	No Response	Very Accurate (1)	Accurate (2)	Marginal (3)	Inaccurate (4)	Very Inaccurate (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	0	5	3	4	1	6	2	0	4	7	1	0	7	2
2. Call for Information	0	13	3	2	1	2	0	1	14	4	0	0	1	1
3. Scoping Meeting	0	10	4	4	1	2	0	0	10	6	0	1	3	1
4. Draft EIS	0	7	8	5	1	0	0	0	5	14	0	1	1	1
5. Public Hearing	0	11	2	3	1	2	2	0	11	6	0	1	1	2
6. Final EIS	0	10	7	3	1	0	0	0	10	9	0	1	0	1
7. Proposed Notice of Offering	0	14	4	1	1	1	0	1	13	6	0	0	1	0
8. Final Notice of Offering	0	14	4	1	1	1	0	1	13	6	0	0	1	0
9. Other *(Please specify)* ______	0	0	1	0	2	0	18	0	0	1	0	0	1	19

8. Under the area-wide process, is the time period established by DOI for your organization to participate in each step generally adequate or inadequate? *(Check one box in each row.)*

	More Than Adequate (1)	Adequate (2)	Marginal (3)	Inadequate (4)	Very Inadequate (5)	No Basis to Judge (6)	No Response
1. State's Resource Report	0	10	2	1	0	7	1
2. Call for Information	0	17	1	2	1	0	0
3. Scoping Meeting	0	14	1	3	0	3	0
4. Draft EIS	0	12	5	4	0	0	0
5. Public Hearing	0	15	4	1	0	1	0
6. Final EIS	0	18	3	0	0	0	0
7. Proposed Notice of Offering	0	15	4	2	0	0	0
8. Final Notice of Offering	0	16	2	1	0	1	1
9. Other *(Please specify)* ______	0	0	0	1	0	0	20

9. How useful or not, are the following steps in providing your organization an opportunity to express your concerns? *(Check one box in each row.)*

	Very Great Use (1)	Great Use (2)	Moderate Use (3)	Some Use (4)	Little or No Use (5)	No Basis to Judge (6)	No Response
1. DOI's Resource Report	0	5	5	3	2	4	2
2. State's Resource Report	0	1	4	3	2	9	2
3. Call for Information	5	5	4	3	3	1	0
4. Scoping Meeting	4	7	4	3	2	1	0
5. Draft EIS	7	10	3	0	1	0	0
6. Public Hearing	3	6	8	3	0	1	0
7. Final EIS	3	5	8	3	2	0	0
8. Proposed Notice of Offering	9	5	2	1	3	1	0
9. Final Notice of Offering	5	6	4	2	3	1	0
10. Other *(Please specify.)*	2	0	0	0	1	0	18

10. Secretary of Interior Clark recently proposed a number of modifications to the pre-lease planning process. Assuming the following are implemented, to what extent, if any, do you think the following proposed modifications will *improve* the pre-lease planning process? *(Check one box in each row.)*

	Very Great Extent (1)	Great Extent (2)	Moderate Extent (3)	Some Extent (4)	Little or No Extent (5)	Don't Know (6)	No Response
1. Avoid those planning areas where the level of industry interest is minimal and where conflicts exist with other uses	16	3	1	0	1	0	0
2. Time the planning process to make key decisions when the area of leasing interest is defined for the draft EIS	8	10	1	0	0	2	0
3. Increase the number of public hearings	0	6	7	4	4	0	0
4. Periodically publish a list of planning milestones	3	11	7	0	0	0	0
5. Reinstitute early scoping meetings	8	7	4	0	0	1	1
6. Encourage industry to identify areas of interest at the beginning of the planning process	16	4	1	0	0	0	0
7. Improve communication with the federal agencies involved in OCS activities	8	8	2	2	0	1	0

PART III INCLUDES QUESTIONS RELATED TO ENERGY EXPLORATION, PRODUCTION, SERVICE, AND/OR INVESTMENT COMPANIES *ONLY*. IF YOU ARE *NOT* A MEMBER OF THIS GROUP, *PLEASE SKIP TO QUESTION 33 ON PAGE 13.*

APPENDIX II

33. If you have comments on any of the previous questions or on the Department of the Interior's Outer Continental Shelf leasing program. please use the space provided below or attach another sheet. (24)

Please provide below the name, title, and telephone number of the person completing the questionnaire in case we need to clarify any answers.

NAME: ____________________

TITLE: ____________________

TELEPHONE: (   ) ____________________

Thank you for your help!

7/84

RECEIPT OF FAIR MARKET VALUE-- A CONTINUALLY EVOLVING PROCESS

Throughout the OCS leasing program, ensuring receipt of fair market value has been an evolving process placing increased reliance on the marketplace and competition for accepting bids and less reliability on Interior's own valuation. This appendix describes the evolution of the process.

Time period	Bid-acceptance process
1968	Interior starts placing a value on every tract offered for lease and rejecting high bids that fall below this estimated value (or the minimum leasing price of $25 per acre, whichever is greater). This process evolved to the current Monte Carlo tract evaluation method (referred to as MONTCAR), which uses detailed geologic, geophysical, and engineering analysis and a discounted cash flow computer program to determine a value for an OCS tract.

The following is a description of Interior's Monte Carlo method:

(1) Interior estimates the range of possible values of each variable that will affect the outcome of oil and natural gas production from the tract.

(2) One value from the estimated range for each variable is selected at random and the tract value is computed using this combination of variables. This computation determines one point in the final distribution of possible tract values. A second value from the distribution of each of the variables is then selected at random and the resulting tract value is computed to determine the second point of possible tract values. This process is repeated at least 1,000 times with a set of new values selected for each variable.

(3) The values are averaged and assigned a risk factor to determine the estimated value of the tract. The risk factor reflects the quality and quantity of the data used in determining the characteristics of the tract as well as the past successes and failures encountered in the area. Thus, while the

quality and quantity of data available to evaluate offshore tracts are important, according to Interior, the Monte Carlo method provides a reliable estimated tract value, even with some uncertainty in the precise measure of particular variables.

The method provides two estimates of value for each tract: the mean range of values (MROV) and the discounted mean range of values (DMROV). The MROV represents the government's estimate of the current value of the tract. The DMROV represents the tract's value reflecting revenue delays to the government if the high bid is rejected and the tract is leased at a later time.

1974 Interior adopts a third criterion for accepting bids: the average evaluation of tract (AEOT). The AEOT is the average of the MROV and the bids received on a tract. If the high bid does not exceed the MROV or DMROV, any bid exceeding the AEOT is generally accepted. Using AEOT places greater weight on the bids received than Interior's estimated value. In determining whether AEOT is a reliable criterion, Interior considers the number of bids on the tract and reliability of the data to evaluate the tract.

1977 Interior adopts discretionary use of the geometric mean rather than the arithmetic mean in calculating the AEOT.[1] The geometric mean is always less than or equal to the arithmetic mean. Interior had concluded that the geometric mean generally fell closer to the median or middle bid and was a better average and measure of central tendency. Interior also concluded, however, that the geometric average was better only if the bids were grouped and were significantly lower than Interior's value and that

---

[1]The arithmetic mean is the sum of the bids plus the MROV divided by the number of bids plus one and is defined as

$$\text{Arithmetic AEOT} = \frac{(MROV_1)+(bids_2)+(bids_3)+\ldots+(bonusN)}{N}$$

The geometric mean is the Nth root of the product of the bids and the MROV where N equals the number of bids plus one and is defined as

$$\text{Geometric AEOT} = \sqrt[N]{(MROV_1)\times(bids_2)\times(bids_3)\times\ldots\times(bidsN)}$$

the number of bids was greater than the average number of bids for that type of tract in the sale.

1982 Interior begins using the geometric average evaluation of the tract (GAEOT) in place of the arithmetic mean in all OCS sales. Interior also raises the minimum leasing price from $25 to $150 per acre.

1983 Interior adopts a two-phase bid-acceptance process that awards leases to the high bidder on the basis of the level of competition and viability of the tract, without requiring a detailed Monte Carlo evaluation. Traditionally, Interior had generated presale values for every tract offered for lease. Interior decided that evaluating every tract was no longer practical, however, because of the large increase in the number of tracts offered for lease in area-wide sales.

During the first phase of the bid-acceptance process, Interior reviews every tract receiving a bid to make four major determinations:

(1) It classifies each tract as either drainage, development, wildcat, or proven. All drainage and development tracts are referred to the second phase and additional detailed Monte Carlo analysis.

(2) It identifies the nonviable tracts. Interior's nonviable determination is based on the following four conditions: (1) lack of an oil or gas structure, (2) structure too small to be economical to produce, (3) adverse stratigraphic conditions, and (4) lack of Interior maps on the tract. All high bids for tracts determined to be nonviable are accepted.

(3) After deleting anomalously low bids,[2] Interior computes the median of the geometric average bid for all viable wildcat

---

[2]Interior defines an "anomalously low bid" as a low bid that is less than one-eighth of the next higher bid. Currently, under this definition, only one bid per tract is considered anomalously low.

and proven tracts.[3] All high bids for those tracts where the geometric average bid was in the upper 50th percentile (compared with the median of all average bids) are accepted.

(4) After deleting anomalously low bids, Interior computes the average number of bids received for all viable wildcat, proven, drainage, and development tracts. All high bids for those tracts receiving three or more bids and more than the average number of bids are accepted.

All tracts not leased during the first phase are referred to the second phase of the process.

The second phase consists of two parts. During the first part Interior, using its Monte Carlo analysis, estimates MROV, DMROV, and GAEOT for each tract. All high bonus bids that are greater than MROV, DMROV, or GAEOT for the tracts are accepted. The remaining tracts are considered during the second part, when Minerals Management Service (MMS) regional managers are supposed to determine

(1) drainage costs and costs attributable to delays in exploration and production of the tract and include them in a recalculation of DMROV,

(2) whether the number of bids for the tract and the number of companies participating are greater than the average for that tract type,

(3) the degree of difference between the reliability of data for the tract and the average reliability of data for the sale, and

---

[3]The <u>median of the geometric average bid</u> is the middle value (or the average of the two middle values) of the range of all the geometric averages of the bids received for each tract. For example, Interior computes the geometric average for the bids received for each wildcat or proven tract. Interior then arranges the averages in order of magnitude (low to high) and the average in the middle of this range is the median of the geometric average bid.

(4) whether the number of bids and the number of companies participating in the bids for the subject prospect are above the average observed for other prospects in the sale.

On the basis of these determinations, the MMS regional manager may accept or reject the high bid.

1984 After six area-wide lease sales, Interior makes three modifications in its bid-acceptance procedures to strengthen the overall process. It (1) requires that tracts be classified as nonviable only when Interior has adequate data and maps to support such a determination, (2) eliminates the median of the geometric means of bids as a bid-acceptance criterion during the first phase, and (3) discontinues the second part of the second phase of the process (discussed above).

All bids received are evaluated through the first phase of the process and, if necessary, through the Monte Carlo analysis in the second phase. The first phase is composed of criteria designed to partition tracts receiving bids into three general categories:

(1) tracts that Interior has identified as nonviable;

(2) tracts where opportunities for strategic underbidding, information asymmetry, collusion, and other noncompetitive practices might be most likely to occur and where the government has the most detailed and reliable data; and

(3) tracts where the market-related and competitive-based factors can be relied upon to ensure fair market value.

Using these categories, the following bid-acceptance criteria are applied to bids during the first phase:

(1) Development and drainage tracts are referred directly for further evaluation in the second phase.

(2) High bids for tracts judged by Interior not to be located on a viable prospect are accepted.

(3) After screening for anomalously low bids, high bids are accepted for viable wildcat and proven tracts receiving three or more bids and more than the average number of bids for all viable tracts.

Wildcat and proven tracts that are not leased during the first phase as well as all drainage and development tracts undergo the Monte Carlo evaluation. High bids are compared with MROV, DMROV, and GAEOT.

Also, if the DMROV for any tract undergoing drainage from production activities on a nearby tract is greater than the high bid, the MMS regional manager recomputes the DMROV by adjusting for the costs of drainage, which is expected to occur before the next lease offering.

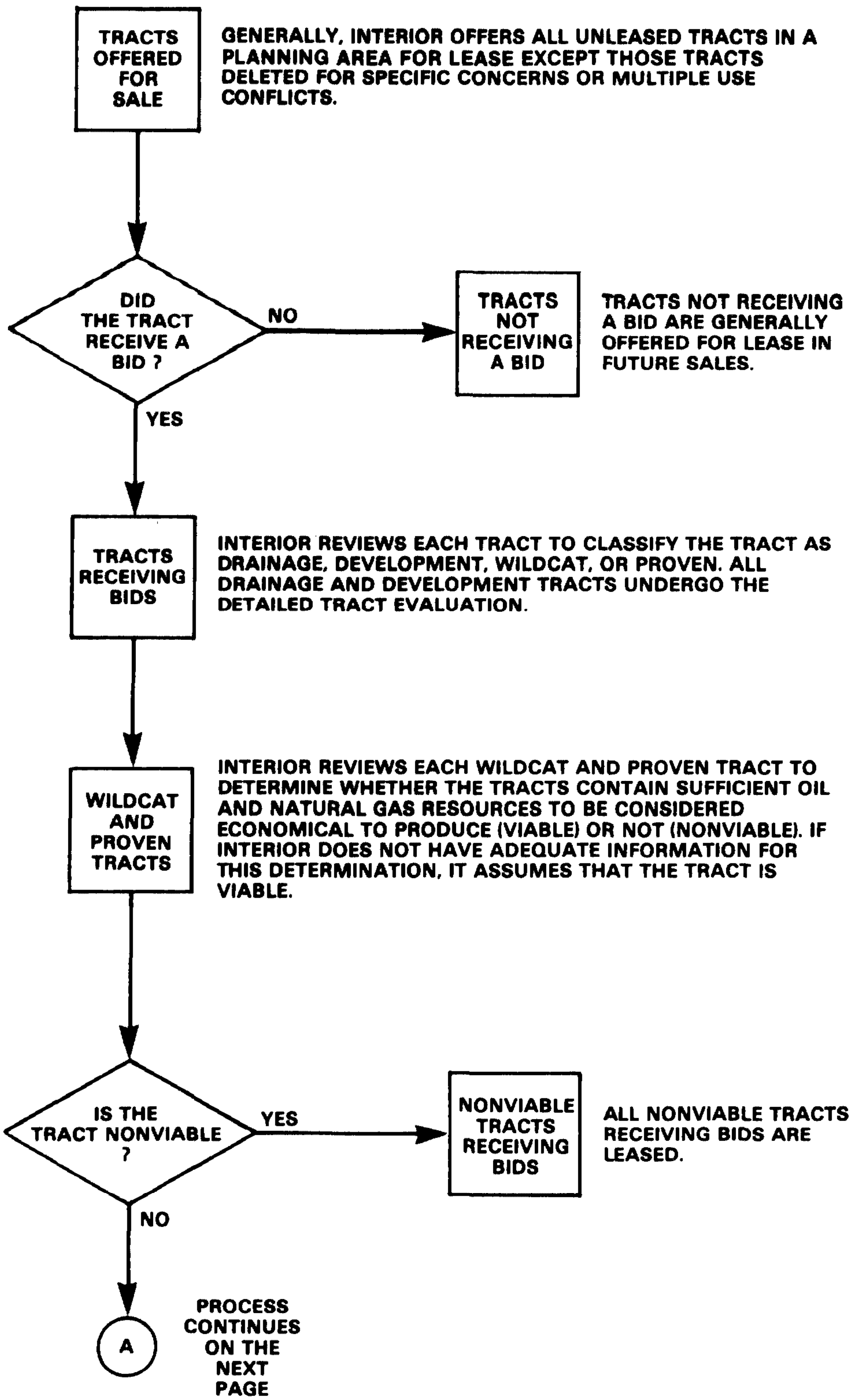
In July 1984 Interior makes three additional modifications to the bid-acceptance procedures.

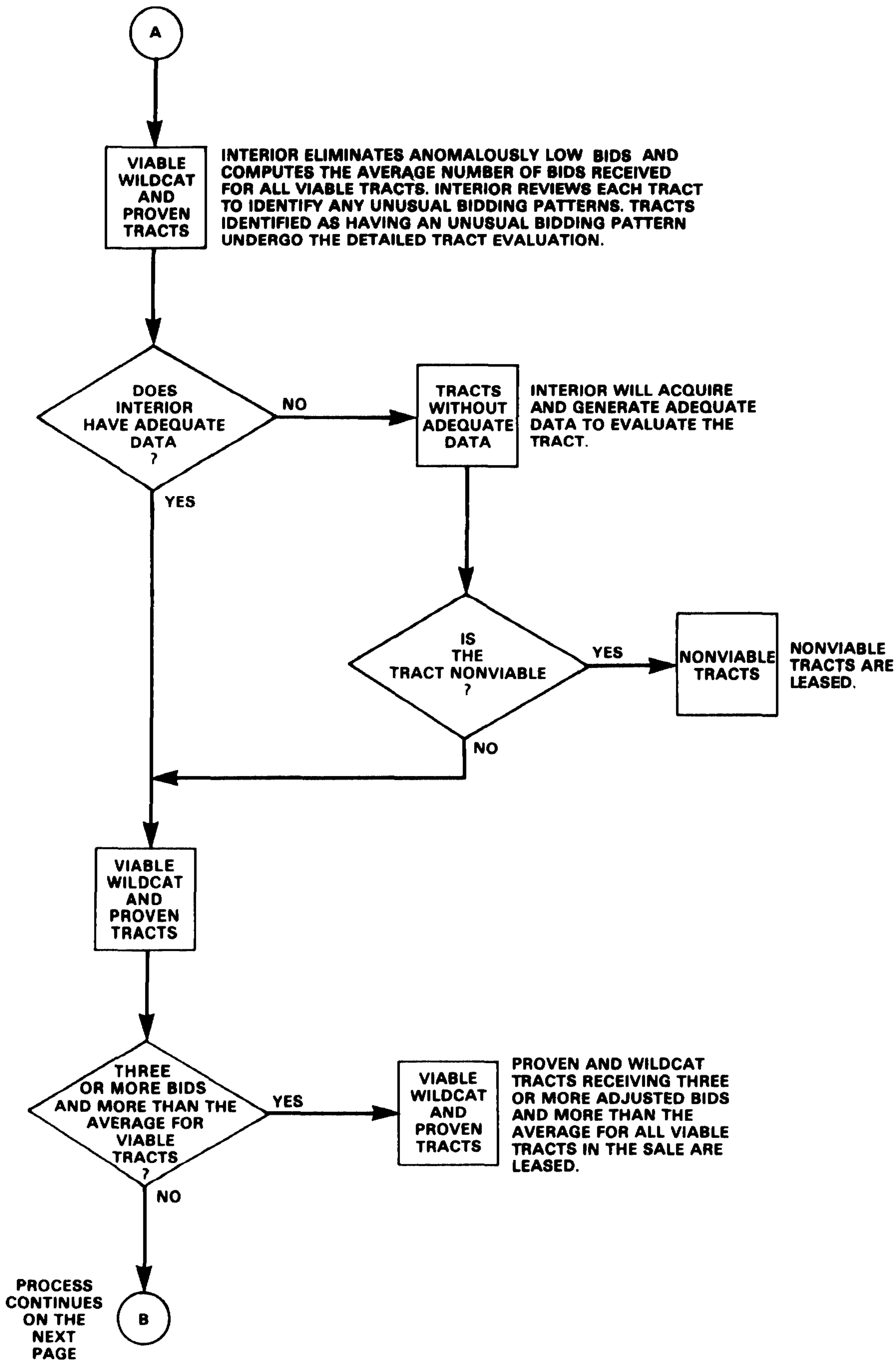
(1) The MMS regional manager, if he or she determines that an unusual bidding pattern exists and can be documented, has the discretionary authority, after consultation and coordination with Interior's solicitor, to refer the tracts to the Monte Carlo evaluation.

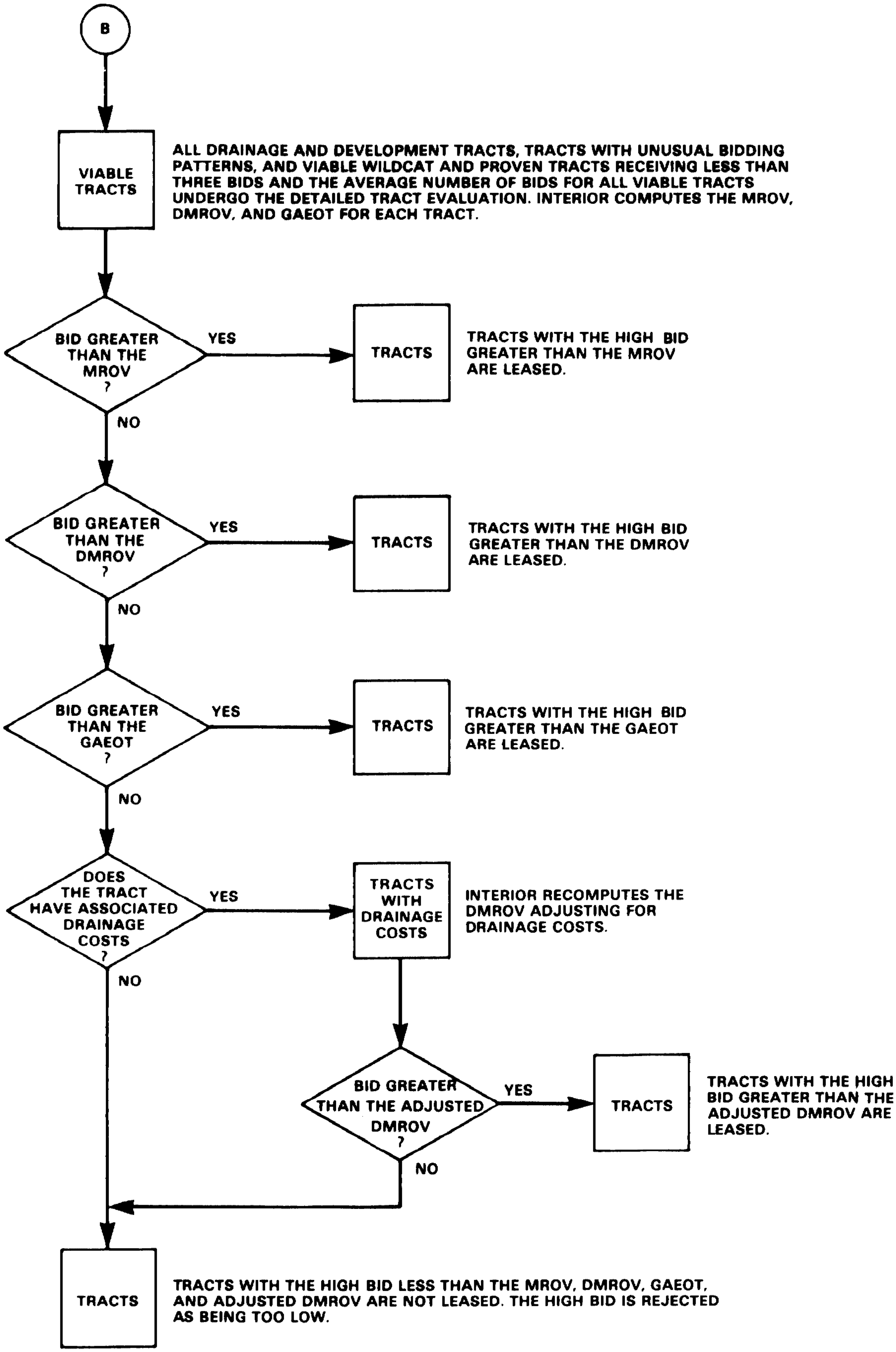
(2) The viability determinations of all wildcat and proven tracts can be reviewed using further mapping and/or analysis prepared during the second phase. Those tracts subsequently determined to be nonviable can be eliminated from the set of tracts undergoing the Monte Carlo analysis and their high bids accepted.

(3) The high bid submitted from one bidder will be accepted and any other bid for the same tract will not be considered.

DETAILED FLOW CHART OF INTERIOR'S BID-ACCEPTANCE PROCESS (AS OF DECEMBER 1984)




A
VIABLE WILDCAT AND PROVEN TRACTS
INTERIOR ELIMINATES ANOMALOUSLY LOW BIDS AND COMPUTES THE AVERAGE NUMBER OF BIDS RECEIVED FOR ALL VIABLE TRACTS. INTERIOR REVIEWS EACH TRACT TO IDENTIFY ANY UNUSUAL BIDDING PATTERNS. TRACTS IDENTIFIED AS HAVING AN UNUSUAL BIDDING PATTERN UNDERGO THE DETAILED TRACT EVALUATION.
DOES INTERIOR HAVE ADEQUATE DATA ?
NO
TRACTS WITHOUT ADEQUATE DATA
INTERIOR WILL ACQUIRE AND GENERATE ADEQUATE DATA TO EVALUATE THE TRACT.
YES
IS THE TRACT NONVIABLE ?
YES
NONVIABLE TRACTS
NONVIABLE TRACTS ARE LEASED.
NO
VIABLE WILDCAT AND PROVEN TRACTS
THREE OR MORE BIDS AND MORE THAN THE AVERAGE FOR VIABLE TRACTS ?
YES
VIABLE WILDCAT AND PROVEN TRACTS
PROVEN AND WILDCAT TRACTS RECEIVING THREE OR MORE ADJUSTED BIDS AND MORE THAN THE AVERAGE FOR ALL VIABLE TRACTS IN THE SALE ARE LEASED.
NO
PROCESS CONTINUES ON THE NEXT PAGE
B


B
VIABLE TRACTS
ALL DRAINAGE AND DEVELOPMENT TRACTS, TRACTS WITH UNUSUAL BIDDING PATTERNS, AND VIABLE WILDCAT AND PROVEN TRACTS RECEIVING LESS THAN THREE BIDS AND THE AVERAGE NUMBER OF BIDS FOR ALL VIABLE TRACTS UNDERGO THE DETAILED TRACT EVALUATION. INTERIOR COMPUTES THE MROV, DMROV, AND GAEOT FOR EACH TRACT.
BID GREATER THAN THE MROV ?
YES
TRACTS
TRACTS WITH THE HIGH BID GREATER THAN THE MROV ARE LEASED.
NO
BID GREATER THAN THE DMROV ?
YES
TRACTS
TRACTS WITH THE HIGH BID GREATER THAN THE DMROV ARE LEASED.
NO
BID GREATER THAN THE GAEOT ?
YES
TRACTS
TRACTS WITH THE HIGH BID GREATER THAN THE GAEOT ARE LEASED.
NO
DOES THE TRACT HAVE ASSOCIATED DRAINAGE COSTS ?
YES
TRACTS WITH DRAINAGE COSTS
INTERIOR RECOMPUTES THE DMROV ADJUSTING FOR DRAINAGE COSTS.
NO
BID GREATER THAN THE ADJUSTED DMROV ?
YES
TRACTS
TRACTS WITH THE HIGH BID GREATER THAN THE ADJUSTED DMROV ARE LEASED.
NO
TRACTS
TRACTS WITH THE HIGH BID LESS THAN THE MROV, DMROV, GAEOT, AND ADJUSTED DMROV ARE NOT LEASED. THE HIGH BID IS REJECTED AS BEING TOO LOW.

INTERIOR'S STREAMLINED PLANNING PROCESS

Interior completes a number of major steps in the leasing process for each sale. These activities rely on environmental assessments and studies, basic and interpretive data, Interior's reviews and reports, and consultations with federal agencies and state and local governments. The new streamlined process is comprised of the following:

(1) Geology report--Approximately 12 months before the call for information and 32 months before the sale, Interior prepares a geology report covering the planning area for the proposed lease sale. It includes the location of recoverable oil and natural gas resources and a description of the sale area.

(2) Notice of intent to prepare an environmental impact statement--The notice is published in the *Federal Register* at the time the call for information is published. It invites public assistance in determining the significant issues, scope, and alternatives to be analyzed in the environmental impact statement.

(3) Call for information--The call is published in the *Federal Register* and requests potential bidders (oil and natural gas companies) to indicate areas and levels of leasing interest within a particular planning area. States and others have the opportunity to comment on the proposed sale area or any other topics of concern, such as environmental effects or other conflicts that should be considered in planning the lease sale.

(4) Area identification--About 4 months after the call is published and after the comments and industry's expressions of interest are analyzed, Interior approves the area to be studied in the environmental impact statement for the proposed lease sale.

(5) Draft environmental impact statement--Interior issues its draft environmental impact statement approximately 9 months before the sale. The draft describes the entire planning area and discusses the potential environmental effects of oil and gas activities in the area proposed for leasing. Alternatives considered in the draft include delaying the offering, cancelling the offering, or deferring offering of certain tracts because of their potential effects.

(6) Public comment period--Generally a 60-day comment period immediately follows the public availability of the draft, during which time public hearings will be held in the affected region. Comments received either orally or in writing are considered in preparing the final environmental impact statement.

(7) Final environmental impact statement--After Interior considers and assesses comments received during the public comment period, it issues the final environmental impact statement. The final statement is filed with the Environmental Protection Agency and is distributed to other federal agencies and state and local governments. It is also available to the general public.

(8) Secretarial issue document--Interior prepares a secretarial issue document for each sale, which analyzes all issues involved in the proposed sale such as economic benefits, environmental risks, and states' views. The issue document is sent to the Secretary of the Interior for review and approval of the proposed sales.

(9) Proposed notice of offering--Interior generally publishes the proposed notice of offering about the same time as the final environmental impact statement. The notice contains the proposed terms and conditions of the sale, tracts proposed for leasing, and other mitigating measures. As required by section 19 of the OCS Lands Act, as amended, the notice is sent to governors of affected states for their comments on the size, timing, or location of the sale. It also invites any further comment that the state wishes to make.

(10) Governors' comments--Governors of affected states are provided 60 days in which to comment on the proposed notice of offering.

(11) Final notice of offering--After receiving comments from the governors, a final decision memorandum analyzing all issues of the sale is prepared for the Secretary of the Interior. The Secretary is required to accept recommendations of the governors if he or she determines that the recommendations provide a reasonable balance between the national interest and the well being of the affected states. About 90 days after the proposed notice is published and after consideration of comments from the governors, Interior issues a final notice of offering. The date, timing, location, tracts to be offered, terms, and conditions of the sale are published in the Federal Register 30 days before the sale is conducted.

(12) Offering--On the day of the sale, Interior opens and reads all sealed bids submitted by qualified bidders. The bids must be received the day before the offering and no bids are accepted at the offering.

(13) Bid acceptance/rejection and lease issuance--The high bids for tracts are evaluated after the offering according to Interior's criteria for ensuring the receipt of fair market value. As required by statute, the Department of Justice performs an antitrust review of the results of the offering.

(005587)

*U.S. GOVERNMENT PRINTING OFFICE: 1985-528-458:30722

31689.

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICAL BUSINESS
PENALTY FOR PRIVATE USE $300

BULK RATE
POSTAGE & FEES PAID
GAO
PERMIT No. G100