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BY THE COMPTROLLER GENERAL

Report To The Chairman, Committee On Interior And Insular Affairs House Of Representatives

OF THE UNITED STATES

Some Issues Affecting Southern California Outer Continental Shelf Oil And Gas Lease Sale 48

This report discusses the value and effect of the Interior Department's Outer Continental Shelf Environmental Studies Program on decisions leading up to leasing 148 Outer Continental Shelf tracts in Southern California. It also discusses the usefulness of resource reports submitted by various Federal agencies in defining the sale area. GAO's review indicated that neither the Environmental Studies Program nor the resource reports had a major impact on Sale 48 decisions.

Industry high bids for the sale tracts were 20 times greater than Interior value estimates, again creating concern as to Interior's ability to evaluate Outer Continental Shelf lands.

An alternate bidding system--bonus bid with a sliding scale royalty--was used for half the tracts offered in Sale 48 to increase competition and small company participation in the sale. The bidding results indicate that the sliding scale alternative did not provide the hoped for results.

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EMD-80-47
MAY 5, 1980

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

B-197313

The Honorable Morris K. Udall
Chairman, Committee on Interior
and Insular Affairs
House of Representatives

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Dear Mr. Chairman:

This report is in response to your September 4, 1979, request for a review of three specific aspects of the Southern California Outer Continental Shelf oil and gas lease Sale 48--namely (1) the use and impact of the Interior Department's Environmental Studies Program on sale decisions, (2) the impact of resource reports in selecting tracts to lease, and (3) the rationale for using the sliding scale royalty bidding system in the sale rather than some other bidding alternative.

We are sending copies of this report to the Secretary of the Interior; the Secretary of Energy; the Director, Office of Management and Budget; and the House and Senate committees and subcommittees having oversight responsibilities for the matters discussed in this report.

Sincerely yours,

Comptroller General
of the United States

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AGC00912

COMPTROLLER GENERAL'S
REPORT TO THE CHAIRMAN
COMMITTEE ON INTERIOR
AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES

SOME ISSUES AFFECTING SOUTHERN CALIFORNIA OUTER CONTINENTAL SHELF OIL AND GAS LEASE SALE 48

D I G E S T

Some specific considerations in deciding the Southern California Outer Continental Shelf (OCS) lease sale 48 were

--the use and impact of the Interior Department's Environmental Studies Program on sale decisions,

--the impact of resource reports in selecting tracts to lease, and

--the rationale for using the sliding scale royalty bidding system rather than some other bidding alternative.

Practically the entire Southern California OCS area--covering about 13.2 million acres and consisting of over 2,400 individual tracts--was initially considered for lease in Sale 48. The area was subsequently reduced to 148 tracts, with 55 tracts eventually receiving bids. Of these, 47 (85 percent) were located in the Santa Barbara Channel.

VALUE OF ENVIRONMENTAL STUDIES DIFFICULT TO DETERMINE

Seventeen studies, totaling about $16.4 million, have been funded through the Department of Interior's OCS Environmental Studies Program for environmental analyses of the Southern California OCS.

The value and impact these studies had on Sale 48 decisions was not readily determinable because little evidence was available at Interior's regional office showing the relationship of specific studies to sale decisions. Interior officials said that 14 of the 17 studies had some degree of usefulness in the decisions--some being of more value than others. Yet, only three studies had a clearly identifiable impact on the sale.

EMD-80-47

RESOURCE REPORTS OF LIMITED VALUE

Reports describing resources in proposed OCS lease areas and the associated multiple-use conflicts that could occur as a result of OCS oil and gas development were requested from 13 Federal agencies for Sale 48. Reports were received from 12 agencies.

The reports had little apparent impact on the sale decisions inasmuch as they contained little additional resource information than was already available to OCS planners from prior sales in Southern California.

In a past report to the Committee, 1/ GAO commented on the importance of resource reports and recommended that the Secretary of the Interior issue new directives to improve their utility. No new directives had been issued at the time of this review.

WIDE DISPARITY BETWEEN GOVERNMENT AND INDUSTRY ON OIL AND GAS POTENTIAL

Interior and industry did not agree on the oil and gas potential in the Sale 48 area. Interior estimates showed that only about half of the 148 tracts had definite oil and gas prospects. And of these, only 10 were economically developable. Industry high bids for the tracts leased, however, were 20 times higher than Interior's valuations. Neither did industry agree with Interior on which tracts had oil and gas potential.

After the sale, Interior found that a series of internal management problems had precluded its field office from adequately evaluating the tracts. Action is reportedly being taken to remedy these problems.

GAO did not discuss the Sale 48 bidding with industry, therefore, cannot comment on the

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1/Report to the Honorable Morris K. Udall, Chairman, Committee on Interior and Insular Affairs, House of Representatives, CED-79-53, February 22, 1979, p. 1.

reasonableness of industry's bids. Until better resource estimates are developed by Interior, the oil and gas potential in the sale area remains an unanswered question.

SLIDING SCALE ROYALTY BIDDING DID NOT ACHIEVE DESIRED RESULTS

Half the sale tracts were offered for lease under an alternative bidding system--bonus bid with a sliding scale royalty--and half were offered under the traditional bonus bid fixed royalty bidding system.

The bonus bid sliding scale royalty system was chosen for Sale 48 because the only other alternative bidding system available for the sale was considered to (1) result in speculative bidding and (2) increase the likelihood of production losses.

Sale 48 results indicate that two key objectives intended by the Congress in adopting alternative bidding systems--increased competition and greater participation from small companies--were not achieved through the sliding scale approach. In addition, there may be insufficient oil and gas resources on the sliding scale tracts to trigger the higher royalties.

GAO has not attempted to make an overall review of the impact the sliding scale royalty system has had on OCS leasing but did note its apparent success in OCS Sale 43. 1/ The results in Sale 48 appeared to run counter to that experience. Thus, the impact of this bidding system remains uncertain.

1/"Georgia Embayment--Illustrating Again The Need For More Data Before Selecting and Leasing Outer Continental Shelf Lands," EMD-79-22, March 1979, p. 12-13.

RECOMMENDATIONS

GAO again recommends that the Secretary of the Interior issue directives on the preparation of resource reports. Such directives should, as a minimum, address (1) the importance and value of the reports in the leasing process, (2) information needs for initial sales in frontier areas and procedures for updating the information for follow-on sales, and (3) the need for providing feedback to agencies on the utility of their reports.

The Secretary of the Interior should closely monitor the efforts to alleviate the problems identified in Sale 48--and also determine if these same management problems exist in other USGS offices.

The Secretary of Energy should, in conjunction with the Secretary of the Interior, evaluate the impact the sliding scale royalty bidding system has had on OCS leasing--including the impact this alternative bidding system has had on the congressional goals of increasing leasing competition and small company participation in lease sales--to determine the appropriateness of continuing with this bidding system in future sales.

AGENCY COMMENTS

Interior basically agreed with GAO's conclusions and recommendations except for the discussion of the sliding scale bidding system. While agreeing with the recommendation to further study the impact of this bidding system, Interior disagreed at length with GAO's discussion on the possible revenue impacts of the sliding scale royalty bidding system.

The Department of Energy commented orally on this report and also generally agreed with its conclusions and recommendations. Energy, as with Interior, stressed that the sliding scale bidding concept is in an experimental mode and that plans are underway to develop an evaluative model to assess this and future alternative bidding systems.

Contents

ABBREVIATIONS

BLM	Bureau of Land Management
DOE	Department of Energy
DOI	Department of the Interior
EIS	Environmental Impact Statement
GAO	General Accounting Office
NAS	National Academy of Sciences
OCS	Outer Continental Shelf
OCSESP	Outer Continental Shelf Environmental Studies Program
POCS	Pacific Outer Continental Shelf
SID	Secretarial Issue Document
USGS	U.S. Geological Survey

CHAPTER 1

INTRODUCTION

The U.S. Outer Continental Shelf (OCS) is believed to contain sizable oil and gas deposits which can contribute significantly to supplying the Nation's future energy needs. Although the quantities of oil and gas on these lands remains uncertain, most agree that the potential is great and the United States must actively pursue a program to find and extract these resources.

The development of programs and processes for exploring and developing these resources, however, is a controversial issue. Some believe that exploration and development must be accomplished in the most expeditious manner and should take priority over other national goals. Others feel that exploration and development must be paced to take into account the impact these activities may have on other national priorities.

REVIEW REQUEST AND SCOPE

Countless concerns from a number of groups are interwoven into the debate on the exploration and development issue. In a letter dated September 4, 1979, (see app. I) we were requested to review three of the more controversial aspects of these activities with regard to the Southern California OCS lease Sale 48. Specifically we were asked to determine:

--How the Interior Department used its OCS Environmental Studies Program (OCSESP) in answering information needs for the sale and how the OCSESP research results affected sale decisions.

--What resource reports and other data were available and used to select tracts, how the tracts were rated, and the impact this information had on competition.

--Why the sliding scale royalty bidding system rather than some other alternative bidding system was used for the sale.

Answers to these questions along with other pertinent sale information are provided in this and the following chapters to this report. Our work--limited basically to the questions delineated in the letter--was performed at the Department of the Interior's Bureau of Land Management Headquarters in Washington, D.C.; the Bureau's Pacific Outer Continental Shelf office and the U.S. Geological Survey's district office, both located in Los Angeles, California; and at the Department of Energy in Washington, D.C.

RESPONSIBILITY FOR OCS DEVELOPMENT ACTIVITIES

The Department of the Interior (DOI) and the Department of Energy (DOE) share the responsibility for managing the development and production of oil and gas resources on the OCS. Basically, DOI is responsible for developing an OCS leasing program, issuing and supervising leases, and enforcing regulations applicable to OCS development and production operations. DOI's Bureau of Land Management (BLM), in concert with the Department of the Interior's U.S. Geological Survey (USGS), has overall responsibility for managing DOI's functions. DOE's responsibilities include setting OCS production goals, developing and implementing bidding systems to be used in leasing OCS lands, establishing lessee diligence requirements for OCS development and production, and fostering competition for OCS leases.

BLM's Pacific Outer Continental Shelf (POCS) office has responsibility for OCS activities off the California coast and was responsible for managing Sale 48 pre-sale activities. The POCS office coordinates OCS activities with Federal, State, and local groups at the regional levels and is also responsible for managing Interior's OCSESP in California.

OCS DEVELOPMENT IN SOUTHERN CALIFORNIA

The Pacific OCS is separated into four development areas: (1) Washington-Oregon, (2) Northern and Central California, (3) the Santa Barbara Channel, and (4) Southern California. Both the Santa Barbara Channel and the Southern California areas were included in Sale 48. For this review we have considered the Santa Barbara Channel and the Southern California area as one area, referring to them jointly as the Southern California OCS. Using this geographical reference, the Southern California OCS extends from the area around Point Conception, California, to the United States-Mexican border (see figs. 1 and 2).

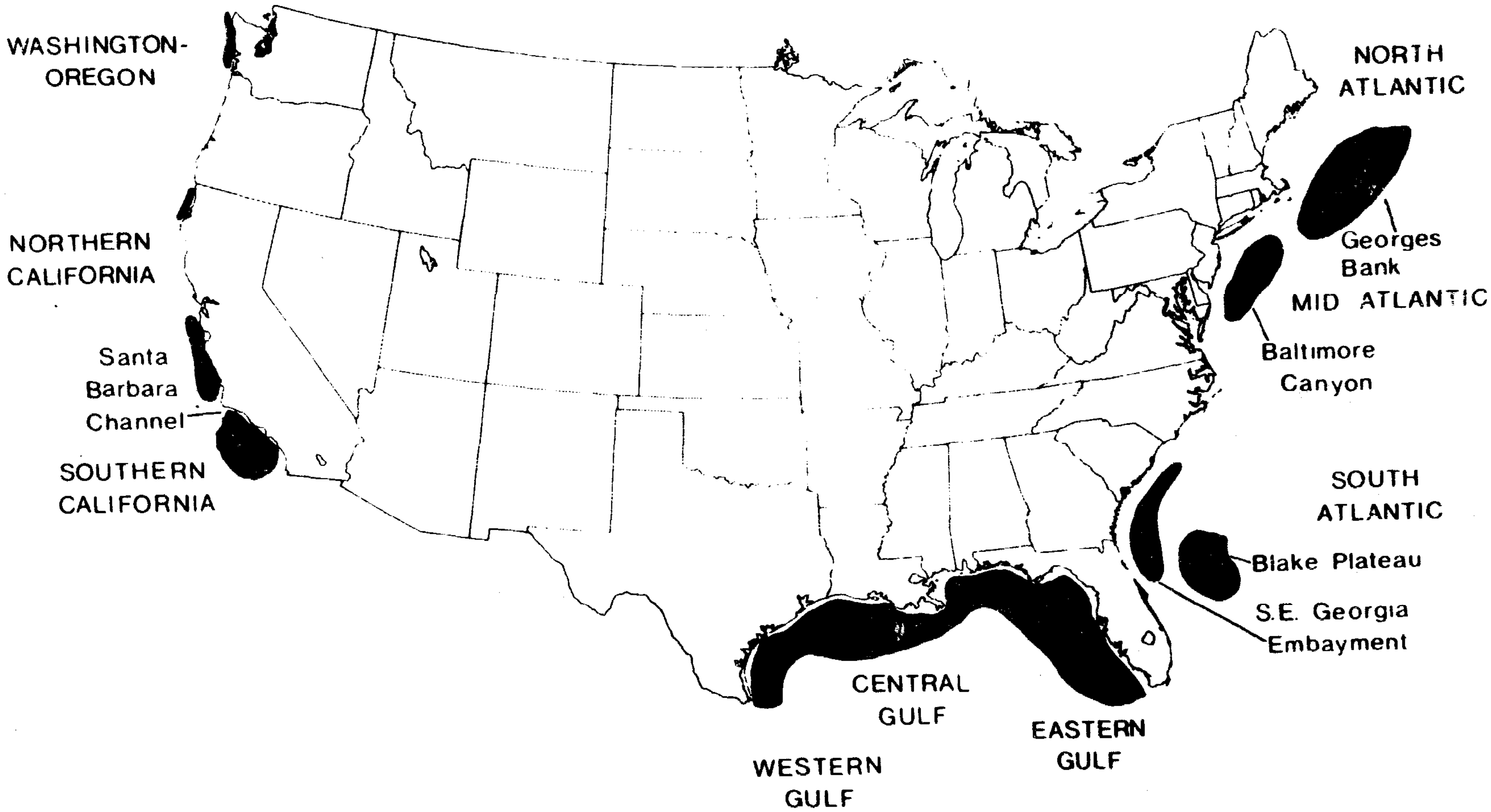
There had been three Southern California OCS lease sales prior to Sale 48. The first sale, in 1966, was a one-tract sale. The leased tract was located adjacent to a California State tract and was leased as a drainage tract. A second sale was held in February 1968. A total of 110 tracts were offered and bids were received and accepted on 71 tracts. Sale 35 occurred in December 1975, with leases awarded on 56 of the 231 tracts offered. Table 1 shows the number of tracts offered and leased in Southern California, including Sale 48, for oil and gas development.

Table 1

Number of Tracts Leased in Southern California OCS

Sales	Tracts offered	Tracts leased
1966	1	1
1968	110	71
1975 (Sale 35)	231	56
1979 (Sale 48)	148	54
Total	490	182

Actual oil and gas production from the Southern California OCS has been minimal to date. According to BLM data, estimated oil production from the Southern California OCS production was 14.24 million barrels in 1978 or about 39,000 barrels per day. Oil production is expected

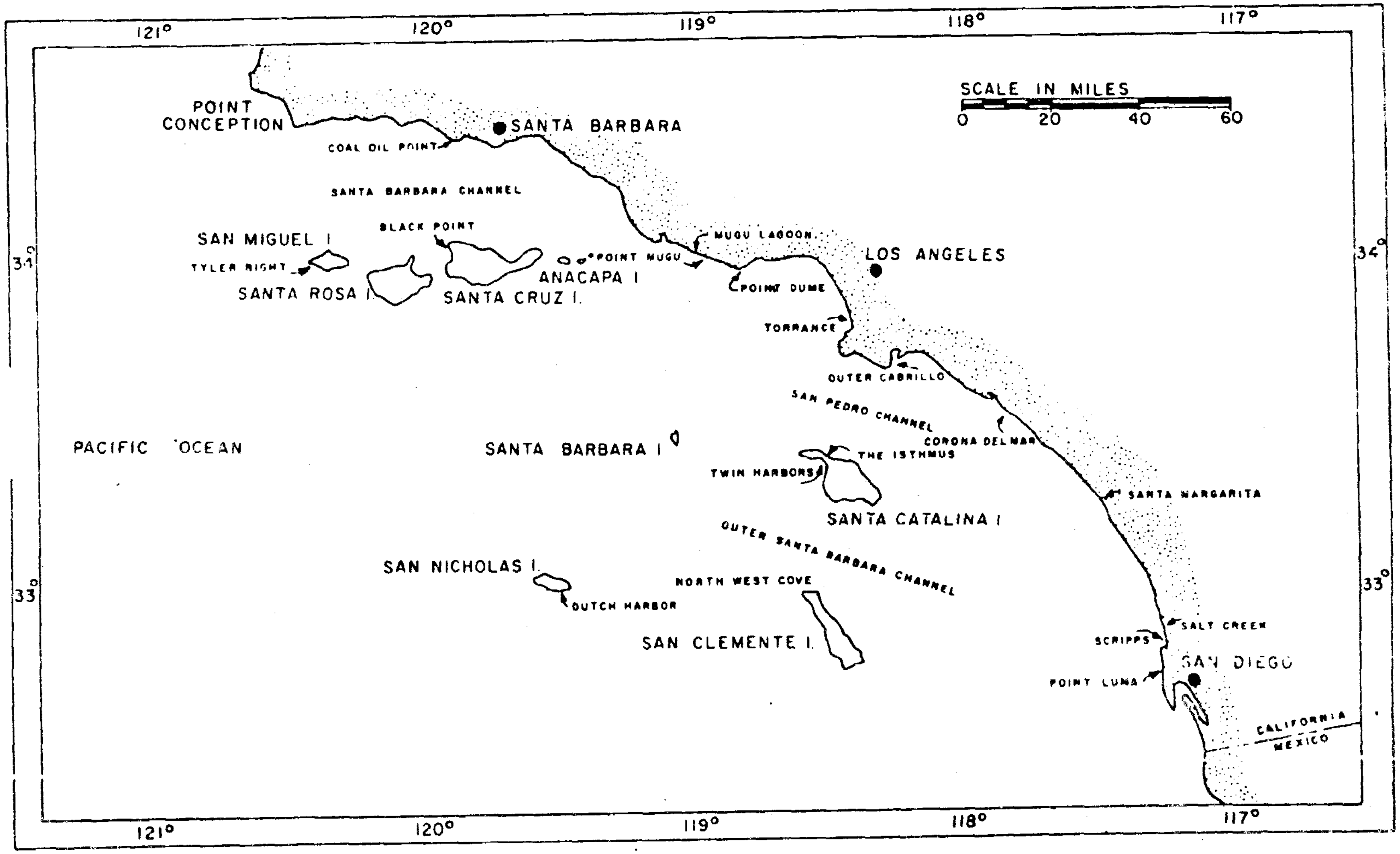


Continental Margin showing areas of leasing potential

0 300 miles

FIG 1
OUTER CONTINENTAL SHELF LEASE AREAS

SOURCE: DEPARTMENT OF INTERIOR



SOURCE: DEPARTMENT OF INTERIOR

FIG 2
SOUTHERN CALIFORNIA
OCS AREA

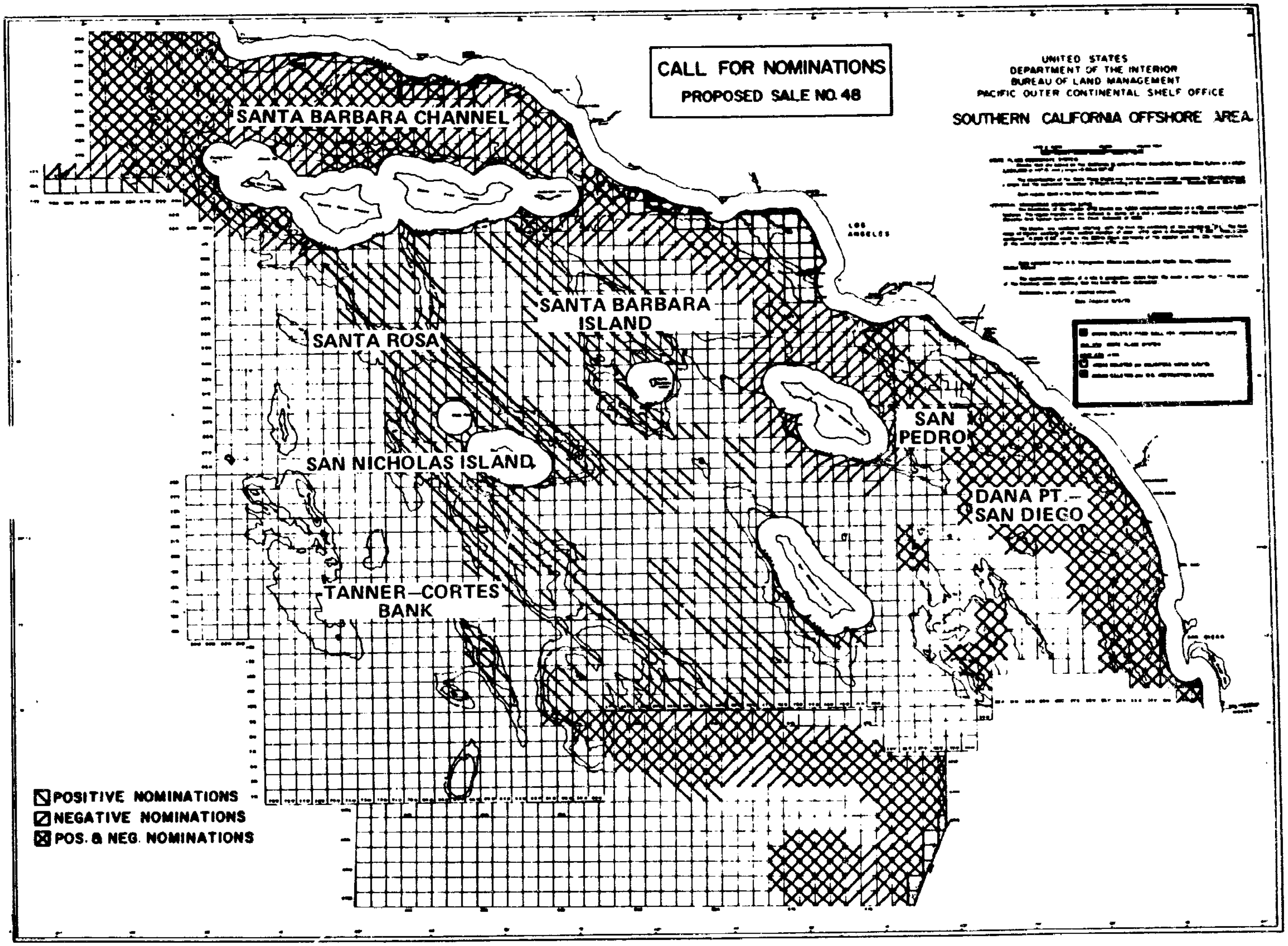
to more than double to over 33 million barrels annually by 1981. Annual gas production for 1978 was estimated at 23.54 billion cubic feet--40.7 billion cubic feet is predicted by 1981. In terms of producing tracts, only 3 of the 128 tracts leased prior to Sale 48 have actually produced oil and/or gas. Thirteen additional tracts are currently under development.

OCS SALE 48 TRACT SELECTION AND SALE

On July 16, 1976, BLM formally requested nominations and comments from interested parties on possible tracts for the proposed Sale 48. The area in which nominations and comments were requested encompassed about 13.2 million acres divided into over 2,400 tracts. Geographically, the proposed sale area included the entire Southern California OCS from Point Conception southward to the U.S.-Mexican border and out to sea as much as 190 miles. According to information provided by the Bureau of Land Management's POCS office, 75 tracts were not included in the call for nominations area for the following reasons:

Reasons for elimination	Number of tracts
Tracts off Santa Monica eliminated as a result of public debate during OCS Sale 35	46
Tracts in the Santa Barbara Channel near California State oil and gas sanctuaries	15
Tracts deleted because of Federal/ State or U.S./Mexico border disputes	14
Total	75

In response to the call for nominations, 17 petroleum companies nominated 970 tracts for inclusion in the sale. About 31 percent of the tracts (308) nominated received 5 or more nominations with 1 tract receiving a high of 11 nominations. These tracts were clustered in four basic areas: (1) the Santa Barbara Channel, (2) a 10-mile wide strip near the coast extending from San Pedro Bay to San Diego, (3) around San Nicholas Island, and (4) on farther out to sea, along the



SOURCE: DEPARTMENT OF INTERIOR

FIG 3
CALL FOR NOMINATIONS
RESULTS

Tanner-Cortes Banks (see fig. 3). Apparently industry had no interest in the remaining 1,430 tracts of the call area--at least at that point in time.

In addition to positive nominations, there were also negative nominations--i.e., comments against leasing tracts for oil and gas development. Negative nominations were received from Federal agencies, State and local groups, and private citizens. Negative nominations were both tract specific and non-tract specific, with nearly 200 tracts receiving tract specific negative nominations. The POCS office received four letters against any leasing whatsoever regardless of specific tracts. Comments were also received against leasing in specific geographical areas. For example, 32 letters were received objecting to any leasing in the Santa Barbara Channel. Negative comments were also received against leasing along the coast from San Pedro Bay to San Diego.

On December 2, 1976, after reviewing the nominations, the POCS office and the USGS district office forwarded a listing of 420 tracts to BLM and USGS headquarters in Washington, D.C., for consideration in OCS Sale 48. Tracts were arrayed in three priorities as follows:

Priority	Assessment	Number of tracts
1	Jointly recommended by BLM and USGS, best potential	106
2	Jointly recommended, lesser potential	127
3	BLM and USGS differ on recommendations, no joint agreement. Resource potential varies, multiple use conflicts, high environmental concern	187
	Total	420

The POCS and USGS offices recommended that all priority 1 and priority 2 tracts--a total of 233 tracts--be included in the proposed sale. The joint report stated that:

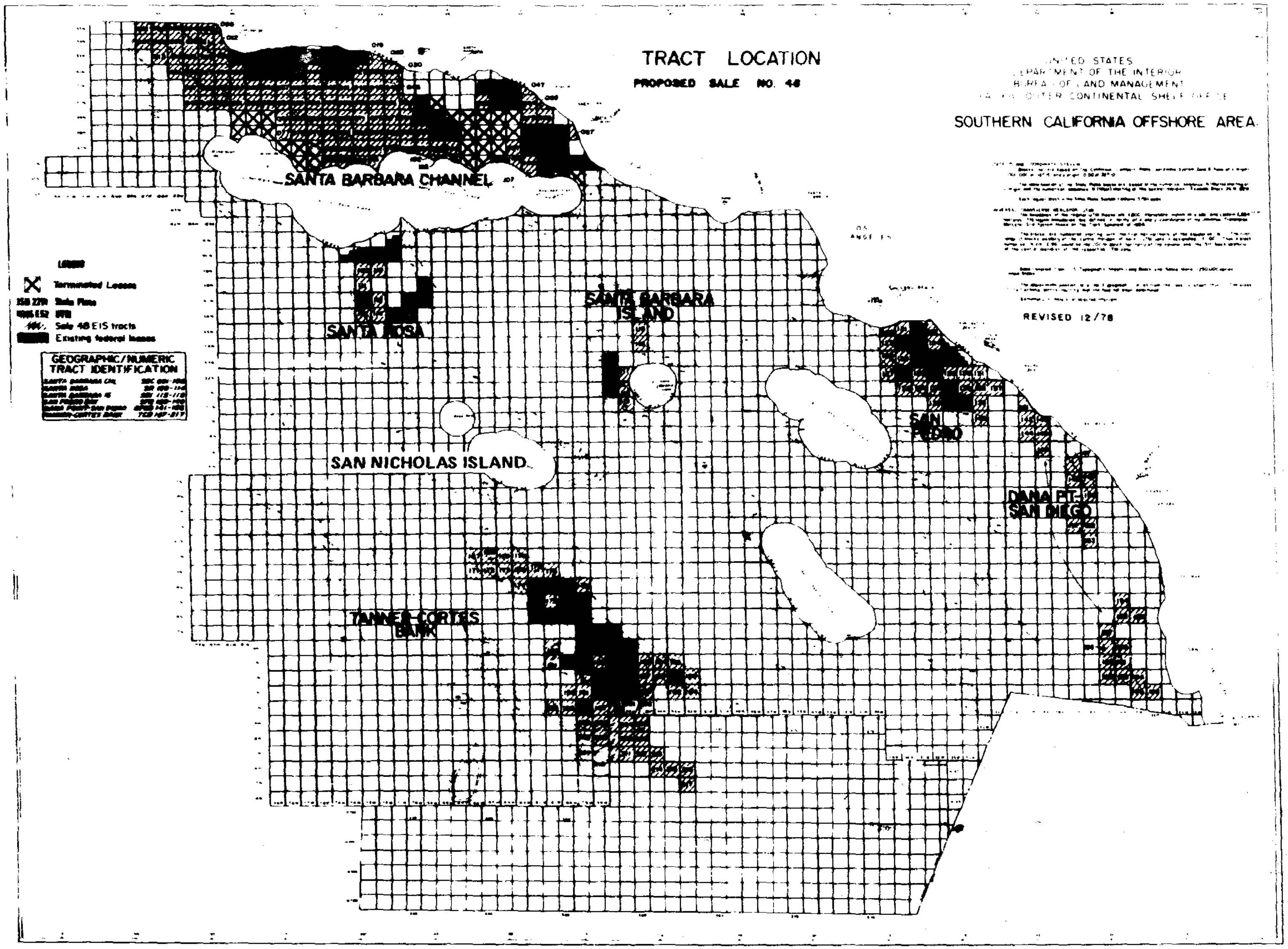
"The deletion of all Priority #3 blocks removes many of the environmental and use conflict problems associated with this proposed sale, although many of the * * * top ranked tracts are in this category."

The report also commented that the inclusion of the priority 3 tracts could result in too large a sale which in turn could affect the orderly development of the OCS and the receipt of fair market value for OCS resources.

No records were available at the POCS office showing the rationale for not considering the remaining 550 tracts (970 less 420) nominated by industry for inclusion in the sale. We asked POCS officials why the tracts were deleted and were told that approximately 65 percent of the tracts were deleted because they were located in Department of Defense (DOD) use areas; about 20 percent were deleted for multiple reasons--namely, DOD use conflicts, deep water concerns, and low resource potential; and about 10 to 15 percent were eliminated for environmental reasons.

BLM and USGS headquarters reviewed the recommendation of the regional offices and, after consultations with DOD, the U.S. Coast Guard, Interior's Fish and Wildlife Service, and discussions with State and local officials of California, recommended that 217 of the 233 priority 1 and 2 tracts be tentatively selected for Sale 48. All priority 3 tracts were eliminated as well as 16 of the priority 1 and 2 tracts. We were told the higher priority tracts were eliminated primarily in deference to Defense Department needs. Seven of the tracts eliminated were near the coast north of San Diego, three were near Santa Barbara Island, and the remaining six were farther offshore in the vicinity of the Tanner-Cortes Banks.

On January 18, 1977, DOI announced that the 217 tracts recommended by BLM and USGS had been tentatively selected for inclusion in OCS Sale 48 (see fig. 4). An environmental impact study was initiated to examine the potential environmental impacts of oil and gas development on these 217 tracts. The study was completed in January 1979 with the results being used with other information in preparing a Secretarial Issue Document (SID) describing the various sale options available to the Secretary of the Interior.



SOURCE: DEPARTMENT OF INTERIOR

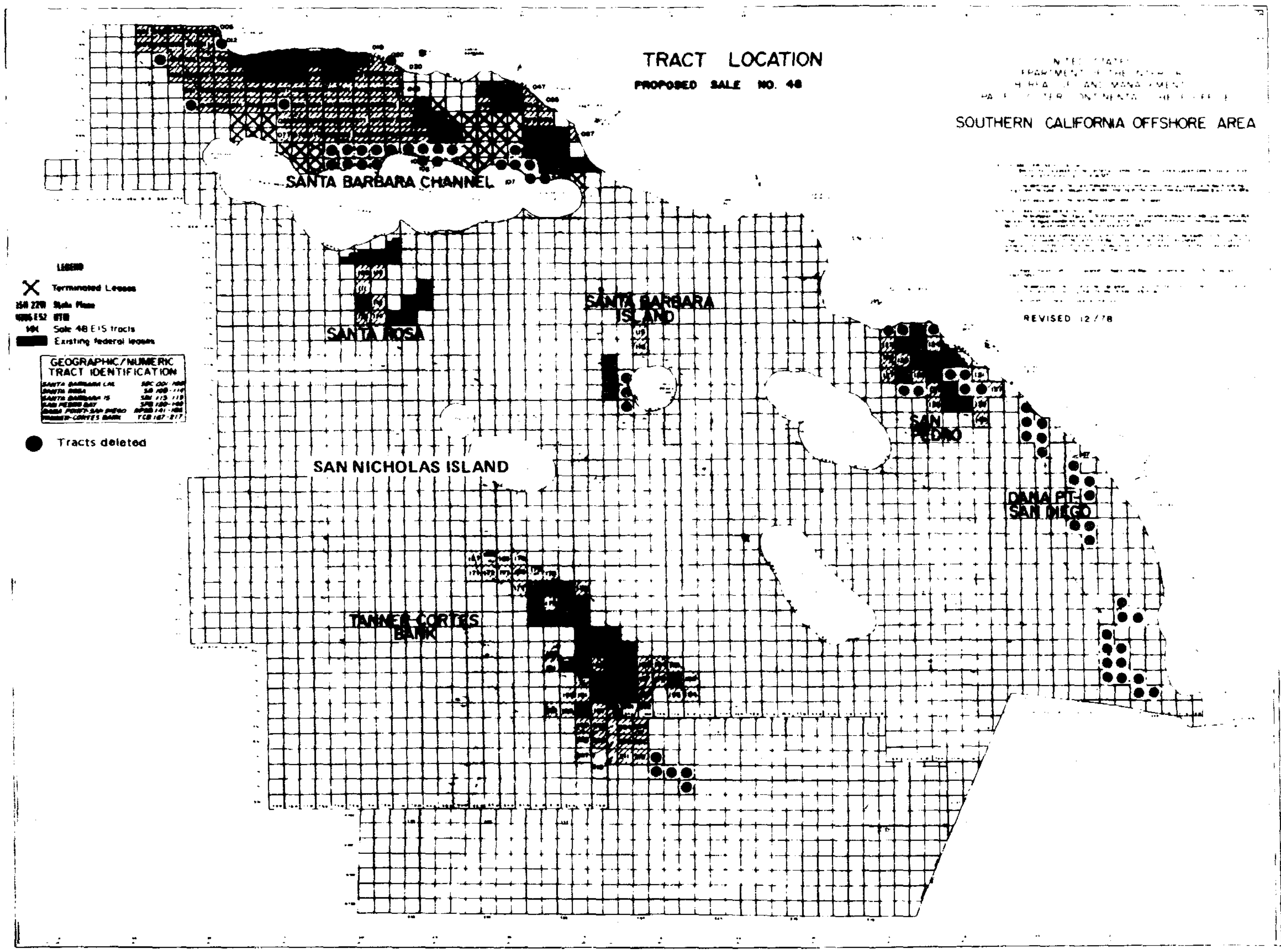
FIG 4
217 TRACTS INCLUDED IN EIS

The Secretary of the Interior reviewed the SID and on March 3, 1979, withdrew 69 additional tracts from the sale--reducing the sale to 148 tracts (see fig. 5). Tracts were withdrawn for the following reasons:

Area	Number of tracts withdrawn	Reasons
Santa Barbara Channel	26	-Bird and mammal protection along channel islands -Defense considerations -Geologic hazards
Santa Barbara Island	3	-Bird and mammal protection -Defense considerations
San Pedro Bay	9	-Shipping navigation hazards -Geologic hazards
Dana Point to San Diego	26	-Protection of gray whale and bird migration routes -Sport and commercial fishing considerations -Geological hazards
Tanner-Cortes Banks	5	-Defense considerations
Total	69	

Our analysis of BLM data indicated 12 tracts were withdrawn for more than one reason.

The final tract selection was coordinated with the State of California and after consideration of the Governor's comments, the lease sale was held in Los Angeles on June 29, 1979. Bids were received on 55 of the 148 tracts offered in the sale and accepted on 54 tracts (the high bid on one tract in the San Pedro Bay area was rejected as being too low). As shown below, about 85 percent of the tracts bid on and leased were in the Santa Barbara Channel.



SOURCE: DEPARTMENT OF INTERIOR

FIG 5
TRACTS DELETED BY SECRETARY OF INTERIOR

Area	Number of tracts offered	Number of tracts receiving bids
Santa Barbara Channel	82	47
Santa Rosa Island	6	3
San Pedro Bay	12	2
Tanner-Cortes Banks	46	3
Santa Barbara Island	2	0
Total	148	55

The sum of the high bids on the 54 tracts leased totaled almost $574 million--averaging about $10.6 million per tract.

The impact of the OCSESP on sale decisions, the usefulness of multiple use resource reports and USGS resource estimates in selecting tracts for the sale, and the impact of the bonus bid sliding scale royalty bidding arrangement on sale competition are discussed in the following chapters of this report.

CHAPTER 2

VALUE OF ENVIRONMENTAL STUDIES

PROGRAM DIFFICULT TO DETERMINE

The value and impact of research information developed through the Southern California OCSESP on Sale 48 decisions could not be precisely determined because information was not available at the Bureau of Land Management's POCS office showing what study information was used in the sale, how it was used, and the impact it had on sale decisions. According to POCS office officials, 13 of the 17 studies commissioned under the program since its inception in late 1973 had some degree of usefulness in Sale 48 decisions--some being of more value than others. Only three studies could be identified as having a clearly identifiable impact on Sale 48 decisions.

Conceptually, BLM's original OCSESP has not focused on individual OCS lease sales. Hence it is not surprising that the relationship between individual studies and Sale 48 decisions is not clearly identifiable. However, in late 1978 BLM refocused its OCSESP to more closely relate individual studies to the management information needs of specific OCS sales. The POCS office has refocused the Southern California program to reflect this change. This new approach, if effectively implemented, should improve the effectiveness of the program. Also, it should provide the mechanism to more precisely evaluate the value and usefulness of future OCSESP studies on both pre-sale and post-sale management decisions.

THE SOUTHERN CALIFORNIA PROGRAM

The Southern California OCSESP began in late 1973 with the awarding of a contract to a California consortium to survey and summarize known information about the environment on the Southern California OCS. Following this study an open conference was held to recommend future research. The conference was hosted under contract by the Southern California Academy of Sciences and reportedly provided the basis for further environmental studies. Including these two efforts, 17 study contracts amounting to approximately $16.4 million have been awarded for the Southern California OCSESP program through October 1979. A listing of the studies is shown in table 2.

Table 2
Southern California
ESP Studies 1973-79 1/

Study	Contractor	Contract awarded	Contracted complete	Contract amount
Southern California Literature Survey	Southern California Ocean Studies Consortium	10/73	11/74	$ 115,065
Southern California Public Meeting	Southern California Academy of Sciences	11/74	3/75	18,996
Southern California Marine Mammal and Seabirds	University of California Santa Cruz/Irvine			
	Year 1	3/75	2/79	652,000
	Year 2	4/76	Partially complete	1,028,951
	Year 3	6/77	Partially complete	900,000
Geological Reconnaissance of Tanner and Cortes Banks	U.S. Geological Survey	5/75	12/76	105,900
Southern California Bight Baseline	Science Applications Inc.			
Year 1		6/75	09/78	$ 3,803,124
Year 2 (Intertidal)		7/76	04/79	2,525,000
Year 2 (Benthic and Water Column)		8/77	09/79	3,606,303
Year 3 (Intertidal)		7/77	09/79	2,114,026
Southern California Bight Air Quality Modeling	AeroVironment, Inc.	4/77	02/78	131,202
Southern California Sale 48 Air Quality Assistance	AeroVironment, Inc.	9/78	05/79	34,265
Southern California Archaeological Literature Survey	Science Applications, Inc.	5/77	11/78	100,641
San Pedro Shelf Sediment Transport	U.S. Geological Survey	2/78	11/79	237,774
Southern California Shelf and Ridge Geophysical and Geological Hazards	U.S. Geological Survey	04/78	In process	121,684
Tanner and Cortes Banks Reconnaissance and Characterization	Interstate Electronics Corp.	09/78	In process	545,633
Climatology and Oceanographical Analysis of Southern and Northern California OCS	National Oceanic and Atmospheric Administration	11/78	In process	334,110
Total		17		$16,374,664

1/Data as of 10/79

We were unable to determine the precise impact the Southern California OCSESP had on Sale 48 decisions because the POCS office has not maintained records delineating the use of specific studies with regard to sale decisions. Through discussions with POCS officials we were told that 13 of the 17 studies funded under the program had a bearing on Sale 48. From these discussions it appears that the studies program had minimal impact, if any, on the early sale decisions, i.e., defining the call for nominations area and carrying out initial tract selection activities, but the studies program was more useful in subsequent sale processes of preparing an environmental impact statement (EIS) and the Secretarial Issue Document (SID). The specific impact on these two decision processes is, again, difficult to determine. For example, we were told that the EIS could have been prepared without the OCSESP study results. Yet, POCS office officials maintained that a better EIS was prepared because of the information provided through the studies program.

The intertidal studies, benthic studies, and the bird and mammal studies appear to have had a more tangible effect on final sale decisions than the other studies funded under the OCSESP. Intertidal studies focus on the habitat of species in the shore areas which are covered at high tide but uncovered at low tide. Because of information developed through these studies, we were told that three tracts were deleted in the final tract selection process. Also, the results of these studies along with information from the bird and mammal studies directly affected the decision to delete 22 tracts around Santa Rosa Island from the sale. Through the benthic studies a small shell animal, thought to be extinct, was found in the Santa Rosa Cortes Ridge. Consequently, a stipulation was attached to several leases offered in this area requiring additional environmental study by the lessee prior to tract development.

The only other study of potential demonstrated value to Sale 48 was an air quality study funded in September 1978. The study, although not influential in the decision processes leading up to the sale, will be used to determine the need to establish air quality regulations in the Southern California OCS area. Promulgation of these regulations is provided for in the OCS Lands Act Amendments of 1978.

POCS office officials explained that information developed under the original OCSESP concept was not focused on the lease sale decisionmaking processes. Consequently, the information developed through the program may or may not have been of specific value in the various decisions leading up to Sale 48. DOI's new OCSESP concept (discussed below), however, will require a link between studies and specific decision points.

DOI's ORIGINAL OCSESP REVISED

The OCSESP was established by DOI to study the environmental impact of oil and gas development on the OCS. The initial program was developed around three types of research--baseline, monitoring, and special studies. The objective of baseline research was to develop a compendium of information which would describe the environmental qualities and condition of the OCS. Monitoring research was designed to track changes in the baseline data brought about by OCS development activities. And, special studies were designed to look at the effects of particular pollutants on specific marine environments.

Concerned with apparent limitations in the original program, DOI, in 1976, contracted with the National Academy of Sciences (NAS) to perform a critical review of the entire program. In January 1978, NAS concluded its review and reported that the OCSESP "does not effectively contribute to leasing decisions or to the accrual of sound scientific information adequate for OCS management, both offshore and onshore." 1/ Overall, NAS questioned the link between ongoing research and scientific needs and the link between scientific needs and management decisions. Among other recommendations, NAS urged DOI to redesign the OCSESP to clearly show these relationships 2/.

1/"OCS Oil and Gas: An Assessment of the Department of the Interior Environmental Studies Program", Jan. 1978, p. 1.

2/In June 1978, we issued a report--"Benefits Derived From the Outer Continental Shelf Environmental Studies Program Are Questionable", CED-78-93--to the Secretaries of the Interior and Commerce on our review of the OCSESP. We also concluded that the OCSESP needed reassessment with particular emphasis on the relationship between research, research needs, and the management decisionmaking process.

In response to these recommendations, DOI redesigned the OCSESP to require that individual studies be specifically linked to information required to answer questions at the following 14 steps in the OCS decisionmaking process.

1. Tentative sale schedule

2. Call for nominations

3. Tentative tract selection

4. Preparation of the environmental impact statement (EIS)

5. Draft Secretarial Issue Document (SID) and preliminary notice of sale

6. Final SID

7. Final tract selection

8. Notice of sale

9. Sale and lease issuance

10. Exploration plan and drilling permit approval

11. Transportation management plan approval

12. Development and production plan evaluation and approval

13. Pipeline permit issuance

14. Lease termination or expiration

In addition to being related to specific management decision points, DOI's new program focus requires that environmental studies be basically impact-oriented rather than baseline-oriented, i.e., the studies will attempt to predict the potential environmental impact that could be expected if particular courses of action are followed.

NEW OCSESP CONCEPT IMPLEMENTED BY POCS

The POCS office has implemented BLM's new OCSESP pro gram. A study plan was developed for fiscal year 1979 and plans have been developed for fiscal years 1980 and 1981. We did not review these plans in detail nor did we attempt to assess the impact the new concept will have on POCS's future studies as opposed to what would have been done under the prior OCSESP concept. We did note that the new plans are focused on issues (for example, air quality, water quality, special biological areas, and others) and linked to decision steps in the OCS sale process. The type of studies needed to deal with these issues along with the timing of the decisions is also linked to the issues identified.

CONCLUSION

Additional time will be needed before the new OCSESP concept is running smoothly. The refocused program, if effectively implemented, should improve the overall effectiveness of the program. Also, since individual studies will be linked to specific sale decisions, the new approach should provide the mechanism for better assessing the value of specific Southern California OCSESP studies on lease sale decisions--both pre-lease and post-lease--in the future.

AGENCY COMMENTS AND OUR EVALUATION

In commenting on a draft of this report, DOI agreed with our conclusion regarding the refocusing of the OCSESP and our assessment of the studies program in Southern California. DOI, however, questioned our assessment of the application and usefulness of the 17 Southern California studies maintaining that several of the studies--more than the three we identified as having a tangible impact on the sale--were useful in documents used by the Secretary of the Interior and others in planning the sale. (Appendix II, pages 46 and 49).

We believe we have given appropriate credit to the usefulness of the studies program in our review. We acknowledged in our draft report that 13 of the 17 studies reportedly had some bearing on sale decisions, that some were of more value than others, and that the studies program apparently had more impact on the latter sale decisions than the initial sale decisions. Our point is that there was little evidence clearly showing the impact of individual studies on sale decisions and that only three studies could be identified as having a tangible impact on the sale.

CHAPTER 3

RESOURCE REPORTS OF LIMITED VALUE

Reports describing resources in proposed OCS lease areas and the associated multiple-use conflicts that could occur as a result of OCS oil and gas development were requested from 13 Federal agencies prior to requesting tract nominations for Sale 48. Reports were received from 12 agencies. The reports, however, had little apparent impact on Sale 48 decisions inasmuch as they contained little more resource information than was already available to POCS office planners from prior OCS sales in Southern California.

PURPOSE OF RESOURCE REPORTS

The call for resource reports is one of the initial steps in the sale process. According to 43 CFR 3312.1 (1979) the Director, BLM, is required to request from the Director, USGS, a report on the general geology and potential mineral resources in a proposed OCS sale area. These reports are requested prior to soliciting tract nominations from the public and industry. In addition, the BLM Director is required to request reports from other interested agencies describing known valuable resources and/or environmental concerns within the OCS area being considered for lease.

As we stated in a past report to the Committee, 1/ resource reports are supposed to be used primarily to identify significant environmental or user conflicts which could preclude leasing specific tracts or would require lease stipulations to lessen the negative impacts of OCS development. If specific tracts are eliminated early in the sale process, industry and Government are spared the expense of further studying the affected tracts and can concentrate on those tracts most likely to be leased. In addition, resource reports can assist BLM in determining any additional environmental information that may be required to make sound decisions concerning proposed lease sales.

Our prior report to the Committee was limited to a review of resource report practices and procedures in two

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1/Report to the Honorable Morris K. Udall, Chairman, Committee on Interior and Insular Affairs, House of Representatives, CED-79-53, Feb. 22, 1979, p. 1.

OCS regions, New York and Alaska, and concluded that the BLM could improve the quality and usefulness of resource reports by

--informing the agencies submitting reports of the importance and role of resource reports,

--tailoring resource report requests to the expertise areas of individual agencies,

--asking for specific information, and

--providing feedback to agencies about how their resource report information was used in making lease sale decisions.

SALE 48 RESOURCE REPORTS

The resource reports for Sale 48 were requested in the same time period as the resource reports we examined in our earlier review. The Sale 48 requests, however, appear to be more specific and better focused than the requests we examined in the New York and Alaska regions.

BLM solicited resource reports from 13 agencies and received responses from all but one agency. Table 3 lists several of the agencies solicited, the nature of the information requested from these agencies, and the essence of the response submitted to BLM.

In our opinion, the Sale 48 resource report requests informed the agencies of the need and importance of their resource information. Furthermore, in most cases, the requests were specifically tailored to each addressed agency's area of interest and stated specific concerns for each agency to comment on.

For example, in a request sent to the Bureau of Mines the importance and role of resource reports was stated in the following manner.

> "We are requesting information describing multiple uses of and valuable resources contained within the southern California area, the potential impacts of mineral operations upon resources, and use conflicts with potential oil and gas development. We intend to provide early consideration

Table 3

Resource Report Solicitations and Responses from Selected Agencies

Agency submitting report	Nature of request	Nature of response
USGS	-summary of geology and mineral resoures in area	-38 page report
	-assessment of favorable targets in area with estimates of oil and gas reserves	-limited date available on resource potential
	-potential environmental hazards	-limited data available on environmental and geological hazards
	-comments on capital, manpower and infrastructure available for exploration and development	
Environmental Protection Agency	-identification of potential conflicts along with possible solutions	-reemphasized concerns with: (1) deep water tracts (2) areas of biological significance (3) state coastal zone planning
		-recommended deletion of Santa Barbara Channel tracts from sale
Bureau of Mines	-need for hydrocarbons from Southern California OCS	-addressed all three requests fairly specifically
	-probable markets	
	-comments on capital, manpower, and infrastructure available for exploration and development	
Department of Defense (DOD)	-information on: (1) DOE waring areas, (2) submarine lanes, (3) ordinance dumping area, (4) shipping lanes, (5) aircraft operation zones (6) test sites (7) areas where oil and gas activity would affect undersea installations	-reiterated Sale 35 agreements and conflict areas identified in Sale 35
National Oceanic and Atmospheric Administration (NOAA)	-information on developed and undeveloped commercial fisheries, fish and marine mammal migratory routes that might be affected, general oceanographic and meteorological information, and State of California coastal zone management plans	-noted the already on-going contact between local NOAA agencies, and BLM
		-identified data available for use if needed
		-provided information used for Sale 35
Fish and Wildlife	-information on sport fishing; seabird population, wildlife refuges, and areas needing special consideration	-10-page report updating information supplied for Sale 35
National Aeronautics and Space Administration (NASA)	-conflicts between OCS and NASA activities, for example, fallout of spent equipment	-conflicts addressed in general terms
		-more specific information can be made available
Federal Power Commission	-information on the national energy supply and demand situation, the impact of Southern California resources on the situation, probable markets, and the availability of capital, manpower, and infrastructure to develop and transport OCS resources	-specific response provided based on previous Sale 35 data

of multiple use management data in order to insure orderly and timely development of OCS resources and to minimize environmental hazards. We, therefore, would appreciate any comments you wish to offer."

In another request letter to the National Oceanic and Atmospheric Administration (NOAA), the importance and role of resource reports was mentioned another way:

"* * *It is our intention to consider available multiple use data on the area in order to insure orderly and timely development of OCS resources as well as to minimize environmental hazards."

Both request letters mentioned above were also tailored to each agency's area of expertise. For example, BLM requested the Bureau of Mines to specifically comment on the following: (1) the need for hydrocarbons from the Southern California OCS; (2) the probable market for the hydrocarbons; (3) the availability of capital, manpower, and infrastructure to develop, transport, and process the resources; and (4) other relevant comments. In the request to NOAA, BLM requested data and comments on the area's developed and undeveloped commercial fisheries, environmental concerns, fish and marine mammal migratory routes, and on several other topics. NOAA was also asked to designate any areas considered to require special attention and the supporting rationale. NOAA's response included several types of comments. NOAA noted the already direct contact between BLM's regional office and NOAA's Office of Coastal Zone Management and National Marine Fisheries. NOAA also sent a copy of a letter discussing areas of special significance in Southern California which was originally used in OCS Sale 35 (Sale 48 encompasses the general area included in Sale 35). In addition, NOAA listed other information from its Environmental Data Service that could be made available to BLM if needed.

When an agency's area of expertise did not specifically relate to the proposed OCS geographical area, such as the Treasury Department, BLM sent a more general request.

For the most part, we have concluded that in Sale 48 the agencies were informed about the role and importance of their resource reports in each request letter, and the request letters were specifically tailored to individual agencies. BLM did not, however, provide any feedback to the agencies responding to resource report requests as to how their information was used in Sale 48. Our previous report recommended that BLM provide the agencies with feedback on how resource report information was used in a sale.

IMPACT OF RESOURCE REPORTS ON SALE DECISIONS

According to agency officials, the Sale 48 resource reports had no specific impact in defining the area to be considered in the call for nominations and no tracts were eliminated from the call area as a result of information provided through resource reports. Indications are that resource report information supplied in the previous Southern California OCS sale (Sale 35) most likely reduced the use and impact of information contained in the Sale 48 resource reports. According to agency officials, a significant amount of environmental and/or multiple-use information was already available to Sale 48 planners from previous sales. We noted that information supplied in Sale 35 resource reports was either included or referenced in several resource reports submitted for Sale 48.

POCS OFFICE'S VIEW OF RESOURCE REPORTS

Resource reports are generally not voluminous documents but rather are in the form of memorandums or letters to the Secretary of the Interior. POCS office officials told us this type of reporting is sufficient and a longer, more detailed report is not needed in the early stages of the sale process. Furthermore, they are not at that time concerned with deleting any tracts from the call area. Before any tracts are deleted, BLM will evaluate multiple-use and environmental concerns against industry interests and USGS resource estimates. Many agencies informed BLM in their Sale 48 resource reports that more information could be made available upon request.

POCS office officials told us they view the resource reports as serving two purposes:

--Resource report requests notify other interested agencies of a proposed sale.

--Resource reports either inform BLM of the potential multiple-use conflicts in a proposed sale area or provide updates on previously reported information.

We were told that the resource reports submitted for Sale 48 were adequate and met POCS office needs.

NO DIRECTIVES EXIST FOR RESOURCE REPORTS

GAO in its February 1979 report on resource reports recommended, among other things, that the Secretary of the Interior direct the Director, BLM, to require each OCS field office to tailor resource report requests letters to each agency, and request specific information. BLM headquarters officials said they hadn't issued any directives to the regions as a result of our recommendations.

CONCLUSION AND RECOMMENDATION

Apparently more thought and attention went into the solicitation and preparation of Sale 48 resource reports than what we witnessed in our prior review of these activities in two other OCS regions. Such inconsistencies point out the need for detailed departmental criteria covering the solicitation and preparation of these reports. And even though Sale 48 resource reports contained little more information that was already available to POCS office planners from prior OCS sales in Southern California, such reports, nevertheless, are still important ingredients in the leasing program. Thus, we again recommend that the Secretary of the Interior issue directives on the preparation of resource reports. Such directives should, as a minimum, address (1) the importance and value of the reports in the leasing process (2) information needs for initial sales in frontier areas and procedures for updating the information for follow-on sales, and (3) the need for providing feedback to agencies on the utility of their reports.

AGENCY COMMENTS AND OUR EVALUATION

DOI agreed with our findings but, apparently, interpreted our draft report to be overly critical of the usefulness of resource reports--DOI's interpretation apparently being based on our finding that the Sale 48 reports were of minimal value in the sale. (Appendix II, pages 46 and 49).

We believe DOI misinterpreted our position. In our report we stated that, even though the Sale 48 reports were of little value in planning for the sale, they nevertheless are important in the leasing program. We also recommended that, because of their importance, DOI issue directives on the preparation of these report--echoing a recommendation we had made in an earlier report.

DOI commented that it will update its instructions on the preparation of resource reports.

CHAPTER 4

WIDE DISPARITY BETWEEN USGS AND INDUSTRY VALUATION OF OIL AND GAS RESOURCES

USGS's final estimates of the resource potential of the 148 tracts selected for lease indicated that only about half (75) had definite oil and gas prospects. And of these, USGS believed only 10 had sufficient resources to warrant development from an economic standpoint. The remaining 73 tracts, according to USGS's evaluation, had no oil and/or gas potential. The oil industry apparently considered the tracts to have far more potential. Industry high bids for the tracts leased were 20 times higher than the values placed on them by USGS. Neither did industry agree with USGS on which tracts had oil and gas potential.

A series of internal managment problems affected USGS's efforts in developing resource estimates. Steps are being taken to correct these problems. It would be premature to say that industry estimates of the oil and gas potential for the sale area are right--industry could be overly optimistic. Yet, our past reports on OCS sales have repeatedly drawn attention to deficiencies in USGS's ability to adequately assess the oil and gas potential of the OCS. Such estimates are important to the Government in assuring a fair market value for OCS resources and in planning generally for future OCS development. USGS's performance in Sale 48 raises further doubt on its ability to make adequate pre-sale evaluations of OCS resources.

USGS'S ESTIMATES REVISED DOWNWARD

Estimates of the oil and gas potential of the tracts offered in Sale 48 were reduced significantly by USGS in the months just prior to the sale. In May 1977 USGS estimated that the 217 tracts tentatively selected for the sale contained approximately 715 million barrels of oil and about 860 billion cubic feet (Bcf) of gas. These were the estimates used by BLM in preparing the environmental impact statement for the sale. In February 1979, almost 2 years later and just 5 months before the sale, USGS revised these estimates downward. The oil potential estimate was revised to about 208.5 million barrels or to about 29 percent of the original estimate. The gas estimate was also reduced--

from 860 to 819.4 Bcf--but not nearly as significantly as the oil estimate. The revised estimates were used by DOI in preparing the Secretarial Issue Document for the sale.

USGS officials told us the estimates were reduced in view of revised interpretations of geological and geophysical data in the sale area and as a result of poor showings from Sale 35 tract drillings in the Tanner Cortes area. We were also told that although the risks associated with finding oil and gas on the 217 tracts were factored into the May 1977 and February 1979 estimates, the estimates did not consider the economic aspects of developing the potential resources, i.e., the value of the resources contained compared to the costs to recover the resources.

The Secretary of the Interior's decision to eliminate 69 of the 217 tracts proposed for lease resulted in further revisions of the resource estimates. Based on this and other data the oil estimates were reduced by half to 104 million barrels, and the gas potential was reduced by about 40 percent to 498 Bcf. These estimates, in addition to considering the reduction in tracts, were the first estimates in which the economic aspects of developing the oil and gas in the sale area were considered.

The final estimates of the oil and gas potential on the 148 tracts selected for lease were generated in June 1979 through the use of sophisticated computer techniques. The oil estimates were reduced by about 10 percent to 93 million barrels, and the gas estimate was revised significantly to 190.1 Bcf--a decrease of about 62 percent.

USGS's analysis of the 148 tracts offered in the sale shows that only about half the tracts (75) had definite oil and gas prospects. And of these 75 tracts, only 10 were believed to have sufficient resources to warrant development from an economic standpoint. The remaining 73 tracts offered in the sale, according to USGS's evaluation, had no oil and/or gas potential.

INDUSTRY'S ESTIMATES HIGHER

As will be discussed in the alternative bidding section of this report, the oil industry apparently considered the tracts offered in the sale to have far more potential than USGS. In fact, industry high bids for the tracts leased were 20 times higher than the values placed on the tracts by USGS. Furthermore, industry did not agree with USGS on which tracts had oil and gas potential. An analysis of industry bids shows that

--approximately 38 percent of the tracts viewed by USGS as having no potential received bids,

--34 percent of the tracts viewed by USGS as having prospects--but not being economical to develop--also received bids, and

--only 5 of the 10 tracts viewed by USGS as both having prospects and being economical to develop received bids.

USGS Evaluation of Tract Potential in Comparison to Industry Bids

USGS evaluation		Tracts receiving industry bids
Minimal value tracts		
-Tracts having no prospect	73	28 (38%)
-Tracts having prospect but not economical to develop	65	22 (34%)
Tracts having value	10	5 (50%)
Total	148	55

Moreover USGS's two highest valued tracts received no bids and its third highest valued tract received only one bid. On the other hand, of the 10 tracts receiving the highest bids from industry, only 2 were considered by USGS to have economically recoverable resources. The remaining 8 high bid tracts were either viewed as having no resources (3 tracts) or having insufficient resources to warrant development (5 tracts).

USGS MANAGEMENT PROBLEMS

Concerned with the disparity between USGS's and industry's perception of the value of the Sale 48 tracts, Headquarters USGS formed a task force to review its actions in assessing the oil and gas potential and determining the associated value of the tracts offered in the sale. The task force completed its report on October 30, 1979, finding that a series of organizational problems had hindered USGS's district office in its efforts to evaluate the Sale 48 tracts. According to the report, adequate data was available to evaluate the tracts; however (1) the lack of experienced personnel at the regional level, (2) the absence of a clear organizational framework for monitoring and carrying out pre-sale evaluation activities, (3) the requirement to prepare for another sale in the Central California OCS at the same time Sale 48 activities were being accomplished, and (4) problems associated with using and understanding USGS's computer capabilities in evaluating tracts resulted in Sale 48 activities not being accomplished in an adequate and timely matter. These problems became known to USGS in February 1979, and from that time on, according to the task force report, Sale 48 activities were conducted on a crash basis.

The task force report recommended that certain actions be taken to improve USGS's ability to conduct pre-sale evaluations in the Pacific OCS. In response to these recommendations, USGS plans to restructure the organizational relationship of its Southern California field office with the Washington office, appoint a new manager and a senior experienced geophysicist to the field office, and institute a new training program for its inexperienced technical personnel. We did not evaluate USGS's programs in implementing these recommendations nor did we assess the appropriateness of the actions in relation to the problems identified in the task force's report. Therefore, we cannot comment on the impact USGS's actions will have in improving the Southern California field office's ability to conduct pre-sale evaluations.

IMPACT OF DISPARITY

In our opinion, the oil and gas potential in the Sale 48 area remains an unanswered question. USGS admittedly did not adequately evaluate the area's resource potential. But, on the other hand, industry bidding may not always be a reliable indicator of the oil and gas potential in a sale area. Industry may be overly optimistic of the resource potential in a sale area and, in some cases, bidding may be influenced by factors other than resource data. For example, a company may bid higher for a tract which is located adjacent to a tract it already has under lease than it would if it did not already own the adjoining tract.

We did not discuss the Sale 48 bidding with the companies participating in the sale; therefore, we cannot comment on the reasonableness of industry's analysis of the oil and gas potential or on the motivations affecting the bidding on specific tracts. However, regardless of industry's position, without a sound, reliable evaluation by USGS, the oil and gas potential in the Sale 48 area remains uncertain. And without this information, the Government is in a weak position to assess (1) whether it will receive fair market value for any future resources that may be obtained from the leased tracts, (2) the impact the Southern California OCS may have on the Nation's future oil and gas needs, and (3) the appropriateness of continuing OCS development in Southern California.

CONCLUSIONS AND RECOMMENDATION

We have issued numerous reports over the past years commenting on USGS's capabilities to develop adequate estimates of the oil and gas potential on the OCS. These reports have cast doubts on the credibility of USGS estimates, basically from the standpoint that USGS has had insufficient data to make adequate evaluations. Our Georgia Embayment report 1/ summarizes our past positions on this issue.

Sale 48 reflects a different problem, however. Apparently a considerable amount of data was available to evaluate the tracts in the sale area but USGS, because of management problems, did not adequately evaluate the data in time for the sale. USGS's performance in Sale 48 casts further doubt on its ability to adequately evalute OCS resources.

1/"Georgia Embayment--Illustrating Again The Need For More Data Before Selecting and Leasing Outer Continental Shelf Lands," EMD-79-22, Mar. 19, 1979, pp. 1-2.

We recommend that the Secretary of the Interior closely monitor the efforts to alleviate the management problems associated with developing resource estimates identified in Sale 48--and also determine if these same problems exist in other USGS offices.

AGENCY COMMENTS AND OUR EVALUATION

DOI contends that our report assumes that industry's estimates of the oil and gas potential in the sale area are correct. DOI also argues that its ability to make presale evaluations should not be questioned merely because its evaluations do not agree with those of industry--pointing out that drilling in the Gulf of Mexico indicates that its evaluations in the past tend to be accurate. (Appendix II, pages 46 and 50). DOI also points out that at different times in the decisionmaking process (i.e. 5-year leasing schedule), DOI and industry estimates of resource potential in particular OCS areas are similar.

Again, we believe DOI has misinterpreted our position. Our draft report clearly stated that we did not attempt to assess industry's evaluations of the oil and gas potential in the sale area and that we could not comment on the reasonableness of their estimates. Moreover, we stated it would be premature to say that industry's estimates of the oil and gas potential are correct. Our comments on DOI's ability to make adequate pre-sale estimates of oil and gas potential is based on DOI performance in Sale 48 and our past work in the OCS area--not solely because DOI and industry differ or agree on the resource potential in given areas at any point in the OCS decisionmaking process.

DOI further contends that we did not give adequate coverage to the actions that have been taken by the Department to correct the deficiences identified by the Sale 48 task force. (Appendix II pages 46, 50, and 55.) In commenting on our report DOI stated that

> * * * an Acting Manager for the Pacific Region was appointed on December 1, 1979. His purpose is to establish the new Pacific Region as an operational Region and work to begin to implement the Conservation Division's reorganization in Los Angeles. In addition, his top priority is to establish a supervisory climate which will encourage open communications, identify problems

in a timely manner, and ensure objectives concerning mission goals are met. In addition, a senior geophysicist with 40 years of petroleum exploration experience was temporarily assigned to the Los Angeles Office to assist the expertise of the geophysical personnel, to institute a new training program for inexperienced personnel, and to apply practical on-the-job training for each geophysicist.

Our draft report noted these planned changes although not in the detail shown above. As also stated in our draft, we did not evaluate DOI's program to implement changes, therefore, we cannot comment on the impact the changes will have on DOI's future performance in preparing pre-sale evaluations.

CHAPTER 5

OBJECTIVES OF ALTERNATIVE BIDDING SYSTEM NOT ACHIEVED

The OCS Lands Act of 1953 (P.L. 83-212) provides that OCS tracts be awarded competitively using either cash bonus or royalty rate bidding systems. Under the cash bonus bidding system, the Government predetermines or fixes a royalty rate prior to the sale, and companies submit cash bids on how much they are willing to pay in advance to obtain a lease. Under the royalty bidding arrangement, the Government predetermines the cash bonus that must be paid for each tract, and companies bid on the amount of royalty they are willing to pay the Government on the value of oil and gas produced--should production occur. For the most part, bonus bidding has been the favored practice for leasing OCS tracts in the past.

For a variety of reasons, the Congress mandated in the OCS Lands Act Amendments of 1978 that alternative bidding systems--i.e., alternatives to bonus bidding--be developed and used for at least 20 percent of the OCS areas offered for lease during the 5-year period between September 18, 1978, and September 18, 1983 (section 205 of P.L. 95-372). Two objectives in offering alternative bidding systems are (1) to increase competition and (2) to increase small company participation in OCS development.

Of the 148 tracts offered in Sale 48, one-half (74 tracts) were offered under an alternative bidding arrangement to comply with the provisions of the OCS Lands Act Amendments, and the other half offered under the traditional bonus bidding arrangement. Our review of the sale results indicates that the objectives hoped for under the alternative bidding approach were not fully achieved in Sale 48.

THE ALTERNATIVE BIDDING SYSTEM SELECTED FOR SALE 48

The alternative bidding system used in Sale 48--termed bonus bidding with a fixed sliding scale royalty--is basically a variation of the bonus bidding fixed royalty arrangement used in past OCS sales. The system provides for bonus bid competition as in the bonus bid fixed royalty approach; however, it departs from past practices by prescribing a sliding scale approach for determining royalty payments. The sliding scale alternative, as applied in Sale 48, provides for a 16-2/3 percent royalty to be paid on the value of oil and gas produced until the quarterly value of production (adjusted to account for the effects of inflation) exceeds $13,236,229. Once this value is exceeded, the sliding scale royalty scheme is triggered with the lessee paying a progressively higher royalty rate as the value of production increases, until the adjusted quarterly value of production reaches $1,662,854,082. At this production level, the royalty rate tops out at 65 percent, i.e., should the lessee's quarterly production exceed this value, the royalty rate would remain at 65 percent. It should be noted that although the adjusted value of production determines when the sliding scale is to be used, the royalty due to the U.S. Government is calculated by multiplying the unadjusted or actual value of production by the appropriate royalty rate. In contrast, the tracts offered under the traditional bidding concept provide for bonus bidding and a fixed 16-2/3 percent royalty rate regardless of the value of production.

According to DOE, the only other alternative bidding system authorized by the OCS Lands Act Amendments of 1978 with which the Government had had prior experience was the royalty bidding system. DOE had no regulations or procedures for the other four alternatives authorized in the 1978 legislation. A DOE official told us that the sliding scale alternative was chosen for Sale 48 over the royalty bidding system because the latter system is considered to result in speculative bidding. DOI, in commenting on this report quoted a Secretarial statement to the Congress stating that the sliding scale alternative was selected primarily because "it would tend to reduce the likelihood of production losses that could result if royalty rates were set by other means, such as royalty bidding..."

ALLOCATION OF TRACTS TO BIDDING ARRANGEMENT

DOI and DOE officials told us that all attempts were made to offer equally attractive tracts under both bidding systems. No attempt was made to make the sliding scale royalty tracts either more attractive or less attractive than the tracts offered under the fixed royalty arrangement. In reviewing the allocation of tracts to specific bidding arrangements we observed that tracts offered under the sliding scale royalty alternative were geographically dispersed throughout the entire sale area. The dispersion of tracts to specific sale areas is shown below.

Sale area	Total	Sliding scale royalty	Fixed royalty
Santa Barbara Channel	82	43	39
Santa Rosa Island	6	6	0
San Pedro Bay	12	12	0
Tanner Cortes Banks	46	11	35
Santa Barbara Island	2	2	0
Total	148	74	74

Our review of USGS estimates showed that the tracts offered under the sliding scale royalty arrangement had greater oil and gas potential than the tracts offered under the fixed royalty arrangement. As was discussed in the previous section of this report, only 10 of the 148 tracts offered in the sale were viewed by USGS as containing economically recoverable resources--5 of these were offered under the sliding scale royalty arrangement and five under the fixed royalty system. However, the 5 tracts offered under the sliding scale royalty arrangement were valued at approximately $24.5 million whereas the fixed royalty tracts were valued at about $11.8 million--less than half the value given the sliding scale royalty tracts. The two highest valued tracts were offered under the sliding scale royalty arrangement.

BIDDING RESULTS

Bids were received on 55 of the 148 tracts offered in the sale. The bidding results indicate that competition in Sale 48 was generally less than what DOI has experienced in previous sales. Comparing the results of Sale 48 with the overall results (i.e., averages) from 12 prior sales (see table 4) shows that (1) a lower percentage of tracts offered in the sale received bids than in previous sales, (2) the average number of bids per tract was less than prior experiences, and (3) a higher percentage of tracts received only one bid. By many standards this would be deemed inadequate competition. However, we recognize that resource potential and different costs prevail in different OCS areas, and that these factors need to be considered before a definite judgement is possible.

Table 4

Selected Data On OCS Lease Sales

	Calif. Sale 35	Gulf of Mexico Sale 41	Northern Gulf of Alaska Sale 39	Atlantic Sale 40	Gulf of Mexico Sale 44	Gulf of Mexico Sale 47	Alaska Cook Inlet	Georgia Embayment Sale 43	Gulf of Mexico Sale 45	Gulf of Mexico Sale 65	Gulf of Mexico Sale 51	Atlantic Sale 49	Calif. Sale 48	Totals
Tracts offered	231	132	189	154	61	223	135	224	145	89	128	109	148	1968
Tracts receiving bids	70	41	81	101	48	152	91	57	101	35	88	44	55	964
Percent tracts receiving bids	30%	31%	43%	66%	79%	68%	67%	25%	70%	39%	69%	40%	37%	49%
Average bids per tract	2.37	1.98	3.01	4.1	2.44	2.79	2.6	1.7	2.8	1.77	3.27	1.68	2.03	2.62
Tracts receiving only one bid	40	24	35	28	18	62	34	31	36	20	23	24	31	406
Percent tracts receiving only one bid	57%	59%	43%	28%	36%	41%	37%	54%	36%	57%	26%	55%	56%	42%
Date of lease sale	12/75	2/76	4/76	8/76	11/76	6/77	10/77	3/78	4/78	10/78	12/78	2/79	6/79	

Twenty-nine of the 55 tracts (53 percent) receiving bids were tracts offered under the sliding scale royalty arrangement--the remaining 26 tracts were offered under the fixed royalty arrangement. Only 5 of the 10 tracts estimated by USGS to have recoverable resources received bids. Two of these were sliding scale tracts and three were offered under the fixed royalty system. A comparison of the bidding on the sliding scale and fixed royalty tracts is shown below.

Comparison of Bidding Results

	Sliding scale royalty	Fixed royalty	Total
Tracts offered	74	74	148
Tracts receiving bids	29	26	55
Total bids	45	67	112
Average bids per tract	1.55	2.83	2.03
Tracts receiving only one bid	19	12	31
Tracts receiving three or more bids	4	11	15
Total high bids	\$219.5 million	\$354.4 million	\$573.9 million
Average high bid per tract	\$7.5 million	\$13.6 million	\$10.4 million

Our analysis of the Sale 48 bidding between sliding scale and fixed royalty tracts indicates that contrary to expectations and the stated purposes of the Congress in prescribing alternative bidding systems

--competition was greater for the fixed royalty tracts than for the sliding scale royalty tracts, and

--smaller companies tended to favor the fixed royalty tracts.

In addition, we found that significantly higher bids were received on the fixed royalty tracts than on the sliding scale tracts and that the level of production required to trigger increased royalties on sliding scale tracts--at least based on USGS's estimates--may be set too high to ultimately recover revenues not realized through the traditional bonuses approach.

More competition on fixed royalty tracts

The higher degree of competition on the fixed royalty tracts is evidenced by the fact that only 45 bids were received on the 29 sliding scale royalty tracts--1.55 bids per tract--whereas 67 bids were received on the 26 fixed royalty tracts--2.83 bids per tract. Although 2.83 bids per tract may be only marginally acceptable in terms of demonstrating competition, it does show that, on the average, the fixed royalty tracts received at least one more bid than the sliding scale royalty tracts. Also, it should be noted that 11 of the 26 fixed royalty tracts (42 percent) received 3 or more bids while only 4 of the 29 sliding scale royalty tracts (14 percent) received 3 bids or more.

Smaller companies favored fixed royalty tracts

The bidding results also show that contrary to what the Congress had in mind, the smaller oil and gas companies favored the fixed royalty tracts over the sliding scale tracts in Sale 48. For purposes of analysis, we grouped the 27 firms bidding in the sale into the following two groups shown on page 39. 1/

1/Criteria for these groupings was solicited from the Departments of Energy and the Interior as well as the American Petroleum Institute. Apparently no clear-cut, authoritative criteria exist for separating oil and gas companies along the above lines. Our grouping is based on Fortunes 500 listing of the 500 largest industrials in 1978.

Larger companies	Smaller companies
Atlantic Richfield Company	Allied Chemical Corp.
Chevron U.S.A., Inc.	American Petrofina Company
Continental Oil Company	Casex Company
Exxon	Champlin Petroluem Company
Getty Oil Company	Freeport Petroleum Company
Marathon Oil Company	Hamilton Brothers Oil Company
Mobil Oil Corporation	ICI Delaware, Inc.
Occidental Petroleum, Inc.	Koch Industries, Inc.
Phillips Petroleum Company	Ogle Petroleum
Shell Oil Company	Oxoco
Sun Oil Company, Delaware	Pennzoil Oil and Gas, Inc.
Texaco, Inc.	Santa Fe Energy Company
Union Oil Company of California	Texas Eastern Exploration Company
	Weeks Petroleum Corporation

In our analysis, company interest was determined by examining the bidding of each company to determine the number of bids submitted, the type tract (fixed or sliding scale royalty) each company competed for, and how they competed (single company bid or joint bid with other companies). The number of bids counted in this analysis reflects company interest and bid participation by individual companies and should not be confused with the total number of bids--112--received on the 55 tracts offered in the sale. For example, three companies may join together and submit a joint bid for a particular tract. For our analysis this would be viewed as three bids rather than one bid, i.e., three individual companies having a definite interest in a particular tract although only one bid is actually submitted to BLM.

Using this framework for analysis, we found that the larger oil and gas companies collectively bid 149 times and the smaller firms collectively bid 118 times in Sale 48. Of the 149 bids from the larger companies, 60 percent were for fixed royalty tracts and 40 percent were for sliding scale royalty tracts. The largest oil company--Exxon--bid 20 times on sliding scale tracts and only 7 times on the fixed royalty tracts. By comparison, of the 118 bids received from smaller firms, 80 percent were for fixed royalty tracts and only 20 percent were for sliding scale royalty tracts.

In analyzing single company versus joint company bidding, we noted that only about 18 percent of the total bids offered in the sale were one company bids--and almost all these bids (47 of 49) were from the larger companies. More single company bids were offered on the sliding scale royalty tracts (28) than on the fixed royalty tracts (21). And all the single company bids offered on the sliding scale royalty tracts were rendered by the larger oil and gas companies. No single company bids were received from the smaller companies on the sliding scale royalty tracts. The smaller firms offered only two single company bids, both of which were offered for fixed royalty tracts.

REVENUE TRADEOFFS BETWEEN FIXED AND SLIDING SCALE ROYALTY SYSTEMS

As noted earlier, in order to trigger a sliding scale royalty rate higher than the fixed royalty of 16-2/3 percent, in excess of $13 million of hydrocarbons would have to be produced in a single quarter of the year. Discussions with DOE and DOI officials indicate that this level of production might not be achieved for the sliding scale tracts in OCS Sale 48 and, if so, the royalty rate on these tracts may never exceed the fixed royalty rate of 16-2/3 percent.

In OCS sales the Government receives fair market value on leased tracts through bonuses and royalty payments. In theory, higher bonuses are received when the royalty rates are lower and, conversely, lower bonuses are received when the royalty rates are increased. Under this theory, if lower bonuses are received on the Sale 48 sliding scale royalty tracts, and if the higher sliding scale royalty rates were never triggered because of insufficient production, then a loss of revenue could occur as opposed to leasing these tracts under a cash bonus fixed royalty arrangement.

We did not evaluate the rationale and methodology in establishing the parameters for the sliding scale royalty system used in Sale 48, and, therefore, are in no position to comment on the various combinations of production rates and oil and gas prices that would be required to activate higher sliding scale royalties. However, we believe that the theoretically possible loss of revenue on the Sale 48 sliding scale royalty tracts is a concern that needs further study.

SLIDING SCALE BIDDING SYSTEM IMPACT ON SALE

DOE and DOI officials stated that they had not compared the sliding scale royalty and fixed royalty bidding approach results for Sale 48 in any great detail, however, they did not believe the sliding scale alternative had a noticable impact on the sale. A POCS official stated that he saw no increased participation in the sale because of the sliding scale alternative.

According to DOI officials, the sliding scale royalty system was first used in 1977 and since has been used in nine lease sales. As with Sale 48, DOE officials told us they have not studied the impact the sliding scale alternative has had on previous lease sales in any great detail. Moreover, they indicated that the impact on revenues to the U.S. Government is speculative at this point in time because there has been no production from sliding scale royalty tracts to date. Until there is production, the assumptions upon which the sliding scale formula are based cannot be evaluated.

We have not attempted to make an overall review of the impact the sliding scale royalty arrangement has had on OCS leasing, however, we did comment on the apparent success of the sliding scale concept in our Georgia Embayment report. 1/ In that report, we noted that 40 of the 57 tracts bid on in the sale were sliding scale royalty tracts and that the average number of bidders was greater on the sliding scale tracts than on the cash bonus tracts. We concluded that, from the

1/"Georgia Embayment--Illustrating Again The Need For More Data Before Selecting and Leasing Outer Continental Shelf Lands," EMD-79-22, March 1979, p. 12-13.

standpoint of industry participation, the sliding scale royalty alternative seemed to provide favorable results. Yet, as shown above, the results of Sale 48 appear to run counter to the results of the Georgia Embayment sale. Thus, the impact of using this bidding system remains uncertain--warranting further study.

CONCLUSIONS AND RECOMMENDATION

Our review of the Sale 48 bidding results showed that at least two objectives sought by the Congress in adopting alternative bidding systems--increased competition and more participation by small companies--were not achieved through the offering of tracts under the sliding scale royalty arrangement. To the contrary, our analysis shows that there was less competition and less small company interest in the tracts offered under the alternative bidding arrangement than the tracts offered under the traditional leasing approach.

We believe it is important that DOE thoroughly evaluate the impact the sliding scale royalty alternative bidding system is having on OCS leasing and development. These evaluations are necessary early-on in order to assess the progress being made in meeting the leasing objectives of the OCS Lands Act Amendments of 1978 including the receipt of fair market value. We recommend that the Secretary of Energy, in conjunction with the Secretary of the Interior, evaluate the impact the sliding scale royalty bidding system has had on OCS leasing--including the impact this alternative bidding system has had on the Congressional goals of increasing leasing competition and small company participation in lease sales--to determine the appropriateness of continuing with this bidding system in future sales.

AGENCY COMMENTS AND OUR EVALUATION

The Department of Energy commented orally on our report, generally agreeing with our conclusions and recommendations on the impact of the sliding scale bidding system on Sale 48. They emphasized, however, that the alternative bidding concept authorized by the OCS Lands Act Amendments is in a testing phase, i.e., the Congress authorized the use of alternative bidding systems for only a 5-year period to see how well they would work. They also said that the Department was in the process of contracting for a model to be used in evaluating the impact of alternative bidding systems. The model is expected to be completed in about a year. Additionally, DOE commented that the skyrocketing price of oil and gas could very easily affect the economic aspects of developing oil and gas on the Sale 48 tracts. Hence the attractiveness of these tracts should not be discounted.

DOI, while agreeing with our recommendations that the impact of the sliding scale bidding system warrants additional study, disagreed at length that the system would create a loss of revenue in Sale 48. We agree that there is no evidence now to conclusively determine whether or not revenue losses have or might occur, and we did not intend to imply such a situation. We have rewritten the section of our report discussing this issue to be as responsive as possible to DOI's points.

We continue to believe, however, that bonuses will generally be lower when coupled with a sliding scale royalty than when coupled with a fixed royalty arrangement. Unless the lower bonus is later offset by the implementation of higher royalty rates under the sliding scale royalty system, a loss of revenue could result. Therefore, we believe the likelihood of this situation occurring, and ways to minimize or avoid it, should be carefully evaluated. We have recommended a study which we believe would evaluate this issue as well as other important issues such as competition and rate of production.

DOI also expressed concern with our comparison of the overall bidding results of Sale 48 with 12 prior OCS sales. Our analysis indicated that competition was generally less in Sale 48 than in other sales. DOI maintains that the results of Sale 48 are not directly comparable with the results of other sales for a variety of reasons and that competition was adequate in Sale 48 to provide the Government a fair return. We recognize that no two OCS areas are exactly comparable because of differing resource potential and costs. Nevertheless, we believe the bidding performance in this sale was sufficiently low to justify raising the question of "adequate" competition.

Also, in commenting on a draft of this report, DOI advised us that they are nearing completion of a statistical analysis of all sliding scale royalty tests. We did not evaluate the study and therefore cannot comment on its comprehensiveness. Hopefully this study will provide the type of information needed to make future judgements on the viability of the sliding scale bidding system.

APPENDIX I

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

September 4, 1979

The Honorable Elmer B. Staats
Comptroller General of the
United States
General Accounting Office
441 G. St., N.W.
Washington, D.C. 20548

Dear Mr. Staats:

The Department of Interior recently leased a number of tracts off the coast of California for the development of oil and natural gas. The lease sale, OCS Sale #48, included an initial offering of 148 tracts and resulted in 55 tracts receiving bids. The sale included the use of both fixed royalty bidding and sliding scale royalty bidding.

There are certain questions concerning OCS Sale #48 which we would like you to review. These questions include (1) how well the Interior Department's Outer Continental Shelf Environmental Studies Program (OCSESP) worked in answering information needs with regards to Sale #48 tracts and how the OCSESP research results affected the Secretarial decision-making process for the sale; (2) what research and other data were available and used to select tracts for lease, how tracts were rated, and what impact did these aspects have on competition; and (3) why the sliding scale royalty bidding system was used instead of some other alternative bidding system.

We would like to be briefed on the results of your analysis by late October, 1979, at the latest, with a letter or report following. This will depend on what seems most justified based on your review. Should your staff have any questions on this request, they should contact Carla Kish (225-4295) or Roy Jones (225-8515) of the Committee staff.

 APPENDIX I

Thank you for your attention to this matter.

Sincerely,

MORRIS K. UDALL
Chairman

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 2 ? 1980

Mr. J. Dexter Peach
Director, Energy & Minerals Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

This is in response to your March 6, 1980, letter to the Secretary requesting our comments on the GAO draft report, "Observations on the Southern California Outer Continental Shelf Oil and Gas Lease Sale 48." While we agree with the conclusions and recommendations in two major areas of the draft report, we have serious problems with the discussion of use of the sliding scale royalty system of bidding.

Specifically, we agree with GAO's conclusion that recent steps to refocus the environmental studies program to address data needs for specific OCS decisions should improve the overall effectiveness of the studies program. We question the GAO assessment of the application and usefulness of the 17 studies in the southern California program and maintain that data from several of the studies were useful in documents used by the Secretary and others in developing the sale.

We also agree with the report's description of the general utility and quality of resource reports received for sale 48 and the efforts of the Bureau of Land Management (BLM) to improve the process. However, we do not think that the fact that no additional significant information was uncovered relative to sale 48 (because the existing data base for the area was relatively good) should reflect on the usefulness of the resource report concept in general. BLM will update instructions to its OCS offices to accommodate the GAO concerns.

With regard to the disparity between government and industry on oil and gas potential, the draft report briefly mentions that USGS formed a task force to examine the sale 48 resource estimate and that USGS is reported to be taking actions to remedy problems identified by the task force. We believe the GAO report should provide more details on the actions which have been taken by the Department in response to the task force report. In addition, while there was wide disparity between USGS and industry estimates in sale 48, industry's ranking of Santa Barbara and southern California was comparatively similar to that of the GS in terms of resource potential for input to the proposed 5-year OCS Leasing Program.

The conclusions and recommendations concerning use of sliding scale bidding systems cannot be supported. GAO has repeatedly criticized the Department's use of cash bonus bidding. The government cannot use a bidding system which relies on contingency payments (e.g. royalties, profit share) to capture fair market value and not expect to lose revenues compared to a cash bonus bidding system in those cases where bidders' resource expectations turn out to be too high. If the government is to share in the risk in order to improve competition, it must accept the downside risks as well.

In addition, the conclusions reached by GAO appear to be based on a statistically untested hypothesis without a consistent theoretical base. GAO contends that it is improbable that any sliding scale tract will generate royalties greater than 16-2/3 percent. Therefore, it should assume that it is unlikely that this system produced any bidding effect. We cannot understand how GAO could maintain that less competition and less bonus money was produced even though the royalty rate was identical. Somehow, it is assumed that if the sliding scale tracts were alternatively offered at 16-2/3 percent royalty, the Government would have received more royalty revenue.

To determine whether the sliding scale has had any effect on bid levels, the GAO must first determine whether firms lowered their bid amounts from levels which would have been offered under a fixed one-sixth royalty bidding system. The same can be said about the effect on the level of competition. The GAO must first determine whether more firms bid than would have bid under the traditional fixed royalty system.

The GAO analysis does not allow any conclusions to be made as to whether firm expectations and bid behavior were affected by the use of the sliding scale royalty bidding system. It is premature to attribute the finding of a loss of bonus revenue (the lowering of front-end requirements) and a decrease in the number of bids (competition) to the use of the sliding scale royalty system.

We agree with GAO's conclusion that the sliding scale royalty system warrants further study. This bidding system is still considered experimental and will be so for the next couple of years. With respect to the recommendation that DOE, in conjunction with DOI, evaluate the impact of the sliding scale royalty system on OCS leasing, we are near completion of a study done by Resource Planning Associates (RPA) which provides a careful statistical analysis of all sliding scale royalty tests.

More detailed responses addressing the major components of the draft report are enclosed. Editorial comments on the report, as well as comments related to specific data in the Appendix, are also enclosed.

Thank you for the opportunity to comment on this report. We would be happy to meet with you to discuss our comments, should you find this helpful.

Sincerely,

Acting Assistant Secretary for
Policy, Budget and Administration

Enclosures

SALE 48 BASICALLY ANOTHER SANTA BARBARA CHANNEL SALE

GAO states in the second paragraph (page 2) that industry indicated no interest in the remaining 1,430 tracts of the call area. This is not necessarily correct. Industry was only concentrating on what appeared to them to be the prime acreage.

VALUE OF ENVIRONMENTAL STUDIES DIFFICULT TO DETERMINE

The GAO report presents a fairly accurate overview of the evolution of the environmental studies program. They have described the late 1978 redirection of the program toward studies tied to the management needs and away from "baseline" studies. The list of 17 studies and funding levels for the southern California program appears in order. However, the BLM questions the GAO assessment of the application and usefulness of those 17 studies. They state that three had clearly identifiable impact resulting in tract deletions or lease stipulations: the benthic study, intertidal study and marine mammal and seabird study. We maintain that other studies as well influenced decisionmaking for sale 48. These include the literature survey, the archaeological literature survey, the reconnaissance survey of Tanner and Cortex Banks and the geohazards study. These and others increased the base of information available for use in documents used by the Secretary and others in developing the sale. For example, the archaeological literature survey was used in determining the applicability of the cultural resource stipulation and the air quality modeling effort provided information for use in the sale process and in post-sale activities as well. We agree that the redesigned studies program should make easier the linking of environmental information and the decision process.

RESOURCE REPORTS OF LIMITED VALUE

The report adequately describes the general utility and quality of resource reports received for sale 48 and the efforts of the BLM to improve the process. It appears overly critical, however, when it states that no tracts were deleted as a result of the resource report information. As is mentioned by the GAO, the existing data base for the area was relatively good as a result of process for OCS sale 35 which preceded sale 48. The fact that no additional significant information was uncovered should not reflect on the usefulness of the resource report concept in general.

Certainly, in areas where leasing has not occurred or where the data base is sparse, we would expect resource report replies to provide critical information. The GAO recommends that directives be issued concerning preparation of resource reports addressing the importance of the reports, the information needs and updating procedures, and a feedback system for notifying other Federal agencies of the utility of their reports. The BLM will update instructions to its OCS offices to accommodate the GAO concerns.

WIDE DISPARITY BETWEEN GOVERNMENT AND INDUSTRY ON OIL AND GAS POTENTIAL

In the discussion on the wide disparity between the USGS and industry oil and gas estimates, GAO made an assumption without any basis that industry's estimates are correct, then questions the ability of USGS to make adequate presale estimates. Differences between USGS and industry estimates do not necessarily relate to USGS's ability to make adequate presale evaluations of OCS oil and gas resources. Estimating oil and gas resources is done using established, widely accepted, geological and geophysical mapping principles and techniques. To prove these estimates are right or wrong, enough exploratory drilling will have to be done.

While there was wide disparity between GS and industry estimates in sale 48, industry ranked Santa Barbara and southern California comparatively similar to the Geological Survey in terms of resource potential for input to the proposed 5-Year OCS Leasing Program.

GAO states that industry apparently considered the tracts in sale 48 to have far more potential than the GS estimated. Just because industry exposes a fairly large amount of money at a sale does not indicate that its interpretation and evaluation of the tracts is correct. Industry quite possibly was concerned with competition and felt the need to expose a sufficient amount of money to assure successful bids.

On the adequacy of GS presale evaluations, drilling in areas such as the Gulf of Mexico indicates that GS presale evaluations tend to be accurate. More details and analysis should be provided of the findings of the OCS lease sale 48 task force report and the actions which have already been taken by the Department. The GAO draft report only briefly references the task force report.

SLIDING SCALE ROYALTY BIDDING DID NOT ACHIEVE DESIRED RESULTS

GAO states that sliding scale was selected for this sale because it results in less speculative bidding than the other alternative -- royalty bidding. This was not the reason for choosing this system. In the Secretary's notice to Congress, dated May 22, 1979, the DOI explained that sliding scale royalty was selected primarily because,""it would tend to reduce the likelihood of production losses that could result if royalty rates were set by other means, such as royalty bidding . . ." GAO cites a DOE source as indicating the sliding scale system was first used in 1978 and since has been used in several lease sales. In fact, sliding scale royalty was first used in March 1977, and has since been used in nine OCS lease sales.

GAO also comments that they did not evaluate DOE's rationale and methodology in establishing the parameters for the sliding scale royalty system. We would point out that it is DOI's responsibility, in coordination with DOE, to set the parameters of the sliding scale royalty bidding system.

With regard to the GAO analysis of the sliding scale royalty bidding system used in OCS lease sale 48, the conclusions reached by GAO appear to be based on statistically untested hypothesis without a consistent theoretical base. GAO contends that it is improbable that any sliding scale tract will generate royalties greater than 16-2/3 percent. Therefore, they should assume it is unlikely that this system produced any bidding effect. We cannot understand how GAO could maintain that less competition and less bonus money was produced even though the royalty rate was identical. Somehow, it is assumed that if the sliding scale tracts were alternatively offered at 16-2/3 percent royalty, the Government would have received more total revenue.

To determine whether the sliding scale has had any effect on bid levels, the GAO must first determine whether firms lowered their bid amounts from levels which would have been offered under a fixed one-sixth royalty bidding sytem. The same can be said about the effect on the level of competition. The GAO must first determine whether more firms bid than would have bid under the traditional fixed royalty system.

It is important to note that bidding behavior is affected by changes in firm expectations prior to bidding. These expectations could very well differ from the bidding behavior which actually occurred. The GAO analysis does not allow any conclusions to be made as to whether firm expectations and bid behavior were affected by the use of the sliding scale royalty bidding system. It is premature to attribute the inconsistent finding of a loss of bonus revenue (the lowering of front-end requirements) and a decrease in the number of bids (competition) to the use of the sliding scale royalty system.

If the lower total of bonus amounts on sliding scale tracts resulted from bidders' expectations of paying higher royalty rates rather than from their expectations of finding less resources in comparison to fixed royalty tracts, then we must conclude that the bidders expect the government to recover the difference in bonus value through later royalty payments. The only way for the government to lose in this situation is for the resources actually found and produced to be less than bidders' expectations. Had bonus been more relied upon, the government would have collected more bonus because of the bidders' high expectations.

It is an inescapable feature of alternative bidding systems that substitute contingency payments for cash bonus payments that if the resource turns out to be less than bidders expect, the government revenue is less than it would have been under a system which relied mostly on bonus payments and less on contingency payments. It is not possible to use systems that shift away from bonus payments in hopes of increasing competition without incurring the risk of lower government revenues when resource expectations fail to be realized.

GAO contends that competition for sale 48 was, "generally less than what DOI has experienced in previous sales." They base this on a comparison with 12 previous sales. Eleven of the 12 sales used in this comparison were in entirely different OCS areas where different resource potential and different costs prevail. The other sale showed a pattern of similar competition although such an analysis must be more rigorous than a simple comparison of the average number of bids. In general, we believe competition was adequate to provide the Government a fair return, especially given the low USGS and industry ranking of the area for resource potential.

The sliding scale royalty system, like all systems of potentially high royalties, can cause production losses. Our choice of sliding scale parameters in the early tests was based on the balance between bonus reductions on the one hand and potential production losses on the other hand. If improvements in competition result from the use of such parameters, then we will be in a position to weigh such improvements against expected production losses. If no improvements are evident, then parameters involving slightly higher losses can be chosen and tested for competition improvements.

As we gradually adjust sliding scale parameters testing for competitive improvements, we will eventually reach the point at which the potential production losses will outweigh any remaining hopes for competitive gains. At this point, we may conclude that the value of the sliding scale royalty system is limited.

One of the advantages of the sliding scale royalty system lies in the increased royalty rates as increased prices raise the value of production. From July 1979 to January 1980, since oil prices have increased 24.4 percent and natural gas prices have increased 8.9 percent, much more than the 6.5 percent increase in general price levels experienced during this seven-month period, it is more likely that sliding scale royalty tracts will trigger royalty rates above 16-2/3 percent.

CONCLUSIONS AND RECOMMENDATIONS

Any leasing system chosen for a sale will have to be designed around GS estimates of resources and costs. These estimates are made 6 to 8 months before the sale. Data received during the final 6 to 8 months is incorporated in the GS estimates used at sale time. This could cause the resource estimates to be quite different and could account for some of the appearance that a particular leasing system did not achieve its objectives. The fact that there is a difference in the perceptions of the value of oil and gas resources in a sale between GS and industry is not a secret, nor is it a secret that there are often large differences in the perceptions of value between the companies at sale time.

We agree that the sliding scale royalty bidding system warrants further study. This bidding system is still considered experimental and will be until at least 1983. We are near completion of a study done by Resource Planning Associates (PRA) which provides a careful statistical anaysis of all sliding scale royalty tests. The GAO analysis of the relative competition for the different types of tracts fails to statistically test the significance of the averages on which conclusions were based. RPA's conclusion with regard to competition in sale 48 is consistent with GAO's.

EDITORIAL COMMENTS AND COMMENTS ON APPENDIX DATA

Page 4, 4th paragraph - Should read "*** * only about half (75) were [p. 27.] definite * * *. The remaining 73 tracts, according to USGS's evaluation * * *."

Page 4, 4th paragraph - "* * * and of these, USGS believed only 10 had [p. 27.] sufficient resources to warrant development from an economic standpoint." This should be reworded to say that only 10 had sufficient economically recoverable resources to warrant being bid on if the geologic risk is accounted for, otherwise 29 tracts had commercial resources.

Page 5, next to last paragraph - Should read "* * * USGS formed a task [p. 29 1st para.] force to examine the resource estimates it developed * * *."

Page 9, 2nd paragraph - Change to read " . . . problems in their office [p. 29 1st para.] . . ." This refers to the USGS regional office yet uses abbreviation for BLM's Pacific OCS Office - POCS.

Appendix I

Page 10, 1st paragraph - Of the 970 tracts nominated, 550 were not deleted. [p. 9 3rd para.] They were not selected for further study in the sale process.

Page 22, in the listing of 14 steps to OCS process, only 13 items are noted. [p. 18.] Missing is "Final Secretarial Issue Document" which should appear between numbers 5 and 6.

GAO note: The above page numbers correspond to the pages in the draft report provided to DOI for comment. Bracketed numbers [ ] indicate the location of these points in the final report.

Page 27, [p. 22.] Table 3 - The response to the request for the "assessment of favorable targets in the area with estimates of oil and gas reserves" should be "limited data available on resource potential." The response to the request for the "potential environmental hazards" should be "limited data available on environmental and geological hazards."

Page 33, [p. 27 3rd para.] last paragraph - This is incorrect. The elimination of 69 tracts occurred after the revision of resource estimates. The estimates of 104 million barrels of oil and 498 billion cubic feet of gas are estimates supplied by BLM for the purpose of estimating social benefits.

Page 35, [p. 28.] Table - There were 73 tracts having no potential.

Page 37, [p. 31 4th para.] 1st paragraph - In response to the recommendation of the task force, an Acting Manager for the Pacific Region was appointed on December 1, 1979. His purpose is to establish the new Pacific Region as an operational Region and work to begin to implement the Conservation Division's reorganization in Los Angeles. In addition, his top priority is to establish a supervisory climate which will encourage open communications, identify problems in a timely manner, and ensure objectives concerning mission goals are met. In addition, a senior geophysicist with 40 years of petroleum exploration experience was temporarily assigned to the Los Angeles Office to assist the expertise of the geophysical personnel, to institute a new training program for inexperienced personnel, and to apply practical on-the-job training for each geophysicist.

Page 38, [p. 29 1st para.] last paragraph; page 54 - As with past sales, data onhand at the time tracts were evaluated for Sale No. 48 were sufficient and adequate to make an evaluation.

Page 43, [p. 35 2nd para.] 1st paragraph - The tracts selected for the two leasing systems were based on GS resource estimates made several months before the sale. The fact that the resource estimates at the time of the sale indicate that the resource potential may not have been evenly divided is a result of significant changes in the resource potential that will usually occur over time, especially with the incorporation of additional data and/or methodologies.

Page 43, [p. 35 2nd para.] 2nd paragraph in general - Comparing the results of a sale with the averages of several prior sales is not necessarily valid unless all the sales are comparable, especially in resource potential. As can be seen in Table 4, other sales vary from the "average" to a larger extent than does Sale No. 48.

Pages 47-48 [p. 38, 39.] - Before very much is made of the interest of smaller companies in the various types of tracts in Sale No. 48, a study should be made of the amount of interest shown by smaller companies in the various types of tracts in comparable sales.

Page 54, last sentence - After each OCS lease sale, our field offices
[p. 31-32.] perform a postsale analysis of each sale. This consists of a review of the geological, geophysical, and engineering data on tracts receiving bids to assess the correlation of such data with the sale results. Our analyses show that our evaluations of lease sales in other offices are adequate. Open communication between evaluators, management, and supervisors is effective. Therefore, a monitoring program in all OCS offices would seem unnecessary.

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