

For Reference

Not to be taken from this room

**Outer Continental Shelf Oil and Gas  
Information Program:**

**ALASKA INDEX  
(DECEMBER 1974-JUNE 1979)**

By  
J. Benton  
T. McDowell  
W. Conner  
The MITRE Corporation

**An Annotated Guide to  
Reports and Documents Used by the  
Federal Government in the Decisionmaking  
Process for Leasing, Exploration, Development, and  
Production of the Outer Continental Shelf**

**Prepared for the  
U.S. Department of the Interior,  
Geological Survey  
and the  
Bureau of Land Management,  
in Cooperation with the  
Council on Environmental Quality  
under Contract No. EQ8AC020**

**U.S. Geological Survey Open-File Report 79-1345**

This report has not been edited for conformity with the publication standards of the Geological Survey or the Bureau of Land Management.

Sponsor: Council on Environmental Quality

**August 1979**

Contract No.: EQ8AC020  
Project No.: 16600  
Dept.: W-54

**The MITRE Corporation**  
Metrek Division  
1820 Dolley Madison Boulevard  
McLean, Virginia 22102

MITRE Technical Report  
MTR-79W00187

Copies of this guide are available from:

Chief, RALI Program  
U.S. Geological Survey  
750 National Center  
Reston, Virginia 22092

For specific questions regarding the Index contact:

Mr. Henry Noldan  
Chief, Division of Offshore  
Resources, Code 540  
Bureau of Land Management, DOI  
18th and C Streets, N.W.  
Washington, D.C. 20240  
(202) 343-6906

Mr. David A. Nystrom  
Manager, OCS Oil and Gas  
Information Program  
U.S. Geological Survey  
750 National Center  
Reston, Virginia 22092  
(703) 860-7166

Sponsor: Council on Environmental Quality  
Contract Number: EQ8AC020

## TABLE OF CONTENTS

	Page
LIST OF FIGURES	iv
LIST OF TABLES	iv
INTRODUCTION	1
GENERAL BACKGROUND	3
INDEX CONTENT AND ORGANIZATION	10
Proposed OCS Planning Schedule	11
Resource Reports	13
Call for Nominations and Comments	22
Tentative Tract Selection Notice and State Notification	32
Pre-Sale Environmental Impact Statement	34
Hazards Report	36
Secretarial Issue Document	37
Proposed Notice of Sale	38
Sale	39
Exploration Plan and Environmental Report	41
Environmental Assessment and Environmental Impact State- ment (If Necessary) for Exploration	45
Drilling Permit for Exploration	48
Development and Production Plan and Environmental Report*	50
Environmental Assessment and Impact Statement (If Neces- sary) for Development and Production*	52
Drilling Permit for Development and Production*	53
Pipeline Permit*	54
OTHER DOCUMENTATION	55
Geological and Geophysical Analysis	56
Intergovernmental Planning Program	58
Regional Environmental and Socioeconomic Studies	60
Summary Reports	80
GLOSSARY	81
APPENDIX A—SUPPLEMENTAL READING	85
APPENDIX B—FEDERAL DEPOSITORY LIBRARIES	89
APPENDIX C—GOVERNORS' DESIGNATED OCS REPRESENTATIVES	91

---

\*These documents have not been prepared for the Alaska Area because marketable mineral resources have not yet been discovered on Federal leases. Therefore, only descriptions of the documents are presented.

## LIST OF FIGURES

Figure No.		Page
1	Outer Continental Shelf Lease Areas, Alaska	4
2	Outer Continental Shelf Scheduled Sales, Alaska Area	5
3	Department of Interior Decisionmaking Process	7
4	Pre-Sale Decisions and Required Department of Interior Documents	8
5	Post-Sale Decisions and Required Department of Interior Documents	9

## LIST OF TABLES

Table No.		Page
1	Proposed OCS Planning Schedule	12

## INTRODUCTION

The Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1331 et seq.), as amended in 1978 (P.L. 95-372), grants to the Secretary of the Interior the authority to issue leases for minerals on the U.S. Outer Continental Shelf (OCS). It provides the authority and guidelines which the Secretary utilizes for expeditious exploration and development of the OCS while ensuring timely access to information by affected states and local governments in order that appropriate planning will anticipate and ameliorate impacts from such OCS activities.

This document is prepared in accordance with Part 30 of the Code of Federal Regulations (CFR), Section 252.5 and 43 CFR, Section 3300.2(b), which require that the Directors of the U.S. Geological Survey and the Bureau of Land Management shall make available an Index, listing all relevant, actual or proposed programs, plans, reports, environmental impact statements and other lease sale information, on a regular basis, to each affected state and, upon request, to the executive of any local government whose jurisdiction covers an area affected by OCS activities. Accordingly, the Geological Survey and the Bureau of Land Management are cooperating in a joint effort to compile all relevant information on the OCS Oil and Gas Leasing Program in an Index with four volumes; Alaska, Atlantic, Gulf of Mexico and Pacific.

This volume is a listing of documents used in the Alaska Area OCS decisionmaking process, and its format parallels this process. The bibliographic references are presented by lease sale number, in the sequence in which the documents are generated in the Federal OCS leasing program. Thus, the reader may compare all documents of one type in the Alaska Area or trace a single lease sale throughout the entire leasing process. Activities which generate information throughout the OCS lease sale process are described under Other Documentation and Supplemental Reading. Other Documentation pertains to Federal data gathering and analysis programs which are an integral part of the OCS decisionmaking process and are used throughout the process due to the usefulness of their subject matter. The Supplemental Reading documents (Appendix A) are not used in decision-making but are invaluable sources of general OCS information.

Except when noted otherwise, all of the documents listed are available as of May 1979; Bureau of Land Management documents can be reviewed at the OCS Office shown below:

OCS Office  
Bureau of Land Management  
800 A Street  
Anchorage, Alaska 99510

(907) 276-2955

The U.S. Geological Survey documents can be examined at the following office:

Geological Survey  
Conservation Division  
Alaska Area  
800 A Street  
Anchorage, AK 99510

(907) 271-4348

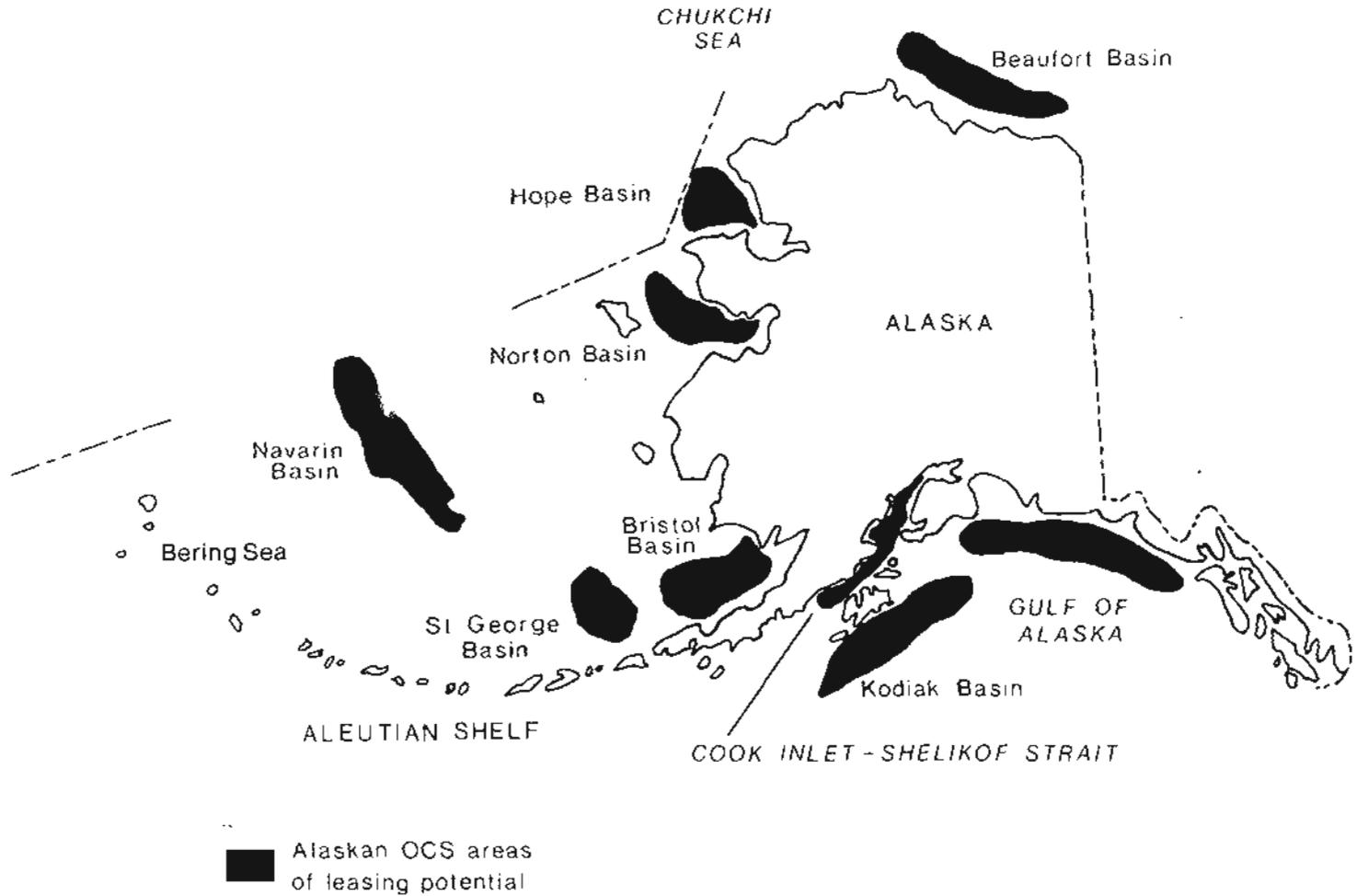
## GENERAL BACKGROUND

As part of a national goal to reduce dependence on foreign energy sources, the United States is currently managing a program for leasing of OCS oil and gas resources. The areas potentially affected, consisting of 22 coastal states and Pennsylvania, can be grouped into four major areas: Alaska, Atlantic, Gulf of Mexico and Pacific. The Alaska Area has three lease sale areas: Gulf of Alaska, the Bering Sea and the Chukchi and the Beaufort Sea (see Figures 1 and 2).

Most of the information used by both the government and industry on the hydrocarbon potential of the Alaska Area is initially acquired and compiled on a regional basis. These data are used by industry in nominating tracts for lease and in preparation of bids and by the Department of the Interior for general sale area identification, tract selection, environmental impact statements and resource evaluation. Subsequent environmental information and data analysis is directed toward defining specific sub-areas and site-specific evaluation.

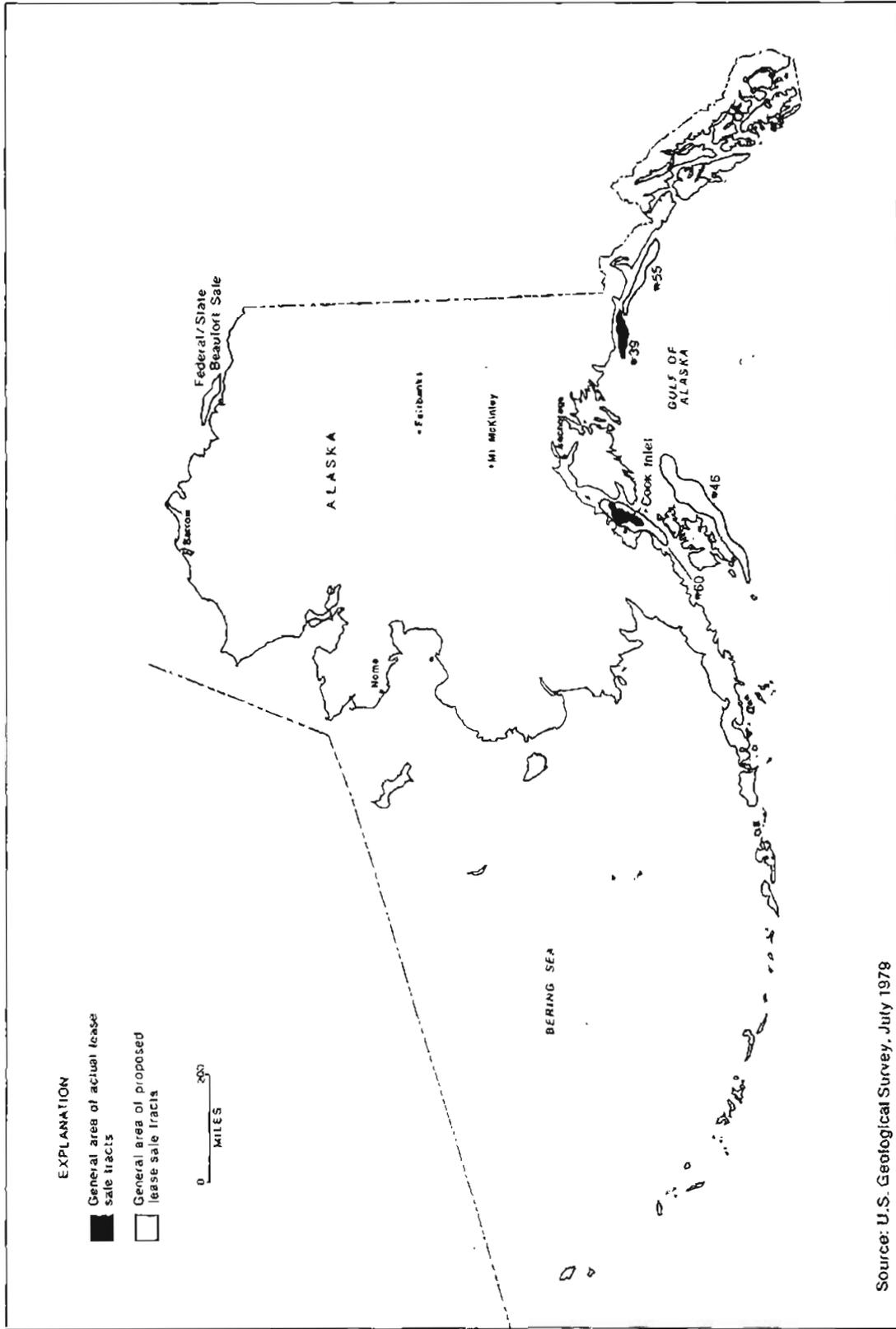
Detailed conduct of these activities is carried out primarily by two agencies of the Department: the Bureau of Land Management under the provisions of 43 CFR §3300 and the Geological Survey, with assistance from other agencies as appropriate. The Bureau of Land Management is responsible for implementing the leasing objectives of the Outer Continental Shelf Lands Act as amended. During each step of the OCS leasing procedure, the Bureau of Land Management coordinates with agencies both within and outside the Department. Major coordination efforts are conducted on a continuing basis with the Geological Survey which provides technical advice throughout several of the leasing procedures. The Geological Survey also is responsible for supervising and regulating exploration, development and production activities on the leaseholds after leases are issued.

Figure 3 outlines the major pre-sale and post-sale decision points; Figures 4 and 5 list the documents used in the decisionmaking process. The OCS lease sale program is a long-term process that begins 33 to 26 months prior to a lease sale and continues through exploration, commercial production, if any, and abandonment. As a result, regional data collection is a continuous activity and several decisionmaking documents may be formalized concurrently.



Source: U.S. Geological Survey, June 1979

**FIGURE 1  
OUTER CONTINENTAL SHELF SCHEDULED SALES, ALASKA AREA**

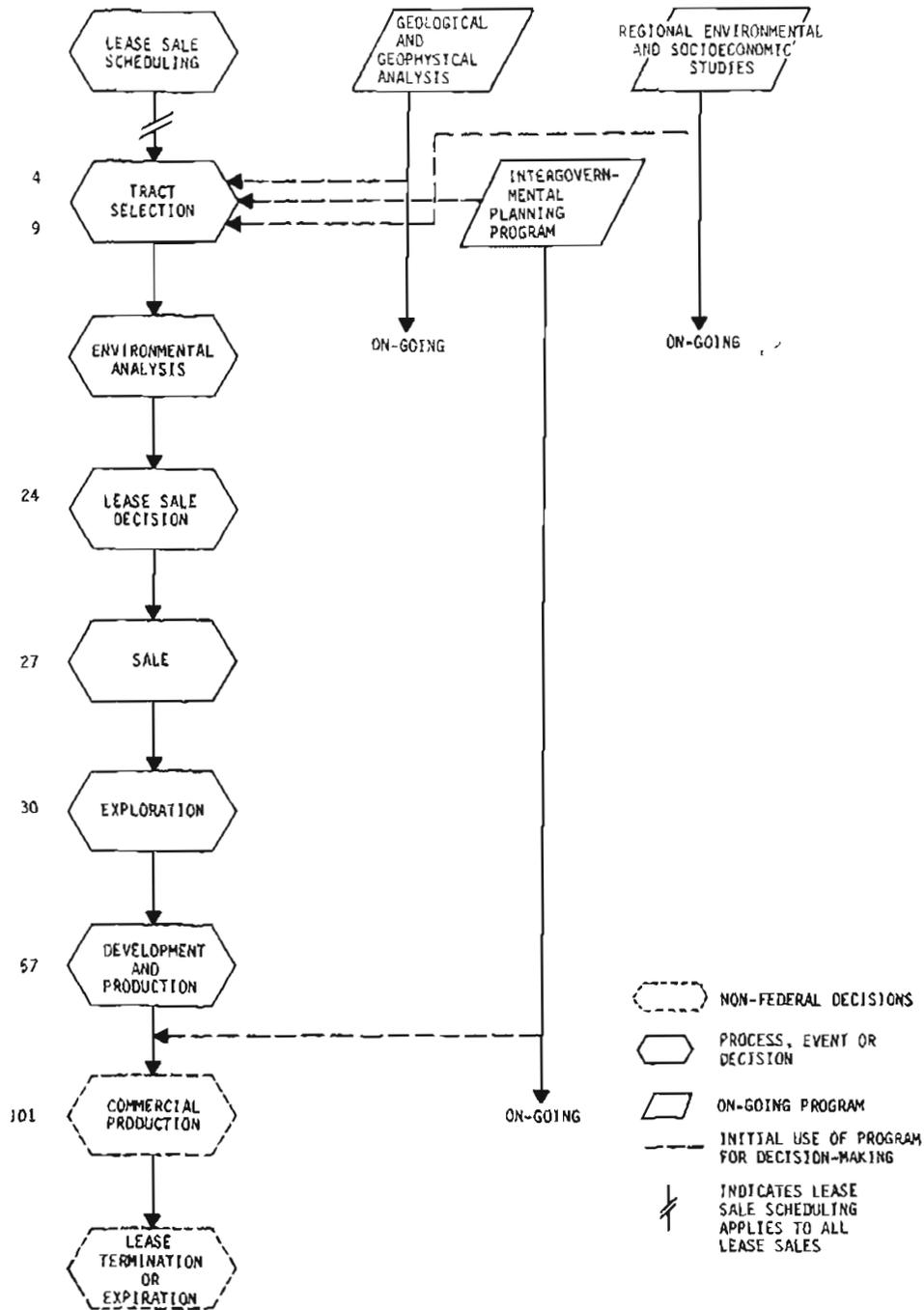


Source: U.S. Geological Survey, July 1978

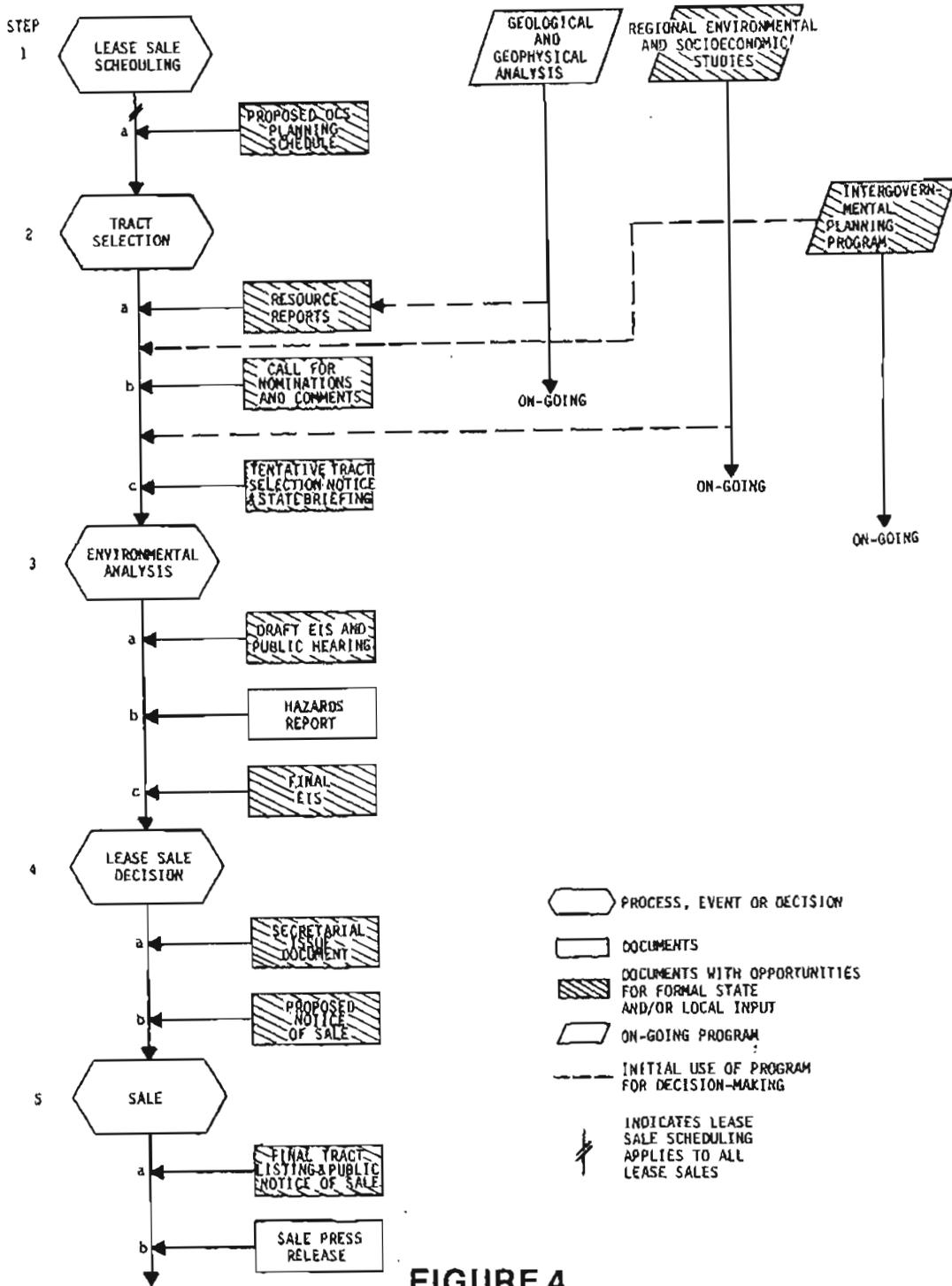
FIGURE 2  
OUTER CONTINENTAL SHELF SCHEDULED SALES, ALASKA AREA

Continuous data gathering is demonstrated by the preparation of Transportation Management Plans, Regional Environmental and Socio-economic Studies Plans and collection of geological and geophysical data (Figure 3). Coordination of this information along with the other documents in the decisionmaking sequence is described in the following sections.

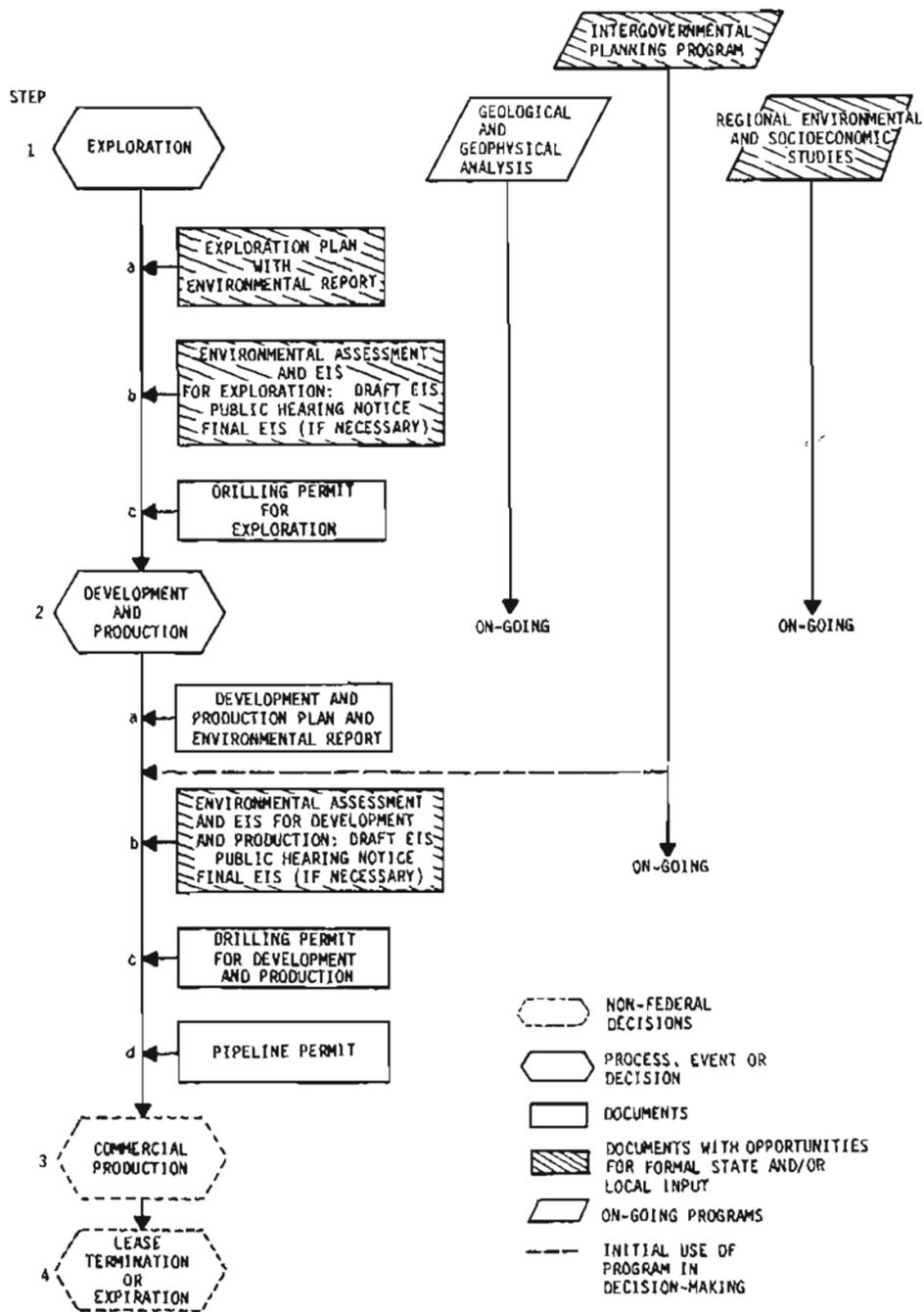
APPROXIMATE  
TIME, MONTHS



**FIGURE 3**  
**DEPARTMENT OF THE INTERIOR**  
**DECISIONMAKING PROCESS**



**FIGURE 4  
PRE-SALE DECISIONS AND REQUIRED  
DEPARTMENT OF INTERIOR DOCUMENTS**

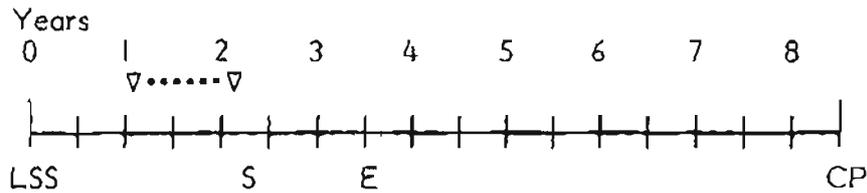


**FIGURE 5  
POST-SALE DECISIONS AND REQUIRED  
DEPARTMENT OF INTERIOR DOCUMENTS**

## INDEX CONTENT AND ORGANIZATION

This section presents the documents used in the OCS lease sale activities. The documents are presented by Lease Sale Number in the sequence that they are first used for decisionmaking and are keyed to their listing in Figures 4 and 5. A sample entry illustrates the timing format used in this section; each document description begins with a time bar indicating when the document fits in the overall OCS production schedule. The entire time line represents 102 months, the approximate time from lease sale scheduling to commercial production.

Time Bar:



The abbreviations on the time bar are defined as:

- LSS = Lease Sale Activities Start
- S = Sale
- E = Exploration
- CP = Commercial Production
- ▽ = Time when document or action pertains
- ▽.....▽ = Continuing process in which one or more documents may be produced

Document listings are referenced using the same notations as the file copy. In some cases, no documents are in the file, and the following explanations are given:

- None, to date: Pre-Sale Document which does not currently exist because the individual Lease Sale has not reached the stage requiring generation of the document
- To date, not available: Pre-Sale Document that exists, but is not yet available in the public files due to the pending Lease Sale
- Not in file: File copy not found
- To date, none submitted: Post-Sale Document which has not yet been filed with the Federal government by a lessee
- At the time, none required: Legislation requiring the document was not enacted at the time of the lease sale

PROPOSED OCS PLANNING SCHEDULE (Figure 4, Step 1a\*)  
43 CFR §3310

Description

The Department of the Interior prepares a planning schedule listing the lease sales anticipated during the next five years for all OCS regions. The timing and current status of each lease sale is also presented schematically. Three leasing objectives have equal consideration in development of this schedule: (1) orderly and timely resource development; (2) protection of the environment; and (3) receipt of fair market value to the public. Although these goals also apply to every step of the decisionmaking process, their emphasis may vary from step to step.

The schedule is updated and revised within the Department as conditions and knowledge affecting the leasing areas change. Resource and environmental data, along with the current energy situation, the availability of technology and the proximity of resources to market, are considered in the development of the schedule. During preparation of the schedule, input is solicited from other Federal agencies, environmental and public interest groups and Governors of affected coastal states. The current schedule was formulated in August 1977 but will be replaced by a new leasing schedule during 1980.

Pursuant to the recent amendments to the OCS Lands Act, new regulations were published in the *Federal Register*, Vol. 43, #208, October 26, 1978 (43 CFR 3308) which set forth a timetable of major steps in the development of the initial five-year OCS Leasing Program for years 1980-1985. The leasing program, when approved, will replace the leasing schedule shown on the following page.

The *Federal Register* notice cited above requested comments on the leasing program by December 1, 1978. A draft proposed program was sent to the Governors of affected states on March 10, 1979 with comments requested by April 20, 1979. In early June 1979, a proposed OCS leasing program will be published for public comment and sent to Congress for preliminary review. Details of the steps in the development of the leasing program can be found in the October 26, 1978, *Federal Register* notice.

The scheduling of an individual proposed lease sale, on either the current planning schedule or the 1980-1985 leasing program being developed, is the beginning of a leasing process which may result in the holding of a lease sale. The abbreviation "LSS" is shown on the time bar to mark the starting point of this process which generates the pre-sale analyses, events, documents and decision points listed in this Index.

---

\*Designates where documents first occur in lease sale activities.

TABLE 1  
PROPOSED OCS PLANNING SCHEDULE\*\*

SALE AREA	1977				1978				1979				1980				1981																
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D			
01 Cook Inlet			N	S																													
42 N. Atlantic	F	P	N																														
43 South Atlantic Georgia Embayment			P	P	N	S																											
45 Gulf of Mexico			P	P	N	S																											
65 Eastern Gulf of Mexico					E	H		F	P	N	S																						
51 Gulf of Mexico					E	H		F	P	N	S																						
49 Mid-Atlantic	T				E	H		F	P	N	S																						
48 Southern California								E	H	F	P	N	S																				
58 Gulf of Mexico			C	D	T			E	H	F	P	N	S																				
58(a) Gulf of Mexico			C		D		T		E	H	F	P	N	S																			
*Federal/State Beaufort (near shore)			C	D	T			E	H	F	P	N	S																				
55 Gulf of Alaska							C	D	T				E	H	F	P	N	S															
62 Gulf of Mexico									C	D	T			E	H	F	P	N	S														
46 Kodiak													E	H	F	P	N	S															
52 North Atlantic									C	D	T			E	H	F	P	N	S														
53 Central and Northern California			C			D	T							E	H	F	P	N	S														
61 Cook Inlet									C	D	T			E	H	F	P	N	S														
56 South Atlantic Georgia Embayment										C	D	T			E	H	F	P	N	S													
59 Mid-Atlantic												C	D	T			E	H	F	P	N	S											
66 Gulf of Mexico													C	D	T			E	H	F	P	N	S										
57 Bering Norton										C				D	T			E	H			F	P	N	S								

C - CALL FOR NOMINATIONS (Figure 4, Step 2b)  
 D - NOMINATIONS DUE (Figure 4, Step 2b)  
 T - ANNOUNCEMENT OF TRACTS (Figure 4, Step 2c)  
 E - DRAFT ENVIRONMENTAL STATEMENT (Figure 4, Step 3a)

H - PUBLIC HEARING (Figure 4, Step 3a)  
 F - FINAL ENVIRONMENTAL STATEMENT (Figure 4, Step 3c)  
 P - PROPOSED NOTICE OF SALE (Figure 4, Step 4b)  
 N - NOTICE OF SALE (Figure 4, Step 5a)  
 S - SALE (Figure 4, Step 5b)

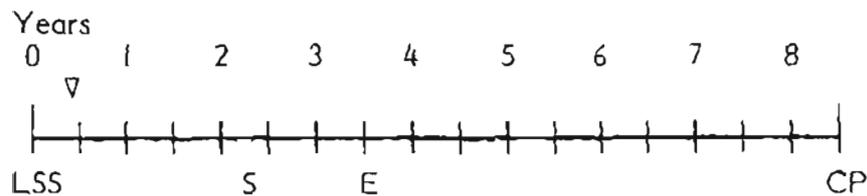
The Department of the Interior  
August 1977

Note: The sale of Lease Area #40 occurred August 1976, which predates this OCS Planning Schedule.

\* No Lease Sale Number has been assigned.

\*\* The June 1979 Proposed OCS Planning Schedule is currently undergoing review.

**RESOURCE REPORTS (Figure 4, Step 2a)**  
43 CFR §3312.1



Description

Based on the lease sale areas identified in the OCS Planning Schedule, the Bureau of Land Management initiates the pre-leasing tract identification process by requesting technical Resource Reports from all Federal agencies and bureaus with expertise appropriate to the needs of the proposed area. Governor's offices in the affected states may also be asked to submit such reports. Within the Department, the Geological Survey and Fish and Wildlife Service submit Resource Reports for all potential leasing areas, while the Bureau of Indian Affairs, Bureau of Mines, Heritage Conservation and Recreation Service and National Park Service may also submit Resource Reports. Other Federal agencies may submit Resource Reports containing general information on the defined geographic region. Federal agencies that may submit Resource Reports include:

- o Department of Agriculture
  - U.S. Forest Service
- o Department of Commerce
  - National Oceanic and Atmospheric Administration
  - National Marine Fisheries Service
- o Department of Defense
  - Maritime Safety Watch
  - Air Force
  - Army
    - Corps of Engineers
    - Marine Corps
  - Navy
- o Department of Energy
- o Department of Transportation
  - U.S. Coast Guard
  - Federal Aviation Administration
  - Office of Pipeline Safety
- o Council on Environmental Quality
- o Environmental Protection Agency
- o National Aeronautics and Space Administration

Resource Reports for the Alaska Area are available for review at the regional Bureau of Land Management OCS Office listed in the Introduction (p. 2). In addition, the Geological Survey Resource Reports are available as Open-File Reports from the Branch of Distribution, U.S. Geological Survey, Box 25286, Federal Center, Denver, Colorado 80225, (303) 234-5888. The Resource Reports listed herein are in chronological order.

#### Documents

##### LEASE SALE NO. 39--Gulf of Alaska

- o Federal Power Commission, resource report letter, 2 pp., with 19 pp. attachment, December 24, 1974.
- o Bureau of Outdoor Recreation, resource report letter, 3 pp., with 4 pp. attachment, December 27, 1974.
- o Office of Governor of Alaska, resource report letter, 2 pp., with 2 pp. attachment, December 30, 1974.
- o Bureau of Mines, resource report letter, 3 pp., December 31, 1974.
- o Geological Survey, resource report "Technology, time frame, and infra-structure needed for exploration, development of the Gulf of Alaska Tertiary Province," 15 pp., December 1974.
- o Geological Survey, "Interim report on petroleum resource potential and geologic hazards in the outer continental shelf of the Gulf of Alaska Tertiary Province," 73 pp., December 1974.
- o U.S. Fish and Wildlife Service, resource report letter, 1 p., with 24 pp. attachment, January 6, 1975.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., January 9, 1975.
- o Environmental Protection Agency, resource report letter, 2 pp., with 2 pp. letter attachment, January 9, 1975.
- o U.S. Forest Service, resource report letter, 2 pp., with 8 pp. attachment, January 9, 1975.
- o Federal Energy Administration, resource report letter, 2 pp., with 14 pp. attachment, January 10, 1975.

- o Department of Transportation, resource report letter, 3 pp., January 13, 1975.
- o Department of Treasury, resource report letter, 1 p., with 11 pp. attachment, January 15, 1975.
- o National Oceanic and Atmospheric Administration, resource report letter, 3 pp., with 12 pp. attachment, February 18, 1975.

LEASE SALE NO. CI--Cook Inlet

- o Department of Treasury, resource report letter, 1 p., July 25, 1975.
- o Alaska State Department of Natural Resources, resource report letter, 1 p., July 27, 1975.
- o Bureau of Outdoor Recreation, resource report letter, 2 pp., August 11, 1975.
- o Federal Energy Administration, resource report letter, 2 pp., August 20, 1975.
- o National Park Service, resource report letter, 2 pp., August 27, 1975.
- o Bureau of Mines, resource report letter, 2 pp., September 9, 1975.
- o Federal Power Commission, resource report letter, 12 pp., September 11, 1975.
- o Department of Agriculture, resource report letter, 1 p., September 16, 1975.
- o Bureau of Indian Affairs, resource report letter, 1 p., with 14 pp. attachment, September 29, 1975.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., September 29, 1975.
- o National Oceanic and Atmospheric Administration, resource report letter, 1 p., September 30, 1975.
- o Environmental Protection Agency, resource report letter, 1 p., October 10, 1975.

- o U.S. Fish and Wildlife Service, resource report letter, 15 pp., October 14, 1975.
- o Department of Transportation, resource report letter, 2 pp., October 24, 1975.
- o Geological Survey, Open-File Report 75-549, 75 pp., 1975.

LEASE SALE NO. 46--Kodiak

- o Department of Treasury, resource report letter, 1 p., July 10, 1975.
- o Geological Survey, resource report letter, 1 p., July 18, 1975.
- o Federal Energy Administration, resource report letter, 2 pp., August 1, 1975.
- o Bureau of Outdoor Recreation (Northwest Region), resource report letter, 2 pp., August 20, 1975.
- o Bureau of Mines, resource report letter, 2 pp., August 21, 1975.
- o National Park Service, resource report letter, 1 p., with 15 pp. attachment, August 25, 1975.
- o Department of Transportation, resource report letter, 3 pp., with 2 pp. attachment, September 2, 1975.
- o U.S. Forest Service, resource report letter, 1 p., September 16, 1975.
- o Federal Power Commission, resource report letter, 2 pp., with 14 pp. attachment, September 17, 1975.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., September 24, 1975.
- o Bureau of Indian Affairs, resource report letter, 1 p., with 4 pp. attachment, September 29, 1975.
- o U.S. Fish and Wildlife Service, resource report letter, 1 p., with 29 pp. attachment (undated).
- o National Oceanic and Atmospheric Administration, resource report letter, 1 p., with 8 pp. attachment (undated).

LEASE SALE NO. 55--Gulf of Alaska

- o Bureau of Mines, resource report letter, 1 p., February 6, 1978.
- o Alaska Bureau of Land Management, resource report letter, 1 p., February 13, 1978.
- o Alaska Economic Development Office, resource report letter, 1 p., February 28, 1978.
- o Department of Energy, resource report letter, 2 pp., March 2, 1978.
- o National Park Service, resource report letter, 1 p.; with attachment, March 6, 1978.
- o U.S. Forest Service, resource report letter, 2 pp., March 27, 1978.
- o Department of Treasury, resource report letter, 2 pp., March 29, 1978.
- o U.S.G.S. Petroleum Potential, Geologic Hazards and Technology for Exploration in the OCS of the Gulf of Alaska, 29 pp., references and maps, April, 1978.
- o Heritage Conservation and Recreation Service, resource report letter, 3 pp., April 10, 1978.
- o U.S. Fish and Wildlife Service, resource report letter, 1 p., April 21, 1978.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., April 24, 1978.
- o Environmental Protection Agency, resource report letter, 1 p., April 28, 1978.

LEASE SALE NO. 60—Cook Inlet/Shelikof Strait

- o Department of Treasury, resource report letter, 2 pp., July 26, 1978.
- o Bureau of Mines, resource report letter, 1 p., August 17, 1978.
- o Heritage Conservation and Recreation Service, resource report letter, 2 pp., September 20, 1978.
- o Environmental Protection Agency, resource report letter, 2 pp., September 29, 1978.
- o National Oceanic and Atmospheric Administration, resource report letter, 3 pp., September 29, 1978.
- o U.S. Forest Service, resource report letter, 1 p., October 3, 1978.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., October 10, 1978.
- o U.S. Coast Guard, resource report letter, 1 p., October 23, 1978.
- o Geological Survey, Open-File Report 79-600, 38 pp., December 1978.

LEASE SALE NO.--BF Joint Federal/State Beaufort Sea

- o Geological Survey, Open-File Report 76-830, 32 pp., 1976.
- o Federal Power Commission, resource report letter, 8 p. (no date: references Frank Edwards' letter of April 21, 1976.)
- o Geological Survey, resource report memo, 3 pp., May 20, 1976.
- o U.S. Coast Guard, Planning Branch, 17th Coast Guard District, resource report letter, 1 p., June 8, 1976.
- o National Park Service, resource report memo, 1 p., June 23, 1976.
- o Federal Energy Administration, resource report letter, 2 pp., June 29, 1976.
- o Bureau of Mines, resource report memo, 1 p., July 8, 1976.

- o Bureau of Outdoor Recreation, resource report memo, 1 p., July 13, 1976.
- o Bureau of Indian Affairs, resource report memo, 1 p., July 14, 1976.
- o Environmental Protection Agency, resource report letter, 11 pp., July 20, 1976.
- o Department of Transportation, resource report letter, 3 pp., July 26, 1976.
- o U.S. Fish and Wildlife Service, resource report memo, 7 pp., July 27, 1978.
- o Department of Defense, resource report letter, 2 pp., July 29, 1976.
- o National Oceanic and Atmospheric Administration, resource report letter, 137 pp., August 24, 1976.
- o Federal Power Commission, resource report letter, 10 pp., September 7, 1976.
- o Bureau of Outdoor Recreation, resource report memo, 1 p., September 9, 1976.
- o Federal Energy Administration, resource report letter, 1 p., September 9, 1976.
- o Department of Defense, resource report letter, 2 pp., September 14, 1976.
- o National Park Service, resource report memo, 1 p., September 14, 1976.
- o Bureau of Indian Affairs, resource report memo, 2 pp., September 20, 1976.
- o National Oceanic and Atmospheric Administration, resource report letter, 3 pp., September 21, 1976.
- o Bureau of Outdoor Recreation, resource report memo, 2 pp., September 20, 1977.
- o Federal Energy Administration, resource report letter, 2 pp., September 21, 1977.

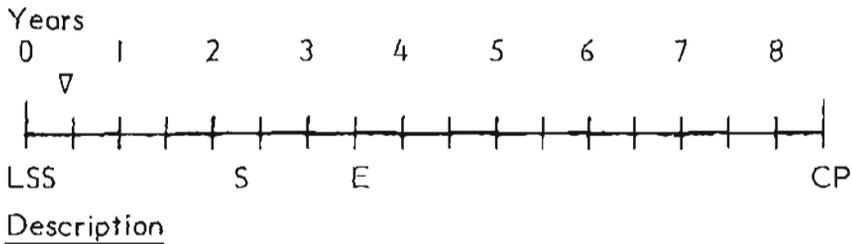
- o Federal Aviation Administration, Department of Transportation, resource report letter, 1 p., September 21, 1977.
- o National Park Service, resource report letter, 1 p., September 23, 1977.
- o U.S. Coast Guard, resource report letter, 1 p., September 28, 1977.
- o Environmental Protection Agency, resource report letter, 2 pp., September 30, 1977.
- o Bureau of Mines, resource report letter, 4 pp., September 30, 1977.
- o U.S. Fish and Wildlife Service, resource report letter, 2 pp., October 3, 1977
- o National Oceanic and Atmospheric Administration, resource report letter, 30 pp., October 4, 1977.
- o Bureau of Land Management, Alaska State Office, resource report letter, 2 pp., October 4, 1977.
- o Department of the Treasury, resource report letter, 1 p., October 11, 1977.
- o Department of Defense, resource report letter, 1 p., October 19, 1977.

LEASE SALE NO. 57--Bering Norton

- o U.S. Forest Service, Regional Forester, Alaska, resource report letter, 1 p., January 9, 1979.
- o Heritage Conservation and Recreation Service, Alaska Area Office, resource report letter, 1 p., January 16, 1979.
- o Geological Survey, Conservation Division, Office of Area Geologist, resource report letter, 1 p., with 15 pp. enclosure, January 18, 1979.
- o Department of Treasury, resource report letter, 1 p., February 15, 1979.
- o Bureau of Mines, resource report letter, 1 p., with 7 pp. enclosure, February 23, 1979.

- o U.S. Forest Service, resource report letter, 1 p., February 23, 1979.
- o State of Alaska, Office of the Governor, Division of Policy Development and Planning, resource report letter, 3 pp., with 17 pp. enclosure, February 28, 1979.
- o Department of Energy, resource report letter, 3 pp., with enclosure, March 2, 1979.
- o National Park Service, Alaska Area Office, resource report letter, 2 pp., March 2, 1979.
- o Department of Transportation, resource report letter, 1 p., March 5, 1979.
- o National Park Service, resource report letter, 2 pp., March 8, 1979.
- o Department of Defense, Office of the Assistant Secretary, resource report letter, 1 p., March 15, 1979.
- o National Oceanic and Atmospheric Administration, Office of Coastal Zone Management, resource report letter, 2 pp., with enclosure, March 16, 1979.
- o U.S. Fish and Wildlife Service, resource report letter, 1 p., with enclosure, April 3, 1979.

**CALL FOR NOMINATIONS AND COMMENTS (Figure 4, Step 2b)**  
 43 CFR §3313.1-2



Description

The Call for Nominations and Comments is published in the *Federal Register* to solicit input from interested parties on which tracts are of leasing interest, require special attention and analysis, or are believed to contain such geological conditions as bottom hazards, archaeological or cultural sites. Governors of affected states are also notified of the Call requesting them to identify specific goals and policies which they believe should be considered. Executives of any local government may submit recommendations to the Secretary. The Secretary also considers suggestions from other Federal agencies, industry, all interested parties and the general public.

The Call covers large contiguous areas, usually embracing several million acres offshore, and is usually published 60 to 120 days prior to tentative tract selection. Specific information bearing upon potential leasing and development in an area includes geological, geophysical, environmental, biological and socioeconomic factors. The Call is an information-gathering component of the Department's leasing procedure and does not commit it to leasing within the area of the Call.

General information and comments are filed with the Resource Reports and are available for public examination at the appropriate OCS office listed in the introduction. However, specific tract nominations are considered to be proprietary and are available for public review only in summary form. The Calls for Nominations and Comments are published in the *Federal Register* as shown below.

Documents

LEASE SALE NO.	FEDERAL REGISTER VOL.	NO.	DATE
39	39	230	November 27, 1974
C1	40	184	September 22, 1975
46	40	211	October 31, 1975
Beaufort Sea	43	48	March 10, 1978
55	43	102	May 25, 1978
60 original	43	250	December 28, 1978
60 addendum	44	9	January 12, 1979
57	44	89	May 7, 1979

Responses to the Call are as follows:

## NOMINATIONS:

### LEASE SALE NO. 39—Gulf of Alaska

- o Al Aquitaine Exploration, Ltd.
- o Amerada Hess Company
- o Amoco Production Company
- o Atlantic Richfield Company
- o Cities Services Oil Company
- o Clinton Oil
- o Conoco
- o Exxon
- o Getty Oil Company
- o Gulf Oil Company
- o Marathon Oil Company
- o Mobil Oil Corporation
- o Murphy Oil Corporation
- o Ocean Production
- o Oil Development Company of Texas
- o Phillips Petroleum
- o Shell Oil Company
- o Standard Oil Company
- o Sun Oil Company
- o Superior Oil Company
- o Tenneco Oil Company
- o Texas International Petroleum Company

- o Texaco

LEASE SALE NO. CI--Lower Cook Inlet

- o E. W. Westrick, Attorney in Fact, Gulf Oil Company--U.S., letter, 6 pp., October 10, 1975.
- o Fritz G. Nagel, Marathon Oil Company, letter, 2 pp., October 18, 1975.
- o P. F. Solars, Manager, Exploration Department, Western Division, Exxon Company, U.S.A., letter, 3 pp., November 3, 1975.
- o Charles D. Williams, Exploration Manager, The Louisiana Land and Exploration Company, letter, 2 pp., November 6, 1975.
- o H. E. Wendt, Offshore Manager, Getty Oil Company, letter, 2 pp., November 7, 1975.
- o Jesse P. Johnson, South Alaska District Manager, Atlantic Richfield Company, letter, 5 pp., November 7, 1975.
- o J. V. Kowalski, Vice President, DEPCO, Inc., letter, 2 pp., November 11, 1975.
- o R. D. Jaeguer, Attorney in Fact, Mobil Oil Corporation, letter, 3 pp., November 11, 1975.
- o John C. Marshall, Attorney in Fact, Shell Oil Company, letter, 2 pp., November 12, 1975.
- o M. R. Burditt, Vice President, Oil Development Company of Texas, letter, 4 pp., November 12, 1975.
- o Weyman W. Crawford, Texas Gulf, Inc., letter, 2 pp., November 12, 1975.
- o J. H. Silcox, Director and Vice President, Standard Oil Company of California, letter, 2 pp., November 12, 1975.
- o R. C. Portiss, Jr., Alaska Representative, Cities Service Oil Company, letter, 4 pp., November 13, 1975.
- o Carl L. Cain, Attorney in Fact, Amoco Production Company, letter, 3 pp., November 13, 1975.

- o Wayne Rodges, Landman, Union Oil Company of California, letter, 2 pp., November 14, 1975.
- o R. C. Showalter, Exploration Manager, Western Region, Phillips Petroleum Company, letter, 2 pp., November 21, 1975.

LEASE SALE NO. 46--Kodiak

- o T. M. Grove, Skelly Oil Company, letter, 4 pp., December 2, 1975.
- o Jesse P. Johnson, South Alaska District Manager, Atlantic Richfield Company, letter, 10 pp., December 12, 1975.
- o John B. Simmons, Murphy Oil Corporation, letter, 15 pp., December 18, 1975.
- o R. C. Portiss, Jr., Alaska Representative, Cities Service Oil Company, letter, 42 pp., December 19, 1975.
- o Fritz G. Nagel, Marathon Oil Company, letter, 4 pp., December 22, 1975.
- o T. S. Yancey, Attorney in Fact, Amoco Production Company, letter, 6 pp., December 22, 1975.
- o R. J. Vinson, Attorney in Fact, Shell Oil Company, letter, 3 pp., December 22, 1975.
- o Robert T. Anderson, Union Oil Company of California, letter, 2 pp., December 23, 1975.
- o Crandall D. Jones, Exxon Company, U.S.A., letter, 4 pp., December 23, 1975.
- o E. W. Westrick, Attorney in Fact, Gulf Oil Corporation, letter, 10 pp., December 23, 1975.
- o W. H. Darbonne, Land Supervisor, Sun Oil Company, letter, 4 pp., December 23, 1975.
- o J. Webb Higgins, Pennzoil Company, letter, 4 pp., December 23, 1975.
- o Richard A. Lindermanis, The Louisiana Land and Exploration Company, letter, 4 pp., December 24, 1975.

LEASE SALE NO. BF—Joint Federal/State Beaufort Sea

- o M. R. Burditt, Executive Vice President, Oil Development Company of Texas, letter, 1 p., March 29, 1978.
- o Fritz G. Nagel, Division Exploration Manager, Marathon Oil Company, letter, 2 pp., April 11, 1978.
- o R. J. Vinson, Attorney in Fact, Shell Oil Company, letter, 2 pp., April 14, 1978.
- o E. Falk, Dome Petroleum Limited, Dome Petroleum Corporation, letter, 1 p., April 14, 1978.
- o John D. Carr, District Landman, Atlantic Richfield Company, letter, 1 p., April 17, 1978.
- o R. S. Young, Exploration Manager, Getty Oil Company, letter, 2 pp., April 17, 1978.
- o W. E. Ryker, Exploration Manager, Northwest Region, Phillips Petroleum Company, letter, 1 p., April 17, 1978.
- o Crandall D. Jones, Manager, Offshore/Alaska Division, Exploration Department, Exxon Company, U.S.A., letter, 1 pp., April 19, 1978.
- o R. H. Pretus, Land Department, Texas Eastern Exploration Company, letter, 8 pp., April 19, 1978.
- o W. S. Blanton, Land Supervisor, Mobil Oil Corporation, letter, 1 p., April 20, 1978.
- o Wayne Rodges, Union Oil Company of California, letter, 1 p., April 21, 1978.
- o C. C. S. Davies, Vice President, Exploration, Sohio Petroleum Company, letter, 2 pp., April 21, 1978.
- o Wayne Rodges, Union Oil Company of California, letter, 1 p., April 21, 1978.
- o J. J. Anders, Attorney in Fact, Chevron, U.S.A., Inc., letter, 2 pp., April 24, 1978.

LEASE SALE NO. 55--Gulf of Alaska

- o Crandall D. Jones, Exxon Company, U.S.A., letter, 4 pp., July 11, 1978.
- o Jesse P. Johnson, Atlantic Richfield Company, letter, 3 pp., July 19, 1978.
- o J. J. Anders, Attorney in Fact, Chevron U.S.A., Inc., letter, 2 pp., July 24, 1978.

LEASE SALE NO. 60--Cook Inlet

- o Harry Simmons, Land Manager, Murphy Oil Corporation, letter, 3 pp., January 22, 1979.
- o J. Kenneth Watson, Newmont Oil Company, letter, 2 pp., February 1, 1979.
- o Charles R. Harrison, Alaska-Canada Geology Manager, Texas Eastern Exploration Company, letter, 1 p., February 16, 1979.
- o Fritz G. Nagel, Marathon Oil Company, letter, 4 pp., February 22, 1979.
- o J. J. Anders, Attorney in Fact, Chevron U.S.A., Inc., letter, 2 pp., February 22, 1979.
- o Lawrence Davis, The Louisiana Land and Exploration Company, letter, 2 pp., February 22, 1979.
- o J. M. DeLay, Manager, Special Exploration Projects, Mobil Exploration and Producing Services, Inc., letter, 2 pp., February 22, 1979.
- o Jesse P. Johnson, South Alaska District Manager, Atlantic Richfield Company, letter, 2 pp., February 23, 1979.
- o W. E. Ryker, Northwestern Region, Phillips Petroleum Company, letter, 2 pp., February 23, 1979.
- o R. J. Vinson, Attorney in Fact, Shell Oil Company, letter, 4 pp., February 23, 1979.

## COMMENTS

### LEASE SALE NO. C1--Lower Cook Inlet

- o Robert M. White, Administrator, NOAA, letter, 3 pp., September 16, 1975.
- o F. V. Schmidt, Fish and Wildlife Service, memo, 3 pp., October 24, 1975.
- o R. C. Nichols, Commander, U.S. Coast Guard, Acting Chief, Marine Safety Division, letter, 1 p., November 14, 1975.
- o Kenneth D. Moore, President, North Pacific Fisheries Association, Inc., letter, 2 pp., November 15, 1975.
- o Emil V. Nelson, Vice Chairman, Homer Advisory Committee, letter, 1 p., November 16, 1975.
- o Ernst W. Mueller, Commissioner, Department of Environmental Conservation/James W. Brooks, Commissioner, Alaska Department of Fish and Game, letter, 7 pp., November 19, 1975.
- o Bill Bledsoe, Starlight Fisheries, Inc., letter, 1 p., November 17, 1975.
- o Frank A. Tupper, Spokesman, Kachemak Bay Defense Fund, letter, 3 pp., November 17, 1975.
- o Virginia dal Piaz, OCS Committee, UCTC/ACS, Alaska Conservation Society, letter, 2 pp., December 2, 1975.

### LEASE SALE NO. 46--Kodiak

- o William and Jean Schwaab, letter, 2 pp., December 23, 1975.
- o Ed Naughton, Business Manager, Kodiak Shrimp Trawlers Association, letter, 9 pp., December 23, 1975.
- o Edward F. Naughton, Alaska House of Representatives, letter, 2 pp., December 26, 1975.
- o Lynn A. Greenwell, Fish and Wildlife Service, memo, 2 pp., January 2, 1976.
- o Robert M. White, Administrator, NOAA, draft memo, 7 pp., January 2, 1976.

- o Diane Des Jardin, Secretary, Kodiak Fishermen's Wives Auxiliary, letter, 3 pp., January 6, 1976.
- o Allen Searle, President, B & B Fisheries, Inc., letter, 1 p., January 15, 1976.
- o Thomas A. Casey, Manager, United Fishermen's Marketing Association, Inc., letter, 2 pp., January 16, 1976.
- o D. L. Spencer, Acting Area Director, ... of Sport Fisheries and Wildlife, memo, 2 pp., January 16, 1976.
- o Ernst W. Mueller, Commissioner, Alaska Department of Environmental Conservation, letter, 7 pp., January 19, 1976.
- o Salvatore Di Maria, KSAP, Kodiak Island Subsistence Advocacy Project, letter, 2 pp., January 25, 1976.

LEASE SALE NO. 55--Gulf of Alaska

- o Mark A. Jensen, Jr., Ocean Beauty Seafoods, Inc., letter, 1 p., June 5, 1978.
- o Nina Faust, letter, 1 p., June 14, 1978.
- o Robert B. Weeden, President, Alaska Conservation Society, letter, 2 pp., July 5, 1978.
- o Crandall D. Jones, Exxon Company, U.S.A., letter, 1 p., July 11, 1978.
- o Edward E. Lafaye, Amoco Production Company, letter, 1 p., July 12, 1978.
- o William J. Glude/Gayle Hampton, letter, 2 pp., July 12, 1978.
- o Bob Blake, Chairman, Cordova District Fisheries Union, letter, 1 p., July 13, 1978.
- o Junichi Namekata, Vice President, Idemitsu Alaska Oil Development Corporation, letter, 2 pp., July 14, 1978.
- o A. D. Mookhoek, Exxon Company, U.S.A., letter, 1 p., July 17, 1978.
- o Ruth E. McHenry, letter, 1 p., July 19, 1978.
- o R. H. Manz, Vice President, Western E&P Region, Shell Oil Company, letter, 1 p., July 20, 1978.

- o I. G. Ashby, Manager, U.S. Fleet Operations, Mobil, letter, 2 pp., July 21, 1978.
- o Gary L. Hickman, U.S. Fish and Wildlife Service, memo, 4 pp., July 25, 1978.
- o Jerry L. Madden, State-Federal Coordinator, Alaska Policy Development and Planning, letter, 5 pp., August 4, 1978.
- o V. E. Cox, Captain, U.S. Coast Guard, Chief, Marine Safety Division, letter, 4 pp., August 16, 1978.
- o Samuel A. Bleicher, Director, Office of Ocean Management, NOAA, letter, 5 pp., August 17, 1978.

LEASE SALE NO. 60—Cook Inlet/Shelikof Strait

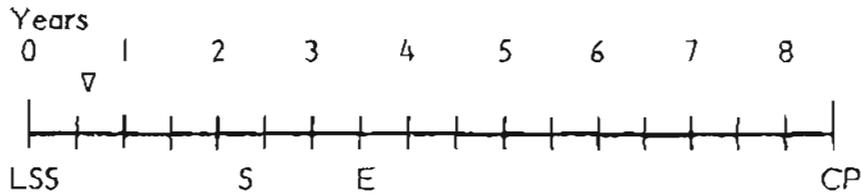
- o Al Burch, Manager, Alaska Shrimp Trawlers Association, letter, 7 pp., November 28, 1978.
- o Peter M. Smith, letter, 1 p., January 4, 1979.
- o Paul E. Jones, letter, 2 pp., January 11, 1979.
- o V. E. Cox, Captain, U.S. Coast Guard, Chief, Marine Safety Division, letter, 3 pp., January 23, 1979.
- o Salvatore Di Maria, KSAP, Kodiak Island Subsistence, Advocacy Project, letter, 2 pp., January 25, 1979.
- o Roy Bedsole, letter, 1 p., February 9, 1979.
- o Patricia O'Hara, letter, 1 p., February 15, 1979.
- o Wayne Hall, letter, 2 pp., February 15, 1979.
- o W. R. Francis, Division Landman, Amoco Production Company, letter, 1 p., February 19, 1979.
- o Mike Rivard, M/V Heron, letter, 1 p., February 19, 1979.
- o Nick Hartzell, Program Director, Kodiak Island Subsistence, Advocacy Council, letter, 4 pp., February 19, 1979.
- o Kenton Bloom, President, Kachemak Bay Conservation Society, letter, 2 pp., February 24, 1979.

- o Crandall D. Jones, Exxon Company, U.S.A., letter, 2 pp., February 26, 1979.
- o David Benton, Friends of the Earth, letter, 61 pp., February 26, 1979.
- o Stuart O. Denslow, Kodiak Island Borough, letter, 3 pp., February 27, 1979.
- o Mark A. Boberick, letter, 1 p., March 1, 1979.
- o Jerry L. Madden, State-Federal Coordinator, Alaska Division of Policy Development and Planning, letter, 23 pp., March 6, 1979.
- o Lynn A. Greenwalt, Director, U.S. Fish and Wildlife Service, memo, 13 pp., March 14, 1979.
- o Robert W. Knecht, Assistant Administrator, Office of Coastal Zone Management, NOAA, memo, 6 pp., March 16, 1979.
- o Rudolf J. Engelmann, Director, Outer Continental Shelf Environmental Assessment Program, NOAA, letter, 21 pp., March 22, 1979.
- o Robert L. Peterson, Acting Area Director, National Park Service, memo, 2 pp., March 26, 1979.
- o Frances A. Ulmer, Director, Alaska Division of Policy Development and Planning, letter/amendment, 7 pp., April 2, 1979.

LEASE SALE NO. 57--Bering-Norton

- o Harry V. Boone, letter, 4 pp., March 5, 1979.
- o Albert A. Ningeulook, letter, 1 p., May 1, 1979.

**TENTATIVE TRACT SELECTION NOTICE AND STATE NOTIFICATION**  
(Figure 4, Step 2c)  
43 CFR §3314.1-2



Description

At least 60 days after the Call for Nominations and Comments, specific tracts are selected for detailed environmental analysis for possible lease offering. The Bureau of Land Management, Geological Survey, other Department of Interior bureaus and Federal agencies, affected states and local agencies participate in the tract selection process through participation in a series of meetings at the field and headquarters level. The responsibility of the Bureau of Land Management involves an evaluation of: (1) the number of nominations per tract, nomination patterns and tract leasing history; (2) environmental conditions to be considered, including tracts deleted from previous sales for environmental or other reasons and tracts for which special environmental stipulations may be necessary; (3) comments or recommendations received from Federal, state and local governmental agencies, interest groups, or the public; (4) other uses of the area proposed for leasing and (5) review of technical data.

The Geological Survey's responsibility involves a technical evaluation to identify those tracts which are prospective sources of hydrocarbons. The Fish and Wildlife Service provides additional support throughout the process. Based on the Department of Interior analyses, a joint Bureau of Land Management-Geological Survey field office tentative tract selection recommendation is made. The Washington headquarters offices of the Bureau of Land Management, Geological Survey and Fish and Wildlife Service review the joint field report and any appropriate additional information and prepare a recommendation for tentative tract selection, which is then formally transmitted to the Secretary of the Interior for approval.\* Announcement of the tentative tract selection is made by telegrams to Governors of the affected states and by press release to the general public from the Department. Copies of the press releases can be obtained upon request from the Information Specialist, Bureau of Land Management, 130 18th and C Streets, N.W., Washington, D.C. 20240, (202) 343-5717.

Copies of the press releases and telegrams may be examined at the regional Bureau of Land Management OCS Office listed in the Introduction (p. 2).

---

\*Affected states are invited to participate in tract selection meetings at the field and Washington levels.

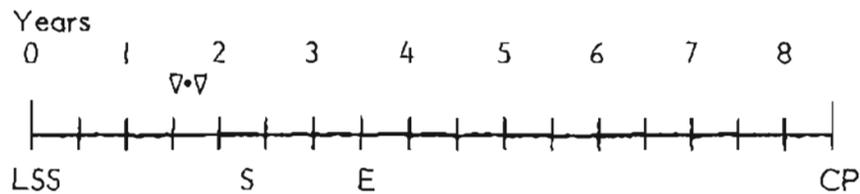
PRESS RELEASE

LEASE SALE NO.		DATE
39	Interior Makes Tract List Available for Possible Offshore Sale in Gulf of Alaska (OCS #39), 3 pp.	March 20, 1975
CI	Interior Makes Tract List Available for Possible Offshore Sale (OCS CI) in Alaska's Lower Cook Inlet	March 2, 1976
Beaufort	Tract List Made Available for Proposed Offshore Oil and Gas Sale in Beaufort Sea	March 16, 1976
46	Tracts Selected for Environmental Study of Proposed Offshore Oil and Gas Lease Sale (OCS #46) in the Western Gulf of Alaska, 4 pp.	April 30, 1976
55	Interior Selects 1.9 Million Acres for Environmental Study in Proposed Offshore Alaska Sale (OCS #55), 3 pp.	October 26, 1978
60	None, to date	
57	None, to date	

STATE BRIEFING

LEASE SALE NO.	STATE	DATE
39	At the time, none required	
CI	At the time, none required	
Beaufort Sea	Alaska	March 16, 1976
46	Alaska	April 26, 1976
55	Alaska	September 15, 1978
60	None, to date	
57	None, to date	

**PRE-SALE ENVIRONMENTAL IMPACT STATEMENT (Figure 4, Steps 3a and 3c)**  
42 U.S.C. §4321 et seq.



Description

Environmental Impact Statements (EIS's) are mandated by the National Environmental Policy Act (NEPA) of 1969, particularly subsection 102(2)(C), which requires detailed EIS's for major Federal actions significantly affecting the quality of the human environment. The Bureau of Land Management is responsible for EIS preparation prior to a lease sale. A draft EIS is prepared, which describes the existing environment, the proposed action and the probable environmental impacts. Mitigating measures, unavoidable adverse impacts, cumulative effects and irreversible and irretrievable commitment of resources are analyzed along with possible alternatives to the proposed action. The draft EIS is then published for Federal, state and public review and comment. A public hearing(s) may be held to solicit comments on the draft EIS. After the comments are assessed, a final EIS is prepared, which incorporates substantive comments, findings and recommendations. The document is then submitted to the U.S. Environmental Protection Agency and made available to the general public.

The final EIS's in the Alaska Area may be examined at the Bureau of Land Management OCS office listed in the Introduction (p. 2), or at the designated Federal Depository Libraries (listed in Appendix B) in each affected state.

LEASE SALE NO. 39--Gulf of Alaska

Title: Final environmental impact statement: proposed OCS oil and gas lease sale northern Gulf of Alaska OCS Sale No. 39, 1976, 4 vols., 1,636 pp., appendices and visuals

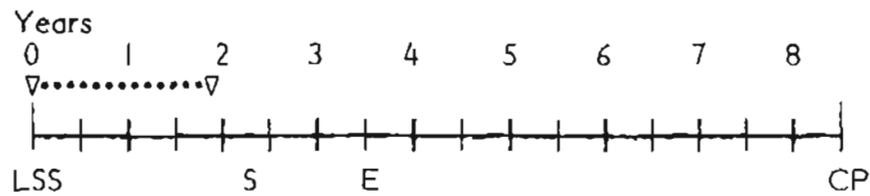
LEASE SALE NO.--Lower Cook Inlet

Title: Final environmental impact statement: proposed 1976 OCS oil and gas lease sale Lower Cook Inlet OCS Sale No. CI, 1976, 3 vols., 980 pp., appendices and visuals

LEASE SALE NO.--BF Joint Federal/State Beaufort Sea

Title: Draft environmental impact statement: proposed federal/state oil and gas lease sale Beaufort Sea, 1979, 3 vols., approximately 530 pp., appendices and visuals

## HAZARDS REPORT (Figure 4, Step 3b)



### Description

As noted on the time marker, hazards report preparation is a relatively long term pre-sale activity, which requires approximately two years. Once tracts are announced for an OCS lease sale, the Geological Survey begins to gather potential geologic hazards information for each tract. Effects of geologic processes are analyzed and submitted to the Bureau of Land Management for inclusion in the final EIS at least 60 days prior to publication of the EIS. On the basis of this report, tracts with known hazards that cannot be mitigated are deleted from the proposed lease sale; other tracts with known hazards may be included with stipulations on how they may be developed. The hazards reports are subsequently published as Open File Reports by the Geological Survey.

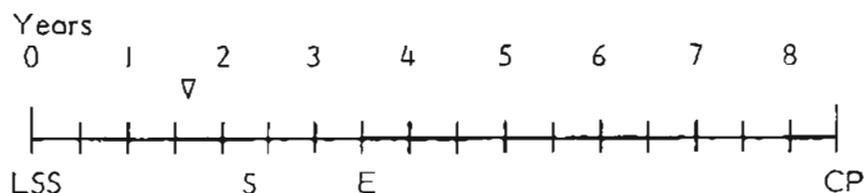
The hazards data for Lease Sale CI are available at the Branch of Distribution, U.S. Geological Survey, Box 25286, Federal Center, Denver, Colorado, 80226, (303) 234-5888, and the unpublished reports may be examined at the Bureau of Land Management OCS Office and the Anchorage Area Geological Survey Office listed in the Introduction (p. 2). Copies may be obtained at cost of reproduction from the Alaska Area Geological Survey Office.

### Documents

#### LEASE SALE NO.

39	Internal memo
CI	Internal Report also available as Open File Report 77-358 (May 1977).
Beaufort Sea	Internal memo
46	Internal memo
55	Internal memo
60	None, to date
57	Internal memo

## SECRETARIAL ISSUE DOCUMENT (Figure 4, Step 4a)



### Description

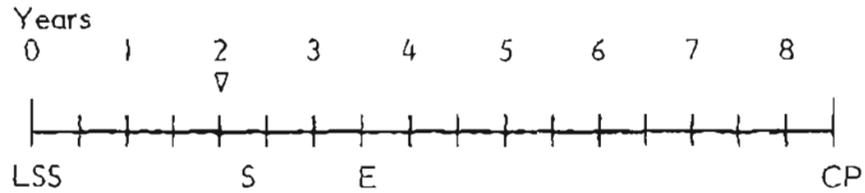
At the time the final EIS is being prepared, a Secretarial Issue Document (SID), formerly called the Program Decision Option Document, is also prepared. The SID brings to the decisionmaker's attention all factors associated with the proposed action. These include environmental and physical factors and other issues including potential economic and social impacts of the proposal and its effect on the Department's programs. The SID and the final EIS provide the information necessary to enable the Secretary to make a decision on various sale options, including whether or not to hold a lease sale.

SID's for the Alaska Area are available subject to the Secretary's final decision on each sale, at the Bureau of Land Management OCS Office listed in the Introduction (p. 2).

### Documents

LEASE SALE NO.	PAGES	DATE
39	77 23 pp. attachment	December 1, 1975
CI	38 and 2 addenda	January 6, 1977
Beaufort Sea	None, to date	
46	None, to date	
55	None, to date	
60	None, to date	
57	None, to date	

**PROPOSED NOTICE OF SALE (Figure 4, Step 4b)**  
 43 CFR §3315



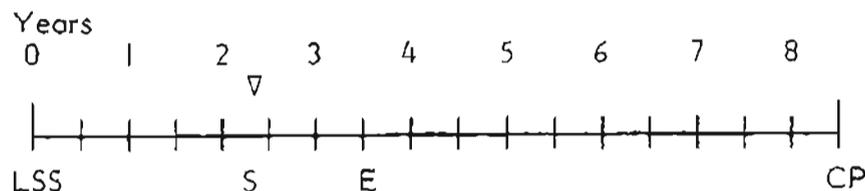
Description

Following a tentative decision by the Secretary to proceed, the Proposed Notice of Sale is published in the *Federal Register* and sent to the Governors of the affected states. The Notice contains the proposed listing of tracts and allows 60 days for replies on the tracts recommended for sale. Governors' replies and state and local comments, if any, may be reviewed at the Department of the Interior, Office of Outer Continental Shelf Program Coordination, 18th and C Streets, N.W., Washington, D.C. 20240. Sale notices were published in the *Federal Register* as follows.

Documents

LEASE SALE NO.	FEDERAL REGISTER VOL.	NO.	DATE
39	41	50	March 12, 1976
C1	42	13	January 19, 1977
Beaufort Sea	None, to date		
46	None, to date		
55	None, to date		
60	None, to date		
57	None, to date		

SALE (Figure 4, Steps 5a and 5b)  
43 CFR §3316.1-7



Description

Following a 60-day comment period on the proposed lease sale, a final sale decision meeting is held to determine whether a sale should be held, and if so, which tracts will be offered for sale, method of bidding, lease stipulations and all terms and conditions of the sale. This information is then published as a Public Notice of Sale in the *Federal Register* as shown below with details for date, time and place for bid submission and opening.

Qualified parties submit bids to the Bureau of Land Management, which, with the assistance of the geologic and economic evaluation by the Geological Survey, conducts a review of the high bids to determine whether the particular bids should be recommended for acceptance or rejection. The primary purpose of the post-sale analysis is to determine if the high bids on each tract qualify, are sufficient, and meet the OCS leasing objectives. The final decision on lease sale award or rejection is announced by a press release, from the Department of the Interior, which may be examined at the regional Bureau of Land Management OCS office listed in the Introduction (p. 2). Copies of the press release may be obtained from the Information Specialist, Bureau of Land Management, 130 18th and C Streets, N.W., Washington, D.C. 20240, (202) 343-5717.

Documents

LEASE SALE NO.	FEDERAL REGISTER VOL.	NO.	DATE
39	41	50	March 12, 1976
CI	42	180	September 16, 1977
Beaufort Sea	None, to date		
46	None, to date		
55	None, to date		
60	None, to date		
57	None, to date		

LEASE SALE PRESS RELEASE

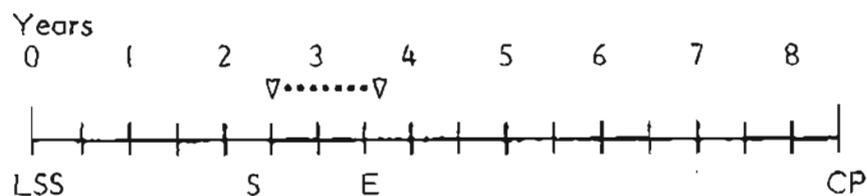
LEASE SALE NO. 39

Title: Interior Accepts Bids Totalling \$559 million for OCS Sale No. 39,  
Offshore Northern Gulf of Alaska, April 26, 1976

LEASE SALE NO. CI

Title: \$398,471,313 for Alaskan Cook Inlet Oil and Gas Lease Sale (OCS  
#CI), November 4, 1977

## EXPLORATION PLAN AND ENVIRONMENTAL REPORT (Figure 5, Step 1a)



### Description

The Exploration Plan provides for effective and environmentally sound exploration activities and is submitted by the lessee along with an Environmental Report to the Geological Survey. It must be recognized, however, that the Exploration Plan furnished by the lessee may contain proprietary information which is not released to the public. Often two sets of Exploration Plans are submitted, one with the proprietary information to be used only by the Conservation Division, and one from which this information is deleted to be distributed to the Governors of the affected states and to be made available for public inspection. The same is true for Development and Production Plans and for APD's (Application for Permit to Drill). The Plan and Environmental Report must be determined to be complete by the Survey prior to exploration activities in the OCS.

The Exploration Plan includes:

- o Type and sequence of exploration activities and tentative timetable of activities
- o Descriptions of drilling vessels, platforms or other offshore structures, and features such as safety and pollution prevention and control measures
- o Geophysical equipment to be used
- o Approximate location of each well

The Environmental Report for exploration contains:

- o Description of the affected ocean area
- o Description of environmentally sensitive areas
- o Procedures for oil or waste spill prevention and clean-up
- o Onshore support facilities
- o Personnel requirements

- o Travel routes and transport operations
- o Demands and impacts on offshore and onshore environments
- o The lessee's statement of consistency with applicable state approved coastal zone management programs
- o Name, address and telephone number of an employee of the lessee to whom inquiries can be made

The Exploration Plans and Environmental Reports can be examined at the Geological Survey offices listed in the Introduction (p. 2). To date, no Plans have been submitted, except for the Lease Sales 39 and CI.\*

Documents

LEASE SALE NO. 39

Lessee: Atlantic Richfield Company

Title: Exploration Plan, Salome Prospect, OCS-Y-0007, OCS-Y-0008, 47 pp., June 24, 1976.

Title: Exploration Drilling Program, OCS-Y-0033 (Rachel Prospect), Icy Bay Area, Gulf of Alaska, Atlantic Richfield Co., operator, 31 pp., August 1976.

Lessee: Exxon Company

Title: Exploratory Drilling Program, OCS-Y-0043, Northern Gulf of Alaska, 53 pp., May 24, 1977.

Title: Exploratory Drilling Program, OCS-Y-0050, Northern Gulf of Alaska, Exxon Co., operator, 53 pp., December 20, 1976.

Title: Exploratory Drilling Program, OCS-Y-0057, Northern Gulf of Alaska, 50 pp., April 4, 1977.

Title: Exploratory Drilling Program, OCS-Y-0080, Northern Gulf of Alaska, Exxon Co., operator, 46 pp., February 28, 1977.

Title: Exploratory Drilling Program, OCS-Y-0066, Gulf of Alaska, 9 pp., August 23, 1977.

---

\*Prior to January 1978 Exploration Plans did not require submission of Environmental Reports.

Lessee: Gulf Oil Corporation

Title: Exploratory Drilling Program, OCS-Y-0072, Northern Gulf of Alaska, 10 pp., August 11, 1977.

Title: Exploratory Drilling Program, OCS-Y-0073, Northern Gulf of Alaska, 10 pp., June 15, 1977.

Lessee: Shell Oil and Atlantic Richfield Companies

Title: Exploratory Drilling Program, Shell Oil and Atlantic Richfield Companies, OCS-Y-0001 (39-9), Y-0005 (39-26), Y-0006 (39-27), 46 pp., 4 visuals, April 4, 1977.

Lessee: Shell Oil Company

Title: Exploratory Drilling Program, OCS-Y-0004, OCS-Y-0011, OCS-Y-0025 (Moria Prospect), Icy Bay Area, Gulf of Alaska, 42 pp., March 18, 1977.

Title: Exploratory Drilling Program, OCS-Y-0004, OCS-Y-0011, OCS-Y-0028 (Moria Prospect), Icy Bay Area, Gulf of Alaska, Shell Oil Co., operator, 44 pp., June 30, 1976.

Title: Exploratory Drilling Program, OCS-Y-0013 (Block 110) and OCS-Y-0014 (Block 111), (Yvonne Prospect), Northern Gulf of Alaska, Shell Oil Co., 79 pp., September 10, 1976.

Title: Exploration Drilling Plan, OCS-Y-0078, Middletown Island, Block 340, Tract 202, 22 pp., 1 visual, June 10, 1977.

Lessee: Texaco, Inc.

Title: Exploratory Drilling Program, OCS-Y-0032, Northern Gulf of Alaska, Texaco, Inc., operator, 44 pp., 20 pp. attachment, December 10, 1976.

Title: Exploratory Drilling Program, OCS-Y-0046, Northern Gulf of Alaska, Texaco, Inc., operator, 36 pp., 2 appendices, December 10, 1976.

#### LEASE SALE NO. CI

Lessee: Atlantic Richfield Company

Title: Exploration Plan for Lower Cook Inlet, 28 well locations, 29 pp., Environmental Report, approximately 40 pp., June 7, 1978.

Lessee: Marathon Oil Company

Title: Exploratory Drilling Plan, OCS-CI, Block 318, OCS-Y-0086, 14 sections, plus visuals, February 17, 1978.

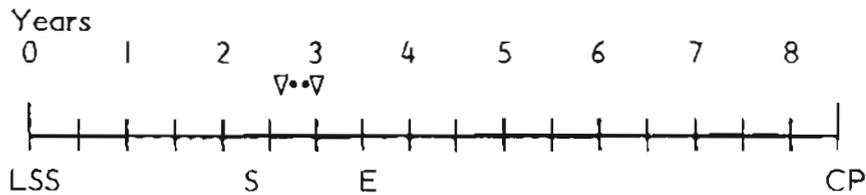
Title: Exploration Drilling Plan for Lower Cook Inlet, Leases OCS-Y-0156, OCS-Y-0167 and OCS-Y-0168, 14 pp., August 30, 1978.

Lessee: Phillips Petroleum Exploration

Title: Exploration Drilling Plan, Leases OCS-Y-0124, OCS-Y-0152, OCS-Y-0084 and OCS-Y-0136, approximately 200 pp., June 15, 1978.

:

## ENVIRONMENTAL ASSESSMENT AND ENVIRONMENTAL IMPACT STATEMENT (If Necessary) FOR EXPLORATION (Figure 5, Step 1b)



### Description

An Environmental Assessment is prepared by the Geological Survey based on the information in the Exploratory Drilling Plan and Environmental Report and information from other existing sources as well as input from the affected states and other Federal agencies. Should the Environmental Assessment indicate that approval of a plan does not significantly affect the human environment, an EIS would not be required. If the Environmental Assessment indicates that approval of the plan would significantly affect the human environment, an EIS must be prepared (refer to the previous description of the EIS process).

States with an approved Coastal Zone Management (CZM) plan are requested to make a consistency determination in accordance with provisions of the Coastal Zone Management Act of 1972, as amended (16 USC 1451 et seq.). On the basis of the Environmental Assessment or EIS findings and the state(s) consistency certification(s), the plan will be approved, disapproved or modified as appropriate. If approved, applications to drill are submitted to the Geological Survey for approval. To date, only Environmental Assessments for Lease Sales 39 and CI have been prepared in the Alaska Area; they may be examined at the Geological Survey's office listed in the Introduction (p. 2).

### Documents

#### LEASE SALE NO. 39

Lessee: Atlantic Richfield Company

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0033 (Rachel Prospect), Icy Bay Area, Gulf of Alaska, Atlantic Richfield Co., 16 pp., plus 4 appendices, August 1976.

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0007, OCS-Y-0008 (Salome Prospect), Icy Bay Area, Gulf of Alaska - Atlantic Richfield Co., operator, 16 pp., plus 5 appendices, August 1976.

- Title: Addendum to Environmental Analysis, Exploration Drilling Plan OCS-Y-0007, OCS-Y-0008 (Salome Prospect), Icy Bay Area, Gulf of Alaska, 8 pp., April 15, 1977.
- Lessee: Exxon Company
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0035, Gulf of Alaska, Exxon Co., 11 pp., plus 6 appendices, March 1978.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0043, Northern Gulf of Alaska, Exxon Co., 17 pp., 5 appendices, July 1977.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0080, Northern Gulf of Alaska, Exxon Co., operator, 17 pp., plus 3 appendices, April 1977.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0066, Gulf of Alaska, Exxon Co., 14 pp., plus 6 appendices, May 1978.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0072, Northern Gulf of Alaska, Exxon Co., operator, 17 pp., plus 5 appendices, September 1977.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0050, Northern Gulf of Alaska, Exxon Co., operator, 16 pp., plus 5 appendices, January 1977.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0057, Northern Gulf of Alaska, Exxon Co., operator, 16 pp., plus 5 appendices, May 1977.
- Lessee: Gulf Oil Corporation
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0059, Northern Gulf of Alaska, Gulf Oil Corp., operator, 16 pp., plus 5 appendices, February 1977.
- Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0073, Northern Gulf of Alaska, Gulf Oil Corp., operator, 16 pp., plus 5 appendices, July 1977.

Lessee: Shell Oil Company

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0004, OCS-Y-0011, OCS-Y-0028 (Maria Prospect), Icy Bay Area, Gulf of Alaska, Shell Oil Co., operator, 18 pp., plus 4 appendices, August 1976.

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0028 and OCS-Y-0041 (Maria Deep Prospect), Northern Gulf of Alaska, Shell Oil Co., 17 pp., plus 3 appendices, June 1977.

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0013 and OCS-Y-0014 (Yvonne Prospect), Northern Gulf of Alaska, Shell Oil Co., 17 pp., plus 3 appendices, November 1976.

Lessee: Texaco, Inc.

Title: Environmental Analysis, Exploration Drilling Program OCS-Y-0032, Northern Gulf of Alaska, Texaco, Inc., 16 pp., plus appendices, March 1977.

Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0046, Northern Gulf of Alaska, Texaco, Inc. operator, 16 pp., plus 5 appendices, February 1977.

#### LEASE SALE NO. CI

Lessee: Atlantic Richfield Company

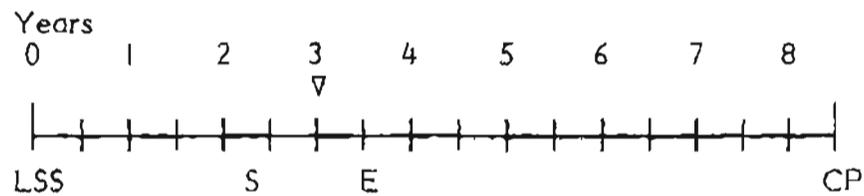
Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0097 (Block 401), OCS-Y-0161 (Block 572), OCS-Y-0113 (Block 576), OCS-Y-0136 (Block 798), OCS-Y-0123 (Block 667), OCS-Y-0158 (Block 1016), Lower Cook Inlet, Atlantic Richfield Co., 24 pp., plus 7 appendices, October, 1978.

Lessee: Phillips Petroleum Company

Title: Environmental Analysis, Exploratory Drilling Program OCS-Y-0084 (Block 274), OCS-Y-0124 (Block 668), OCS-Y-0136 (Block 798), OCS-Y-0152 (Block 970), Lower Cook Inlet, Phillips Petroleum Co., 23 pp., plus 7 appendices, September 1978.

Title: Environmental Analysis, Exploratory Drilling Program, OCS-Y-0084 (Block 274), OCS-Y-0124 (Block 668), OCS-Y-0136 (Block 798), OCS-Y-0152 (Block 970), 22 pp., 7 appendices, September 1978.

## DRILLING PERMIT FOR EXPLORATION (Figure 5, Step 1c)



### Description

The Drilling Permit for Exploration is obtained by filing an Application for Permit to Drill (APD). The APD is approved by the Geological Survey after review and approval of the Exploration Plan and Environmental Report or EIS. Availability and cost information of these documents can be obtained at the Public Information Office, U.S. Geological Survey, Alaska Area, 800 A Street, Anchorage, AK 99510, (907) 271-4348.

Other permits required prior to exploratory drilling include Permits for Aids to Navigation from the U.S. Coast Guard, Navigation Permits from the U.S. Army Corps of Engineers, National Pollutant Discharge Elimination System permits from the U.S. Environmental Protection Agency, and consistency determination from states with approved Coastal Zone management plans. To date, APD's have been submitted only for Lease Sales 39 and CI in the Alaska Area. The APD's may be examined at the Geological Survey's offices listed in the Introduction (p. 2).

Documents

## EXPLORATION DRILLING PERMITS

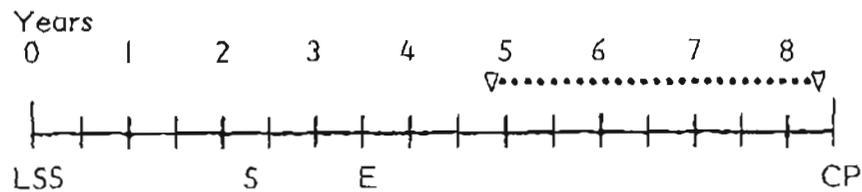
## LEASE SALE NO. CI

<u>Lessee</u>	<u>Lease No.</u>	<u>Block</u>	<u>Well</u>	<u>Date</u>
Atlantic Richfield	OCS-Y-0097	401	1	November 21, 1977
Marathon Oil	OCS-Y-0168	2	1	June 26, 1978
			1-A	August 22, 1978
			1	August 30, 1978
Phillips	OCS-Y-0124	668	1	June 15, 1978
	OCS-Y-0136	798	1	June 22, 1978

## LEASE SALE NO. 39

Atlantic Richfield	OCS-Y-007	72	1	June 24, 1976
			2	November 19, 1976
			3	December 30, 1976
	OCS-Y-008	73	1	December 30, 1976
	OCS-Y-0033	163	1	July 28, 1976
			2	March 9, 1977
Exxon	OCS-Y-0043	199	1	May 24, 1977
	OCS-Y-0050	289	1	December 20, 1976
	OCS-Y-0057	327	1	April 4, 1977
	OCS-Y-0066	370	1	August 23, 1977
	OCS-Y-0080	343	1	February 28, 1977
Gulf	OCS-Y-0072	296	1	August 11, 1977
	OCS-Y-0073	296	1	June 15, 1977
Shell	OCS-Y-0011	106	1	July 29, 1976
	OCS-Y-0028	106	1	August 6, 1976
	OCS-Y-0014	111	1	October 19, 1976
			2	June 21, 1977
	OCS-Y-0028	150	1	March 31, 1977
	OCS-Y-0041	194	1	March 31, 1977
	OCS-Y-0078		1	July 27, 1977
Texaco	OCS-Y-0046	241	1	December 10, 1976

## DEVELOPMENT AND PRODUCTION PLAN AND ENVIRONMENTAL REPORT (Figure 5, Step 2a)



### Description

This Development and Production Plan identifies and describes all development and production activities planned by a lessee in a specific lease area for a specific period of time. It is prepared by the lessee and submitted to the Geological Survey. The Development and Production Plan includes:

- o A description of the activities to be performed
- o Proposed schedule for development and production
- o Descriptions of drilling vessels, platforms, and other offshore structures, their locations and safety and pollution control features
- o Approximate well location
- o Current interpretations of geological and geophysical data (proprietary information)\*
- o Safety standards to be met and implementation procedures

The lessee also submits an Environmental Report (ER) with the Development and Production Plan. This document analyzes the impacts that may occur as a result of the implementation of the proposed plan. Both offshore and onshore facilities and operations are analyzed. Pertinent information includes, but is not limited to:

- o Acreage requirements
- o Transportation routes

---

\*This information is proprietary and will be released by the Department according to the time frames specified in 30 CFR 251.

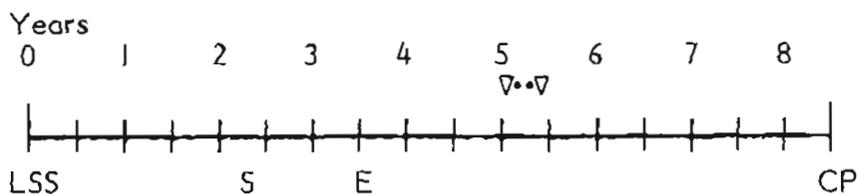
- o Pollutants generated
- o Resource requirements
- o Biological environment affected
- o Physical environment affected
- o Human environment affected
- o Contingency plans and equipment

The Development and Production Plan and Environmental Report for the Plan are provided to the states, along with the consistency certification for states with approved CZM plans, for comments and consistency determination. To date, no Federal leases have reached the Development and Production Stage in the Alaska Area.

#### Documents

To date, none submitted.

**ENVIRONMENTAL ASSESSMENT AND IMPACT STATEMENT (If Necessary)  
FOR DEVELOPMENT AND PRODUCTION (Figure 5, Step 2b)**



Description

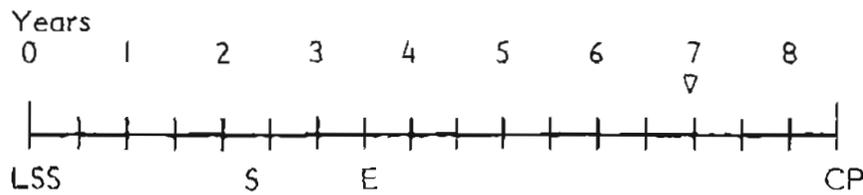
The Geological Survey prepares an Environmental Assessment (EA) for the proposed Development and Production Plan. If the EA indicates that approval of the Plan does not significantly affect the human environment, then no EIS is required and the Plan is approved. If the Plan is approved, applications to install platforms, pipelines, aids to navigation, as well as permits for navigation, utilizing permits for each well and NPDES permits are submitted to the appropriate Federal agencies for approval.

However, if the EA indicates that approval of the plan could significantly affect the environment, an EIS must be prepared. In addition, the OCS Lands Act Amendments of 1978 require that at least one development and production EIS be required at least once in any area or region of the OCS except the Gulf of Mexico. This declaration will necessitate the preparation of an EIS that incorporates the maximum amount of information about industry's intentions for that OCS area and the possible impacts that may result.

Document

To date, none submitted.

**DRILLING PERMIT FOR DEVELOPMENT AND PRODUCTION** (Figure 5, Step 2c)



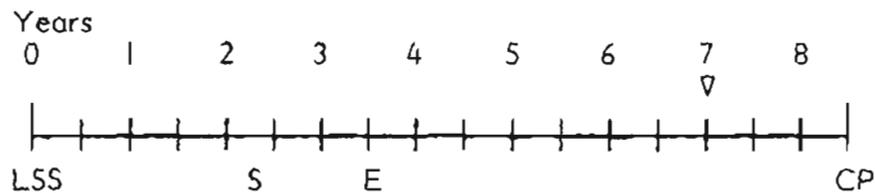
Description

The Drilling Permit for Development and Production is obtained by filing an Application for Permit to Drill (APD). It is approved by the Geological Survey after review and approval of the proposed Development and Production Plan.

Documents

To date, none have been received in the Alaska Area for Lease Sales 39 and C1. The other lease sales have not reached the development and production stage.

**PIPELINE PERMIT (Figure 5, Step 2d)**  
43 CFR §3340



Description

Pipeline permit applications are reviewed by a number of agencies, depending on the purpose of the pipeline, the mineral resource being transported, the method of transport and the onshore facilities required. The Department of Transportation's Materials Transportation Board is responsible for issuing regulations for pipelines on the OCS; the Bureau of Land Management grants rights-of-way for pipelines across the OCS, while the Geological Survey makes hazard analysis of the proposed pipeline route and grants rights of use and easements on OCS leases. In addition, the U.S. Army Corps of Engineers issues permits for construction of pipelines in navigable waters, the Fish and Wildlife Service reviews all pipeline applications and state and local agencies are responsible for regulation of pipelines in state waters.

Documents

To date, none have been received for the Alaska Area for Lease Sales 39 and C1, and the other lease sales have not reached the development stage.

## OTHER DOCUMENTATION

Four programs which generate data relevant to OCS activities and are used on a continuous basis from pre-lease sale activities through production are presented in this section. These include Geological and Geophysical Analysis, Intergovernmental Planning, Regional Environmental and Socio-economic Studies and Summary Reports.

## GEOLOGICAL AND GEOPHYSICAL ANALYSIS

Most of the resource information used by both the Government and industry on the oil and gas potential of various OCS areas is based on data obtained by geological and geophysical surveys. The collection of geological and geophysical data is a dynamic process beginning prior to the lease sale scheduling and continuing throughout the lease sale process. A considerable amount of the data is collected, under permits issued by the U.S. Geological Survey, by specialized data collection firms that sell or furnish the information to oil companies and the Department and directly by operations of the USGS Geologic Division.

Seismic surveys are the principal geophysical technique employed by oil companies and private contractors for identification of structures which may be hydrocarbon bearing in areas that may be proposed for lease sale. Geological testing techniques include bottom sampling, shallow coring and deep stratigraphic testing. The latter technique is often a final step in pre-sale geologic exploration. This drilling is referred to as a Continental Offshore Stratigraphic Test (COST) well and is used to determine the hydrocarbon potential of the rock.

The presence and quality of source rocks and reservoir rocks are determined together with the age of the rocks, environment during formation and other relevant characteristics which indicate the hydrocarbon potential of the area.

The Geological Survey also gathers pre-sale information through in-house activities and from industry. Although the data are first used in joint Bureau of Land Management and Geological Survey tract selection, both industry and the Department use such information to nominate tracts for lease sale, and the Geological Survey continuously gathers, analyzes and uses the geological and geophysical data for tract evaluation and lease management.

All geological and geophysical data collected by industry under permit and requested by the U.S. Geological Survey are submitted to the Director on a confidential or proprietary basis. Under certain conditions, proprietary data would be made available as outlined in the following. Under 30 CFR 251.14 (effective January 23, 1976, changes proposed February 9, 1979), geological data on hydrocarbons or any environmental hazards on unleased lands discovered during drilling will be released immediately. All other geological data except for deep stratigraphic data will be released ten years after issuance of permits, while deep stratigraphic test results are released five years after completion of the test well or sixty days after issuance of a lease within fifty miles.

Data collected under lease operations by a lessee will be proprietary under the terms of 30 CFR 250.97 (effective June 23, 1976, changes proposed February 17, 1979). Geological data and analyzed information will remain proprietary as long as the lease remains in effect or for two years after the date of submission, whichever is less. Geophysical data and interpreted information will remain proprietary for the duration of the lease or ten years, whichever is less. Proposed changes would exclude high resolution geophysical data, required from the lessee, from being proprietary.

Finally, data purchased by exclusive contract is nonproprietary while data purchased by contract will be proprietary according to the terms of the contract.

Except for proprietary data which would compromise the competitive position of any party participating in data collection or other lease sale activities, the raw data are available on magnetic tapes and/or microfiche from the National Geophysical and Solar-Terrestrial Data Center, NOAA/EDIS/NGSDC, Code D621, Boulder, Colorado 80303, (303) 499-1000. Information regarding availability and cost of the tapes and documents can be obtained from the above address.

## INTERGOVERNMENTAL PLANNING PROGRAM (Figure 5, Step 2a)

### Description

The Intergovernmental Planning Program for OCS Oil and Gas Leasing, Transportation and Related Facilities (IPP) will provide a formal coordination and planning mechanism for three major OCS program elements administered by the Bureau of Land Management: (1) the leasing process, (2) the Environmental Studies Program and (3) Transportation Planning for OCS oil and gas. The IPP establishes, in each of the leasing areas, a Regional Technical Working Group Committee and, if a marketable discovery is made, a State Technical Working Group Subcommittee. The Regional Committee will be composed of representatives of participating states in each OCS region (in this region, only Alaska), the Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Coast Guard, U.S. Geological Survey, U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, industry, and the private sector. Most likely there will be three State Subcommittees in Alaska to cover each of the sub areas in the Alaska OCS region.

The Regional Committee will be involved with making recommendations at various decision points throughout the leasing process. Before the sale the committee will participate in the tract-selection process. After the sale, if a marketable discovery is made, the State Subcommittee will use the information gathered from the Environmental Studies Program to begin a regional Transportation Management Plan. These plans will be composed of recommendations concerning the following elements:

- o Analysis and recommendation for discrete corridors and alternatives, which will include all transportation routes to onshore facilities or to offshore terminals serving as collection points for more than one production area;
- o Identification of environmentally sound alternative areas for the location of onshore facilities;
- o Any alternatives regarding surface vessel transportation (in accordance with appropriate regulatory agencies);
- o A plan for monitoring of construction and operations and any following-up studies which may be required and
- o Any stipulations and use restrictions identified as applicable to rights-of-way.

No Transportation Plans have been formalized for the Alaska Area.

## Documents

To date, none have been prepared for the Alaska Area.

## REGIONAL ENVIRONMENTAL AND SOCIOECONOMIC STUDIES

### Description

Regional Environmental Studies are part of a National Environmental Study Program administered by the Bureau of Land Management and designed to provide the environmental information required to make decisions at the various steps in the leasing process. The strategy of the National Program is to identify imminent and long-term information needs well before leasing activity begins and to develop studies that address specific regional concerns and generic, OCS-wide problems. Regional Environmental Studies Plans are the tools that implement this strategy. Regional issues are identified via public participation at least a year before any lease sale activity is begun, and studies are designed for these issues. Regional Studies Plans from the various regions are then used to build budget requests and to allocate appropriated funds across regions. The final Regional Studies Plans describe the present status of OCS oil and gas activity in the region, issues of local and National importance and the timing of information needs relative to decision points and the studies proposed to answer these needs. In the Alaska Area the studies have been directed at socio-economic issues as well as environmental concerns.

The Alaska OCS Socioeconomic Studies Program is a multi-year research effort which attempts to predict and evaluate the effects of Alaska OCS Petroleum Development upon the physical, social, and economic environments within the state. The analysis addresses the differing effects among various geographic units: the State of Alaska as a whole, the several regions within which oil and gas development is likely to take place, and within these regions, the local communities.

As shown in Figures 4 and 5 of this Index, information contained in the documents may be gathered at the onset of the OCS process, is first considered during tract selection, and is part of an ongoing program in which new data are continually made available for decisionmaking in the OCS regions. The documents listed with the National Technical Information Service may be obtained at 5285 Port Royal Road, Springfield, Virginia 22161, (703) 557-4650.

### Documents

#### SOCIOECONOMIC STUDIES PROFILE

o **Definition of Alaska petroleum development regions (Technical Report #1)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska. September 1978, 69 pp. Available through NTIS, paper copy \$6.00/microfiche \$3.00 (PB-291 915).

The purpose of this report is to define boundaries for petroleum development regions in Alaska. These boundaries provide initial data-gathering and impact analysis areas which will be refined as petroleum development scenarios and other research products become available. The boundaries defined in this report generally accord with those of native corporations in onshore areas adjacent to lease-sale areas, although they were further modified to accord with certain labor, census and political boundaries.

o **Literature survey (Technical Report #2)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, April 1977, approximately 479 pp. Available through NTIS, paper copy \$15.00/microfiche \$3.00 (PB-269 244).

This document is a literature review relevant to OCS development in Alaska, specifically the petroleum development regions of the Beaufort Sea, Bering Sea, Southwest Region and the Gulf of Alaska. Sixteen chapters discuss the current literature, research and data gaps in the following categories: economy, population, government, education, natural constraints to development, transportation, communications and utilities, cultural patterns, revenue and taxation, land-use, public safety, subsistence, social services, health and housing, archeological resources, and oil and gas resources. Each subject chapter includes a bibliography. A master bibliography of the 1,200 items surveyed, and an index to that bibliography by subject, key word and OCS region is also included.

o **Beaufort Sea petroleum development scenarios: interim report (Technical Report #3)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska. December 1977, approximately 382 pp. Available for review, Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

This study is an interim report detailing a set of petroleum development scenarios that are the most economical and technically feasible based on available estimates of oil and gas resources of the Beaufort Sea Region.

o **Prudhoe Bay case study (Technical Report #4)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska. February 1978, 98 pp. Available through NTIS, paper copy \$6.50/microfiche \$3.00 (PB-281 544).

This study explores the concept of enclave development in remote areas. It documents the present status of the working and living relationships at Prudhoe Bay, an industrial enclave built to tap the largest known oil and gas reserve in North America. The study identifies situations encountered during construction and operation of facilities at Prudhoe Bay that might be applied to enclave development elsewhere in the state.

o **Baseline studies of the physical and manmade environment: the Beaufort Sea Region, interim report (Technical Report #5)**, Peat, Marwick, Mitchell and Co., for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, 1977, approximately 185 pp. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

This document provides an interim inventory of selected baseline information on the physical and man-made environment of the Beaufort Sea petroleum development region and eight of its communities. It is organized into four categories: 1) land use, 2) land status, 3) transportation and 4) utilities.

o **Beaufort Sea petroleum development scenarios for the state-Federal and Federal outer continental shelf: final report (Technical Report #6)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, May 1978, approximately 390 pp. with a 30 pp. executive summary. Available through NTIS, paper copy \$15.25/microfiche \$3.00 (PB-283 236).

This study presents an expanded set of petroleum development scenarios governing potential OCS oil and gas development in the Beaufort Sea lease sale basin. These scenarios take into account potential oil and gas activities in the state and Federal offshore areas as well as relevant onshore areas. The projections are the basis on which the Environmental Studies Program will evaluate changes resulting from future OCS development in the Beaufort Sea region.

o **Case study of Copper Center, Alaska (Technical Report #7)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, March 1979, 237 pp. Available through NTIS in August 1979.

The sources and consequences of change due to rapid, large-scale recent development and other concurrent factors are identified through this case study of the small Alaskan community Copper Center. Copper Center was chosen as the subject of the study because of the events that have occurred there and because small communities such as this typify one of several types of communities likely to be impacted by OCS development. The findings will guide other studies in the Socioeconomic Studies Program in the examination of small Alaskan communities, in assessments of more complex communities, and in making projections of the chains of consequences likely to flow from current trends and OCS activities.

o **Beaufort Sea Region—man-made environment (Technical Report #8)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, April 1978, Approximately 280 pp. Available through NTIS, paper copy \$11.00/microfiche \$3.00 (PB-281 634).

The objective of this study is to clarify the current physical, social, economic and demographic conditions of the Beaufort Sea petroleum development region including the entire North Slope Borough, and the communities of Barrow, Kaktovik, Nuiqsut and Wainwright. As part of Phase I, Task 6 "Baseline Studies" of the Socioeconomic Studies Program, this study will be supplemented by and synthesized with future Baseline Studies conducted by other Program subcontractors. The Baseline Studies will form the basis of impact identification with and without OCS development.

o **Beaufort Sea Region—sociocultural systems (Technical Report #9)**, Peat, Marwick, Mitchell and Co., for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, June 1978, approximately 170 pp. Available through NTIS, paper copy \$9.00/microfiche \$3.00 (PB-284 566).

This study is part of Phase I, Task 6 "Baseline Studies" of the Socioeconomic Studies Program and will be supplemented by and synthesized with Baseline Studies conducted by other Program subcontractors. This report presents the organization, content and concerns of current socio-cultural conditions of the Beaufort Sea petroleum development region and the communities of Barrow, Kaktovik, Nuiqsut and Wainwright.

o **Beaufort Sea Region—natural physical and biotic baseline: final report (Technical Report #10)**, Peat, Marwick, Mitchell and Co., for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, May 1978, approximately 40 pp. with 5 maps. Available through NTIS, paper copy \$5.40/microfiche \$3.00 (PB-284 567).

This document provides critical natural physical information for the Beaufort Sea Region Baseline Report, and forms the basis of the projection of natural physical environmental impacts and resource conflicts of the different OCS development scenarios. Baseline information is drawn from current sources and analyzed to highlight the particularly susceptible areas. The conclusions will be used by other Studies Program Reports to analyze socioeconomic relationships.

o **Beaufort Sea Region socioeconomic baseline (Technical Report #11)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, July 1978, 636 pp. including 5 maps with 41 pp. executive summary. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

This study summarizes four concurrent investigations (Technical Reports 5, 8, 9 and 10) of the Beaufort Sea region, conducted from 1976 to 1978. It provides a basis for projecting socioeconomic impacts on the Beaufort Sea petroleum development region, given a variety of outer continental shelf petroleum development scenarios.

o **Anchorage socioeconomic and physical baselines: final report (Technical Report #12)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, June 1978, 277 pp. with a 33 pp. executive summary. Available through NTIS, paper copy \$11.00/microfiche \$3.00 (PB-284 568).

This document is a community profile of socioeconomic and physical data of the Municipality of Anchorage. Topics include a brief history of the inception of Anchorage as a township with an overview of significant historical events; a comprehensive discussion of the Anchorage economy and current demographic information; local government revenues and expenditures; community support service sectors including health services, social services, leisure and recreational services, education, police (state and local), fire and emergency medical services; physical characteristics of Anchorage; utilities and transportation. Within each section, current issues are identified and planning efforts are discussed.

o **Beaufort Sea petroleum development scenarios: impacts on Anchorage, Alaska: final report (Technical Report #13)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, August 1978, 216 pp. Available through NTIS, paper copy \$9.50/microfiche \$3.00 (PB-291 916).

This study analyzes the impacts and changes in local socioeconomic and physical systems in Anchorage as a result of potential petroleum development in the Beaufort Sea region.

o **Alaska-Fairbanks case study (Technical Report #14)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, May 1978, 121 pp. Available through NTIS, paper copy \$7.25/microfiche \$3.00 (PB-284 570).

This study synthesizes existing information on the socioeconomic changes in Fairbanks induced by the construction of the trans-Alaska pipeline. According to the projections made, Fairbanks is likely to provide staging manpower and facilities support for OCS development in the Beaufort Sea petroleum development region. The observations made during pipeline construction provided the Studies Program with indications of the types and direction of impacts and responses likely to occur in the area as a result of proposed OCS development.

o **Historical indicators of Alaska native culture change (Technical Report #15)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, September 1978, 148 pp. with a 5 pp. executive summary. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

The objective of this study is to identify sociocultural aspects of Alaskan communities that are most susceptible to change induced by OCS activities as well as other external events. Using secondary-source data, the links between rapid exogenous change and internal changes experienced by communities are identified. The results will guide the Studies Program in detailed examinations and projections of likely changes due to OCS development and other external forces on local communities.

o **Governance in the Beaufort Sea Region: petroleum development and the North Slope Borough (Technical Report #16)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, August 1978, 270 pp. with a 10 pp. executive summary. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

The purpose of this report is to determine the effects of oil and gas development in the Arctic on local government and related institutions of the North Slope. The focus is on the interaction of the North Slope Borough government with organizations engaged in petroleum exploration and development. The study analyzes the past effects of Arctic petroleum resource development on the borough, the borough's resource development policies, prospective patterns of oil and gas development including the OCS, and the borough's attitude toward petroleum development planned by Federal and state governments and the regional corporation.

o **Monitoring petroleum activities in the Gulf of Alaska and Lower Cook Inlet between April 1975 and June 1978 (Technical Report #17)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, August 1978, 72 pp. Available through NTIS, paper copy \$6.00/microfiche \$3.00 (PB-285 408).

The purpose of this study is to obtain an accurate, historical account of events including equipment use, timing, employment and wages, locations, infrastructure requirements and effects of OCS activity related to the Gulf of Alaska Lease Sale No. 39, the Lower Cook Inlet Lease Sale CI and the Gulf of Alaska Continental Offshore Stratigraphic Test (COST) Well. Another objective is to build on the monitoring data above, by collecting and analyzing other pertinent information. The assembled data will be used in preparing petroleum development scenarios for future northern and western Gulf of Alaska and Cook Inlet lease sales.

o **Beaufort Sea petroleum development scenarios: economic and demographic impacts (Technical Report #18)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, June 1978, 293 pp. Available through NTIS, paper copy \$11.00/microfiche \$3.00 (PB-285 409).

Forecasts of population and employment for five scenarios of the Beaufort Sea region, the state of Alaska as a whole and, Anchorage and Fairbanks are developed in this study. The scenarios include no OCS development of the Outer Continental Shelf in the Beaufort Sea region which requires further explanation relative to other lease sale areas of the state, as well as four scenarios which assume different levels of petroleum development.

o **Beaufort Sea petroleum scenarios: man-made environment impacts (Technical Report #19)**, Alaska Consultants, Inc., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, August 1978, 195 pp. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

This report evaluates the impact of OCS development on the man-made environment of four of the region's traditional communities. Projections of population and employment are made in one non-OCS and four OCS scenarios. After estimating probable community needs in a non-OCS case and taking borough capital improvement plans into account, the added impact that each OCS scenario could be expected to have is calculated. Parameters analyzed were population and employment, community facilities and services and borough finances.

o **Beaufort Sea petroleum development scenarios: transportation impacts: final report (Technical Report #20)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, September 1978, 163 pp. Available through the NTIS, paper copy \$8.00/microfiche \$3.00 (PB-291 917).

The objective of this study is to analyze the capacity of existing state and regional transportation systems (air, land and water) and determine whether the increased demand for these services will take place as a result of differing levels of OCS oil and gas development in the Beaufort Sea. It also assesses Prudhoe Bay and its function as an enclave on the North Slope, based on conditions projected for each scenario. The analysis of change for the state and regional transportation system was conducted for five scenarios, one which assumes no OCS development in the Beaufort Sea and four which assume increasing levels of such development. .

o **Beaufort Sea petroleum development scenarios: natural physical environment impacts: final report (Technical Report #21)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, July 1978, 100 pp. with 4 maps. Available through NTIS, paper copy \$6.50/microfiche \$3.00 (PB-284 571).

The objective of this study is to analyze the impact on the natural physical environment for each petroleum development scenario and for a non-OCS scenario for the Beaufort Sea region, consisting of the communities of Barrow, Kaktovik, Nuiquist and Wainwright. The characteristics of the four OCS scenarios were generated by Dames and Moore; the non-OCS scenario together with forecasts of statewide and regional population, employment and economy for all five scenarios were generated by the Institute of Social and Economic Research (ISER).

o **Assessment of change in the north slope, Beaufort Sea Region, sociocultural systems (Technical Report #22)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, August 1978, 107 pp. Available through NTIS, paper copy \$6.50/microfiche \$3.00 (PB-291 918).

The objective of this study is to assess future impacts of five petroleum development scenarios and the related impacts to the man-made and natural physical environments. Specific areas include impact assessments on cultural traditions and residents who currently reside in each community and the transient workers and external interests associated with each development scenario. The interaction of these two groups and their different cultural systems and values are compared in five scenarios, including no OCS development in the Beaufort Sea and four increasing levels of OCS development.

o **Beaufort Sea petroleum development scenarios: summary of socio-economic impacts (Technical Report #23)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, December 1978, 113 pp. Available for review at the Bureau of Land Management, OCS Office, 800 A Street, Anchorage, Alaska 99510, (907) 276-2955.

This study summarizes five concurrent investigations (Technical Reports 18, 19, 20, 21 and 22) of perceived impacts for the Beaufort Sea petroleum development scenarios. It is a synthesis of findings of those socioeconomic impacts which are expected to result from this development.

o **Developing predictive indicators of community and population change (Technical Report #26)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, March 1979, 510 pp. Available through NTIS August 1979.

The objective of this report is to analyze data already assembled on a sample of Alaskan communities which have either recently experienced or expect to experience rapid change as a result of energy-related development in order to identify the most important social and economic changes which have been observed in existing impacted communities, to identify the most important interrelationships among these social and economic changes, to determine the resident and community characteristics which appear to have the strongest relationships with observed response patterns, and in conjunction with OCS development scenarios and estimated immigrant and resident characteristics and community response capabilities, to develop methods for projecting the character and magnitude of the interrelationships identified in the above.

o **Alaska outer continental shelf visual resources management methodology study (Technical Report #27)**, Peat, Marwick, Mitchell and Co., Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, March 1979, 73 pp. Available through NTIS, paper copy \$6.50/microfiche \$3.00 (PB-294 835).

The development of a visual resources methodology for identifying and assessing potential impacts of petroleum development on the Alaskan OCS and adjacent onshore areas is the major objective of this study. Specific focal points include the identification and characterization of the visual resources in addition to detailing a comprehensive procedure for the assessment of impacts on them.

o **Northern Gulf of Alaska petroleum development scenarios (Technical Report #29)**, Dames and Moore, Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, March 1979, approximately 340 pp. Available through NTIS, paper copy \$13.25/microfiche \$3.00 (PB-294 229).

This report presents petroleum development scenarios for the northern Gulf of Alaska Lease Sale No. 55 (a second-generation sale following Lease Sale No. 39). Based on Geological Survey resource estimates, scenarios are detailed for high find (5% probability find), medium find (statistical mean probability) and no commercial resources. Each scenario is detailed according to facilities, equipment and manpower requirements centered around an economic analysis of various production systems currently used in the North Sea. The economic analysis defines the minimum economic field size to justify development with a selected technology in the Gulf of Alaska and the minimum required price to justify development of a field in the Gulf.

o **Western Gulf of Alaska petroleum development scenarios (Technical Report #35)**, Dames and Moore, Anchorage, Alaska, for the Bureau of Land Management, Alaska OCS Office, Anchorage, Alaska, February 1979, 341 pp. Available through NTIS, paper copy \$13.00/microfiche \$3.00 (PB-294 281).

This report details petroleum development scenarios for high find (5% probability) and medium find (statistical mean probability) resource estimates of the Geological Survey for the proposed lease sale areas in the western Gulf of Alaska (Kodiak). In addition, a scenario describing exploration, where no commercial resources are discovered, is developed. The scenarios are detailed according to their facility, equipment and manpower requirements and development schedules. A central part of the study is an economic analysis of the Gulf of Alaska petroleum resources. An evaluation of various production systems that may be suitable to develop western Gulf of Alaska petroleum resources is discussed and a detailed description of the technologies is provided.

## REGIONAL ENVIRONMENTAL STUDIES

o **Environmental assessments of the Alaskan continental shelf: annual reports for the year ending March 1976**, Environmental Research Laboratories, National Oceanic and Atmospheric Administration, Boulder, Colorado, March 1976, 7,968 pp., 14 volumes. Available free, on request through OCSEAP Publications, NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This 14-volume document presents baseline studies of the natural resources of the Alaskan outer continental shelf as well as studies of the environmental effects of resource development in that area.

**Volume 1, "Marine Mammals"**, consists of a range of studies of marine mammals in a variety of Alaskan areas. Specific studies include those on seasonal distribution, abundance, morbidity and mortality, biology, natural history and ecology of several species of whales, seals, sea otters and sea lions. Different disciplinary studies are undertaken for the different species. Areas covered include the Gulf of Alaska, Kenai Peninsula, Kamishak Bay, the Kodiak Archipelago and southwestern Bristol Bay.

**Volumes 2 and 3, "Marine Birds"**, identify and delineate the marine and coastal migratory bird habitats in Alaska. There are studies of ecosystem dynamics, breeding ecology, behavior, community structure, distribution and interrelationships of a variety of Alaskan marine and coastal birds in the areas of the Pribilof Islands, Offshore Island near Prudhoe Bay, the south shore of Seward Peninsula and the OCS of the Bering Sea and Gulf of Alaska.

**Volume 4, "Marine Birds"**, contains aerial surveys, photographic mappings and a catalog of seabird colonies in Alaska. There is an analysis of literature and unpublished data on marine birds, and a study of marine habitats particularly subject to influence by OCS development. Additional studies include feeding ecology, trophic relationships and population dynamics.

**Volume 5, "Fish, Plankton, Benthos, Littoral"**, has studies of the distribution, abundance, diversity and productivity of benthic organisms in the Bering Sea. There is also a summary of existing literature and unpublished data of these studies for the Beaufort Sea.

**Volume 6, "Fish, Plankton, Benthos, Littoral"**, contains a herring spawning survey of the southern Bering Sea and a Gulf of Alaska razor clam habitat survey, a description and numerical analysis of factors affecting production processes and a review and evaluation of an historical data base on non-salmonid pelagic resources. Also included are baseline characterizations of littoral biota of the Gulf of Alaska and Bering Sea.

**Volume 7, "Fish, Plankton, Benthos, Littoral"**, concentrates on various studies of plankton, zooplankton, phytoplankton and micronekton in the Gulf of Alaska and the Bering, Chukchi and Beaufort Seas. Other studies presented include: demersal resources of the northern Gulf of Alaska and eastern Bering Sea, an estuarine fishery study of the Beaufort Sea, studies and summarizations of existing data on benthic organisms of the Gulf of Alaska and Bering Sea, a preparation of illustrated keys to skeletal remains and otoliths of forage fishes, a literature search and data conversion on density, distribution of fishes in the Beaufort Sea, an Alaska marine ichthyoplankton key and a littoral survey of the Beaufort Sea region.

**Volume 8, "Effects of Contaminants"**, contains studies of the physiological effect of acute and chronic exposure to hydrocarbons and petroleum on near-shore fishes and the impact of oil on pinnipeds in the Bering Sea. Other studies include sublethal metabolic responses of Alaskan marine organisms to petroleum hydrocarbons, identification of major processes in biotransformations of petroleum hydrocarbons and trace metals, an assessment of the available literature on the effects of oil pollution on biota in arctic and subarctic waters and on seagrass photosynthesis.

**Volume 9, "Chemistry and Microbiology"**, assesses potential interactions of microorganisms and pollutants resulting from petroleum development on the OCS of the Beaufort Sea and Gulf of Alaska. Included are analyses of trace hydrocarbons in sea ice and at the sea ice-water interface, and an analysis of high individual molecular weight aromatic hydrocarbons.

**Volume 10, "Chemistry and Microbiology"**, contains studies of the natural distribution of trace heavy metals and gives environmental background in three Alaskan Shelf areas. Baseline studies of microbial activity in the Beaufort Sea and Gulf of Alaska, and studies of the incidence of the pathology of marine fish disease in the Gulf of Alaska, Bering and Beaufort Seas are also included.

**Volume 12, "Geology"**, presents a seismotectonic study of the seismic and volcanic hazards in the Pribilof Islands, studies of coastal morphology, sedimentation, environmental geology and geomorphology, and characteristics and transport of suspended particulate matter in the Gulf of Alaska. Also included are offshore permafrost studies and marine environmental problems of the Beaufort Sea region.

**Volume 13, "Geology"**, concentrates on faulting and slope instability in the St. George Basin area and the adjacent continental shelf of the southern Bering Sea. Other studies focus on fault history, earthquake activity, and erosion and deposition of shelf sediments in various Alaskan coastal regions. Additionally, there are seismic and volcanic risk studies, permafrost studies and studies of benthos-sedimentary substrate interactions. Specific geographic areas include regions of the Beaufort and Bering Seas, Yukon Delta coast and portions of the Gulf of Alaska.

**Volume 14, "Ice"**, contains studies of the interaction of oil with sea ice in the Arctic Ocean; dynamics of nearshore ice; study of the climatic effects on fast ice, specifically the extent and seasonal decay along the coast of the Beaufort Sea; mechanics of the origin of pressure ridges; shear ridges and hummock fields in landfast ice and morphology of Bering and Beaufort nearshore ice conditions. Also included is a historical baseline ice study of the Bering Strait, and a description of operations and procedures of an Alaskan facility for the application of remote-sensing data to outer continental shelf studies.

o **Environmental assessments of the Alaskan continental shelf: annual reports summary for the year ending March 1976**, Environmental Research Laboratory, OCSEAP, National Oceanic and Atmospheric Administration, Boulder, Colorado, March 1976, 585 pp. Available free, on request through OCSEAP Publications, NOAA, Boulder Colorado 80303, (303) 499-1000, ext. 6551.

This report summarizes the baseline studies contained in the preceding 14-volume document. It is grouped by geographic area including the Lower Cook Inlet, Kodiak Island, northeast Gulf of Alaska, Bristol Bay, St. George Basin and the Beaufort Sea.

o **Environmental assessments of the Alaskan continental shelf: annual report for the year ending March 1977**, OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, March 1977, 12,250 pp., 18 volumes. Available free, on request through OSEAP Publications, OCSEAP/NOAA, Boulder, Colorado 80303 (303) 499-1000, ext. 6551.

This 18-volume document contains baseline studies intended as reference points to assess the potential environmental impacts from resource development of the Alaskan continental shelf. Each volume is described below.

**Volume 1, "Receptors-Mammals"**, contains a wide range of biological and ecological studies on marine mammals in the Bering and southern Chukchi Seas and the Gulf of Alaska. Specific mammals studied include several whale and seal species, sea lions and cetaceans.

**Volumes 2 through 5**; each volume is titled "Receptors-Birds". They identify and delineate habitats and habits of the Alaskan coastal and marine birds. Migration patterns, population dynamics, trophic relationships, community ecology and assessments of the surrounding biological resources are analyzed. The separate volumes concentrate on different geographic areas and species indigenous to those areas.

**Volumes 6 through 10, "Receptors-Fish, Littoral, Benthos"**, contain studies of the distribution, abundance, diversity, productivity and life histories of benthic and demersal organisms and littoral biota. Additionally, summaries of the existing literature and unpublished data on those subjects are presented. The volumes vary in area and species covered.

**Volume 11, "Receptors-Microbiology"**, assesses potential interactions of microorganisms and pollutants resulting from petroleum development on the OCS in the Beaufort Sea, Gulf of Alaska and Cook Inlet. Other studies include microbial activity in the Beaufort Sea and Gulf of Alaska and a determination of the frequency and pathology of marine animal diseases in this area as well as the Bering Sea.

**Volume 12, "Effects"**, presents studies of the physiological effects of different levels of exposure to hydrocarbons and trace minerals, on near-shore fish, marine mammals and the photosynthesis of sea grass. Also included are research results for determining the accumulation of organic constituents and heavy metals from petroleum impacted sediments in the Bering Sea, the Gulf of Alaska and Cook Inlet.

**Volume 13, "Contaminant Baselines"**, contains a quality-assurance program for trace hydrocarbon analysis with a methodology for the analysis of sea water to evaluate trace elements. Specific studies concentrate on the composition and transport of suspended particulate matter, submarine seepage of natural gas in Norton Sound, trace metal content of bottom sediment matter in sediments from the Gulf of Alaska, Bering and Beaufort Seas.

**Volume 14, "Transport"**, includes studies of the development and operation of several ocean current mapping techniques and findings. Measurements and various oceanographic processes are mapped for the northeast Chukchi Sea, the Beaufort Sea, the Gulf of Alaska, Bristol Bay and the Yukon Delta. There are also reports of the climatic effects on fast ice, specifically the extent and seasonal decay evident along the Beaufort and Chukchi coasts.

**Volume 15, also titled "Transport"**, contains baseline ice studies for the Beaufort and Chukchi Seas and the Bering Strait. Studies of the mechanics of the origin of pressure ridges, shear ridges and hummock fields in landfast ice, in addition to the morphology of nearshore ice conditions in the above mentioned seas, are also included. There are also discussions of hardware development and procedures involved in acquiring the data.

**Volume 16, "Hazards"**, details studies of coastal morphology, sedimentation and oil spill vulnerability, environmental geology and geomorphology of the Gulf of Alaska coastal plain. Also included are studies of nearshore ice, the interaction of oil with sea ice in the Arctic Ocean and a delineation of permafrost characteristics beneath and offshore the Beaufort Sea.

**Volume 17**, also titled "Hazards", concentrates on marine environmental problems in the ice-covered Beaufort Sea shelf and coastal regions and areas of faulting and potentially unstable sediments in the St. George's Basin. There are also seismic and volcanic risk studies of the eastern Gulf of Alaska, sub-sea permafrost analyses and studies of benthos sedimentary substrate interactions of the Beaufort Sea coast, Lower Cook Inlet and the western Gulf of Alaska.

**Volume 18**, "Hazards and Data Management", contains studies similar to those in Volume 17. However, it also includes descriptions of the Alaska OCS program coordination, bibliographic support to principal investigators, the maintenance of Alaskan OCSEAP surface marine and coastal station data file and other information management systems.

o **Environmental assessments of the Alaskan continental shelf: annual reports summary for the year ending March 1977**, Science Applications, Inc., Boulder, Colorado, for National Oceanic and Atmospheric Administration, OCSEAP Publications, March 1977, 747 pp. Available free, on request through OCSEAP Publications, NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This document summarizes the preceding 18 volumes. Summaries are grouped by geographic area: northeastern Gulf of Alaska, Lower Cook Inlet, Kodiak Shelf, Aleutian Shelf, Bristol Bay, St. George Basin, Norton Sound, Chukchi Sea and the Beaufort Sea.

o **Environmental assessments of the Alaskan continental shelf: annual report for the year ending March 1978**, OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, October 1978, approximately 15,500 pp., 13 volumes. Available free on request through OCSEAP Publications, OCSEAP/NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551

**Volume 1**, "Receptors - Mammals, Birds", is divided into two portions. The first focuses on baseline characterizations of marine mammal populations, including population distribution and abundance, morbidity and mortality, natural history, trophic relationships and ecology. The mammals studied include various whale species, seals, sea lions and cetaceans in areas such as the Bering Sea, the Gulf of Alaska and the vicinity of Prince William Sound. The second portion on birds identifies, documents and delineates the coastal migratory bird habitat in Alaska. Areas studied include the northern Chukchi and Beaufort Seas and the Pribilof Islands.

**Volume 2**, "Receptors - Birds", is concerned with simulation modeling of marine bird population energetics. Also included are studies on the distribution, abundance and feeding ecology of birds associated with pack ice, and avian community ecology in areas such as the northern Bering Sea, the south and east Kodiak Island waters, Kotzebue Sound, Cape Thompson and Cape Lisburne.

**Volume 3, "Receptors - Birds"**, reports on the population dynamics and trophic relationships of marine birds in the Gulf of Alaska and southern Bering Sea. Included in this volume is the current state of knowledge on the subject, description of the study areas, methods used in acquiring the data, results, discussions and conclusions, and needs for future studies.

**Volume 4, "Receptors - Fish, Littoral, Benthos"**, surveys the epifaunal invertebrates of the southeastern Bering Sea, and finfish in Norton and Kotzebue Sounds. Additional studies include the distribution, abundance, diversity, productivity, community structure and trophic relationships of benthos and littoral biota in areas of the Gulf of Alaska, Cook Inlet, Kodiak Shelf and the Bering Sea.

**Volume 5, "Receptors - Fish, Littoral, Benthos"**, has reconnaissance characterizations of littoral biota in the Beaufort and Chukchi Seas, and studies of plankton in the Beaufort Sea. There are also descriptions of the seasonal composition and food-web relationships of marine organisms (in nearshore zones) including ichthyoplankton, meroplankton and nearshore fishes. Study areas include the eastern Bering Sea and Lower Cook Inlet in addition to the Chukchi and Beaufort Seas.

**Volume 6, "Receptors - Microbiology"**, assesses the potential interactions of microorganisms and pollutants resulting from petroleum development on the Alaskan OCS, as well as microbial interactions in the waters and sediments of Cook Inlet and the Beaufort Sea. Also included are reports of the frequency and pathology of marine fish diseases in the Bering and Beaufort Seas and the Gulf of Alaska, ice-edge ecosystem studies of the Bering Sea, and nutrient dynamics in nearshore under-ice waters.

**Volume 7, "Effects"**, focuses on the sublethal effects of petroleum hydrocarbons and trace metals on several Alaskan species by looking at biotransformations as reflected by morphological, chemical, physiological, pathological and behavioral indices. Areas studied include the eastern Bering Sea, Gulf of Alaska, Lower Cook Inlet and the Beaufort Sea.

**Volume 8, "Contaminant Baselines"**, presents a quality-assurance program for the analysis of trace hydrocarbons in sea water and bottom sediments. Additionally, there are studies of the composition and transport of suspended particulate matter in various waters offshore the Alaskan coast.

**Volume 9, "Transport"**, documents various oceanographic processes of the Lower Cook Inlet, Gulf of Alaska, Beaufort and Chukchi Seas and Bristol Bay. Specific reports detail various current mapping and measurement techniques, the climatic effects on fast ice and the mechanics of the origin of pressure ridges, shear ridges and hummock fields in landfast ice.

**Volume 10**, also titled "Transport", documents reports on environmental geology, geomorphology, meteorology and sediment characteristics as well as oceanographic processes. Also included are descriptions of the development and procedures of hardware used to acquire the data. Areas studied include the Gulf of Alaska, Beaufort Sea and the Alaskan arctic coast.

**Volume 11**, "Hazards", concentrates on studies of hazards associated with sea ice interacting with oil, earthquakes, ground shaking, seismic and volcanic occurrences and subsea permafrost conditions in areas of the Beaufort Sea coast, the southern Bering Sea and the Gulf of Alaska.

**Volume 12**, "Hazards", contains reports on faulting, sediment instability and erosion of the Norton Basin seafloor, seismotectonic studies of northeast and western Alaska, coastal processes and morphology of the Bering Sea coast, sediment transport in Norton Sound and a shoreline history of Chukchi and Beaufort Seas to predict offshore permafrost conditions.

**Volume 13**, "Data Management", describes the Alaskan OCS program coordination in addition to the bibliographic support to the Alaskan OCS environmental assessment program principal investigators. There are also descriptions of a geographic based information-management system for permafrost conditions in the Beaufort and Chukchi Seas, and the OCSEAP data-processing services and facilities.

The "Executive Summary" of this document identifies key concerns and issues associated with program management, management support, planning, workshops and OCSEAP publications. Also included is a data-management summary, with data inventories, catalogs, tracking systems and requests. There are also summaries of field activities and logistics concerned with data acquisition and an outline of FY 78 accomplishments with plans for future studies and goals.

o **Environmental assessments of the Alaskan continental shelf: final reports of principal investigators**, OCSEAP, National Oceanic and Atmospheric Administration, Boulder, Colorado, June 1978, 3 volumes, 2,060 pp. Available free, on request through OCSEAP publications NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551.

These volumes contain biological baseline studies of the environmental effects related to petroleum development on the Alaskan continental shelf. Volume 1 has reports of lethal and sublethal effects on selected marine species after acute and long-term exposure to oil and oil components. Volume 2 is an historical review of the demersal fish and shellfish resources of the Gulf of Alaska for the years 1948-1976 and Volume 3 contains various studies of marine birds in the Gulf of Alaska, a reconnaissance of the intertidal and shallow subtidal biotic lower Cook Inlet and airborne multi-spectral mapping of the intertidal zone of southern Alaska.

o **Environmental assessment of the Alaskan continental shelf: interim synthesis: Beaufort/Chukchi**, Arctic Project Office of OCSEAP, National Oceanic and Atmospheric Administration, Boulder, Colorado, August 1978, 362 pp. Available free, on request through OCSEAP Publications, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This synthesis presents reports and findings of the Beaufort and Chukchi Seas as given at a January 23-27 meeting in Barrow, Alaska. The document is divided into two sections. The first, 'Disciplinary Overviews and Identification of Information Gaps', includes the following: sea ice environment, physical oceanography and meteorology, earth sciences, and marine mammals and biota. Section two covers interdisciplinary aspects of likely OCS impacts such as species habitats and processes sensitive to OCS development, trophic interactions, potential impacts of oil development, effects of gravel mining and construction of gravel islands and causeways and environmental hazards to offshore operations.

o **Environmental assessment of the Alaskan continental shelf: interim synthesis report: Kodiak**, Science Applications, Inc., Boulder, Colorado, for OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, February 1978, 202 pp. Available free, on request through OCSEAP Publications, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This report synthesizes the proceedings of a meeting about the Kodiak Shelf, held in Anchorage on March 8-10, 1977. Topics discussed include subregional descriptions of northeastern, southeastern and eastern Kodiak and identifications of areas particularly susceptible to adverse impacts resulting from oil and gas development. Additionally, there is a summary of new technical data concerning levels of petroleum-related contaminants, geologic hazards, marine transport processes and the region's biotic resources.

o **Environmental assessment of the Alaskan continental shelf: Kodiak interim synthesis report**, Science Applications, Inc., Boulder, Colorado, for OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, January 1979, 215 pp. Available free on request through OCSEAP Publications, OCSEAP/NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This document reports on the existing distribution and concentration of contaminants around Kodiak as well as the potential magnitude and nature of contaminants assumed to accompany OCS exploration and development. There are also reports on the geologic hazards to petroleum exploration and development on the Kodiak shelf, the movement of contaminant discharges through the marine environment, descriptions of biological populations and ecological systems, the effects of hydrocarbon and trace-element contaminants on individuals and populations, and there is a synthesis of the major issues associated with OCS development with emphasis on regions of special significance.

o **Environmental assessment of the Alaskan continental shelf: interim synthesis report: Northeast Gulf of Alaska**, Science Applications, Inc., Boulder, Colorado, for OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, February 1978, 199 pp. Available free, on request through OCSEAP Publications, Boulder, CO 80303, (303) 499-1000, ext. 6551.

The report is based on the NOAA/OCSEAP Synthesis meeting held January 11-13, 1977 in Anchorage, Alaska. The meeting's proceedings included material provided by the participants and recommendations for specific research needs to synthesize northeast Gulf of Alaska environmental information. Critical areas are identified relative to possible OCS oil and gas development and new technical data presented during the meeting is summarized. The information includes background levels of petroleum-related contaminants, geologic hazards, transport processes operating in coastal waters and marine fauna. Also discussed are some of the environmental implications of oil spills.

o **Environmental assessment of the Alaskan continental shelf: interim Lower Cook Inlet synthesis report**, Science Applications, Inc., Boulder, Colorado, for OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, December 1977, 169 pp. Available free, on request through OCSEAP Publications, Boulder, CO 80303, (303) 499-1000, ext. 6551.

This report contains the proceedings of the Lower Cook Inlet synthesis meeting in Anchorage, Alaska on November 16-18, 1976. The purpose of the meeting was to present environmental information of the area. Included are summaries of new technical data and discussions of the data presented on climate, regional setting, sea ice, ocean chemistry and Cook Inlet's biotic resources. Also given are conceptual models of the physical-chemical behavior of oil slicks and toxic metals and a listing of research needs and information gaps closely identified with offshore hydrocarbon development.

o **Climatic atlas of the outer continental shelf waters and coastal regions of Alaska**, National Climatic Center, National Oceanic and Atmospheric Administration and Arctic Environmental Information and Data Center, Anchorage, Alaska, 1977, 1,291 pp., 3 volumes. Available in Alaska from Arctic Environmental Information and Data Center, 707 A Street, Anchorage, AK 99501, \$5.00 per volume, plus handling and postage.

This atlas summarizes the present knowledge of climatological conditions in three Alaskan marine and near coastal areas that are important to resource development of the outer continental shelf—The Gulf of Alaska (Vol. 1), The Bering Sea (Vol. 2) and The Chukchi and Beaufort Seas (Vol. 3). The maps, graphs and tables in the atlas present a detailed climatic profile of the marine and coastal regions of Alaska. Statistical means, extremes and percent frequency of occurrence of threshold values are given for wind, visibility, present weather, sea level pressure, temperature, clouds, waves and other supplemental information. Data were derived from 600,000 surface marine observations and 2 million observations for 49 coastal land stations.

o **Environmental assessment of the Alaskan continental shelf: Bouchard #65 oil spill in ice covered waters of Buzzards Bay, ARC TEC, Inc., for OCSEAP Publications, National Oceanic and Atmospheric Administration, Boulder, Colorado, December 1977, 75 pp. Available free, on request through OCSEAP Publications, NOAA, Boulder, CO 80303, (303) 499-1000, ext. 6551.**

This report describes an oil spill that occurred in an area of active ice in Buzzards Bay, Massachusetts on January 28, 1977. This was one of the few documented oil spills in dynamic ice-covered waters and the report attempts to extrapolate how the conditions of the Buzzards Bay experience might apply to the Alaskan coast. The descriptions include Buzzards Bay's environmental setting, the technical approach used for investigating the spill and its impact, the physical and chemical behavior of the spilled oil, comparisons of the 1977 oil spill in ice with two other Buzzards Bay oil spills that occurred in open water, the application of the spill to possible spills in Alaskan coastal waters and the methods and devices used to recover the spilled oil. Conclusions and recommendations are given.

## SUMMARY REPORTS

### Description

In accordance with Section 252.4 of 30 CFR, the Geological Survey has proposed to prepare and distribute a set of Summary Reports covering single states or multi-state regions affected by OCS lease sale activities. The reports will differ in context and coverage to account for regional needs; however, their basic format will be compatible to permit regional comparisons and national data aggregations. The proposed outline for the Summary Reports includes:

- o geological and geophysical data summaries,
- o oil and gas resource and reserve estimates,
- o projections of the magnitude and timing of development,
- o descriptions of oil and gas transportation strategies
- o descriptions of the nature and location of nearshore and onshore facilities.

### Documents

To date, none have been prepared for the Alaska Area.

## GLOSSARY

- Block** - Term for a leasing unit of approximately 9 square miles (2,304 hectares or 5,760 acres) (see Tract).
- Call Area** - Set of tracts on which nominations and comments are received prior to designation of a proposed sale area.
- Data** - Facts and statistics or samples which have not been analyzed or processed.
- Development** - Activities which take place following discovery of minerals in paying quantities, including but not limited to geophysical activity, drilling, platform construction and operation of all directly related onshore support facilities and which are for the purpose of ultimately producing the minerals discovered.
- Drainage Tract** - Tract from which oil and gas may be removed by drilling on an adjacent tract because of the migration of the oil or gas due to a passive reduction caused by nearby producing wells.
- Established Area** - Proven areas that have been leased and have undergone exploration and development of oil or natural gas.
- Exploration** - The process of searching for minerals. Exploration activities include: (1) geophysical surveys where magnetic, gravity, seismic or other systems are used to detect or imply the presence of such minerals and (2) any drilling, whether on or off known geological structures. Exploration also includes the drilling of a well in which a discovery of oil or natural gas in paying quantities is made and the drilling of any additional well after such discovery which is needed to delineate a reservoir and to enable the lessee to determine whether to proceed with development and production.
- Field** - An area underlain by one or more geologically related hydrocarbon reservoirs.
- Frontier Area** - New leasing area where no extensive exploratory drilling or development drilling has taken place.
- Geologic Hazards** - Geologic features and conditions, which if undetected may pose varying degrees of risk to oil and gas exploration and development activities.
- Identified Resources** - Specific accumulations of economic resources whose location, quality and quantity are estimated from geologic evidence supported in part by ongoing measurements.

**Interpreted Information** - Knowledge, often in the form of maps, developed by determining the geological significance of geological and geophysical data, analyzed geological information and processed geophysical information.

**OCS Orders** - Document, issued by the Director, USGS, pursuant to 30 CFR 250.11 and 250.37, that prescribes OCS development and production procedures, drilling, well abandonment, safety devices, pollution contingency plans and use of pipelines.

**Outer Continental Shelf** - All submerged lands that comprise the continental margin adjacent to the U.S. which remains subject to Federal jurisdiction and control after enactment of the Submerged Lands Act (43 USC 1301 and 1302).

**Processed Geophysical Information** - Data which have been processed. Processing involves changing the form of data to facilitate interpretation. Processing operations may include but are not limited to, applying corrections for known perturbing causes, rearranging or filtering data and combining or transforming data elements.

**Production** - Those activities which take place after the successful completion of any means for the removal of minerals, including such removal, field operations, transfer of minerals to shore, operation monitoring, maintenance and work overdrilling.

**Proprietary Data** - Geologic and geophysical data and immediate derivatives thereof which can not be released to the general public because of instructions imposed by contracts, Federal regulations or statutes.

**Reserves** - That portion of the identified resource which can be economically extracted.

**Reservoir** - An oil or gas accumulation which is separated from and not in oil or gas communication with any other such accumulation.

**Resources** - Concentration of naturally occurring solid, liquid or gaseous materials in or on the earth's crust in such form that economic extraction of the commodity is currently or potentially feasible.

**Sale Area** - Final aggregation of tracts to be leased.

**Stratigraphic Trap** - A reservoir, capable of holding oil or gas, formed from a change in the character of the reservoir rock. Such a trap is harder to locate than a structural trap because it is not readily revealed by geological or geophysical surveys.

**Structural Trap** - A reservoir capable of holding oil or gas, formed from crustal movements in the earth that fold or fracture rock strata in such a manner that oil or gas accumulating in the strata are sealed off and cannot escape. In some cases "structure" may be synonymous with structural trap.

**Structure** - In some cases synonymous with structural trap. In other instances the term may be used to indicate a displacement of rock strata lacking a trap, as where a trap is present, lacking deposits of oil or gas in commercial quantities.

**Summary Report** - Document, prepared by the Department of the Interior pursuant to 30 CFR 252.4, that is intended to inform affected state and local governments as to current OCS reserve estimates, development magnitude and timing projections, transportation planning, and general location and nature of nearshore and onshore facilities.

**Tract** - Administrative term, used during the lease sale, for individual areas of land being leased. A tract number is assigned to a block (see Block) only during the actual sale.

**Well Log** - A record of formations penetrated by a well, their depth, thickness, physical properties and, if possible, contents.

## APPENDIX A

### SUPPLEMENTAL READING

Documents described in this section are not used in any specific decisionmaking step, but are general sources of information pertaining to OCS activities.

o **DEROCS: a computer program to simulate offshore oil and natural gas development scenarios and onshore service base requirements**, P. A. Marcus, E. T. Smith, S. R. Robertson, and A. T. Wary, U.S. Geological Survey, Reston, Virginia, March 1977, 175 pp. Available as USGS open-file report No. 77-130 from RALI Program Office, U.S. Geological Survey, National Center, Mail Stop 750, Reston, VA 22092; no charge.

DEROCS (Development of Energy Resources of the Outer Continental Shelf) is a Fortran IV computer program. This report describes how DEROCS constructs OCS resource development scenarios and quantifies the requirements for and impacts of the operation of the onshore service bases necessary to support offshore oil and gas operations. The authors present two examples of program application.

o **Oil spill workshop, results of the Alaska workshop on oil spill ecological damage assessment**, MTR 7922, Conner, Dr. William G., and Dr. Philip U. Alkon, Metreck division of the MITRE Corporation, McLean, Virginia, August 1978, 419 pp. Available for review at the U.S. Environmental Protection Agency Library.

This document presents the final results of a workshop on oil spill ecological damage assessment held in Anchorage, Alaska during November 27-30, 1977. The workshop was designed to identify scientific needs and capabilities to be incorporated into a regional response plan for assessing the ecological damage from major oil spills. Results are organized in terms of workshop plenary sessions, meetings and scientific and technical panels and meetings of the workshop executive committee. A draft of this document was submitted for review and revision by the workshop coordinators and panel chairpersons.

o **Onshore facilities related to offshore oil and gas development: Factbook**, New England River Basins Commission, Boston, Massachusetts, November 1976, 422 pp. Available from the Public Information Office, New England River Basins Commission, 55 Court Street, Boston, MA 02108.

The Factbook is an encyclopedic reference on the principal onshore facilities related to offshore oil and gas development. Each facility is described in detail as are the factors that influence, and the steps involved in, siting the facility in a frontier area. Also described are the land, water, energy, transportation, labor and capital requirements and various environmental and construction impacts of each facility.

o **Onshore facilities related to offshore oil and gas development: Methodologies for OCS-related planning**, New England River Basins Commission, Boston, Massachusetts, March 1978, 151 pp. Available from the Public Information Office, New England River Basins Commission, 55 Court Street, Boston, MA 02108.

The report details a systematic approach to assist officials responsible for planning for OCS-related facilities. The approach is divided into three major methodologies: (1) estimating levels of offshore exploration and development activity; (2) estimating the number and kinds of onshore facilities required and (3) identifying and assessing the impacts of alternative sites for facilities. Each component is a series of tasks and steps, which, when successively solved, satisfies the particular methodology. Numerous examples of these tasks and steps, in addition to a user's guide, are given.

o **Planning for offshore oil development, Gulf of Alaska OCS handbook**, Kramer, L. S., V. C. Clark and G. J. Cannelos, Alaska Department of Community and Regional Affairs, Juneau, Alaska, 1978, 257 pp. Library of Congress Catalogue No. 78-52261, Alaska State Library No. HT 393.A42 A455. Information on availability may be obtained from Alaska Department of Community and Regional Affairs, Division of Community Planning, Pouch B, Juneau, AK 99811.

The purpose of this document is to clarify the nature of outer continental shelf oil and gas activity in the waters off Alaska and what these activities mean to Alaskans. It also discusses the state policies on OCS development and the cooperation and coordination needed among local and state governments so that related onshore activities will confer the most benefit and the least harm. Specific topics include leasing and exploration, development scenarios, industry profiles, facility setting, employment estimates and population and public services.

o **Socioeconomic impact of outer continental shelf oil and gas development—a bibliography**, Pattison, Malka L., 1977, 63 pp. Available from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202, no charge.

The bibliography lists reports available as of February 1977 which are concerned primarily with socioeconomic impacts of OCS oil and gas development or which contain significant discussion of the socioeconomic issues. The references are annotated for better access to the reports.

o **Source book: onshore impacts of outer continental shelf oil and gas development**, prepared by the Conservation Foundation for the American Society of Planning Officials, Chicago, Illinois, 1977, 180 pp. Available from American Society of Planning Officials, 1313 East 60th Street, Chicago, IL 60637, no charge.

This document is a supplement to a series of workshops for state and local planners on the potential onshore impacts of oil and gas development on the outer continental shelf. The source book is a structured guide to the following information: offshore oil and gas resources and extraction processes, offshore activities and related onshore facilities, onshore impacts of OCS oil and gas development and planning and management techniques available to states and communities. Sources provided include books, reports, periodicals and audiovisual information. State, Federal and regional agencies involved in OCS development and related planning are also listed, as are energy, industry and public interest groups.

## APPENDIX B

### FEDERAL DEPOSITORY LIBRARIES

Under provisions of Title 44 of the United States Code, certain libraries are designated depositories for Government publications. Through them the Federal Government documents are made available to residents of every state, the District of Columbia, Guam, Puerto Rico and the Virgin Islands. Distribution to the libraries is made by the Office of the Superintendent of Documents. The following libraries have received pre-sale Environmental Impact Statements for the Alaska Area.

#### Alaska

Juneau Memorial Library  
114 West 4th Street  
Juneau

Kodiak Public Library  
Kodiak

Kenai Community Library  
Cook and Main Streets  
Kenai

University of Alaska—  
Arctic Environmental Information and Data Center  
707 A Street  
Anchorage

University of Alaska Library  
3211 Providence Avenue  
Anchorage

Loussac Public Library  
427 F Street  
Anchorage

Fairbanks North Star Borough Library  
901 First Avenue  
Fairbanks

North Slope Borough Office  
Barrow

Village Council Office  
Nuiqsut

Village Council Office  
Kaktovik

## APPENDIX C

### GOVERNOR'S DESIGNATED OCS REPRESENTATIVES

In accordance with the Outer Continental Shelf Lands Act Amendments of 1978, the Governor of any affected state may designate an appropriate state official to receive information as designated by the Secretary. The current official Alaska state OCS contact and alternates are listed herein.

Ms. Frances A. Ulmer  
Director, Office of the Governor  
State Policy Development and Planning  
Pouch AD  
Juneau, AK 99801  
(907) 465-3512

Mr. Robert E. LeResche  
Commissioner  
Department of Natural Resources  
Pouch M  
Juneau, AK 99801