5-YEAR OCS PROGRAM

I. Alternative Schedules

A. Alternative 1 - Proposed Program (June Schedule) _____

B. Alternative 2 - DOE Production Goals _____

C. Alternative 3 - Status of CZM Programs _____

D. Alternative 4 - Availability of Environmental Information _____

E. Alternative 5 - State of California Proposal _____

F. Alternative 6 - Sensitivity of Other Resources _____

G. Alternative 7 - Availability of Technology _____

H. Alternative 8 - Transportation and Processing of Alaskan Oil and Gas _____

I. Alternative 9 - State of Alaska Proposal _____

J. Alternative 10 - No Future OCS Leasing _____

K. Alternative 11 - Addition of Hope Basin _____

L. Alternative 12 - House Select Committee on the OCS Staff Proposal _____

M. Other Modification:

1. Delay Atlantic sales for more information _____

2. Other _____

II. Technical Changes

A. Switch sale dates for #52 North Atlantic with #69 Gulf of Mexico _____

B. Consolidate sale preparation for Gulf of Mexico sales _____

C. Revise Mid-Atlantic/South Atlantic boundaries _____

D. Consolidate South Atlantic and Blake Plateau areas _____

E. Move North Aleutian Shelf northern boundary from 56° 30' north latitude to 57° north latitude _____

F. Revise Chukchi/Beaufort boundary _____

G. Other modification _____

III. Adopt Annual Nationwide Reoffering Sale ______

IV. Reschedule at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale) ______

V. Identification of environmentally preferable alternative(s)

______ alternative(s)

Heather Ross

Table 1

Characteristics of Alternative Leasing Schedules

Alternative	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	NRDC Proposal
Description	June Proposed Program	DOE Production Goals	Status of Coastal Zone Management Plans	Availability of Environmental Information	State of California Proposal	Sensitivity of Other Resources	Availability of Technology	Transportation and Processing of Alaskan Oil and Gas	State of Alaska Proposal	No Future OCS Leasing	Addition of Hope Basin	House Select Comm. on the OCS Staff Proposal	
Oil and Gas Statistics													
Total Oil & Total Gas (BBOE)*	11.443	11.766	11.443	11.443	11.046	11.376	10.913	7.576	8.259	0	11.497	15.631	6.662
Total Oil (million barrels)**	6620	6744	6620	6620	6304	6580	6200	4160	4576	0	6646	8881	3370
Total Gas (trillion cubic feet)**	28.938	30.134	28.938	28.938	26.454	28.778	28.278	20.498	22.098	0	29.108	40.5	19.754
Net Economic Value ($ billions)	74.7	77.8	74.0***	74.4***	71.1***	74.4	75.5	57.3	58.9***	0	74.9	102	53.8 ***
Maximum Acreage Offered (million acres)	32.1	29.2	32.1	32.1	28.7	28.7	29.7	27.9	29.8	0	32.7	39.1	32.2
Number of Sales	30	33	30	30	29	29	30	25	28	0	31	38	29
Number of Frontier Areas	7	4	7	7	7	6	6	2	5	0	8	7	4
Number of Exploratory Wells	2082	1730	2082	2082	2008	2070	2084	2028	2056	0	2090	2680	2333
Number of Development & Production Wells	4924	4656	4924	4924	4558	4914	4930	4424	4525	0	4928	6103	4231
Number of Platforms	547	546	547	547	532	546	547	533	536	0	548	685	550
Statistically Probable Number of Oil Spills > 10^3 bbl.	33.55	33.3	33.55	33.55	32.05	33.32	29.78	19.43	22.48	0	33.70	44.56	14.73
Estimates of Appropriations and Staff (cumulative)													
Appropriations ($ M)	376.1	878.9	873.2	867.6	862.7	860.8	866.0	813.1	862.1	416.3	895.2	947.6	850.7
Staff (FTP)	10040	10287	10142	10140	10140	10107	10140	9762	10021	5431	10131	11709	10057
Number of Sales per Region													
Atlantic	6	6	6	6	6	6	6	6	6	0	6	7	5
Gulf of Mexico	11	14	11	11	11	11	11	11	11	0	11	16	15
California	4	3	4	4	3	4	4	4	4	0	4	4	3
Alaska	9	10	9	9	9	8	9	4	7	0	10	11	6

* Billion barrels of oil equivalent.
** Resource estimates are "risked estimates," that is, the probability that no oil or gas may be found is factored into the estimates.
***The net economic value has been adjusted to reflect the loss in present value (at 10% discount) to account for delays in the economic benefits of production. These adjustments do not reflect any offsetting increases in value due to higher real prices of oil and gas realized as a result of production occurring in later years.

3/6/80

Comparison of Schedule Alternatives

Table 2

Alternative I June Proposed Program	Alternative III Status of Coastal Zone Management Plans	Alternative IV Availability of Environmental Information	Alternative V State of California Proposal	Alternative VI Sensitivity of other Resources	Alternative VII Availability of Technology	Alternative VIII Transportation and Processing of Alaskan Oil and Gas	Alternative IX State of Alaska Proposal	Alternative X No Future OCS Leasing	Alternative XI Addition of Hope Basin	Alternative XII House Select Committee on the OCS Staff Proposal	Alternative II DOE Production Goals	NRDC Proposal
1980												
A-62 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
55 Gulf of Alaska	X	X	X	X	X	X	X		X		X	X
62 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
46 Kodiak	X	X	X	X	X	X			X	X	X	X
										Gulf of Mexico		
1981												
53 Central & North California	X	X		X	X	X	X		X	X	X	
A66 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
56 South Atlantic	X	X	X	X	X	X	X		X	X	X	X
60 Cook Inlet	X	X	X	X	X	X	X		X	X	X	X
66 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
59 Mid-Atlantic	X	X	X	X	X	X	X		X	X	X	X
										57 Norton Basin		
										Gulf of Mexico		
1982												
67 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
68 Southern California	X	X	X	X	X	X	X		X	X	X	X
52 North Atlantic	X	X	X	X	X	X	X		X	X	X	
57 Norton Basin		X	X	X	X				X			X
69 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
70 St. George Basin			X	X	X				X	X	X	
		72 Gulf of Mexico								Beaufort Sea	71 Beaufort	Gulf of Mexico
										Gulf of Mexico	Gulf of Mexico	
										Navarin		

3/6/80

Comparison of Schedule Alternatives

Table 2 (cont'd)

Alternative 1 June Proposed Program	Alternative III Status of Coastal Zone Management Plans	Alternative IV Availability of Environmental Information	Alternative V State of California Proposal	Alternative VI Sensitivity of other Resources	Alternative VII Availability of Technology	Alternative VIII Transportation and Processing of Alaskan Oil and Gas	Alternative IX State of Alaska Proposal	Alternative X No Future OCS Leasing	Alternative XI Addition of Hope Basin	Alternative XII House Select Committee on the OCS Staff Proposal	Alternative II DOE Production Goals	NRDC Proposal
1983												
71 Beaufort Sea	X	X	X	X	X	X	X (land fast areas only)		X	X		X (land fast areas only)
72 Gulf of Mexico	X		X	X	X	X	X		X	X	X	X
73 California	X	X		X	X	X	X		X	X		
74 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
75 North Aleutian Shelf		X	X		X				X	X		
76 Mid-Atlantic	X	X	X	X	X	X	X		X	X	X	X
77 Gulf of Mexico*	X	X	X	X	X	X	X		X	Gulf of Mexico		
		70 St. George Basin	53 Central & Northern California				46 Kodiak			St. George Basin	Gulf of Mexico	77 Gulf of Mexico
											78 South Atlantic	53 Central & Northern California
											Gulf of Alaska	
											57 Norton	
1984												
78 South Atlantic/Blake	X	X	X	X	X	X	X		X	X		X
79 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
80 California	X	X		X	X	X	X		X	X		
81 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	X
82 North Atlantic	X	X	X	X	X	X	X		X	X	X	
83 Navarin Basin	X	X	X	X	X		X		X	X		
	70 St. George Basin		80 Southern California				57 Norton Basin			Mid-Atlantic	80 Southern California	80 Southern California
	75 North Aleutian Shelf									Gulf of Mexico	Gulf of Mexico	Gulf of Mexico
......											Beaufort Sea	
— —											St. George Basin	

3/6/80

Comparison of Schedule Alternatives

Table 2 (cont'd)

Alternative 1 June Proposed Program	Alternative III Status of Coastal Zone Management Plans	Alternative IV Availability of Environmental Information	Alternative V State of California Proposal	Alternative VI Sensitivity of other Resources	Alternative VII Availability of Technology	Alternative VIII Transportation and Processing of Alaskan Oil and Gas	Alternative IX State of Alaska Proposal	Alternative X No Future OCS Leasing	Alternative XI Addition of Hope Basin	Alternative XII House Select Committee on the OCS Staff Proposal	Alternative II DOE Production Goals	NPOC Proposal
1985												
84 Gulf of Mexico	X	X	X	X	X	X	X		X	X	X	
85 Chukchi Sea	X	X	X	X					X	X	X	
	57 Norton Basin				85 Beaufort		Hope Basin		Hope Basin			Gulf of Mexico
												52 North Atlantic (outside 100 fathoms)
												Hope Basin
												Gulf of Mexico

* = Contingency Sale
X = Sale same as in Alternative I
Blank = Modifications (e.g., deleted if not shown elsewhere)

3/6/80

PROPOSED OCS OIL AND [illegible]S LEASE SALE SCHEDULE

JUNE [illegible]79

1979[1]

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico									E		H	
55 Gulf of Alaska									E		H	
62 Gulf of Mexico									E		H	
46 Kodiak										E		
A66 Gulf of Mexico						C		D		T		
56 South Atlantic			C		D		T					
60 Cook Inlet		D			T							
66 Gulf of Mexico						C		D		T		
59 Mid-Atlantic							C		D			T
68 Southern California[2]												C
52 North Atlantic										C		D
57 Norton Basin				C							D	
70 St. George Basin							C			D		
71 Beaufort Sea										C		D

1980

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico		F		P		SC	R	N	S			
55 Gulf of Alaska			F		P		SC	R	N	S		
62 Gulf of Mexico		F				P		SC	R	N	S	
46 Kodiak	H				F		P		SC	R	N	S
53 Central N. Calif.				E		H				F		P
A66 Gulf of Mexico							E		H			F
56 South Atlantic							E		H			
60 Cook Inlet								E		H		
66 Gulf of Mexico							E		H			F
59 Mid-Atlantic											E	
67 Gulf of Mexico	C		D		T							
68 Southern California[2]		D			T							
52 North Atlantic				T								
57 Norton Basin		T										
69 Gulf of Mexico								C		D		T
70 St. George Basin		T										
71 Beaufort Sea			T									
73 California											C	
75 No. Aleutian Shelf					C			D				T

1981

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
53 Central N. Calif.		SC	R	N	S							
A66 Gulf of Mexico		P		SC	R	N	S					
56 South Atlantic	F		P		SC	R	N	S				
60 Cook Inlet		F		P		SC	R	N	S			
66 Gulf of Mexico					P		SC	R	N	S		
59 Mid-Atlantic	H				F		P		SC	R	N	S
67 Gulf of Mexico			E		H			F		P		SC
68 Southern California[2]					E		H				F	
52 North Atlantic							E		H			
57 Norton Basin						E				H		
69 Gulf of Mexico										E		H
70 St. George Basin										E		
71 Beaufort Sea												E
72 Gulf of Mexico	C		D		T							
73 California	D			T								
74 Gulf of Mexico							C		D		T	
76 Mid-Atlantic					C		D			T		
77 Gulf of Mexico[3]										C		D
78 So. Atlantic/Blake			C			D				T		
80 California										C		D
83 Navarin Basin						C			D			
85 Chukchi Sea							C			D		

1982

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
67 Gulf of Mexico	R	N	S									
68 Southern California[2]	P		SC	R	N	S						
52 North Atlantic	F		P		SC	R	N	S				
57 Norton Basin		F		P		SC	R	N	S			
69 Gulf of Mexico			F		P		SC	R	N	S		
70 St. George Basin	H				F		P		SC	R	N	S
71 Beaufort Sea			H				F		P		SC	R
72 Gulf of Mexico			E		H			F		P		SC
73 California				E		H				F		P
74 Gulf of Mexico									E		H	
75 No. Aleutian Shelf								E			H	
76 Mid-Atlantic										E		H
77 Gulf of Mexico[3]		T										E
78 So. Atlantic/Blake											E	
79 Gulf of Mexico	C		D		T							
80 California			T									
81 Gulf of Mexico					C		D		T			
82 North Atlantic				C		D			T			
83 Navarin Basin	T											
84 Gulf of Mexico											C	
85 Chukchi Sea		T										

1983

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
71 Beaufort Sea	N	S										
72 Gulf of Mexico	R	N	S									
73 California		SC	R	N	S							
74 Gulf of Mexico		F		P		SC	R	N	S			
75 No. Aleutian Shelf			F		P		SC	R	N	S		
76 Mid-Atlantic				F		P		SC	R	N	S	
77 Gulf of Mexico[3]		H			F		P		SC	R	N	S
78 So. Atlantic/Blake		H				F		P			R	N
79 Gulf of Mexico			E		H			F		P		SC
80 California					E		H				F	
81 Gulf of Mexico							E		H			F
82 North Atlantic									E		H	
83 Navarin Basin										E		
84 Gulf of Mexico	D		T									
85 Chukchi Sea												E

1984

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
78 So. Atlantic/Blake	S											
79 Gulf of Mexico	R	N	S									
80 California	P		SC	R	N	S						
81 Gulf of Mexico		P		SC	R	N	S					
82 North Atlantic			F		P		SC	R	N	S		
83 Navarin Basin	H				F		P		SC	R	N	S
84 Gulf of Mexico	E		H			F		P		SC	R	N
85 Chukchi Sea			H				F		P		SC	R

1985

SALE AREA	J	F	M	A	M	J	J	A	S	O	N	D
84 Gulf of Mexico	S											
85 Chukchi Sea	N	S										

C - Call for Nominations
D - Nominations Due
T - Tentative Tract Selection
E - Draft Environmental Statement
H - Public Hearing

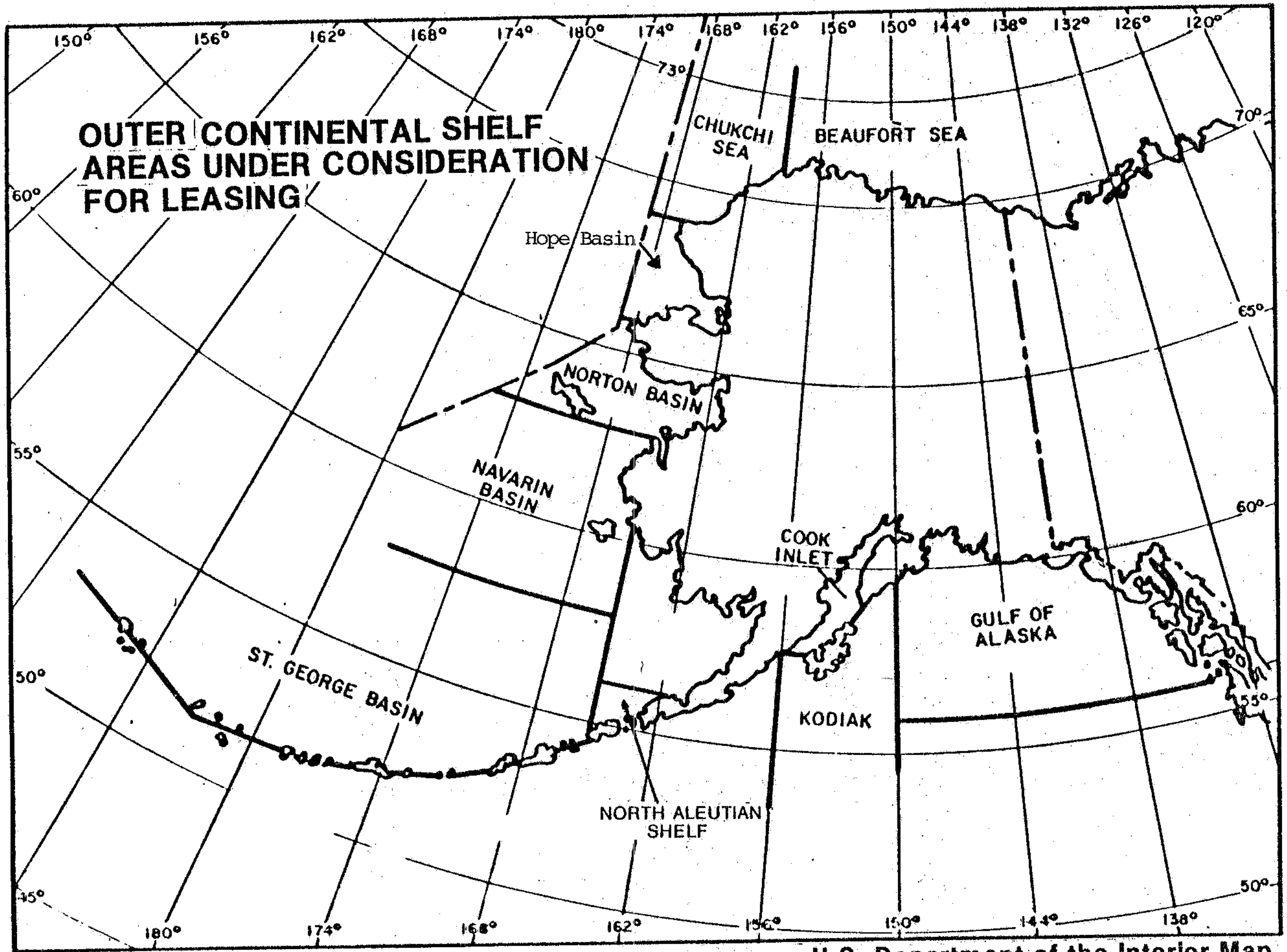
F - Final Environmental Statement
P - Proposed Notice of Sale
SC - State Comments Due
R - Energy Review
N - Notice of Sale

S - Sale

[1] The 1979 Column is included to indicate the pre-lease actions required for OCS lease sales scheduled for the period 3/80 - 2/85. Sales scheduled for dates in the latter half of 1979 include:
48 So. California June 1979
58 Gulf of Mexico July 1979
42 North Atlantic Oct. 1979
58A Gulf of Mexico Nov. 1979
Beaufort Sea Dec. 1979

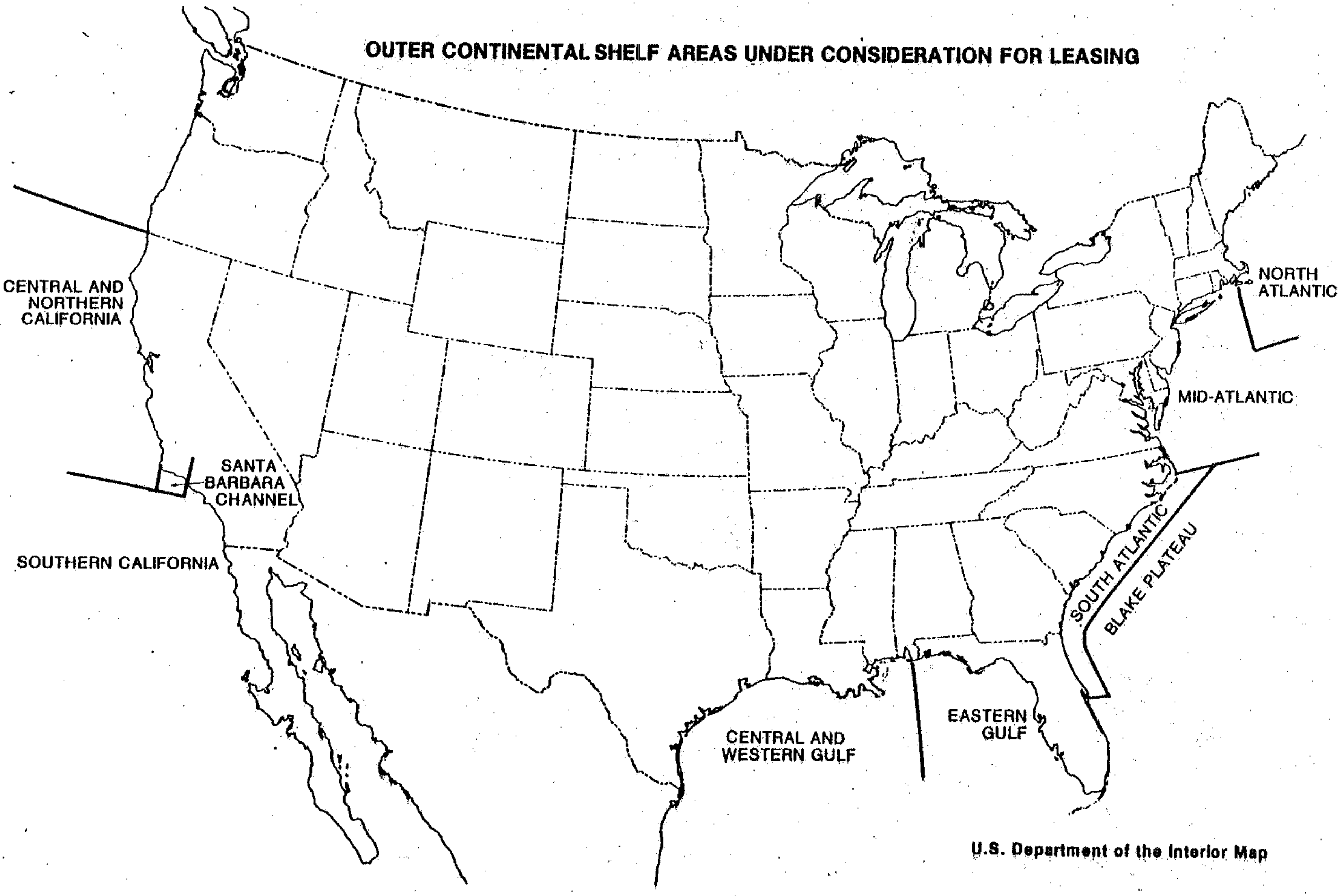
[2] Includes Santa Barbara Channel.

[3] This sale has been included in this schedule in order that planning may be commenced. Subsequent events (e.g., deletion of another sale from this schedule) will determine whether this sale will be held as indicated, held at some other time during the 5-year period, deleted or postponed until after February 1985.



U.S. Department of the Interior Map

OUTER CONTINENTAL SHELF AREAS UNDER CONSIDERATION FOR LEASING



U.S. Department of the Interior Map

I. Alternative Schedules

A. Alternative 1 - Proposed Program (June Schedule) ______

B. Alternative 2 - DOE Production Goals ______

C. Alternative 3 - Status of CZM Programs . ______

D. Alternative 4 - Availability of Environmental Information ______

E. Alternative 5 - State of California Proposal ______

F. Alternative 6 - Sensitivity of Other Resources ______

G. Alternative 7 - Availability of Technology ______

H. Alternative 8 - Transportation and Processing of Alaskan Oil and Gas ______

I. Alternative 9 - PART OF THE State of Alaska Proposal - MOVE KODIAK TO 4-83 CDA

J. Alternative 10 - No Future OCS Leasing ______

K. Alternative 11 - Addition of Hope Basin in 1985 CDA

L. Alternative 12 - House Select Committee on the OCS Staff Proposal ______

M. Other Modification:

1. Delay Atlantic sales for more information ______

2. Other - FOOTNOTE CHUKCHI SALE: WILL BE HELD IF TECHNOLOGY IS AVAILABLE FOR EXPLORATION & DEVELOPMENT CDA

II. Technical Changes

A. Switch sale dates for #52 North Atlantic with #69 Gulf of Mexico CDA

B. Consolidate sale preparation for Gulf of Mexico sales CDA

C. Revise Mid-Atlantic/South Atlantic boundaries CDA

D. Consolidate South Atlantic and Blake Plateau areas CDA

Reject E. Move North Aleutian Shelf northern boundary from 56° 30' north latitude to 57° north latitude ______

F. Revise Chukchi/Beaufort boundary CDA

G. Other modification - No contingency sale CDA

Cecil D. Andrus

III. Adopt Annual Nationwide Reoffering Sale CDA

IV. Reschedule at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale) CDA

V. Identification of environmentally preferable alternative(s)

VIII, IX & X alternative(s) CDA

Cecil D. Andrus
3-20-80

SUMMARY OF RECOMMENDATIONS

5-Year OCS Leasing Program

Energy and Minerals

Alternative I

1980

A62 Gulf of Mexico
55 Gulf of Alaska
62 Gulf of Mexico
46 Kodiak

1981

53 Central & Northern California
A66 Gulf of Mexico
56 South Atlantic
60 Cook Inlet
66 Gulf of Mexico
59 Mid-Atlantic

1982

67 Gulf of Mexico
68 Southern California
52 North Atlantic
57 Norton Basin
69 Gulf of Mexico
70 St. George Basin

1983

71 Beaufort Sea
72 Gulf of Mexico
73 California
74 Gulf of Mexico
75 North Aleutian Shelf
76 Mid-Atlantic
77 Gulf of Mexico*

1984

78 South Atlantic/Blake
79 Gulf of Mexico
80 California
81 Gulf of Mexico
82 North Atlantic
83 Navarin Basin

1985

84 Gulf of Mexico
85 Chukchi Sea

* Contingency Sale

Indian Affairs

Alternative III

1980

A62 Gulf of Mexico
55 Gulf of Alaska
62 Gulf of Mexico
46 Kodiak

1981

53 Central & Northern California
A66 Gulf of Mexico
56 South Atlantic
60 Cook Inlet
66 Gulf of Mexico
59 Mid-Atlantic

1982

67 Gulf of Mexico
68 Southern California
52 North Atlantic
69 Gulf of Mexico

1983

71 Beaufort Sea
72 Gulf of Mexico
73 California
74 Gulf of Mexico
76 Mid-Atlantic
77 Gulf of Mexico*

1984

78 South Atlantic/Blake
79 Gulf of Mexico
80 California
81 Gulf of Mexico
82 North Atlantic
83 Navarin Basin
70 St. George Basin
75 North Aleutian Shelf

1985

57 Norton Basin
84 Gulf of Mexico
85 Chukchi Sea

Fish Wildlife and Parks

Alternative VI (MODIFIED)

1980

A62 Gulf of Mexico
55 Gulf of Alaska
62 Gulf of Mexico
46 Kodiak

1981

53 Central & Northern California
A66 Gulf of Mexico
56 South Atlantic
60 Cook Inlet
66 Gulf of Mexico
59 Mid-Atlantic

1982

67 Gulf of Mexico
68 Southern California
52 North Atlantic
57 Norton Basin
69 Gulf of Mexico
70 St. George Basin DELETE

1983

71 Beaufort Sea
72 Gulf of Mexico
73 California
74 Gulf of Mexico
76 Mid-Atlantic
77 Gulf of Mexico*

1984

78 South Atlantic/Blake
79 Gulf of Mexico
80 California
81 Gulf of Mexico
82 North Atlantic
83 Navarin Basin

1985

84 Gulf of Mexico
85 Chukchi Sea

Land & Water Resources

Alternative I (MODIFIED)

1980

A62 Gulf of Mexico
55 Gulf of Alaska
62 Gulf of Mexico
46 Kodiak

1981

53 Central & Northern California
A66 Gulf of Mexico
56 South Atlantic
60 Cook Inlet
66 Gulf of Mexico
59 Mid-Atlantic

1982

67 Gulf of Mexico
68 Southern California
52 North Atlantic
57 Norton Basin
69 Gulf of Mexico
70 St. George Basin

1983

71 Beaufort Sea
72 Gulf of Mexico
73 California
74 Gulf of Mexico
75 North Aleutian Shelf DELETE
76 Mid-Atlantic
77 Gulf of Mexico*

1984

78 South Atlantic/Blake
79 Gulf of Mexico
80 California
81 Gulf of Mexico
82 North Atlantic
83 Navarin Basin

1985

84 Gulf of Mexico
85 Chukchi Sea
ADD: HOPE BASIN

DELAY

* Contingency Sale

Policy, Budget and Administration

Alternative XI

1980

A62 Gulf of Mexico
55 Gulf of Alaska
62 Gulf of Mexico
46 Kodiak

1981

53 Central & Northern California
A66 Gulf of Mexico
56 South Atlantic
60 Cook Inlet
66 Gulf of Mexico
59 Mid-Atlantic

1982

67 Gulf of Mexico
68 Southern California
52 North Atlantic
57 Norton Basin
69 Gulf of Mexico
70 St. George Basin

1983

71 Beaufort Sea
72 Gulf of Mexico
73 California
74 Gulf of Mexico
75 North Aleutian Shelf
76 Mid-Atlantic
77 Gulf of Mexico*

1984

78 South Atlantic/Blake
79 Gulf of Mexico
80 California
81 Gulf of Mexico
82 North Atlantic
83 Navarin Basin

1985

84 Gulf of Mexico
85 Chukchi Sea
Hope Basin

I. Alternative Schedules

A. Alternative 1 - Proposed Program (June Schedule)*	EM
B. Alternative 2 - DOE Production Goals	
C. Alternative 3 - Status of CZM Programs	IA
D. Alternative 4 - Availability of Environmental Information	
E. Alternative 5 - State of California Proposal	
F. Alternative 6 - Sensitivity of Other Resources	FW
G. Alternative 7 - Availability of Technology	
H. Alternative 8 - Transportation and Processing of Alaskan Oil and Gas	
I. Alternative 9 - State of Alaska Proposal	
J. Alternative 10 - No Future OCS Leasing	
K. Alternative 11 - Addition of Hope Basin	PBA
L. Alternative 12 - House Select Committee on the OCS Staff Proposal	
M. Other Modification:	
1. Delay Atlantic sales for more information	
2. Other	

II. Technical Changes

A. Switch sale dates for #52 North Atlantic with #69 Gulf of Mexico	EM, FW, PBA, LW
B. Consolidate sale preparation for Gulf of Mexico sales	EM, FW, LW, PBA
C. Revise Mid-Atlantic/South Atlantic boundaries	EM, FW, LW, PBA
D. Consolidate South Atlantic and Blake Plateau areas	EM, FW, IA, PBA, LW
E. Move North Aleutian Shelf northern boundary from 56° 30' north latitude to 57° north latitude	EM, LW, PBA (FW-No)
F. Revise Chukchi/Beaufort boundary	EM, FW, LW, PBA
G. Other modification	EM-Delete contingency sale from option.

*LW proposed modification of alternative 1 - see specific comments.

III. Adopt Annual Nationwide Reoffering Sale	EM, FW, IA, LW, PBA
IV. Reschedule at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale)	EM, FW, IA, LW, PBA
V. Identification of environmentally preferable alternative(s)	PBA (VIII, IX & X) alternative(s) EM (IX) LW (IX)

Table 3. (continued) Leasing Schedule Alternatives

Alternative VII	Alternative VIII	Alternative IX	Alternative X	Alternative XI	Alternative XII
1980	**1980**	**1980**	**1980**	**1980**	**1980**
A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico	No action	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	Gulf of Mexico A62 Gulf of Mexico 62 Gulf of Mexico 46 Kodiak
1981	**1981**	**1981**	**1981**	**1981**	**1981**
53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	No action	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	Gulf of Mexico 53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 57 Norton Basin 59 Mid-Atlantic
1982	**1982**	**1982**	**1982**	**1982**	**1982**
67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 70 St. George Basin	67 Gulf of Mexico 68 Southern California 52 North Atlantic 69 Gulf of Mexico	67 Gulf of Mexico 68 Southern California 52 North Atlantic 69 Gulf of Mexico	No action	67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 70 St. George Basin	Beaufort Sea 67 Gulf of Mexico 68 Southern California Gulf of Mexico 52 North Atlantic Navarin Basin 69 Gulf of Mexico 70 St. George Basin
1983	**1983**	**1983**	**1983**	**1983**	**1983**
71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico*	71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 76 Mid-Atlantic 77 Gulf of Mexico*	46 Kodiak 71 Beaufort Sea (includes landfast ice areas only) 72 Gulf of Mexico 73 California 74 Gulf of Mexico 76 Mid-Atlantic 77 Gulf of Mexico*	No action	71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico*	71 Beaufort Sea 72 Gulf of Mexico 73 California St. George Basin 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico
1984	**1984**	**1984**	**1984**	**1984**	**1984**
78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin	78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic	57 Norton Basin 78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin	No action	78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin	78 South Atlantic/Blake 79 Gulf of Mexico Mid-Atlantic 80 California 81 Gulf of Mexico Gulf of Mexico 82 North Atlantic 83 Navarin Basin
1985	**1985**	**1985**	**1985**	**1985**	**1985**
84 Gul[illegible] Mexico 85 Beau[illegible]t Sea	84 Gulf of Mexico	84 Gulf of Mexico Hope Basin	No action	84 Gulf of Mexico 85 Chukchi Sea Hope Basin	84 Gulf of [illegible]o 85 Chukchi [illegible]

Table 3. Leasing Schedule Alternatives

Alternative I	Alternative II	Alternative III	Alternative IV	Alternative V	Alternative VI
1980	**1980**	**1980**	**1980**	**1980**	**1980**
A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak	A62 Gulf of Mexico 55 Gulf of Alaska 62 Gulf of Mexico 46 Kodiak
1981	**1981**	**1981**	**1981**	**1981**	**1981**
53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	A66 Gulf of Mexico 53 Central & Northern California 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic	53 Central & Northern California A66 Gulf of Mexico 56 South Atlantic 60 Cook Inlet 66 Gulf of Mexico 59 Mid-Atlantic
1982	**1982**	**1982**	**1982**	**1982**	**1982**
67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 70 St. George Basin	67 Gulf of Mexico 69 Gulf of Mexico Gulf of Mexico 52 North Atlantic 68 Southern California 71 Beaufort Sea 70 St. George Basin	67 Gulf of Mexico 68 Southern California 52 North Atlantic 69 Gulf of Mexico	67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 72 Gulf of Mexico	67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 70 St. George Basin	67 Gulf of Mexico 68 Southern California 52 North Atlantic 57 Norton Basin 69 Gulf of Mexico 70 St. George Basin
1983	**1983**	**1983**	**1983**	**1983**	**1983**
71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico*	72 Gulf of Mexico 74 Gulf of Mexico Gulf of Mexico 76 Mid-Atlantic 78 South Atlantic Gulf of Alaska 57 Norton Basin	71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 76 Mid-Atlantic 77 Gulf of Mexico*	71 Beaufort Sea 73 California 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico* 70 St. George Basin	53 Central & Northern California 71 Beaufort Sea 72 Gulf of Mexico 74 Gulf of Mexico 75 North Aleutian Shelf 76 Mid-Atlantic 77 Gulf of Mexico*	71 Beaufort Sea 72 Gulf of Mexico 73 California 74 Gulf of Mexico 76 Mid-Atlantic 77 Gulf of Mexico*
1984	**1984**	**1984**	**1984**	**1984**	**1984**
78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin	79 Gulf of Mexico 81 Gulf of Mexico Gulf of Mexico 82 North Atlantic 80 Southern California Beaufort Sea St. George Basin	78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin 70 St. George Basin 75 North Aleutian Shelf	78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin	78 South Atlantic/Blake 79 Gulf of Mexico 80 Southern California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin	78 South Atlantic/Blake 79 Gulf of Mexico 80 California 81 Gulf of Mexico 82 North Atlantic 83 Navarin Basin
1985	**1985**	**1985**	**1985**	**1985**	**1985**
84 Gulf of Mexico 85 Chukchi Sea	84 Gulf of Mexico 85 Chukchi Sea	57 Norton Basin 84 Gulf of Mexico 85 Chukchi Sea	84 Gulf of Mexico 85 Chukchi Sea	84 Gulf of Mexico 85 Chukchi Sea	84 Gulf of Mexico 85 Chukchi Sea

* Contingency Sale

III. Analysis of Alternatives

A. Introduction

Alternative OCS oil and gas leasing schedules have been developed for Secretarial consideration as a result of the section 18 consultation, the process conducted under NEPA, the establishment of production goals by the Department of Energy, a change in the period of time covered by the 5-year program, and the January 1980 report by the House Select Committee on the OCS, Offshore Oil and Gas: The Five-Year Leasing Program and Implementation of the Outer Continental Shelf Lands Act Amendments of 1978 (Table 3).

The June proposed program, Alternative I, serves as the core alternative. Modifications to it address the following issues: DOE production goals; status of coastal zone management programs; availability of environmental information; concerns expressed by the State of California; sensitivity of other resources; availability of technology; transportation and processing of Alaskan oil and gas; concerns expressed by the State of Alaska; no future OCS leasing; addition of Hope Basin to the June proposed program; and concerns raised by the House Select Committee on the OCS.

Ten alternatives were developed for the ES and two others, XI and XII, have been subsequently prepared. Alternative XI, which adds a Hope Basin sale to the proposed program, was not specifically discussed in the FES but the environmental effects of leasing in Hope Basin were fully analyzed under Alternative IX in the FES and thus it falls within the range of alternatives in the FES. Alternative XII is the accelerated OCS schedule proposed by the staff of the House Select Committee on the OCS, and the staff report states they believe that to the extent their recommendations are adopted, the Department will be required to prepare a supplemental ES.

The discussion of each of the alternatives is organized in the following manner: (1) description of the alternative; (2) a table illustrating characteristics and statistical factors associated with the alternative; (3) a table showing estimates of appropriations and staff for the alternative; and (4) a discussion of the benefits and costs of the alternative.

Where possible, individual factors on the tables illustrating the characteristics of the alternative have been ranked with those of the other alternatives, and a numerical rating was assigned on a scale of 1 - 12 since there are twelve alternatives. A rating of one reflects the highest rating in all cases. Note that a rating of one is not always the most desirable rating (e.g., 1 = greatest oil spill potential). In cases where two or more alternatives have identical characteristics, they were given equal ratings.

F. Future Actions

Subsection 18(d)(2) of the OCS Lands Act, as amended, requires that the Secretary of the Interior submit the proposed leasing program to the President and the Congress, together with any comments received, at least 60 days prior to program approval. This submission must include reasons why any recommendations on the proposed program of the Attorney General or a State or local government were not accepted. A separate letter consistent with these requirements will be prepared for transmittal to the President and the Congress pursuant to the Secretary's decision on the proposed final program.

DOE's simulation model estimated the numbers of small, medium, and large fields that would likely be found for each lease sale in a given province. Each potential field that its simulation model "found" was evaluated on its economic merits to determine whether the field was likely to be produced. DOE evaluated each field independently, and thereby did not consider the possibility that several smaller reservoirs found close together in a high cost area might be developed. It should be stressed once again that assumptions used to estimate the resources to be recovered from a prospective basin are highly uncertain.

Gas production in Alaska. The GS estimated that gas would be produced wherever it was found in Alaska. DOE, however, only expected gas production to take place in the Cook Inlet and the Beaufort Sea. DOE expects production to occur in the Cook Inlet because of the existing gas transportation infrastructure, including a pipeline to Anchorage and an LNG terminal at Nikiski. Production from the Beaufort Sea was expected because it was assumed that the Alaskan Highway Gas Pipeline would be available. Given the price assumptions used at the time the forecast was made, DOE did not expect gas production from other provinces to be profitable enough to warrant investment in transportation facilities.

The GS estimated that 8.72 trillion cubic feet of gas would be produced in those provinces in which DOE expected no gas production to occur. This is clearly one reason why the GS gas estimates are so much higher than DOE's production goals.

Revised GS recoverable resource estimates. The recoverable resource estimates used are the product of continuous updating and revision undertaken by the GS. The production estimates were based on the latest revisions and differ from those provided to DOE in late 1978. These new estimates, which reflect more recent thinking and scientific evidence, are somewhat higher overall than the original estimates provided DOE.

Across the entire OCS, the new recoverable resource estimates are 9.6% higher for oil and 11.8% higher for gas. For those provinces included in the proposed 5-year leasing schedule the changes are 10.6% for oil and 18.4% for gas. These moderate increases mask considerable changes in particular provinces. The GS has substantially increased its estimate of recoverable resources for some areas, notably Navarin, and substantially decreased its estimate for other areas, notably the Central Atlantic and the Gulf of Alaska.

Had DOE conducted its OCS production goals analysis using the newly revised GS estimates, it probably would have arrived at somewhat higher production goals. However, for DOE to await these revisions would have deprived the development of the 5-year leasing program of the advice and analysis provided by DOE in late 1978 and early 1979.

By relating resources to acreage evaluated, this function, a logistic or S-shaped curve, results in substantially lower estimates of the percentage of resources to be found as a result of most sales in the OCS 5-year leasing program than the 20% percentage assumed by the GS. The difference between the GS and DOE production estimating techniques is particularly evident for large frontier areas, notably those in Alaska. For example, under the DOE yield assumption only 6.13% of the recoverable resources for the St. George province would be found in the first lease sale in the area. Using the most recent estimates of recoverable resources, this would mean about 98 million barrels of oil would be located on tracts in the first sale compared to 320 million barrels estimated by the GS.

Assumptions about recoverable resources. The GS assumed that all of the recoverable resources of an OCS province would be discovered and produced. Similarly, if each lease sale was presumed to result in 20% of the recoverable resource being discovered, the GS assumed that all of this resource would also be produced.

The GS applied the same recovery factor to the resources in place for all of a particular type of geological province. Under this approach, the recoverable resources in each province do not depend on the geographic location of the province. However, a smaller reservoir which would be developed in a lower cost OCS area would probably not be developed in a high cost area such as the Beaufort Sea. While one would expect to see, on average, produced resources approximate the recoverable resource estimates in lower cost OCS provinces, some divergence between potential recoverable resources and ultimate production is likely to occur in high cost areas.

The GS estimates of undiscovered recoverable resources are based on hydrocarbon yields from known producing basins and estimates of volumes of sediment potentially rich in hydrocarbons in prospective basins. The hydrocarbon yields are based on the technology and cost/price relationships that existed in the known producing basins at the time that estimates are made. The volumes of sediment available for entrapment of hydrocarbons are made without information on the size or numbers of structures/traps that may exist in the prospective basins.

The DOE evidently reduced the recoverable resources estimates by taking into account prospective basin specific economics and structure size distributions. If adjustments in the GS Circular 725 estimates were to account for prospective basin specific economics, GS estimates that it would probably result in reductions in the order of 10-20% in the recoverable resource estimates. Any further adjustment for structure size distribution would be very difficult. Analogous basins, which were used by DOE to predict the size of fields to be discovered in frontier areas, do not necessarily make good analogs for structure size. A good deal of seismic interpretation would be required which, to our knowledge, does not exist.

° The GS estimate of gas production is higher, in part, because the GS assumed that gas production would occur in all Alaskan provinces. DOE assumed that the absence of existing and planned transportation systems would probably present a barrier to the development of gas resources in a number of Alaskan provinces. DOE assumed Alaskan gas production would take place only in the Beaufort Sea and the Cook Inlet.

° The GS based its production projections on more recent estimates of recoverable resources for the OCS than were available to DOE at the time it made its estimates. For those provinces where OCS sales are planned, the increased recoverable resource estimates are 10.6% higher for oil and 18.4% higher for gas. Additionally, major changes have occurred in the province ranking by resource potential.

An elaboration on the above points follows.

Discovery assumptions. The GS estimates were prepared assuming that 20% of the recoverable resource estimate would be produced from each lease sale in a frontier province. For those provinces where there is substantial drilling experience (e.g., Gulf of Mexico), projections were made in light of this experience.

The uncertainties involved in making sale-specific projections of resources and production at this early stage of the lease sale planning process are very large. The specific tracts to be offered in a particular sale are unknown and specific resource data for such tracts are limited. Consequently, the GS felt that it was advisable to make a general assumption on the percentage of resources to be developed in each frontier sale.

In certain areas where large, readily identifiable structures are located, it is reasonable to assume that a major portion of the resources will be discovered and developed in the early sales. However, in other areas where smaller, less defined structures exist, the major portion of the resources will probably not be discovered and developed until after several sales are held. Of course, it should be mentioned that some very large structures, such as the Destin Dome in the Gulf of Mexico, have not been found to contain hydrocarbons.

As a result of these existing uncertainties, the GS decided that a reasonable rule-of-thumb was that on the average, five sales would be required to lease the recoverable resources in a basin. Furthermore, discovery would proceed uniformly with 20% of the basin's recoverable resources assumed to be developed as a result of each sale in a frontier area.

The DOE assumed a complex mathematical relationship between the proportion of acreage leased and the amount of resources that would be discovered as a result of a particular lease sale. The mathematical function was developed on the basis of intuitive conceptions and anecdotal evidence rather than an empirically derived statistical relationship.

-- The policy principle underlying DOE's production goals is to seek increased OCS production in order to decrease U.S. energy imports. All economic production possible, given non-market constraints, is desirable under this principle. 2/ DOE concluded that "a doubling of the OCS production forecast for the maximum production levels under the average leasing program could replace only about 60 percent of the hydrocarbons forecast to be imported in 1990...and even the most aggressive OCS leasing program could not be expected to cause a domestic surplus of petroleum." 3/

The proposed 5-year leasing program is not expected to exceed DOE's production goals when examined using comparable data and estimating techniques. Further, even if the leasing program were to exceed the numerical production goal, it would be consistent with national energy policy.

2. Discussion

The divergence between the two sets of production estimates should not be taken as evidence of a substantial difference of opinion as to the production that is desirable to be achieved by the 5-year OCS leasing program or, more importantly, the rate of leasing that will best promote the public interest. Both Departments seek an accelerated leasing schedule which can be achieved in an environmentally acceptable manner. Predicting production of oil and gas, particularly in frontier areas, cannot be done with precision. Estimates of future production on the OCS are, in reality, educated guesses. Making these educated guesses involves the application of several variables, the values of which are also highly uncertain. To a large extent the difference between the DOE goals and the GS production estimates is attributable to different assumptions applied to a common set of data.

The difference between the DOE production estimates and the GS estimates presented in the final ES is attributable to the following four factors:

° DOE and GS applied different assumptions about the rate of petroleum discovery that would result from each lease sale. The GS assumed that 20% of the recoverable resource estimate would be produced from each of five lease sales in a frontier province. DOE assumed a logistic or S-shaped curve relationship between the proportion of acreage leased and the percent of resources that would be discovered. There is at present no empirical basis for projecting with any precision what the relationship between acres leased and production realized may be in untested frontier areas.

° The GS and the DOE used different approaches in determining the amount of resources which could be economically produced. The GS relied upon past history and experience for its assumptions pertaining to economics and technology. These assumptions were used in estimating the undiscovered recoverable resources in each basin. The DOE, on the other hand, applied a complex model to the GS estimates of recoverable resources that established costs and economic production for individual 100,000-acre blocks in each OCS region.

2/ Ibid.

3/ Ibid.

E. Comparison of OCS Production Estimates

1. Introduction

The DES, FES and this document contain estimates of oil and gas production associated with alternative leasing schedules. These estimates, developed by the Geological Survey (GS), differ markedly, as shown below, from those developed and reported in earlier proposals for the 5-year leasing program. The earlier estimates were prepared using data and analysis employed by the Department of Energy (DOE) in its preparation of final OCS production goals. 1/

Production Estimates - DOE Basis	Oil (million bbl.)	Gas (trillion cu. ft.)
Proposed 5-Year Leasing Program	2600	6.7
DOE Proposed Lease Schedule/Production Goals	3000	7.1
Production Estimates - GS Basis		
Alternative I (Proposed 5-Year Leasing Schedule)	6600	29.0
Alternative II (DOE Production Goals)	6700	30.0

It is important to understand both the reasons for these differences and their relevance to U.S. energy policy as reflected in the 5-year leasing program, and thus this section discusses the four primary causes of the divergence between DOE and GS estimates. These are differences in the technical methods used in estimating future production and differences in the resource estimates rather than policy differences.

At first glance, one might conclude that several of the 5-year leasing programs set forth (Alternative I and variations) with production of about 6600 million barrels of oil and about 29 trillion cubic feet of gas far exceed the DOE production goals established in June 1979 which call for about 3000 million barrels of oil and about 7.1 trillion cubic feet of gas. This would imply that the 5-year leasing program could be substantially curtailed and still achieve DOE's production goals.

That this is not the case can be seen from three facts:

-- On the basis of the estimates prepared in June using DOE's analysis, the proposed 5-year leasing program would provide about 87% of the oil production goal and 94% of the gas.

-- On the basis of the GS estimates set forth in the ES and SID, Alternative I (the June proposed 5-year leasing program) would provide about 98.5% of oil and 96% of gas production achieved by Alternative II.

1/ Federal Leasing and OCS Energy Production Goals, DOE, June 1979.

D. Size of Sales

Section 18(a) of the OCS Lands Act, as amended, requires that the leasing program consist of a schedule of proposed lease sales indicating, as precisely as possible, the size, timing, and location of leasing activity. Tab 5 of the background material, dated May 29, 1979, prepared for the decision on the proposed 5-year program, addressed these points. The subject of size of sale needs some further elaboration.

In May it was recognized that it was not possible to estimate sale size with any degree of certainty. It was stated that the final sale size would be based on expected hydrocarbon potential, Interior's ability to address environmental and social issues and the availability of technology for exploration and development. It was also stated that Interior believed that one million acres would be the upper end of the range in most cases, and that many sales would be somewhat smaller. A list of probable sale sizes by area was included which was based on the interest in the area, amount of available acreage, and technological constraints. This list was subject to the caveat that if at the time of tentative tract selection, industry interest was higher than then antcipated, and technological advances had been made, Interior would consider larger sales, subject to its administrative capability to conduct appropriate sale preparations. This list was also included in both the DES and FES on the 5-year program.

Since May 1979, tentative tract selection has occurred for several sales, and it appears that in some instances the May estimates were on the conservative side. For example, it had been estimated that a sale in the Norton Basin would include 600,000 acres. Tentative tract selection for sale #57 - Norton Basin, has resulted in the selection of approximately 2.4 million acres. While it is possible that if the sale is held, a substantial portion of the area will be deleted as a result of the analysis conducted under NEPA, it is also possible that the offering will exceed 600,000 acres. The Norton Basin example points to the difficulty of accurately projecting sale size, particularly with respect to frontier areas, prior to initiation of the pre-sale planning. It, therefore, needs to be emphasized that the estimated sale sizes included in the proposed program, and subsequently used in the DES and FES, do not reflect a policy position on the appropriate size of sales. Instead, these figures represent a very rough estimate of what sale sizes might be, recognizing they could be substantially larger or smaller if they are held at all. These estimates are by no means binding or should more be read into them than they deserve. The appropriate size of a sale offering should be based on the most current assessment of all relevant environmental, social, geologic, technological and administrative factors. In general, the Department will select for ES analysis as many tracts as it is capable of adequately considering in a single environmental statement. Tracts will be selected from among those which are identified as having hydrocarbon potential as a result of information provided in response to the Call for Nominations and Comment and by the USGS, but excluding tracts which can be determined at the time of tentative tract selection to be unsuitable for oil and gas development in the timeframe of the proposed sale because of technological constraints, environmental threats, or other preemptive considerations. Sale offerings will consist of tracts which are not found to be unsuitable for oil and gas activity as a result of the ES analysis or other information provided pursuant to the OCS Lands Act, as amended, such as comments on the proposed notice of sale from Governors of affected States.

Table 2. House Select Committee on the OCS Proposed Schedule.

Date	Sale	
8/80		Gulf of Mexico
9/80	A62	Gulf of Mexico
11/80	62	Gulf of Mexico
12/80	46	Kodiak
2/81		Gulf of Mexico
5/81	53	Central and Northern California
7/81	A66	Gulf of Mexico
8/81	56	South Atlantic
9/81	60	Cook Inlet
10/81	66	Gulf of Mexico
11/81	57	Norton Sound
12/81	59	Mid-Atlantic
2/82		Beaufort Sea
3/82	67	Gulf of Mexico
5/82	68	Southern California
6/82		Gulf of Mexico
8/82	52	North Atlantic
9/82		Navarin Basin
10/82	69	Gulf of Mexico
12/82	70	St. George Basin
2/83	71	Beaufort Sea
3/83	72	Gulf of Mexico
5/83	73	California
7/83		St. George Basin
9/83	74	Gulf of Mexico
10/83	75	North Aleutian Shelf
11/83	76	Mid-Atlantic
12/83	77	Gulf of Mexico
1/84	78	South Atlantic/Blake
3/84	79	Gulf of Mexico
5/84		Mid-Atlantic
6/84	80	California
7/84	81	Gulf of Mexico
9/84		Gulf of Mexico
10/84	82	North Atlantic
12/84	83	Navarin Basin
1/85	84	Gulf of Mexico
2/85	85	Chukchi Sea

- Drop the Gulf of Alaska sale in 1980; however, Representative Forsythe does not endorse this particular recommendation.

- Add a Beaufort Sea sale in 1982.

- Add a Navarin sale in 1982.

- Add a Zhemchug-St. George sale in 1983.

- Move the Norton sale from 1982 to November 1981.

Table 2 shows the Committee's proposed 5-year schedule. Several points mentioned in the report are particularly interesting. The report did not conclude that any OCS area should be omitted from the 5-year planning schedule for environmental reasons. Although the study recognized a need for further environmental studies, especially in the proposed frontier lease sale areas, it recommended that more sales be scheduled in frontier areas, for only then will the environmental studies be conducted both quickly and efficiently. The Committee also believes that in order to adopt its recommendations, a supplemental ES would have to be prepared.

The report initiates the concept of constituent sales. A constituent sale is the second phase of a sale to be held at the discretion of the Secretary of the Interior, in the year following the first phase of such a sale. It would be limited to: (1) unleased tracts offered in the first phase, and (2) tracts adjacent to or within 6 miles of tracts leased in the first phase, upon which exploratory drilling has occurred and where information obtained indicates that the offering of a second phase could lead to production. This concept is particularly interesting in view of the similar idea presented in this document for an annual nationwide reoffering sale which would reoffer the tracts whose bids were rejected or tracts which did not receive bids during the previous year for all areas outside the Gulf of Mexico. (Section V).

Sunmark Exploration recommended speeding up sales in basins with proven reserves such as Santa Barbara.

The Environmental Policy Center asked for further studies of St. George Basin, the North Aleutian Shelf and the Chukchi Sea with a later determination to be made regarding sales. It also questioned if the concept of contingency sales could be applied to the more sensitive frontier areas.

The Natural Resources Defense Council urged the use of contingency sales in the Chukchi Sea and the St. George Basin and that sales in St. George Basin, North Aleutian Shelf area, Chukchi Sea and Navarin Basin be delayed or deleted. The Council expressed concern regarding geologic hazards in deep offshore waters including the deep areas of sale #59, Mid-Atlantic.

C. Staff Report of the House Select Committee on the OCS

In January 1980, the staff of the House Select Committee on the OCS published a report entitled "Offshore Oil and Gas: The Five-Year Leasing Program and Implementation of the Outer Continental Shelf Lands Act Amendments of 1978." The report offers seven recommendations directly affecting the 5-year program. The recommendations, which have been endorsed by John C. Murphy, Chairman, and Edwin B. Forsythe, Ranking Minority Member, are:

-- the estimated appropriations and staff for the June proposed leasing program should be met and increased to the extent the program may be further accelerated.

-- DOI should accelerate the schedule for and enhance the adequacy of the environmental studies relating to all proposed frontier lease sale areas.

-- DOI should include more and repeated sales in frontier areas in the 5-year leasing schedule.

-- DOI should commence planning for two additional contingency sales for the 5-year program and as these sales are utilized commence additional back-up sales as needed.

-- the current northern boundary for the North Aleutian Shelf area sale should be moved northward by 30 minutes to 57 degrees.

-- DOI should study and adopt, where appropriate, a second phase constituent sale mechanism and include it in the description and notice of sales in frontier areas.

-- the following changes should be made in the proposed 5-year leasing program:

- Add 5 Gulf of Mexico sales beginning in June 1980.

- Add a Mid-Atlantic sale in 1984.

North Carolina believed that Sale #78 is scheduled too soon following Sale #56 to allow for meaningful assessment of drilling activities. The State also requested that long in advance of any future sale a comprehensive and current data base be established prior to the Call for Nominations to insure the opportunity for States and others to have meaningful participation based on facts, not conjecture, and that deep water exploration be delayed until technology is proven.

Florida objected to the proposed sale on Blake Plateau until physical-meteorological studies are made and also objected to any leasing south of 26° north latitude until completion of at least 3 years of environmental studies in Florida Bay. Florida said that the South Atlantic States have concerns about completion of studies before Sale #56 is scheduled, and they may object to the sale. Emphasis was also placed on accurately defining sale areas geographically and maintaining the integrity of those areas throughout the schedule.

California strongly urged substantial modification in the final program to reflect its concerns. It said that a sale off Central and Northern California in 1981 is premature in light of section 18(a)(3) of the OCS Lands Act, as amended, and the location of proposed Sale #53 is contrary to the requirements of the Act because the balancing cannot seriously be done when such an extensive area is not divided into five physiographic areas (area covers five sedimentary basins).

California strongly disagreed with the DOI approach regarding timing and location of sales. It asserted that the definition of the leasing areas is so broad as to make any meaningful ranking and comparing of areas impossible; the Northern and Central California area, as noted, covers five offshore basins and Southern California covers ten. On the one hand, California believed that the resources estimated to be developed as a result of sale #53 are too small to justify the risk. On the other hand, the State would like to see the pre-sale planning areas smaller to properly assess the risks to each basin. The State also suggested that the Santa Maria Basin (offshore Santa Barbara and San Luis Obispo Counties) and the Eel River Basin (offshore Humboldt County) might be candidates for further consideration in the 5-year program.

Industry generally supported the proposed program off the 48 contiguous States but suggested a more aggressive schedule in frontier Alaskan areas, while the environmental groups had severe reservations about any leasing in North Aleutian Shelf area or the St. George Basin.

Exxon noted that in 1980 and 1981, sales are grouped in consecutive months. It expressed a preference for sales spread more evenly throughout the year to allow both industry and government to more efficiently utilize manpower.

SOHIO requested that the Chukchi Sea sale be advanced and that the traditional size of the California initial lease sales be retained instead of smaller single-basin sales recommended by others.

Table 1 (continued).

Requested Multiple Sales in Area	
Bristol Bay	Summark
Southern part of Northern California	Summark
San Pedro	Summark

Table 1 (continued). 9

Add Sales

Where	When	Requested By
St. George Basin	3/84	Exxon
Briston Bay	2/83	Mobil
St. George Basin	3/83	Mobil
North Aleutian Shelf	2/84	Mobil
North Aleutian Shelf	3/85	Exxon
Norton Basin	3/84	Mobil
Beaufort Sea	12/84	Mobil
Bristol Bay	2/85	Mobil
California (So. & Central)	1983	Mobil
California (So. & Central)	1984	Mobil
Beaufort Sea	1981	Shell
Beaufort Sea	1982	Shell
St. George Basin	1980	Shell
St. George Basin	1981	Shell
St. George Basin	1983	Shell
Gulf of Alaska	1981	Shell
Kodiak	1981	Shell
North Aleutian Shelf (Bristol)	1981	Shell
North Aleutian Shelf (Bristol)	1982	Shell
Cook Inlet	1982	Shell
Norton	1981	Shell
Norton	1983	Shell
Chukchi	1983	Shell
Chukchi	1984	Shell
Navarin	1983	Shell
Navarin	1985	Shell
Hope Basin	1984-85	Alaska

Table 1 (continued).

Delete Sales

Where	When	Requested By
Kodiak	12/80	Exxon Mobil
Cook Inlet	9/81	Mobil
Chukchi	2/85	Sunmark Alaska
Southern California	6/82	County of San Diego
Bristol Basin, including North Aleutian Shelf	10/83	Alaska
St. George Basin	12/82	Alaska
Southern Aleutian Shelf	--	Alaska
Beaufort Sea ice shear and offshore pack ice zones	2/85	Alaska
North Aleutian Shelf	10/83	Natural Resources Defense Council

Combine Sales

#73 (California) & #80 (California) - County of San Diego

Table 1. Modifications Requested to the June 1979 Proposed Program (Alternative I)

Move Sales

Sale	From	To	Requested By
#70 St. George Basin	12/82	3/81	Exxon
		12/80	Mobil
		later	Natural Resources Defense Council
#75 North Aleutian Shelf	10/83	3/82	Exxon
		sooner	SOHIO
		3/81	Mobil
		later	Natural Resources Defense Council
#83 Navarin Basin	12/84	3/83	Exxon
		3/82	Mobil
		later	Alaska
		later	Natural Resources Defense Council
#57 Norton Basin	9/82	9/81	Mobil
		later	Alaska
		later(5-yr.delay)	Villages of the Bering Sea
#71 Beaufort Sea	2/83	6/82	Mobil
		later	New Jersey
		1980	Shell
#85 Chukchi Sea	2/85	3/85	Mobil
		sooner	SOHIO
		1982	Shell
		later	New Jersey
		later	Natural Resources Defense Council
#79 Gulf of Mexico	3/84	1981	Mobil
#81 Gulf of Mexico	7/84	1982	Mobil
#84 Gulf of Mexico	1/85	1982	Mobil
#68 So. California	6/82	sooner	Sunmark
#53 Cen. & No. Calif.	5/81	1984	California
			County of San Luis Obispo
#78 Blake Plateau	1/84	later	Florida, North Carolina
#46 Kodiak Shelf	12/80	later	Alaska

Among those issues which attracted the most attention were: the relationship between OCS development off California and Alaska and refining capacity in the State of California; the North Aleutian Shelf lease area--industry seeking expansion of the area and Alaska and others seeking deletion of the area; and the size of sale offerings off the California coast. Six commenters felt there was a lack of adequate consideration of onshore impacts, and five governmental entities expressed concern about the availability of Federal funding to allow State and local governments to adequately participate in the OCS process. Thirteen organizations requested consideration of a proferred alternate schedule or modification to the proposed schedule (Table 1). Comments relating to the size and/or timing of proposed sales are discussed below in digest form.

Alabama concurred with the scheduling of at least 11 sales in the Gulf of Mexico and the contingency sale there. The State reemphasized its sense of need for increased leasing and development in frontier areas and was in agreement and favorable to terms and conditions of the program as proposed in June.

Alaska requested deferring the scheduling of the North Aleutian Shelf and St. George Basin pending acquisition of more comprehensive oceanographic and biological resource information and development of district coastal management plans, and objected to the timing of the Alaskan frontier area sales. Alaska stated that the early scheduling "restricts State and Federal timetables for conducting needed studies . . . and to prepare for what will be sizeable onshore impacts." It said that early scheduling also requires initiation of some pre-leasing steps which preclude public and State review processes. Alaska resubmitted its proposal for a Federal leasing schedule and asked for scheduling which would permit the State to coordinate its offshore sales with those of the Department of the Interior.

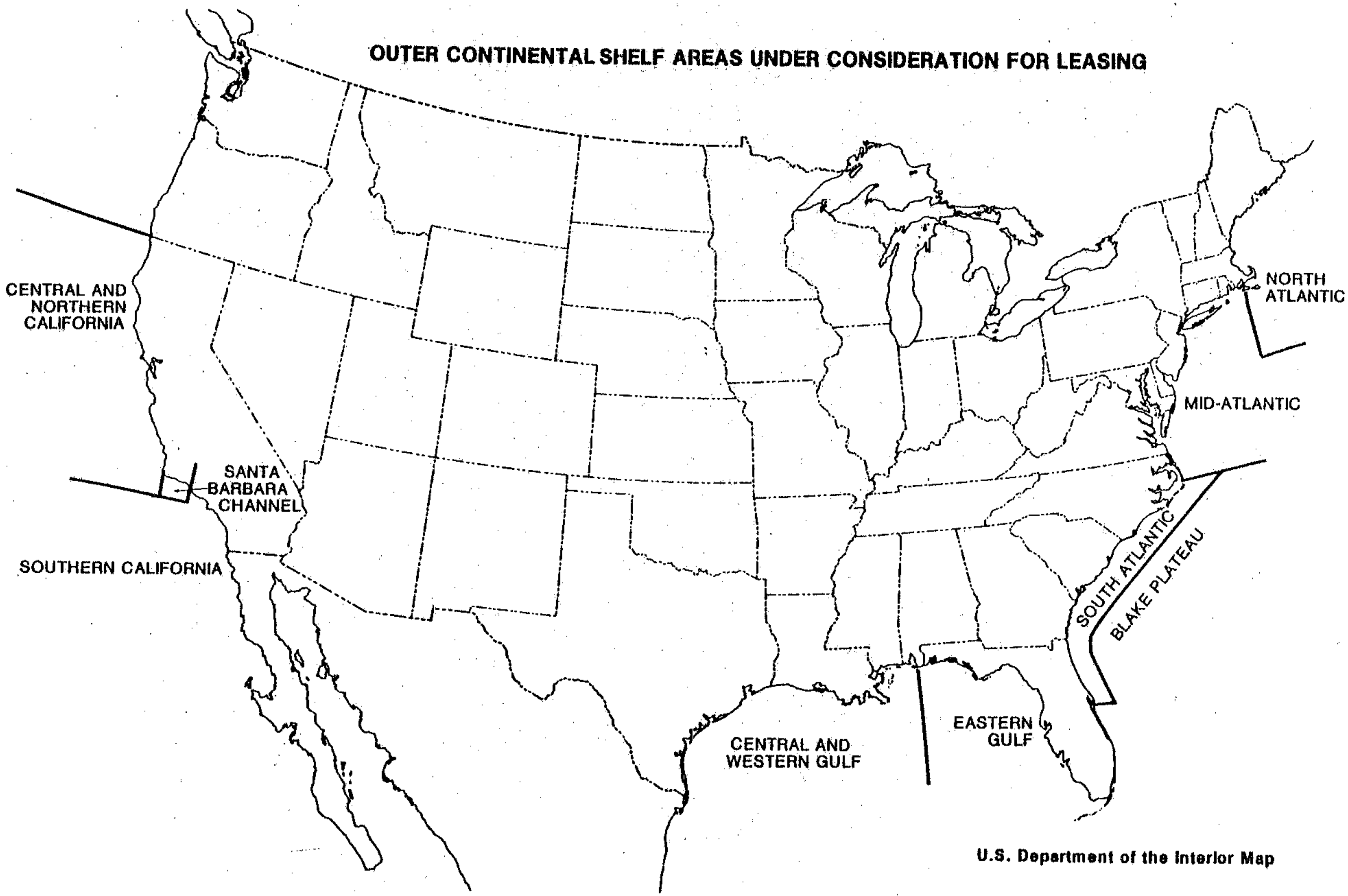
Alaska said that the holding of three major sales in a 6-month period (September 1982 - February 1983) does not afford adequate time for sale preparation by the Federal or State governments or the oil industry. It also commented that more time is needed before leasing than is allowed under the proposed schedule for studies in the Bering Sea, Chukchi Sea and Beaufort Sea.

Massachusetts supported the size, timing, and location of North Atlantic lease sales as proposed and supported the timing of sequential sales in frontier areas.

Rhode Island opposed any effort to reduce the number of sales in the North and Mid-Atlantic areas or any efforts to delay such sales.

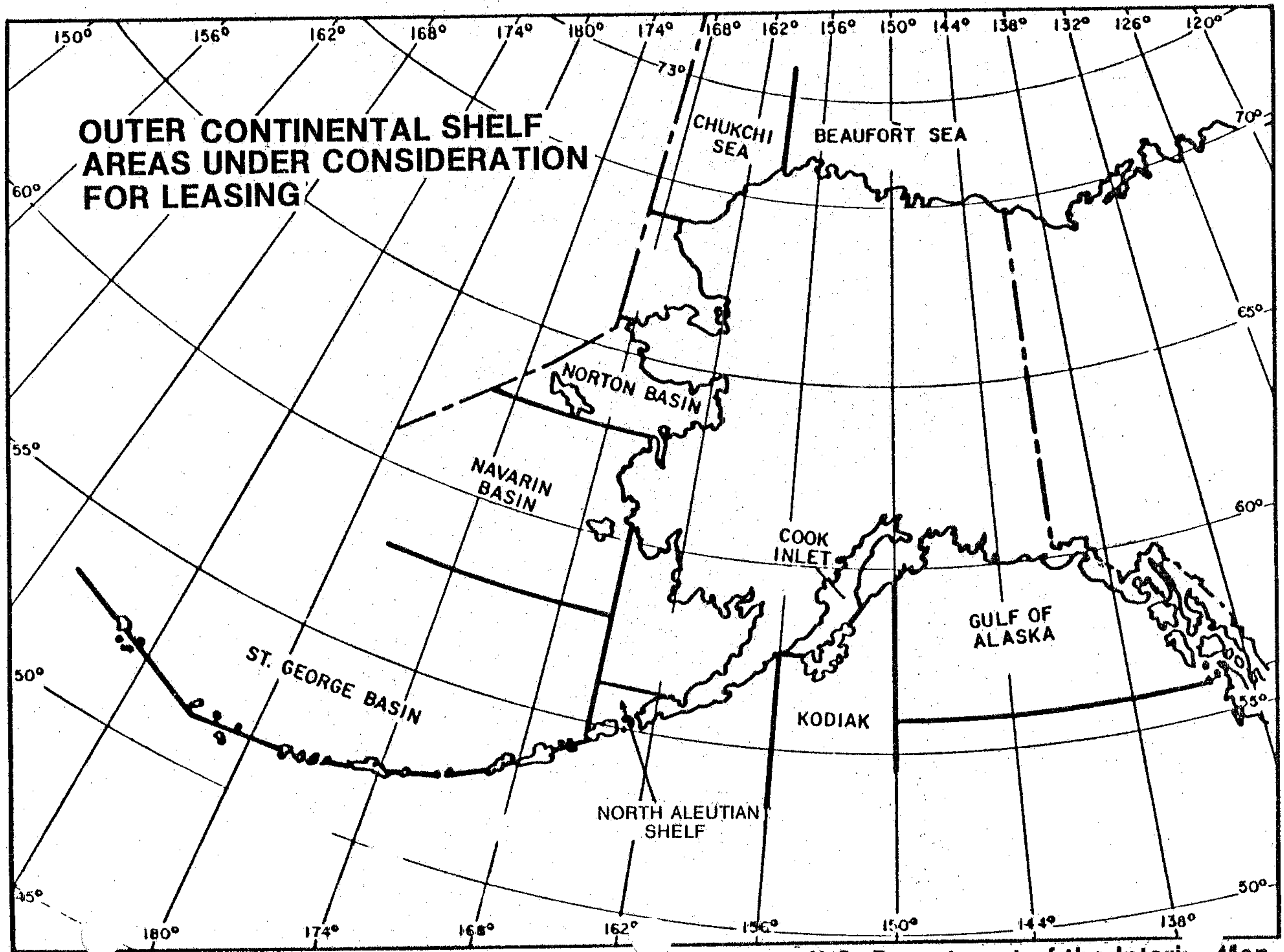
New Jersey believed that the sequence suggested for frontier area sales is too compressed and supports Alaska's recommendation that several Alaskan OCS frontier basin sales be delayed. The State recommended more use of contingency sales, particularly in the North Aleutian Shelf area, the St. George Basin, and the Chukchi Sea.

Plate 2. (continued)*



* Maps do not reflect proposed boundary changes.

Plate 2. OCS Areas Under Consideration for Leasing - June 1979*.



U.S. Department of the Interio. Map

Plate 2.

Plate 1.

PROPOSED OCS OIL AND GAS LEASE SALE SCHEDULE

JUNE 1979

SALE AREA	1979[1] J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico									E		H	
55 Gulf of Alaska									E		H	
62 Gulf of Mexico									E		H	
46 Kodiak										E		
53 Central N. Calif.												
A66 Gulf of Mexico						C		D		T		
56 South Atlantic			C		D		T					
60 Cook Inlet		D			T							
66 Gulf of Mexico						C		D		T		
59 Mid-Atlantic							C		D			T
67 Gulf of Mexico												
68 Southern California[2]												C
52 North Atlantic										C		D
57 Norton Basin				C							D	
69 Gulf of Mexico												
70 St. George Basin							C			D		
71 Beaufort Sea										C		D
72 Gulf of Mexico												
73 California												
74 Gulf of Mexico												
75 No. Aleutian Shelf												
76 Mid-Atlantic												
77 Gulf of Mexico[3]												
78 So. Atlantic/Blake												
79 Gulf of Mexico												
80 California												
81 Gulf of Mexico												
82 North Atlantic												
83 Navarin Basin												
84 Gulf of Mexico												
85 Chukchi Sea												

SALE AREA	1980 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico		F		P		SC	R	N	S			
55 Gulf of Alaska			F		P		SC	R	N	S		
62 Gulf of Mexico		F				P		SC	R	N	S	
46 Kodiak	H				F		P		SC	R	N	S
53 Central N. Calif.				E		H				F		P
A66 Gulf of Mexico							E		H			F
56 South Atlantic							E		H			
60 Cook Inlet								E		H		
66 Gulf of Mexico							E		H			F
59 Mid-Atlantic											E	
67 Gulf of Mexico	C		D		T							
68 Southern California[2]		D			T							
52 North Atlantic				T								
57 Norton Basin		T										
69 Gulf of Mexico								C		D		T
70 St. George Basin		T										
71 Beaufort Sea			T									
72 Gulf of Mexico												
73 California											C	
74 Gulf of Mexico												
75 No. Aleutian Shelf					C			D				T
76 Mid-Atlantic												
77 Gulf of Mexico[3]												
78 So. Atlantic/Blake												
79 Gulf of Mexico												
80 California												
81 Gulf of Mexico												
82 North Atlantic												
83 Navarin Basin												
84 Gulf of Mexico												
85 Chukchi Sea												

SALE AREA	1981 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico												
55 Gulf of Alaska												
62 Gulf of Mexico												
46 Kodiak												
53 Central N. Calif.		SC	R	N	S							
A66 Gulf of Mexico		P		SC	R	N	S					
56 South Atlantic	F		P		SC	R	N	S				
60 Cook Inlet		F		P		SC	R	N	S			
66 Gulf of Mexico					P		SC	R	N	S		
59 Mid-Atlantic	H				F		P		SC	R	N	S
67 Gulf of Mexico			E		H			F		P		SC
68 Southern California[2]					E		H				F	
52 North Atlantic							E		H			
57 Norton Basin						E				H		
69 Gulf of Mexico										E		H
70 St. George Basin										E		
71 Beaufort Sea												E
72 Gulf of Mexico	C		D		T							
73 California	D			T								
74 Gulf of Mexico							C		D		T	
75 No. Aleutian Shelf												
76 Mid-Atlantic					C		D			T		
77 Gulf of Mexico[3]										C		D
78 So. Atlantic/Blake			C			D				T		
79 Gulf of Mexico												
80 California										C		D
81 Gulf of Mexico												
82 North Atlantic												
83 Navarin Basin						C			D			
84 Gulf of Mexico												
85 Chukchi Sea							C			D		

SALE AREA	1982 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico												
55 Gulf of Alaska												
62 Gulf of Mexico												
46 Kodiak												
53 Central N. Calif.												
A66 Gulf of Mexico												
56 South Atlantic												
60 Cook Inlet												
66 Gulf of Mexico												
59 Mid-Atlantic												
67 Gulf of Mexico	R	N	S									
68 Southern California[2]	P		SC	R	N	S						
52 North Atlantic	F		P		SC	R	N	S				
57 Norton Basin		F		P		SC	R	N	S			
69 Gulf of Mexico			F		P		SC	R	N	S		
70 St. George Basin	H				F		P		SC	R	N	S
71 Beaufort Sea			H				F		P		SC	R
72 Gulf of Mexico			E		H			F		P		SC
73 California				E		H				F		P
74 Gulf of Mexico									E		H	
75 No. Aleutian Shelf								E			H	
76 Mid-Atlantic										E		H
77 Gulf of Mexico[3]		T										E
78 So. Atlantic/Blake											E	
79 Gulf of Mexico	C		D		T							
80 California			T									
81 Gulf of Mexico					C		D		T			
82 North Atlantic				C		D			T			
83 Navarin Basin	T											
84 Gulf of Mexico											C	
85 Chukchi Sea		T										

SALE AREA	1983 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico												
55 Gulf of Alaska												
62 Gulf of Mexico												
46 Kodiak												
53 Central N. Calif.												
A66 Gulf of Mexico												
56 South Atlantic												
60 Cook Inlet												
66 Gulf of Mexico												
59 Mid-Atlantic												
67 Gulf of Mexico												
68 Southern California[2]												
52 North Atlantic												
57 Norton Basin												
69 Gulf of Mexico												
70 St. George Basin												
71 Beaufort Sea	N	S										
72 Gulf of Mexico	R	N	S									
73 California		SC	R	N	S							
74 Gulf of Mexico		F		P		SC	R	N	S			
75 No. Aleutian Shelf			F		P		SC	R	N	S		
76 Mid-Atlantic				F		P		SC	R	N	S	
77 Gulf of Mexico[3]		H			F		P		SC	R	N	S
78 So. Atlantic/Blake		H				F		P			R	N
79 Gulf of Mexico			E		H			F		P		SC
80 California					E		H				F	
81 Gulf of Mexico							E		H			F
82 North Atlantic									E		H	
83 Navarin Basin										E		
84 Gulf of Mexico	D		T									
85 Chukchi Sea												E

SALE AREA	1984 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico												
55 Gulf of Alaska												
62 Gulf of Mexico												
46 Kodiak												
53 Central N. Calif.												
A66 Gulf of Mexico												
56 South Atlantic												
60 Cook Inlet												
66 Gulf of Mexico												
59 Mid-Atlantic												
67 Gulf of Mexico												
68 Southern California[2]												
52 North Atlantic												
57 Norton Basin												
69 Gulf of Mexico												
70 St. George Basin												
71 Beaufort Sea												
72 Gulf of Mexico												
73 California												
74 Gulf of Mexico												
75 No. Aleutian Shelf												
76 Mid-Atlantic												
77 Gulf of Mexico[3]												
78 So. Atlantic/Blake	S											
79 Gulf of Mexico	R	N	S									
80 California	P		SC	R	N	S						
81 Gulf of Mexico		P		SC	R	N	S					
82 North Atlantic			F		P		SC	R	N	S		
83 Navarin Basin	H				F		P		SC	R	N	S
84 Gulf of Mexico	E		H			F		P		SC	R	N
85 Chukchi Sea			H				F		P		SC	R

SALE AREA	1985 J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico												
55 Gulf of Alaska												
62 Gulf of Mexico												
46 Kodiak												
53 Central N. Calif.												
A66 Gulf of Mexico												
56 South Atlantic												
60 Cook Inlet												
66 Gulf of Mexico												
59 Mid-Atlantic												
67 Gulf of Mexico												
68 Southern California[2]												
52 North Atlantic												
57 Norton Basin												
69 Gulf of Mexico												
70 St. George Basin												
71 Beaufort Sea												
72 Gulf of Mexico												
73 California												
74 Gulf of Mexico												
75 No. Aleutian Shelf												
76 Mid-Atlantic												
77 Gulf of Mexico[3]												
78 So. Atlantic/Blake												
79 Gulf of Mexico												
80 California												
81 Gulf of Mexico												
82 North Atlantic												
83 Navarin Basin												
84 Gulf of Mexico	S											
85 Chukchi Sea	N	S										

C - Call for Nominations
D - Nominations Due
T - Tentative Tract Selection
E - Draft Environmental Statement
H - Public Hearing

F - Final Environmental Statement
P - Proposed Notice of Sale
SC - State Comments Due
R - Energy Review
N - Notice of Sale

S - Sale

[1]The 1979 Column is included to indicate the pre-lease actions required for OCS lease sales scheduled for the period 3/80 - 2/85. Sales scheduled for dates in the latter half of 1979 include:
48 So. California June 1979
58 Gulf of Mexico July 1979
42 North Atlantic Oct. 1979
58A Gulf of Mexico Nov. 1979
Beaufort Sea Dec. 1979

[2]Includes Santa Barbara Channel.

[3]This sale has been included in this schedule in order that planning may be commenced. Subsequent events (e.g., deletion of another sale from this schedule) will determine whether this sale will be held as indicated, held at some other time during the 5-year period, deleted or postponed until after February 1985.

Plate 1.

The Department of Energy (DOE) played a key role in developing the proposed leasing program by providing a link between the OCS oil and gas leasing program and national energy policy. In accordance with a September 1978 Memorandum of Understanding between the Departments of the Interior and Energy, final OCS production goals for the years 1985, 1990 and 1995 were provided to the Department by letter dated May 17, 1979.

A proposed program was developed, and along with other required information and correspondence, was transmitted to the Congress and the Attorney General on June 18, 1979. Plate 1 shows the proposed leasing schedule, and Plate 2 illustrates the general planning areas of the sales considered in the June proposal. On June 25, 1979, the proposed program was sent to the Governors of the affected coastal States and Pennsylvania, along with responses to their comments on the draft proposed program. The proposal was published in the Federal Register on July 23, 1979.

An environmental impact statement on the proposed leasing program was prepared in order to provide full consideration of the possible environmental effects of the proposed program. The availability of the draft environmental statement (DES) was announced in the Federal Register on August 28, 1979, and public hearings were held throughout the country during October 1979. The final environmental statement (FES) was transmitted to the Environmental Protection Agency on January 18, 1980. The environmental statements were instrumental in refining previously considered alternatives and in creating new alternatives for the Secretary's consideration in selecting the proposed final program.

B. Comments Received on Proposed Program

This section only points out the major issues raised by commenters and provides general information about the remarks received. A detailed summary of comments received in response to specific requests for review of the June proposed program appears in Appendix I. Comments addressing broader schedule issues, including concerns of other Federal agencies, were also received as a result of the DES consultation procedure. These have also been considered and many were addressed in the FES (pp. 353-384).

Thirteen States responded to the request for comments on the June 1979 proposal, along with three environmental groups, five local governmental entities, eight industry organizations, and three representatives of the public. The Attorney General did not comment on the proposed program.

I. Statement of the Issue

The issue addressed in this document is the selection of the final 5-year OCS Oil and Gas Leasing Program covering the period June 1980 through May 1985.

II. Introduction

A. Background

Section 18 of the OCS Lands Act, as amended, requires the Secretary of the Interior to prepare, periodically revise and maintain an OCS oil and gas leasing program to implement the policies of the Act. The statute requires that the leasing program consist of a schedule of proposed lease sales indicating, as precisely as possible, the size, timing and location of leasing activity which the Secretary determines will best meet national energy needs for the 5-year period following its approval or reapproval. The program must also include estimates of appropriations and staff required to obtain resource information, analyze and interpret exploratory data, conduct environmental studies and supervise operations conducted pursuant to each lease.

Development of the 5-year program started on October 25, 1978, with a request for information to Governors of affected coastal States and Pennsylvania, and the Departments of Justice, Energy and Commerce. This was followed by a public request for information and the issuance of regulations to implement section 18(f) of the Act, both published in the Federal Register on October 26, 1978. Information gathered from these requests was reviewed and used in preparing the draft proposed leasing program sent to the Governors of the affected coastal States and Pennsylvania on March 9, 1979, and subsequently released to the public. Also, public meetings were held throughout the country and with industry and environmental groups during late March and early April 1979 to describe the draft proposed program. Comments on the March 9 draft proposed program and the comments received earlier are summarized in Part B, Tab 3 of the background material dated May 29, 1979, prepared for the decision on the proposed program.

Close communication was also maintained with the OCS Policy Committee of the Department's OCS Advisory Board, including several briefings during program development. In December 1978, the Committee received a description of the review process that would be used in the development of the leasing program, including the target dates of steps leading to its completion. Both the National and the Regional OCS Policy Committees received status reports on the progress of the program throughout the whole process. Additionally, members of the OCS Policy Committee were sent copies of all Federal Register notices as well as other documents generated during the process of program development. The Committee members routinely received copies of all OCS-related materials sent to coastal State Governors for review and comment.

List of Tables (continued)

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SECRETARIAL ISSUE DOCUMENT

5-YEAR OCS OIL AND GAS LEASING PROGRAM

February 14, 1980

The tables showing budget and manpower estimates include resource requirements for pre-sale and post-sale activities for those sales included in each alternative, and for the management of the leases issued to date. The tables show the estimates required by section 18(b) of the OCS Lands Act, as amended. In addition, a general category, General Administrative Activities, is included to cover those OCS related costs not specifically required by section 18(b) but necessary in order to fully reflect the cost of managing the program. It should be noted that after FY 81, these tables reflect initial estimates and have not been evaluated through either internal or Office of Management and Budget processes and are subject to refinement. Table 4 provides a summary of estimates of appropriations and staff for all alternatives.

Relative rankings of estimates of resource potential and industry interest in exploration for each of the potential leasing areas is shown on Table 5.

B. Summary of Environmental Consequences

A summary of the potential environmental consequences of Alternative I is presented in this section. This summary is primarily based on information which can be found in the FES.

Review of comments on the DES indicated that the concerns raised most often on the June proposed 5-year leasing schedule involved the following issues: marine resources, subsistence resources, and lifestyle in Alaska; marine mammals and seabirds in Central and Northern California; air quality and recreation in California; the lack of existing arctic technology and possible consequences of oil spills in sea ice conditions; and cumulative effects to endangered whale species. A more detailed description of the specific environmental effects of Alternative I appears on pages 50-63 of the FES.

A major factor which could have environmental consequences and which is inherent in the production of OCS oil and gas is oil spill risk. The number (statistically probable number of oil spills greater than 1,000 barrels) reflected in the tables regarding characteristics of each alternative, represents the total of the anticipated number of oil spills for each OCS region based on estimated volume of oil and mode of transportation to shore, i.e., pipeline or tanker. It is assumed that the spills occur over the life of the field, a 25 to 30 year period. The statistically probable number of oil spills greater than 1,000 barrels does not account for spills originating from existing leases or from oil imports.

Based on volume of oil estimated and historical experience, slightly more than 33 oil spills greater than 1,000 barrels are statistically probable as a result of development stemming from sales included in Alternatives I, III and IV. A spill frequency chart for each OCS region appears on page 146 of the FES. A similar amount of total spills would result from Alternatives V, VI and VII. However, these alternatives would result in

Table 4. Estimated Appropriations and Staff Requirements For Alternative Proposed 5-Year OCS Leasing Programs
($ Millions)

Alternative		FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985		Cumulative	
		$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP
I	BLM	52.1	246	54.0	246	40.6	246	35.5	246	34.7	246	32.6	246	249.5	1476
	USGS	88.5	1241	94.1	1241	111.0	1424	104.5	1458	109.3	1500	109.9	1500	617.3	8364
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14	2.6	78
	Total	141.7	1515	149.5	1517	153.1	1703	141.7	1739	145.8	1783	144.3	1783	876.1	10040
II	BLM	52.1	246	55.0	246	41.3	246	36.7	246	33.8	246	32.6	246	251.5	1476
	USGS	88.5	1241	99.9	1318	113.6	1465	105.4	1501	106.1	1543	104.5	1543	618.0	8611
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.5	12	.4	13	.5	14	.5	14	.5	14	2.7	78
	Total	141.7	1515	156.4	1594	156.4	1744	143.8	1782	141.7	1826	138.9	1826	878.9	10287
III	BLM	52.1	246	51.7	246	41.2	246	36.1	246	34.7	246	32.6	246	248.4	1476
	USGS	88.5	1241	98.9	1312	111.0	1417	107.3	1471	105.7	1513	104.1	1513	615.5	8467
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.5	12	.4	13	.4	13	.5	14	.5	14	2.6	77
	Total	141.7	1515	152.1	1588	153.7	1696	145.0	1751	142.2	1796	138.5	1796	873.2	10142
IV	BLM	52.1	246	53.4	246	40.4	246	35.2	246	34.7	246	32.6	246	248.4	1476
	USGS	88.5	1241	98.9	1312	108.0	1417	104.8	1470	105.6	1512	104.0	1512	609.8	8464
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.5	12	.4	13	.5	14	.5	14	.5	14	2.7	78
	Total	141.7	1515	153.8	1588	149.9	1696	141.7	1751	142.1	1795	138.4	1795	867.6	10140
V	BLM	52.1	246	50.7	246	38.5	246	35.0	246	34.7	246	32.6	246	243.6	1476
	USGS	88.5	1241	98.9	1312	108.0	1417	104.8	1470	105.6	1512	104.0	1512	609.8	8464
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14	2.6	78
	Total	141.7	1515	151.0	1588	148.0	1696	141.5	1751	142.1	1795	138.4	1795	862.7	10140

Table 4 (continued). Estimated Appropriatio nd Staff Requirements For Alternative Proposed 5-Year OCS Leasing Programs ($ Millions)

Alternative		FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985		Cumulative	
		$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP
VI	BLM	52.1	246	50.7	246	39.8	246	35.5	246	34.7	246	32.5	246	245.3	1476
	USGS	88.5	1241	98.9	1312	108.0	1417	102.8	1459	104.0	1501	104.0	1501	606.2	8431
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14	2.6	78
	Total	141.7	1515	151.0	1588	149.3	1696	140.0	1740	140.5	1784	138.3	1784	860.8	10107
VII	BLM	52.1	246	51.6	246	40.5	246	35.8	246	35.6	246	32.5	246	248.1	1476
	USGS	88.5	1241	98.8	1312	108.0	1417	104.8	1470	105.0	1512	103.5	1512	608.6	8464
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14	2.6	78
	Total	141.7	1515	151.8	1588	150.0	1696	142.3	1751	142.4	1795	137.8	1795	866.0	10140
VIII	BLM	52.1	246	43.8	246	32.7	246	30.8	246	32.9	246	32.6	246	224.9	1476
	USGS	88.5	1241	98.8	1312	96.2	1338	100.1	1380	97.8	1411	97.8	1411	579.2	8093
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	12	.4	12	.4	12	.4	12	2.3	71
	Total	141.7	1515	144.0	1588	130.4	1616	132.5	1659	132.4	1692	132.1	1692	813.1	9762
IX	BLM	52.1	246	49.1	246	41.2	246	36.5	246	35.3	246	32.6	246	246.8	1476
	USGS	88.5	1241	98.8	1312	108.0	1318	104.2	1441	104.0	1483	102.5	1483	606.0	8348
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	12	.5	13	.5	13	.5	14	2.6	75
	Total	141.7	1515	149.3	1588	150.7	1666	142.4	1721	141.1	1765	136.9	1766	862.1	10021
X	BLM	52.1	246	17.3	150	9.9	100	8.8	75	8.8	75	8.8	75	105.7	721
	USGS	48.7	769	51.5	769	51.5	769	51.5	769	51.5	769	51.5	769	306.2	4614
	FWS	.3	7	.5	8	.5	8	.5	8	.5	8	.5	8	2.8	47
	POCS	.5	10	.1	3	.1	3	.1	3	.1	3	.1	3	1.0	25
	SOL	.1	4	.1	4	.4	1	.4	1	.4	1	.4	1	.6	24
	Total	101.7	1036	69.5	934	62.1	884	61.0	859	61.0	859	61.0	859	416.3	5431

Table 4 (continued). Estimated Appropriations and Staff Requirements For Alternative Proposed 5-Year OCS Leasing Programs ($ Millions)

Alternative		FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985		Cumulative	
		$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP	$	FTP
XI	BLM	52.1	246	55.8	246	44.4	246	38.1	246	36.3	246	32.6	246	259.3	1476
	USGS	88.5	1241	98.8	1312	114.2	1424	104.9	1463	109.7	1505	110.5	1510	626.6	8455
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10	3.0	60
	SOL	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14	2.6	78
	Total	141.7	1515	156.0	1588	160.1	1703	144.7	1744	147.8	1788	144.9	1793	895.2	10131
XII	BLM	52.1	246	58.6	246	46.0	246	39.3	246	35.8	246	32.6	246	264.4	1476
	USGS	97.4	1335	116.2	1561	119.1	1755	117.1	1819	111.9	1777	111.4	1771	673.1	10018
	FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13	3.7	62
	POCS	.5	10	.6	12	.6	12	.6	12	.6	12	.6	12	3.5	70
	SOL	.4	11	.5	12	.5	15	.5	15	.5	15	.5	15	2.9	83
	Total	150.7	1609	176.4	1839	166.8	2038	158.2	2103	149.6	2063	145.9	2057	947.6	11709

Table 5. Relative Rankings of Resource Potential and Industry's Interest in Exploration.

	Resource Potential		Interest in Exploration
	Industry	Geological Survey	Industry
1.	Central & West Gulf	Central & West Gulf	Central & West Gulf
2.	Beaufort Sea	Chukchi	Santa Barbara
3.	Santa Barbara	Beaufort	Beaufort Sea
4.	Mid-Atlantic	Mid-Atlantic	Bristol Basin
5.	St. George Basin	St. George Basin	North Atlantic
6.	Bristol Basin	Santa Barbara	Mid-Atlantic
7.	Southern California	Eastern Gulf of Alaska	Central & Northern California
8.	North Atlantic	North Atlantic	Southern California
9.	Norton Basin	Cook Inlet	St. George
10.	Chukchi Sea	Southern California	Norton
11.	Navarin Basin	Eastern Gulf of Mexico	Eastern Gulf of Mexico
12.	Central & Northern California	Bristol Bay Basin	Navarin
13.	Blake Plateau	Norton	Cook Inlet
14.	Hope Basin	Navarin	Hope Basin
15.	Eastern Gulf of Mexico	South Atlantic	Blake Plateau
16.	Cook Inlet	Northern California	Gulf of Alaska
17.	Gulf of Alaska	Blake Plateau	Chukchi Sea
18.	South Atlantic	Kodiak	South Atlantic
19.	Kodiak	Hope	Washington-Oregon
20.	Washington-Oregon	Washington-Oregon	Florida Straits
21.	Southern Aleutian	Aleutian Shelf	Kodiak Shelf
22.	Florida Straits	Florida Straits	South Aleutian

reduced risk of spills to specific regions. (Alternative V would reduce spill probability for California by 1.3; Alternative VI would reduce the probable number of spills in the southern Bering by .23; Alternative VII would reduce the probable number of spills in the Arctic by 3.77.) Alternative II would result in a similar number of total spills being probable, but the distribution would vary (1.3 less probable spills in California; 2.3 less in the Bering; .23 more in southern Alaska; and 3.59 more in the Arctic). Alternatives VIII and IX would result in significantly less spills being probable--a total of 19.43 and 22.33, respectively--which would reduce spill likelihood in Alaska.

Oil spills pose potential adverse effects to recreation, through fouling of beaches; to commercial fishing, through fouling of gear, area closures, tainting and possible effects to fish stocks; and to marine and coastal ecosystems. Fish larvae, benthic organisms, sea ducks, pelagic birds, and marine mammals are marine organisms particularly susceptible to oil spills.

Commercial fisheries resources in all of the OCS leasing areas are judged to be at least moderately sensitive to oil spills. However, the Gulf of Alaska, Kodiak, North Aleutian Shelf and Norton Basin have a markedly smaller risk of oil spills than other regions due to relatively low projected amounts of oil. All OCS areas are also adjacent to waterfowl populations and have some populations of pelagic birds. However, based on available, but limited data on levels of pelagic bird population and waterfowl breeding areas, the North Atlantic, offshore California, Gulf of Alaska, Kodiak, North Aleutian Shelf, St. George Basin, Navarin Basin, Norton Basin and the Chukchi and Beaufort Sea areas are believed to be the most sensitive to oil spill effects on bird populations. Likewise, on the basis of previous sale-specific endangered species consultations, the North and Mid-Atlantic, Southern California and all Alaskan areas are judged to be relatively high sensitivity areas for endangered species. Central and Northern California, and all Alaskan areas except Cook Inlet and Navarin Basin are considered the most sensitive to endangered marine mammals due to the abundance of breeding populations. A more detailed discussion of the possibility of oil spills and their damage capability is found on pages 144-150 of the FES; potential effects on endangered species, particularly whales, are discussed on pages 237-255, and effects on commercial fisheries are discussed on pages 206-220. Section 7 consultation for endangered species will occur, as appropriate, for a particular species as individual lease sale decisions are made.

Endangered species of greatest concern, regarding the proposed five-year leasing schedule, include whales which can be affected on a cumulative basis as they migrate through and spend portions of the year in several OCS areas. For example, gray whales winter in the northern Pacific and migrate through the Bering Sea to the Arctic, and some migrate through the Gulf of Alaska and the Kodiak leasing area as well. Therefore, they could be subject to effects in up to eight separate leasing areas. At least one oil spill is probable in each of these areas over the approximately twenty-five to thirty-year period from exploration through production. However, it is impossible to predict whether individual whales or whale populations might be subjected to multiple, simultaneous spill incidents. These species would certainly be subjected to noise from exploration, and from development and production where it occurs, in each of the various regions. However, the cumulative effects of such exposure cannot now be assessed, especially in view of the lack of understanding of the extent to which noise affects whales. Because of these factors, as well as the general lack of information regarding various OCS effects on whales and on whale distribution, and differences in behavior among species, effects on whale populations, especially in the cumulative sense, cannot be assessed in any definitive manner at this time.

Within the various OCS regions there are also unique or unusual resources, habitats or assemblages of organisms which could be adversely affected by oil spills or other oil and gas development-related activities. These include coral reefs and hard bottom communities (South Atlantic, Gulf of Mexico, California), canyonheads (Mid- and North Atlantic), islands serving as discrete and prolific breeding grounds for pelagic birds and marine mammals (California, Aleutian Islands), major migration routes (North Aleutian Shelf) and others. These unique or especially productive areas are most well defined outside of Alaska where the data base is greater. In many cases, these resources are discrete and limited enough that tract selection and mitigating measures for particular lease sales can reduce, though not eliminate, potential adverse environmental consequences. A more detailed discussion of the effects on special areas, such as estuaries, canyonheads, and live or hard-bottom areas, are found on pages 221-236 of the FES.

In addition to the potential of oil spills, development activities will cause: chronic oil discharges and accidental spills of oil-related substances; the release of chemicals in drilling muds and formation waters; smothering effects of drill cuttings; and sedimentation and smothering due to pipeline burial. By and large, these effects will occur in very localized areas around drilling platforms and pipelines. These effects are also amenable to mitigation through control of discharges, tract selection, and by placing structures so as to avoid adverse effects to particularly sensitive and productive resources or areas.

Multiple use conflicts are also difficult to assess in the absence of specific sale proposals. Recreation is principally affected by oil spills. All areas outside of Alaska are judged to be relatively highly sensitive to the effects of oil spills on recreation, although the type of sensitivity differs. Some areas, such as the Mid- and South Atlantic and Southern California, experience heavy recreational use along their entire shorelines. If an oil spill does reach the shore, there is a high risk that a recreational beach would be affected. In areas where beach use is more limited, as in Northern California and North Atlantic, a spill affecting a beach would have a greater consequence because of more restricted beach access, although the chance of affecting a beach may be considerably less. For example, on August 14, 1979, oil from the Bay of Campeche blowout began washing ashore on Texas beaches. Visitation on those beaches was down 25% in August and 23% in September compared to the previous year. Also, recreation and tourism are interrelated. Many local coastal economies are heavily dependent on the quality and attractiveness of ocean and bayfront recreation areas. This effect on recreation is more fully discussed on pages 256-271 of the FES.

In addition to oil spills and other pollution events which may affect fish stocks, the commercial fisheries of the OCS could be further affected by OCS development. The greatest conflict is expected to involve gear damage and loss. However, compensation is available through the Fishermen's Contingency Fund. There will also be short-term and long-term removal of potential fishing grounds from use due to placement of structures and pipelines.

In areas other than northern Bering and Arctic regions, where commercial fishing is minimal, at least moderate conflicts are anticipated. Use conflicts may be higher in the North Atlantic and the Santa Barbara Channel portion of Southern California due to the density of harvesting activities, and in Kodiak, due to crab potting, which is particularly susceptible to losses and for which replacement may be problemmatic, at least in the short-term. These conflicts are discussed on pages 206-220 of the FES. Subsistence harvesting of fish and marine mammals in Alaska may also be affected by the proposed lease sale through conflicts in resource use or from oil spills. Sales in the North Aleutian Shelf, Navarin Basin and Chukchi Sea areas may pose the highest relative risk to these resources and their harvesting. The effects on subsistence economy are discussed on pages 287-9, 295-300 of the FES.

The placement of structures on the OCS can also contribute to navigational conflicts resulting in a higher potential for accidents, including those involving oil, LNG, and hydrocarbon product tankers. This potential conflict can be ameliorated to some degree by control of structure placement and by navigation schemes. However, ship traffic is not always confined to navigation lanes and increased density of obstructions will result in increased potential for collisions. Due to the low density of traffic in Alaska, the risk posed by OCS structures is relatively low. The Mid-Atlantic, Gulf of Mexico and Southern California areas may pose the highest risk due to platform density and/or traffic density relative to potential leasing areas. Traffic separation schemes being proposed by the Coast Guard will serve to reduce this conflict.

Effects on local and regional economies, infrastructure land use, and other socio-economic factors are expected to be generally low to moderate. Outside of Alaska, all coastal regions adjacent to OCS areas have some degree of industrialization, and the economic bases in the urban areas are diverse. Projected levels of OCS-related activities are not expected to produce major changes or growth in economic sectors or to regional employment or population. Depending upon the exact location of onshore facilities, some land use conflicts, and social and fiscal effects on communities could be expected.

In Alaska, major commitments of land to new industrial uses and large influxes of workers, relative to the existing population, can be expected. Based on experience in the North Slope development, and in response to anticipated local and State desires and pressures, it is anticipated that facility development will be isolated from any nearby communities and interaction restricted through the establishment of enclaves. These enclaves should reduce potential adverse effects to subsistence communities. The most sensitive areas of subsistence lifestyle that could be affected by OCS development are, in order, Chukchi Sea, North Aleutian Shelf and St. George Basin. Effects of socio-economic development, particularly on subsistence, in Alaska are treated on pages 285-300 of the FES.

The Marine Mammal Protection Act, the Endangered Species Act, and other statutes and treaties are designed primarily to protect certain species of fish and wildlife. For example, both of the statutes mentioned above contain a specific exemption to allow Native Alaskans to hunt those species for subsistence purposes. These statutes, amongest others, have been construed as specifically imposing on the Federal Government a trust responsibility to protect Native Alaskans right to subsistence hunting. The responsibility requires the Secretary to be cognizant of the needs of Native Alaskans' culture, and to protect the species necessary for subsistence purposes. The Secretary can discharge his trust responsibility primarily by complying with the two above-cited Acts. Decisions regarding compliance for particular species will occur as individual lease sale decisions are made.

At the program level, Alaskan Natives are primarily concerned that no sale be scheduled until local coastal zone management plans are in effect so that the Natives' culture may be protected from the onshore and offshore development which follows a decision to lease tracts in a given sale area.

Effects on marine and coastal organisms, and possibly on ecosystems, can be expected as a result of the proposed OCS oil and gas lease sales. Oil spills, which are statistically probable, would have the greatest potential for severe impacts. Oil spills will result in mortality to individual organisms, and possibly reductions in population. Oil spills occurring in particularly sensitive areas--such as those entrained in an enclosed wetland or estuary--or affecting a small and particularly sensitive population--such as rafting pelagic birds, or bird or marine mammal breeding areas--could result in long-term population declines. Population declines have been observed in pelagic birds in the North Sea which have been attributed to oil spill events (though not confined to offshore oil development). Entrained fuel oil has resulted in closures of wetlands from harvesting molluscs and shellfish for several years (although no similar experience exists with crude oil). Adverse long-term effects on populations are not apparent as a result of 30 years of Gulf of Mexico oil and gas development, the Santa Barbara oil spill, or even tanker spills of refined oil. However, the complexity of factors involved in population size and diversity and the absence of complete baseline data do not permit a definite conclusion that no such long-term effects have or cannot result from oil spills. Effects on coastal ecosystems are discussed on pages 189-191 of the FES.

Similarly, while discharge of drilling fluids and long-term pollution (from day to day operations such as deck drainage and exhaust) caused by OCS development can be expected to have some short-term and very localized effects, experience in the Gulf of Mexico has not shown any apparent long-term adverse effects on populations. However, a conclusion that no such effects will occur is not possible. Thus, long-term pollution and its possible effects on the marine and coastal ecosystems and possibly upon some individual populations are a risk of OCS development. The FES discusses the possible effect of hydrocarbons (in the food web), drilling fluids, and heavy metals on the marine environment on pages 181-188. A very detailed discussion of this issue appears in Appendix 8 of the FES.

Another issue of concern relates to potential effects on air quality. National ambient air quality standards have been established for the major types of pollutants that endanger human health and welfare. Of these, carbon monoxide, particulates, sulfur dioxide, ozone and nitrogen dioxide may be associated with OCS development activities.

In Southern California most coastal areas, from Point Conception south to Mexico, experience concentrations of ozone which are above the national standard. Air quality is within the standards in some areas, but the Los Angeles and San Diego areas have critical problems with exhaust emissions. Pollutants, such as nitrogen oxides and particulates exceed national standard concentrations. Air quality problems exist in Central and Northern California. Some coastal areas experience higher ozone levels than permitted by the standard. Other pollutants are within standards except for the urbanized area near San Francisco Bay where exhaust emissions and industrial sources create air quality problems. The human health effects of poor air quality, such as eye and respiratory disorders as well as headaches and nausea, are well known as are air quality effects on agricultural crops in Southern California.

The prevailing winds in both coastal northern and southern California could transport OCS air emissions onshore, and this in turn could aggrevate existing air quality problems. The proposed U.S. Geological Survey regulations will require controls and other mitigation measures where determined to be necessary to prevent significant effects to any onshore area. In summary, it is possible that at times exploration and development activities occurring on the OCS may significantly affect onshore air quality in coastal California. However, in those instances where a significant effect results, the lessee will be required by Interior to control the emissions. In addition, the State also has responsibilities for regulation of onshore emissions. The FES discusses air quality effects further on pages 153-55, 272-9, 325, and 372-3.

The environmental effects of leasing in deep water (greater than 300 feet) has been a concern that has been raised. Acceleration of deepwater leasing may necessitate the use of new subsea technology which some believe has not been thoroughly tested. None of the proposed alternatives specifically address deepwater leasing. Most of the leasing areas contain portions that are in deeper water, and if selected later, might be included in a particular sale. At that time a detailed assessment will be made of this issue. Historically, the Department has relied on its OCS regulations and operating orders, particularly Orders 2, 5 and 8, to insure that new technology was adequately tested. Deepwater drilling technology is more fully discussed in Appendix 6 of the FES.

C. Alternatives

1. Alternative I (June Proposed Program)

a. Description

Alternative I is the proposed program as submitted to Congress, the Attorney General and the Governors of the affected States in June 1979. It was developed largely in response to President Carter's 2nd Energy Message on April 5, 1979, the comments received on the March draft proposed program, the requirements of Section 18 of the OCS Lands Act, as amended, and DOE's production goals. This alternative has 30 sales over the 5-year period plus one contingency sale. It reflects a mixture of lease sales among proven oil and gas producing areas and frontier areas. Primary emphasis is placed on the early scheduling of Alaskan frontier areas where the resource potential is believed to be high.

Table 6 illustrates characteristics associated with this alternative, and Table 7 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

The major benefit associated with this option is that it would open up frontier areas with high resource potential to exploration faster than any other alternative except Alternatives XI and XII, thereby resulting in an early assessment of the OCS oil and gas resources in these areas. It provides for entry into seven frontier areas which increases the probability of locating commercially recoverable deposits of oil and gas. Further, if economically recoverable hydrocarbon supplies are found, it will also result in the development of new domestic supplies faster than all other options, excluding Alternatives XI and XII. Alternative I has a net economic value of $74.7 billion. Alternative I also provides for a mixture of sales in areas where the resource potential is known (i.e., Gulf of Mexico) and sales in those frontier areas where the hydrocarbon potential is thought to be high.

When compared to the other alternatives, this option ranks fourth, along with Alternatives III and IV, in terms of potential recoverable total oil and total gas resources. The identical rankings of characteristics for Alternatives I, III and IV are because Alternatives III and IV include the same sales as Alternative I, but their timing is different.

Table 6. Characteristics of Alternative I.

Oil and Gas Statistics	Alternative I	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6620	(8881 - 4160)	4
Total Gas (trillion cubic feet)**	28.938	(40.5 - 20.498)	4
Net Economic Value ($ billions)	74.7	(102 - 57.3)	5
Maximum Acreage Offered (million acres)	32.1	(39.1 - 27.9)	3
Number of Sales	30	(38 - 25)	4
Number of Frontier Areas	7	(8 - 2)	2
Number of Exploratory Wells	2082	(2680 - 1730)	4
Number of Development & Production Wells	4924	(6103 - 4424)	4
Number of Platforms	547	(685 - 532)	3
Statistically Probable Number of Oil Spills $> 10^3$ bbl.	33.55	(44.56 - 19.43)	3

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1982	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	9

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Table 7. Estimated Appropriation and Staff Requirements

lternative I

ctivity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
esource nformation:												
USGS	42.5	603	44.6	603	53.5	635	44.0	635	46.4	635	46.6	635
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	45.0	609	54.0	643	44.6	644	47.1	646	47.3	646
cploration ata:												
USGS	2.2	3	2.4	3	2.3	3	2.3	3	2.3	3	2.3	3
nvironmental tatements nd Studies:												
BLM	41.3	100	42.6	100	30.7	100	26.0	100	25.3	100	23.3	100
USGS	10.9	112	11.5	112	14.2	127	14.2	127	14.2	127	14.2	127
Total	52.2	212	54.1	212	44.9	227	40.2	227	39.5	227	37.5	227
pervise ase erations:												
USGS	30.3	461	32.7	461	38.1	597	41.1	631	43.5	673	43.9	673
neral ministrative tivities:												
BLM	10.8	146	11.4	146	9.9	146	9.5	146	9.4	146	9.3	146
USGS	2.6	62	2.9	62	2.9	62	2.9	62	2.9	62	2.9	62
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	15.3	232	13.8	233	13.5	234	13.4	234	13.3	234
mmary:												
BLM	52.1	246	54.0	246	40.6	246	35.5	246	34.7	246	32.6	246
USGS	88.5	1241	94.1	1241	111.0	1424	104.5	1458	109.3	1500	109.9	1500
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	[illegible]	10
Solicitor	.3	11	.4	12	[illegible]	13	.5	14	.5	14	[illegible]	14
Total	141.7	1515	149.5	1517	153.1	1703	141.7	[illegible]	145.8	[illegible]	[illegible]	[illegible]

A significant feature of Alternative I is the timing of sales and the pace at which proposed leasing would occur offshore Alaska. This is an important consideration for two reasons. First, this alternative proceeds at a pace which, with some additional budgetary and personnel resources, can be met by the Department. First and second sales in an area are spaced at 3-year intervals while second and third sales are at 2-year intervals. This sequence provides for a steady level of activity which allows the Department to benefit from the exploratory results from one sale before the next sale is held. This alternative differs markedly from Alternative XII where several of the frontier Alaskan areas are scheduled earlier in the program and where repeat sales are included at one year intervals. Second, it appears that the most prospective unexplored areas are offshore Alaska. The sale dates in Alternative I proposed for these areas are designed to provide for a close integration with the environmental studies program.

As compared to Alternative X (cease leasing, use other sources, and conservation), this alternative avoids the environmental, social and economic costs associated with that option (see pp. 342 and 27-33 in the FES).

(2) Costs

The environmental consequences of Alternative I are discussed in detail in part B of this section.

As previously discussed, a major cost and environmental effect associated with production of OCS oil and gas is oil spill risk. Alternative I, along with Alternatives III and IV, ranks third in comparison with the other options in terms of the greatest number of statistically probable oil spills. Slightly more than 33 oil spills greater than 1,000 barrels are statistically probable as a result of Alternatives I, III and IV. Although oil spill risks exist, methods to reduce the likelihood of an oil spill are available and include strict enforcement of lease sale stipulations and OCS operating orders. In the event of a spill, at least some economic compensation will be available through the Offshore Oil Spill Compensation Fund 1/. The Geological Survey's OCS operating orders require that oil spill equipment be maintained by industry operating on the OCS and include procedures for notifying government agencies in the event a spill occurs. In addition, the National Contingency Plan requires that oil spill equipment be maintained by both the government and industry operating on the OCS.

In addition to the potential of oil spills, development activities as a result of implementation of Alternative I may affect human and marine environments. In general, these effects will be localized near drilling platforms, pipelines and onshore production facilities. Many of the potentially adverse effects can be reduced and controlled through both the development of site-specific lease stipulations and enforcement of Geological Survey's OCS operating orders.

1/ The Fund is managed by the Secretaries of Treasury and Transportation, and the structure of the Fund has been established by the Coast Guard final regulations published March 19, 1979. However, the Treasury regulations dealing with fee assessment and collection are only in proposed form.

Effects on local and regional economies, infrastructure, land use, and other socio-economic factors are expected to be low to moderate for this alternative, with the most pronounced effects being on Alaskan areas which are relatively undisturbed and contain resources important for subsistence uses. In Alaskan areas bordering the Bering Sea and the Chukchi Sea, all alternatives except Alternatives VIII and X will result in commitments of land to new industrialized uses, and non-indigenous population increases can be expected. These infrastructure and social effects upon subsistence cultures in and around the area of development, however, can be reduced by isolating industrial development from nearby communities and restricting interaction through the establishment of enclaves.

Alternative I will also result in increased conflicts with other uses of the sea and seabed, most notably with navigation and commercial fishing. Navigational conflicts could arise from the proposed placement of exploratory, development or production structures in transportation corridors, thereby increasing the potential for boat/structure accidents. These potential effects can be ameliorated to some degree by control of structure placement, slant drilling, subsea completions and designated sealanes. Further, it is the role and responsibility of the Coast Guard to ensure safe navigation under the Ports and Waterways Safety Act. Following passage of the 1978 Amendments to that Act, the Coast Guard initiated studies on all OCS areas which may result in the designation of safe access routes if the studies indicate they are necessary. If safe access routes are designated under the statute in leased OCS areas, all lease rights within the area would be subordinate to the paramount rights of navigational safety.

The greatest potential conflict involving commercial fishing is expected to involve gear damage and loss, but compensation is available through the Fishermen's Contingency Fund, administered by the Secretary of Commerce. Final regulations implementing this Fund were published on January 24, 1980, and the Fund is now fully operational. Both short-term and long-term losses of potential fishing grounds are also expected as a result of the placement of structures and pipelines. These potential conflicts may be relatively high in the North Atlantic, Kodiak, and in the Santa Barbara Channel. Otherwise, these conflicts are expected to be moderate in Alaska, with the exception of the northern Bering Sea and Arctic Ocean regions where commercial fishing is minimal. Subsistence harvesting of fish and marine mammals in Alaska may also be affected by Alternative I through either conflicts in resource use or from potential oil spills. Sales in the North Aleutian Shelf, Navarin Basin, and Chukchi Sea may pose the highest relative risk to these resources and their harvesting.

Potential constraints related to the adoption of Alternative I as the final leasing program also involve the transportation and processing of potential finds of Alaskan gas. The DOE does not believe that gas will be produced from any Alaskan OCS areas except Beaufort Sea and Cook Inlet. If this were the case, total gas expected from the 5-year schedule would be reduced 18% to 20.22 trillion cubic feet. Production from the Beaufort Sea area would probably be connected by spur pipeline to the proposed Alaskan natural gas pipeline terminals at Prudhoe Bay and be transported by pipeline to the lower 48 States. The remaining Alaskan OCS gas production, expected to be about 2.2 billion cubic feet per day around 1990, could be reinjected during the early years of production from each field. Most of this gas could probably eventually be transported by LNG tankers or by pipeline to the lower 48 States. The method of transportation would be determined upon consideration of the exact location, size, and extent of the gas find, future gas markets, environmental considerations and the development of LNG receiving and regassification capacity of the west coast.

At present, there are no LNG plants on the west coast although one has been proposed and conditionally approved by the Federal Energy Regulatory Commission for the Point Conception, California area. Its capacity is projected to be between .9 and 1.2 billion cubic feet per day. There are, however, three LNG receiving terminals currently in operation in the U.S. located in Massachusetts, Maryland and Georgia. An additional LNG plant has been approved for Louisiana. Together, the latter four facilities will have a capacity of less than two billion cubic feet per day. This amount is similar to gas production expected from the Alaskan OCS in early 1990 under Alternative I. Because of cost and safety factors, it is unlikely that large volumes of LNG could be tankered through the Panama Canal. Thus, the shipment of Alaskan OCS gas by LNG tanker may require major construction of LNG receiving terminals on the west coast, and/or near the U.S. in Canada or Mexico. Another option is to export the gas. Even assuming that the gas could not be produced or transported, for several of the Alaskan areas DOE recommended that leasing proceed solely on the value of the oil. This issue is discussed further on pages 45-50 of the FES.

Air quality effects, as discussed in Section III-C., are a concern primarily in California. Many coastal locations currently experience violations of ozone standards and standards for some other pollutants. Prevailing winds in coastal areas will generally transport any OCS air emissions onshore. Since portions of this area already experience severe air quality problems, emission controls from OCS-related or other development will be critically important in meeting air standards. The Geological Survey's proposed air quality regulations issued May 10, 1979, cover this situation. Final regulations are expected in February 1980. Other sale areas either because of air currents or existing onshore petroleum facilities are not expected to experience any major change in air quality. If approved activities on the OCS significantly affect the air quality of any State, the Interior regulations will require necessary controls of emissions.

The costs for Alternative I, as discussed above and in the introductory section, range from minor inconveniences to socio-economic and socio-cultural effects to possible major environmental effects. In general, many of the potential effects related to OCS activities can be curtailed or reduced to a significant degree through tract selection, lease sale stipulations tailored to the specific conditions of the sale area and by post-sale regulation. As the planning process advances for a particular sale, and decisionmaking progresses, the definitions of potentially adverse effects become more site-specific and improved mitigation measures can be developed.

2. Alternative II (DOE Production Goals)

a. Description

Alternative II reflects a proposed schedule developed by the Department of Energy with slight modifications in the timing of sales in order to allow sales to be scheduled consistent with the timing criteria discussed under Alternative I. In contrast with Alternative I, this alternative proposes the addition of six sales--three in the Gulf of Mexico and one each in the Gulf of Alaska, Beaufort Sea and St. George Basin--and the deletion of 3 sales--California, Navarin Basin and North Aleutian Shelf--resulting in a net gain of three sales over the 5-year period. It also excludes the Blake Plateau area from consideration. This alternative focuses on increasing the number of sales in the Gulf of Mexico where the petroleum potential is proven and places emphasis on two Alaskan areas thought to be high in resource potential--the Beaufort Sea and St. George Basin.

Table 8 illustrates characteristics associated with this alternative, and Table 9 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

A major benefit of Alternative II is that it maximizes the net economic value of the schedule as a whole. Sales are scheduled taking into account certain leasing constraints, including, among others, geohazards, rig availability, transportation, and facility siting. This alternative, when compared to Alternative I, results in an increase in net economic value of $3.1 billion. Since it was initially developed by DOE, it is compatible with their final production goals for oil and gas. Alternative II ranks higher than any other alternative, except Alternative XII, in terms of estimated total oil and total gas resources. It also provides for a greater number of sales (33) than any other alternative except Alternative XII and it concentrates these sales in areas of known potential resources (e.g., Gulf of Mexico). This, in turn, has added benefits. First, it allows the Department to concentrate its manpower and funding resources used for obtaining environmental and geophysical data in fewer areas and similarly, permits industry to focus its geophysical data gathering in fewer areas and perhaps require less onshore infrastructure investment.

Environmental consequences for this alternative are similar to those described for Alternative I with the exceptions of the California and Alaskan areas. Reduced overall environmental effects, including air quality concerns, are expected in California due to the elimination of sale #73, a sale designated as California under Alternative I. Alternative I includes California sales in 1983 and 1984, without specifying the location in California, thereby raising the possibility that either

Table 8. Characteristics of Alternative II.

Oil and Gas Statistics	Alternative II	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6744	(8881 - 4160)	2
Total Gas (trillion cubic feet)**	30.134	(40.5 - 20.498)	2
Net Economic Value ($ billions)	77.8	(102 - 57.3)	2
Maximum Acreage Offered (million acres)	29.2	(39.1 - 27.9)	8
Number of Sales	33	(38 - 25)	2
Number of Frontier Areas	4	(8 - 2)	10
Number of Exploratory Wells	1730	(2680 - 1730)	11
Number of Development & Production Wells	4656	(6103 - 4424)	8
Number of Platforms	546	(685 - 532)	7
Statistically Probable Number of Oil Spills $> 10^3$ bbl.	33.3	(44.56 - 19.43)	7

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1983	10	9	13
St. George	1982,1984	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	--	15	13	17
Navarin	--	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	14
California	3
Alaska	10

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

3/6/80

Table 9. Estimated Appropriation . Staff Requirements

ernative II

ivity	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984		FY 1985	
	$ million	FTP	$ million	FTP	$ million	FTP	$ million	FTP	$ million	FTP	$ million	FTP
ource ormation:												
SGS	42.5	603	46.0	635	56.8	673	46.4	678	48.5	678	47.7	678
WS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.4	641	57.3	681	47.0	687	49.2	689	48.4	689
loration a:												
SGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
ironmental tements Studies:												
LM	41.3	100	43.9	100	31.3	100	27.1	100	24.4	100	23.3	100
SGS	10.9	112	15.1	132	14.7	132	16.1	132	13.1	132	12.4	132
Total	52.2	212	59.0	232	46.0	232	43.2	232	37.5	232	35.7	232
ervise se rations:												
SGS	30.3	461	33.6	485	36.5	587	37.5	617	39.1	657	39.1	657
eral inistrative ivities:												
LM	10.8	146	11.1	146	10.0	146	9.6	146	9.4	146	9.3	146
SGS	2.6	62	2.9	63	3.3	70	3.1	71	3.1	73	3.0	73
WS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
olicitor	.3	11	.5	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	15.1	233	14.3	241	13.8	243	13.6	245	13.4	245
mary:												
LM	52.1	246	55.0	246	41.3	246	36.7	246	33.8	246	32.6	246
SGS	88.5	1241	99.9	1318	113.6	1465	105.4	1501	106.1	1543	104.5	1543
WS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
olicitor	.3	11	.5	12	.4	13	.5	14	.5	14	.5	14
Total	141.7	1515	156.4	1594	156.4	1744	143.8	1782	141.7	1826	138.9	1826

the Southern California or Central and Northern California areas could be considered for each of these sales. Since Alternative II includes only one Central and Northern California sale, potential effects to this area may be somewhat less. This would result in less effect on marine mammal pupping grounds and pelagic bird rookeries in the Farallon Island area and to marine and coastal resources of Central and Northern California in general. Further, potential air pollution problems posed by the transfer of oil would be reduced and there may also be less competition with commercial fishermen for onshore facilities.

In Alaska, since Navarin Basin and North Aleutian Shelf are not included in Alternative II, potential adverse environmental and social effects to these areas are eliminated or substantially reduced for the 5-year period. However, since this option proposes successive sales in the Gulf of Alaska, St. George Basin and Beaufort Sea, the additional effects can be expected to offset environmental benefits gained through the deletion of the Navarin and North Aleutian Shelf sales. This issue is more fully discussed under costs.

(2) Costs

The major cost associated with Alternative II is that it does not allow for an early assessment of OCS oil and gas resources in two frontier areas where the resource potential is believed to be high--Navarin Basin and North Aleutian Shelf. Further, this option places increased reliance on two as yet untested Alaskan areas--the Beaufort Sea and St. George Basin. Given the uncertainty of resource potential, it may be better to include a wider selection of frontier areas.

Three sales per year for 1982, 1983 and 1984 are proposed for the Gulf of Mexico, and they would be drawn from the same pool of unleased potentially productive tracts. It is expected that these sales would encompass the same amount of total acreage as that proposed in the Gulf of Mexico sales in Alternative I thus resulting in increased administrative costs for potentially leasing the same amount of acreage. Further, this option could result in smaller individual sales in the Gulf of Mexico.

As mentioned earlier, Alternative II proposes successive sales in the Gulf of Alaska, St. George Basin and Beaufort Sea, and these additional effects may offset environmental benefits gained through the deletion of the Navarin Basin and the North Aleutian Shelf sales. In particular, the same number of sales would be proposed for the Southern Bering Sea as would be in Alternative I. Therefore, the effects on that region would not be expected, at least at this level of analysis (and in the absence of oil spill trajectories) to be substantially different than those described for Alternative I. The Beaufort Sea is more critical for subsistence uses and waterfowl, and because of its restricted nature due to ice conditions, possibly more critical for marine mammals, than is Navarin Basin. The Gulf of Alaska is also relatively highly sensitive to oil spills and other effects on marine mammals and birds. Thus, while Navarin Basin and the North Aleutian Shelf are omitted from Alternative II, it may, because of its emphasis on other Alaskan areas, result in more consequences to marine mammals and birds (particularly waterfowl) and to subsistence use of resources, than would Alternative I.

Alternative II proposes two sales in the Beaufort Sea where the cumulative effects resulting from both Prudhoe Bay activity and exploration at the National Petroleum Reserve must be considered. The onshore area supports a population which is 87 percent native. Although the Inupiat Eskimos are familiar with oil and gas development activities, increased social and cultural effects can be expected with this alternative. The Inupiat culture is closely linked to the subsistence lifestyle, particularly with regard to Bowhead whales. While this alternative, as compared to Alternative I, will increase the socio-economic and socio-cultural effects to the Beaufort Sea region and consequences to the Inupiat culture, it is difficult to attribute these potentially adverse effects to any one cause. Nonetheless, the Department has a trust responsibility to Native Americans, and these cumulative costs must be seriously considered prior to any decision regarding the proposed final leasing program.

3. Alternative III (Status of Coastal Zone Management Plans)

a. Description

Alternative III is a schedule which delays proposed sales in the Bering Sea and Norton Sound regions in Alaska in order to allow time for district coastal zone management plans to be developed. This alternative is identical to Alternative I except it postpones the proposed Norton Basin sale 2-1/2 years, the North Aleutian Shelf area sale 1 year, and the St. George Basin sale 2 years.

Alternate timing of sales for coastal zone management reasons was also considered for the lower 48 States. All States which are currently and actively involved in development of State coastal zone management programs are anticipating Federal approval prior to the end of fiscal year 1980, providing the State program meets the requirements of the Coastal Zone Management Act, as amended. It is questionable if New York and Florida will receive approval within the time limitations for Federal funding, and Georgia is not presently participating in the Federal program. Both California and Alaska have federally approved State coastal zone management programs which provide for the development of local coastal management plans. The deadline for completion of California local plans is January 1981. Sale #53, according to all alternatives except Alternative V, is proposed for spring 1981, and thus local plans are expected to be completed prior to the proposed sale.

The Alaskan coastal zone management issue, however, involves a markedly different situation. The State anticipates 40 district plans, and 20 are expected to be completed by early 1981. The remaining 20 plans could require up to 7 years to complete. The issue of concern is that in Alaska, large portions of the shoreline are "unorganized," meaning no local government exists, and thus planning and zoning expertise is limited. While the lack of district plans is not crucial since the State coastal zone management program is in effect, in unorganized areas coastal zone management funding offers an incentive to become organized, establish district plans, and prepare for potential onshore impacts of OCS development. In the Bering Sea region, only one coastal resource service area has been formed in an area adjacent to Navarin Basin. Since the Navarin Basin sale is not proposed until late 1984 in Alternative I, sufficient time is probably available to complete coastal planning prior to the sale. Areas adjacent to Norton Basin, St. George Basin and North Aleutian Shelf have not yet initiated any efforts which would enable them to become eligible for coastal zone management funding. Alternative III has been developed for the above reasons and in response to State and local government comments which highlighted similar concerns.

Table 10 illustrates characteristics associated with this alternative, and Table 11 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

Alternative III provides additional time and incentive for the organization of coastal resource service areas and development of district coastal zone management plans, which, upon approval, could insure local government involvement in enclave siting decisions and other land use decisions.

Benefits of this alternative are similar to those of Alternative I with the exception that sales in Norton Basin, North Aleutian Shelf and St. George Basin are delayed. Potential adverse environmental effects in these areas will be alleviated but only on a short-term basis (2 - 3 years). Net environmental effects over the long-term could possibly be reduced through the development of district coastal zone management plans which reflect ecologically sound land use planning and siting of industrial, on-shore support facilities.

(2) Costs

The weakness of Alternative III is that an assessment of potential oil and gas resources in Norton, St. George and North Aleutian Shelf will be delayed 2 - 3 years resulting in further delays in development should these areas be hydrocarbon prone. In comparison with Alternative I, this delay results in a loss in net economic value of $.7 billion.

Major costs, as described for Alternative I, are applicable to this alternative except for a possible reduction in land use impacts.

Table 10. Characteristics of AlternativeIII.

Oil and Gas Statistics	Alternative III	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6620	(8881 - 4160)	4
Total Gas (trillion cubic feet)**	28.938	(40.5 - 20.498)	4
Net Economic Value ($ billions)***	74.0	(102 - 57.3)	8
Maximum Acreage Offered (million acres)	32.1	(39.1 - 27.9)	3
Number of Sales	30	(38 - 25)	4
Number of Frontier Areas	7	(8 - 2)	2
Number of Exploratory Wells	2082	(2680 - 1730)	4
Number of Development & Production Wells	4924	(6103 - 4424)	4
Number of Platforms	547	(685 - 532)	3
Statistically Probable Number of Oil Spills > 10^3 bbl.	33.55	(44.56- 19.43)	3

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential Industry	Resource Potential Geological Survey
Kodiak	1980	21	19	18
Norton	1985	10	9	13
St. George	1984	9	5	5
North Aleutian Shelf	1984	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	9

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

***The net economic value has been adjusted to reflect the loss in present value (at 10% discount) to account for del[illegible]s in the economic benefits of production. These [illegible]justments do not reflect any offsetting increas[illegible] in value due [illegible] higher real prices of oil and gas realized as [illegible] result of production occurring in later years.

Table 11. Estimated Appropriation and Staff Requirements

ternative III

tivity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
source formation:												
JSGS	42.5	603	45.9	635	56.7	653	48.7	658	48.5	658	47.7	658
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.3	641	57.2	661	49.3	667	49.2	669	48.4	669
ploration ta:												
JSGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
vironmental atements d Studies:												
BLM	41.3	100	40.9	100	31.2	100	26.5	100	25.3	100	23.3	100
JSGS	10.9	112	14.2	127	12.8	127	16.2	133	13.2	133	12.5	133
Total	52.2	212	55.1	227	44.0	227	42.7	233	38.5	233	35.8	233
pervise ase erations:												
JSGS	30.3	461	33.6	485	36.0	567	37.0	607	38.6	647	38.6	647
neral ministrative tivities:												
BLM	10.8	146	10.8	146	10.0	146	9.6	146	9.4	146	9.3	146
JSGS	2.6	62	2.9	62	3.2	67	3.1	70	3.1	72	3.0	72
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.5	12	.4	13	.4	13	.5	14	.5	14
Total	14.3	231	14.8	232	14.2	238	13.7	241	13.6	244	13.4	244
mary:												
BLM	52.1	246	51.7	246	41.2	246	36.1	246	34.7	246	32.6	246
JSGS	88.5	1241	98.9	1312	111.0	1417	107.3	1471	105.7	1513	104.1	1513
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.5	12	.4	13	.4	13	.5	14	.5	14
Total	141.7	1515	153.1	1588	153.7	1696	[illegible]	1751	[illegible]	[illegible]	138.5	[illegible]

4. Alternative IV (Availability of Environmental Information)

a. Description

Alternative IV is identical to Alternative I except it delays the proposed St. George Basin sale from December 1982 until late in 1983. This alternative was developed in order to assure availability of oceanographic and meteorologic data for use in modelling of oil spills, instead of using preliminary data as would be required under Alternative I.

The possibility of delaying sales to acquire additional environmental information was explored for all proposed sales with particular attention given to the frontier areas. The proposed environmental studies, together with currently available information, are expected to provide enough useful information for sale decisionmaking in all cases. However, as a result of the consultation process in Section 18 of the OCS Lands Act, as amended, and NEPA concerns were raised regarding the availability of environmental information for three areas--St. George Basin, Central and Northern California, and the North Aleutian Shelf. Alternatives V and VI, respectively, have been developed for the latter two proposed sale areas.

By scheduling the St. George Basin in 1983, an additional year of studies information will be available on regional geohazards, pollutant transport and living resources as compared with Alternative I. The geohazards studies involve reconnaisance regional surveys to identify the general nature of geohazards in the area. Tract-specific high-resolution studies are conducted by the Conservation Division of the Geological Survey to evaluate the potential impact of geohazards on oil and gas activities. The pollutant transport studies are used for the risk analysis modelling used in the environmental statement. The living resources studies are used in the evaluation of fishery resources and endangered species (whales). For this reason, Alternative IV was developed.

Table 12 illustrates characteristics associated with this alternative, and Table 13 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

A benefit of this alternative is that it will allow the collection and analysis of an additional year of studies information in regional geohazards, pollution transport and living resources for St. George Basin, a biologically productive area.

The delay might result in fewer impacts to biological resources of the sale area particularly if the additional information was useful to tract selection and lease sale stipulation decisions (i.e., deletion of specific tracts for environmental reasons or the development of site-specific environmentally protective lease stipulations).

Table 12. Characteristics of Alternative IV.

Oil and Gas Statistics	Alternative IV	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6620	(8881 - 4160)	4
Total Gas (trillion cubic feet)**	28.938	(40.5 - 20.498)	4
Net Economic Value ($ billions)***	74.4	(102 - 57.3)	6
Maximum Acreage Offered (million acres)	32.1	(39.1 - 27.9)	3
Number of Sales	30	(38 - 25)	4
Number of Frontier Areas	7	(8 - 2)	2
Number of Exploratory Wells	2082	(2680 - 1730)	4
Number of Development & Production Wells	4924	(6103 - 4424)	4
Number of Platforms	547	(685 - 532)	3
Statistically Probable Number of Oil Spills $> 10^3$ bbl.	33.55	(44.56 - 19.43)	3

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1983	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	9

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

***The net economic value has been adjusted to reflect the loss in present value (10% discount) to account for delays in the economic benefits of production. These adjustments do not reflect any offsetting increases in value due to higher real prices of oil and gas realized as a result of production occurring in later years.

Alternative IV

Table 13. Estimated Appropriation and Staff Requirements

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.9	635	54.7	653	46.3	658	48.5	658	47.7	658
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.3	641	55.2	661	46.9	667	49.2	669	48.4	669
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	42.4	100	30.5	100	25.7	100	25.3	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	16.1	132	13.1	132	12.4	132
Total	52.2	212	56.6	227	42.4	227	41.8	232	38.4	232	35.7	232
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	36.0	567	37.0	607	38.6	647	38.6	647
General Administrative Activities:												
BLM	10.8	146	11.0	146	9.9	146	9.5	146	9.4	146	9.3	146
USGS	2.6	62	2.9	62	3.1	67	3.1	70	3.1	72	3.0	72
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.5	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	15.0	232	14.0	238	13.7	242	13.6	244	13.4	244
Summary:												
BLM	52.1	246	53.4	246	40.4	246	35.2	246	34.7	246	32.6	246
USGS	88.5	1241	98.9	1312	108.0	1417	104.8	1470	105.6	1512	104.0	1512
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.5	12		13	.5	14	.5	14		14
Total	141.7	1515	153.8	1588	149.9	1696	141.7	1751	142.1	1795	138.4	1795

Other benefits, as described for Alternative I, are applicable to this alternative.

(2) Costs

Alternative IV would result in a one-year delay of development and production of potential hydrocarbon resources, and as compared to Alternative I, results in a loss in net economic value of $.3 billion. Otherwise, this alternative will only minimally affect the environmental, social and economic consequences as described for Alternative I, and thus, for all practical purposes, other costs can be expected to be identical.

5. Alternative V (State of California Proposal)

a. Description

Alternative V reflects Alternative I with modifications to the proposed sales offshore California in order to acquire additional environmental information. In contrast with Alternative I, this alternative proposes to delay Central and Northern California sale #53 from 1981 until 1983, to delete California sale #73 proposed for 1983, and to designate the 1984 proposed California sale #80 as a Southern California sale. Thus, it results in 29 sales over the 5-year period.

As mentioned under Alternative IV, during development of alternative schedules particular attention was directed at the frontier areas in evaluating the potential need for additional environmental information. Strictly speaking, Central and Northern California is not a frontier area since it has a limited history of leasing but no development; however, for purposes of program development, the Central and Northern California area was considered a frontier area.

The Central and Northern California area supports abundant coastal and pelagic birds and coastal sea mammals. These species are known to be highly susceptible to oil spill effects and have suffered documented high levels of mortality (e.g., birds) in previous oil spill incidents. These particular effects are demonstrated in contrast with other effects which are hypothesized. Additionally, for pelagic birds, reproduction rates are low and thus populations, as opposed to individuals, are more susceptible to reduction through oil caused mortality than some other marine populations.

The State of California suggested a delay of two years in order to provide for the completion of a seabird and marine mammal study being conducted by the University of California at Santa Cruz, prior to the completion of the FES. Thus, Alternative V was developed. This study, an aerial survey of populations, is scheduled to be completed in June 1981, with an interim report due in April 1980. The interim report will be used in the FES under Alternative I, and the final seabird and marine mammal study results will be used in the review of exploration and development plans. This study supplements existing literature, an ecological characterization study already prepared by the Fish and Wildlife Service (FWS) and a seabird nesting and seasonal use survey being conducted by the FWS. The availability of the results of the FWS studies, together with existing literature ensures that there will be adequate information for the DES as proposed under Alternative I.

Table 14 illustrates characteristics associated with this alternative, and Table 15 shows the estimates of appropriations and staff necessary to implement it.

Table 14. Characteristics of Alternative V.

Oil and Gas Statistics	Alternative V	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6304	(8881 - 4160)	8
Total Gas (trillion cubic feet)**	28.454	(40.5 - 20.498)	8
Net Economic Value ($ billions)***	71.1	(102 - 57.3)	9
Maximum Acreage Offered (million acres)	28.7	(39.1 - 27.9)	9
Number of Sales	29	(38 - 25)	8
Number of Frontier Areas	7	(8 - 2)	2
Number of Exploratory Wells	2008	(2680 - 1730)	10
Number of Development & Production Wells	4558	(6103 - 4424)	9
Number of Platforms	532	(685 - 532)	11
Statistically Probable Number of Oil Spills $>10^3$ bbl.	32.05	(44.56- 19.43)	8

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1982	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	3
Alaska	9

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

***The net economic value has been adjusted to reflect the loss in present value (10% discount) to account for delays in the economic benefits of production. These adjustments do not reflect any offsetting increases in value due to higher real prices of oil and gas realized as a result of production occurring in later years.

Alternative V

Table 15. Estimated Appropriation and Staff Requirements

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.9	635	54.7	653	46.3	658	48.5	658	47.7	658
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.3	641	55.2	661	46.9	667	49.2	669	48.4	669
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	39.9	100	28.7	100	25.5	100	25.3	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	16.1	132	13.1	132	12.4	132
Total	52.2	212	54.1	227	40.6	227	41.6	232	38.4	232	35.7	232
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	36.0	567	37.0	607	38.6	647	38.6	647
General Administrative Activities:												
BLM	10.8	146	10.8	146	9.8	146	9.5	146	9.4	146	9.3	146
USGS	2.6	62	2.9	62	3.1	67	3.1	70	3.1	72	3.0	72
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	14.7	232	13.9	238	13.7	242	13.6	244	13.4	244
Summary:												
BLM	52.1	246	50.7	246	38.5	246	35.0	246	34.7	246	32.6	246
USGS	88.5	1241	98.9	1312	108.0	1417	104.8	1470	105.6	1512	104.0	1512
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	[illegible]	10
Solicitor	.3	11	.4	12	[illegible]	13	.5	14	.5	14	[illegible]	14
Total	141.7	1515	151.0	1588	148.0	1696	141.5	1751	142.1	1795	138.4	1795

b. Discussion

(1) Benefits

A benefit of this alternative is that it would provide an additional two years for completion of the seabird and marine mammal study in the Central and Northern California area. Depending on the final results of this study, this alternative could possibly reduce overall environmental effects in Central and Northern California particularly if the results indicate that existing information on marine mammals or seabirds was either incorrect or incomplete. For example, this study may indicate that certain tracts should be omitted to provide protection for seabird or pinneped concentration areas, including rookeries and pupping grounds, or the results could provide better information useful in development of mitigation measures.

In general, the overall environmental effects, including air quality effects, can be expected to be reduced by adoption of this alternative since it provides for one less sale off California than Alternative I, and an additional two years of studies on marine mammals and seabirds before a sale off Central and Northern California is scheduled. Assuming that the California sale which has been deleted would have been off Central and Northern California, potential effects to this area may be somewhat less. This would result in less effect on marine mammal pupping grounds and pelagic bird rookeries in the Farallon Island area and to marine and coastal resources of Central and Northern California in general. Further, potential air pollution problems posed by the transfer of oil would be reduced and there may also be less competition with commercial fishermen for onshore facilities.

Another benefit of Alternative V is that the number of exploratory wells is less than those required for all other alternatives except Alternative II and Alternative X. Similarly, the estimated number of development and production wells needed is lower than other alternatives excluding Alternatives VIII, IX, and X. Alternative V would also require the lowest number of platforms of any of the alternatives except Alternative X. Oil spill risk under this alternative is slightly reduced, ranking eighth when compared to the other alternatives.

Other benefits as described for Alternative I are applicable to this alternative.

(2) Costs

Alternative V would result in a 2-year delay in exploratory activities which are needed to assess the hydrocarbon potential of Central and Northern California. Projected oil resource estimates for this area are 222 million barrels. Thus, assuming commercially economic deposits are found, this alternative will result in delays in development and production, and as compared to Alternative I, this alternative would result in a loss in net economic value of $3.6 billion.

Another potential cost of Alternative V is that, compared to Alternative I, it affords little flexibility in terms of sale location off California. Alternative I does not designate the exact location of the 1983 or 1984 proposed California sale but rather denotes them as California sales. This was done because the Department expects that drilling in the near future may provide important information that will be valuable in determining the 1983 and 1984 sale locations. Alternative V does not provide for consideration of this additional information.

Other costs are similar to those described for Alternative I.

6. Alternative VI (Sensitivity of Other Resources)

a. Description

Alternative VI is identical to Alternative I except it omits the proposed North Aleutian Shelf sale from the 5-year program.

This alternative was developed because of the sensitivity of other marine resources in the region. The area supports significant biological resources and is in proximity to important breeding habitat, migration routes and feeding areas for marine mammals, including endangered whales, and populations of waterfowl and birds. Shoreward of the area is the Izembek Lagoon, a National Wildlife Refuge, which is a major migratory stop for significant portions of the world populations of black brant, cackling Canada geese, Stellar's eiders and speckled eiders. The Unimak Pass serves as the major migratory gateway to the arctic for many species of fish and marine mammals, including endangered whales. Additionally, the area is located at the southern edge of one of the largest bottom-fish fisheries in Alaska.

Alternative schedules were considered which would omit rather than delay certain sales from the 5-year program in order to provide time for acquiring additional information useful to decisionmaking. Environmental and geologic hazards information is expected to be available early enough for use in decisionmaking in all of the proposed frontier areas included in Alternative I. Four years of data would be available for consideration in an ES for the North Aleutian Shelf if a sale was held in 1983, as proposed under Alternative I. However, because of the sensitivity of other marine resources in this area, consideration was given to omission of the sale from the schedule to provide for long-term studies which would more thoroughly assess potential environmental effects. If such studies were conducted during the 5-year period 1980-1985, even though the sale area was not on the 5-year program, this alternative should provide long-term environmental information useful in any future decisions regarding a potential sale in the North Aleutian Shelf area.

Table 16 illustrates characteristics associated with this alternative, and Table 17 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

The benefit of this alternative is that it would provide additional time for conducting long-term studies concerning coastal ecosystems, the importance of the area as a migration route for coastal and marine organisms, and potential effects associated with oil spills. The results of these studies could be considered in any future sale decisions and the possible effects of oil and gas activities on the other marine resources may be lessened. It is believed that the environmental consequences of this alternative would be the same as for Alternative I, except that potential effects in the North Aleutian Shelf area would be reduced substantially during 1980-1985. Since it appears

Table 16. Characteristics of Alternative VI.

Oil and Gas Statistics	Alternative VI	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6580	(8881 - 4160)	7
Total Gas (trillion cubic feet)**	28.778	(40.5 - 20.498)	7
Net Economic Value ($ billions)	74.4	(102 - 57.3)	6
Maximum Acreage Offered (million acres)	28.7	(39.1 - 27.9)	9
Number of Sales	29	(38 - 25)	8
Number of Frontier Areas	6	(8 - 2)	7
Number of Exploratory Wells	2070	(2680 - 1730)	7
Number of Development & Production Wells	4914	(6103 - 4424)	7
Number of Platforms	546	(685 - 532)	7
Statistically Probable Number of Oil Spills $>10^3$ bbl.	33.32	(44.56- 19.43)	6

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1982	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	8

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

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Table 17. Estimated Appropriation and Staff Requirements

Alternative VI

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.9	635	54.7	653	45.3	653	47.7	653	47.7	653
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.3	641	55.2	661	45.9	662	48.4	664	48.4	664
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	40.0	100	30.0	100	26.0	100	25.3	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	15.2	127	12.4	127	12.4	127
Total	52.2	212	54.2	227	41.9	227	41.2	227	37.7	227	35.7	227
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	36.0	567	37.0	607	38.6	647	38.6	647
General Administrative Activities:												
BLM	10.8	146	10.7	146	9.8	146	9.5	146	9.4	146	9.2	146
USGS	2.6	62	2.9	62	3.1	67	3.0	69	3.0	71	3.0	71
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	14.6	232	13.9	238	13.6	241	13.5	243	13.3	243
Summary:												
BLM	52.1	246	50.7	246	39.8	246	35.5	246	34.7	246	32.5	246
USGS	88.5	1241	98.9	1312	108.0	1417	102.8	1459	104.0	1501	104.0	1501
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	141.7	1515	151.0	1588	149.3	1696	140.0	1740	140.5	1784	138.3	1784

this area may be a concentration point for many marine mammals and birds, this alternative would allow more time to consider possible marine sanctuary status for the area prior to its consideration for sale should it be reconsidered for leasing after May 1985. There are, however, currently no active candidates for marine sanctuary designations in the North Aleutian Shelf area.

Further, it is not possible to conclude that all environmental effects in the North Aleutian Shelf area between 1980 and 1985 would be eliminated. It should be noted that environmental consequences in St. George Basin may result in adverse effects to the same populations as would a sale in North Aleutian Shelf area. In the absence of spill trajectories and other site-specific analyses, the extent of such effects cannot be determined at this stage. Additionally, the individuals and populations of marine mammals and birds which could be affected by a North Aleutian Shelf sale spend portions of the year in other Alaskan areas. Thus, this alternative would probably not eliminate all effects to the resources of the North Aleutian Shelf area during the period covered by the leasing program. (Alternatives VIII and IX consider omission of St. George Basin in addition to North Aleutian Shelf and other areas.)

Another potential benefit is that this alternative provides additional time for the organization of local governmental entities and development and approval of district coastal zone management plans. This action, coupled with long-term environmental studies, could possibly result in a reduction of ecological effects, particularly if the district plan utilized studies data and reflected environmentally sound land use planning and zoning.

(2) Costs

The disadvantage of this alternative is that it indefinitely delays an assessment of potential hydrocarbon reserves in the North Aleutian Shelf area. In comparison with Alternative I, this deletion results in a loss of net economic value of $.3 billion. This area ranks fourth in terms of industry's interest in exploration and sixth in its assessment of resource potential for the 22 proposed sale areas.

Other costs related to this alternative are identical to those described for Alternative I.

7. Alternative VII (Availability of Technology)

a. Description

Alternative VII is identical to Alternative I except it omits the proposed 1985 Chukchi Sea sale and substitutes a Beaufort Sea sale. This alternative was developed for technological reasons. A Chukchi Sea sale would involve tracts in the shear zone and pack ice areas. Currently, operating technology does not exist for OCS activities seaward of the landfast ice zone. Alternative VII was developed in order to provide additional experience in an area similar to the Chukchi Sea but where operating conditions are less severe.

Table 18 illustrates characteristics associated with this alternative, and Table 19 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

This alternative has several advantages. First, it would allow for the concentration of environmental and geologic hazards studies in the Beaufort Sea area, thereby ensuring a more comprehensive data base than would be the case in the Chukchi area. Second, it provides industry additional time and operating experience under similar, but less severe, arctic conditions to develop the necessary technology for working in pack ice and shear zone areas. Third, infrastructure, including transportation facilities, would be available thus offsetting the economic investment which would be required to develop offshore operating technology. Alternative VII, as compared to Alternative I, results in an increase in net economic value of $.8 billion.

Environmental benefits can also be expected, particularly in the Chukchi Sea area where adverse environmental effects will be substantially reduced or eliminated during the 5-year period. Oil spill risk is substantially less in the Beaufort Sea than in the Chukchi Sea resulting in a lowered potential risk for spills for this alternative as compared to Alternative I. Since less oil is expected from a third sale in Beaufort Sea, reduced effects to biological, social and cultural resources can be expected. However, this must be weighed against potential cumulative effects to the Beaufort Sea area.

Other benefits would be similar to those discussed for Alternative I except with regard to the pace of leasing in frontier areas which is somewhat reduced by omitting the Chukchi sale. The Chukchi Sea is more critical for subsistence use (fish and marine mammals) than the Beaufort Sea, and therefore, there would be reduction in subsistence-related effects as well.

Table 18. Characteristics of Alternative VII.

Oil and Gas Statistics	Alternative VII	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6200	(8881 - 4160)	9
Total Gas (trillion cubic feet)**	28.278	(40.5 - 20.498)	9
Net Economic Value ($ billions)	75.5	(102 - 57.3)	3
Maximum Acreage Offered (million acres)	29.7	(39.1 - 27.9)	7
Number of Sales	30	(38 - 25)	4
Number of Frontier Areas	6	(8 - 2)	7
Number of Exploratory Wells	2084	(2680 - 1730)	3
Number of Development & Production Wells	4930	(6103 - 4424)	2
Number of Platforms	547	(685 - 532)	3
Statistically Probable Number of Oil Spills $>10^3$ bbl.	29.78	(44.56- 19.43)	9

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1982	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	--	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	9

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Table 19. Estimated Appropriation and Staff Requirements

ternative VII

tivity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
source formation:												
USGS	42.5	603	45.8	635	54.7	653	46.3	658	48.5	658	47.7	658
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.2	641	55.2	661	46.9	667	49.2	669	48.4	669
ploration ta:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
vironmental atements d Studies:												
BLM	41.3	100	40.8	100	30.6	100	26.3	100	26.1	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	16.1	132	13.1	132	12.4	132
Total	52.2	212	55.0	227	42.5	227	42.4	232	39.2	232	35.7	232
pervise ase erations:												
USGS	30.3	461	33.6	485	36.0	567	37.0	607	38.1	647	38.1	647
neral ministrative tivities:												
BLM	10.8	146	10.8	146	9.9	146	9.5	146	9.5	146	9.2	146
USGS	2.6	62	2.9	62	3.1	67	3.1	70	3.0	72	3.0	72
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	14.7	232	14.0	238	13.7	242	13.6	244	13.6	244
mary:												
BLM	52.1	246	51.6	246	40.5	246	35.8	246	35.6	246	32.5	246
USGS	88.5	1241	98.8	1312	108.0	1417	104.8	1470	105.0	1512	103.5	1512
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
CS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	141.7	1515	151.8	1588	150.0	1696	142.3	1751	142.4	1795	137.8	1795

(2) Costs

The major disadvantage of this alternative is that it indefinitely delays potential development in the Chukchi Sea, an area ranked tenth by industry and second by Geological Survey in terms of estimated resource potential.

Another disadvantage is that the deletion of the Chukchi Sea area from consideration in the 5-year program could serve to thwart industry's incentive to develop technology for operating in pack ice and shear zone areas. This must be viewed as a disadvantage when consideration is given to long-term OCS oil and gas activities which eventually will necessitate such technology.

While the oil spill risk is relatively low with this alternative, ranking 9th when compared to all the other alternatives, this benefit is somewhat offset since the Beaufort Sea islands are more heavily utilized by waterfowl than the Chukchi Sea islands.

Socio-economic and socio-cultural effects for the Beaufort Sea region as a result of this alternative are the same as those described for Alternative II.

8. Alternative VIII (Transportation and Processing of Alaskan Oil and Gas)

a. Description

Alternative VIII provides for a slower pace of leasing and includes 25 proposed sales. In contrast with Alternative I, it proposes the omission of five frontier area sales from the 5-year program--St. George Basin, North Aleutian Shelf, Navarin Basin, Norton Basin and Chukchi Sea.

This alternative was developed largely in response to comments received from the States of California and Alaska regarding transportation and production concerns on the west coast. As discussed under Alternative I, that alternative is expected to result in production of greater amounts of oil and gas than can currently be processed on the west coast, and lack of transportation and facilities for processing of oil and gas from the Bering Sea and Chukchi Sea areas could be a potential constraint. Thus, an option providing for a slower pace of leasing with less oil and gas to be transported and processed was developed. It should be noted that due to market constraints, DOE does not expect any gas production outside of Cook Inlet and the Beaufort Sea.

Table 20 illustrates characteristics associated with this alternative, and Table 21 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

All environmental, social and economic effects as discussed under Section III-B and under Alternative I for the Bering Sea and Chukchi Sea areas would be substantially reduced, if not eliminated, under this alternative. These areas are known to support significant biological resources including sea birds, breeding areas for migratory waterfowl, and breeding and migratory corridors for many species of fish and marine mammals.

Another major benefit of this alternative is that oil spill risk is the lowest of any of the alternatives with the exception of Alternative X, the no future OCS leasing alternative. Potentially 19.4 oil spills in excess of 1,000 barrels would be statistically probable under Alternative VIII.

Onshore environmental effects in Alaska would also be substantially reduced since all of the areas considered to be least prepared for onshore infrastructure and where approved local district coastal zone management district plans do not exist would be omitted from the 5-year program. Projected reductions in oil and gas resources will significantly alleviate concerns regarding transportation and the current shortage of liquified natural gas facilities.

Table 20. Characteristics of Alternative VIII.

Oil and Gas Statistics	Alternative VIII	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	4160	(8881 - 4160)	11
Total Gas (trillion cubic feet)**	20.498	(40.5 - 20.498)	11
Net Economic Value ($ billions)	57.3	(102 - 57.3)	11
Maximum Acreage Offered (million acres)	27.9	(39.1 - 27.9)	11
Number of Sales	25	(38 - 25)	11
Number of Frontier Areas	2	(8 - 2)	11
Number of Exploratory Wells	2028	(2680 - 1730)	9
Number of Development & Production Wells	4424	(6103 - 4424)	11
Number of Platforms	533	(685 - 532)	10
Statistically Probable Number of Oil Spills $>10^3$ bbl.	19.43	(44.56- 19.43)	11

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	--	10	9	13
St. George	--	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	--	12	11	14
Chukchi	--	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	4

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Alternative VIII

Table 21. Estimated Appropriation and Staff Requirements

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.8	635	43.7	607	43.7	607	43.7	607	43.7	607
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.2	641	44.2	615	44.3	616	44.4	618	44.4	618
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	33.6	100	23.4	100	21.7	100	23.6	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	15.2	127	12.4	127	12.4	127
Total	52.2	212	47.8	227	35.3	227	36.9	227	36.0	227	35.7	227
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	35.5	537	36.0	577	36.6	607	36.6	607
General Administrative Activities:												
BLM	10.8	146	10.2	146	9.3	146	9.1	146	9.3	146	9.3	146
USGS	2.6	62	2.9	62	2.8	64	2.9	66	2.8	67	2.8	67
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	12	.4	12	.4	12	.4	12
Total	14.3	231	14.1	232	13.1	234	13.0	236	13.1	237	13.1	237
Summary:												
BLM	52.1	246	43.8	246	32.7	246	30.8	246	32.9	246	32.6	246
USGS	88.5	1241	98.8	1312	96.2	1338	100.1	1380	97.8	1411	97.8	1411
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	12	.4	12	.4	12	.4	12
Total	141.7	1515	144.0	1588	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Additionally, this alternative would eliminate exploratory operations in the Chukchi Sea which has the severest ice conditions of any of the OCS areas. The number of estimated development and production wells necessary for this alternative would be lower than any other alternative except Alternative X.

This alternative will also result in the concentration of the Department's pre-sale planning manpower and financial resources in fewer geographical areas and result in the lowest administrative costs for any of the alternatives excluding Alternative X.

(2) Costs

The major cost of implementation of this alternative is that the slower pace of leasing, particularly in frontier areas, will significantly reduce the probability of finding and developing new domestic energy supplies. Under Alternative VIII, only two new frontier areas would be included in the program. Compared to the other alternatives, Alternative VIII ranks the lowest, except for the no action alternative (Alternative X), in terms of estimated total gas and third lowest for total oil resources. In comparison with Alternative I, this alternative results in a loss in net economic value of $17.4 billion.

Alternative VIII provides the least amount of acreage, 27.9 million acres, offered for lease when compared to the other alternatives. In this respect, Alternative VIII is not responsive to the directives of President Carter's 2nd Energy Message to the nation which he delivered on April 5, 1979.

9. Alternative IX (State of Alaska Proposal)

a. Description

Alternative IX is a schedule which contains 28 sales during the 5-year period and was developed largely in response to comments, including a proposed schedule, submitted by the State of Alaska.

This alternative differs from Alternative I only in the Alaskan OCS, except for some minor timing changes in the Gulf of Mexico. It omits consideration of sales in the southern Bering Sea, in St. George Basin and North Aleutian Shelf, as well as proposed leasing beyond the landfast ice areas in the Arctic. This latter action results in the omission of Chukchi Sea and pack and shear ice zones in the Beaufort Sea. Further, in contrast with Alternative I, it delays the proposed Kodiak sale until 1983 and Norton Basin until 1984, delays of two years and one year respectively. This option also proposes the addition of a new frontier area sale in 1985, Hope Basin, an area of transition between the Bering Sea and the arctic conditions of the Chukchi Sea. In summary, this option mainly delays and omits sales proposed under Alternative I based on the availability of environmental information, the availability of technology to conduct OCS activities under severe arctic conditions, and the status of coastal zone management planning.

Table 22 illustrates characteristics associated with this alternative, and Table 23 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

A major benefit associated with this alternative is that it would significantly reduce the potential environmental, social and economic effects in the southern Bering Sea region. This area is widely recognized as an environmentally sensitive region. The omission of the proposed St. George and North Aleutian Shelf sales would reduce possible effects on important breeding habitats, migratory routes and feeding areas for seabirds, shorebirds, migratory waterfowl and many marine mammals, including endangered species of whales. Potential adverse effects on extensive bottom fisheries and the coastal salmon and crab fisheries would also be reduced.

In similar fashion, benefits can be expected in the Chukchi Sea area because if a sale were held there, new onshore service support and transportation facilities would be needed. Effects on subsistence harvesting of fish and marine mammals in the Chukchi Sea area would also be reduced. However, both of these benefits may be somewhat offset by inclusion of the Hope Basin area.

Table 22. Characteristics of Alternative IX.

Oil and Gas Statistics	Alternative IX	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	4576	(8881 - 4160)	10
Total Gas (trillion cubic feet)**	22.098	(40.5 - 20.498)	10
Net Economic Value ($ billions)***	58.9	(102 - 57.3)	10
Maximum Acreage Offered (million acres)	29.8	(39.1 - 27.9)	6
Number of Sales	28	(38 - 25)	10
Number of Frontier Areas	5	(8 - 2)	9
Number of Exploratory Wells	2056	(2680 - 1730)	8
Number of Development & Production Wells	4525	(6103 - 4424)	10
Number of Platforms	536	(685 - 532)	9
Statistically Probable Number of Oil Spills > 10^3 bbl.	22.48	(44.56 - 19.43)	10

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1983	21	19	18
Norton	1984	10	9	13
St. George	--	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	--	17	10	2
Hope	1985	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	7

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

***The net economic value has been adjusted to reflect the loss in present value (10% discount) to account for de[illegible] in the economic benefits of production. These [illegible]justments do not reflect any offsetting increases in value due [illegible]o higher real prices of oil and gas realized as [illegible]result of production occurring in later years.

3/6/80

Table 23. Estimated Appropriation and Staff Requirements

Alternative IX

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.8	635	54.7	635	46.3	640	48.5	640	47.7	640
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.2	641	55.2	643	46.9	649	49.2	651	48.4	651
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	38.5	100	31.2	100	26.9	100	25.8	100	23.3	100
USGS	10.9	112	14.2	127	11.9	127	16.1	132	13.1	132	12.4	132
Total	52.2	212	52.7	227	43.1	227	43.0	232	38.9	232	35.7	232
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	36.0	557	36.5	597	37.1	637	37.1	637
General Administrative Activities:												
BLM	10.8	146	10.6	146	10.0	146	9.6	146	9.5	146	9.3	146
USGS	2.6	62	2.9	62	3.1	66	3.0	69	3.0	71	3.0	71
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	12	.5	13	.5	13	.5	14
Total	14.3	231	14.5	232	14.1	236	13.7	240	13.6	242	13.4	243
Summary:												
BLM	52.1	246	49.1	246	41.2	246	36.5	246	35.3	246	32.6	246
USGS	88.5	1241	98.8	1312	108.0	1388	104.2	1441	104.0	1483	102.5	1483
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	12	.5	13	.5	13	.5	14
Total	141.7	1515	149.3	1588	150.7	1666	142.4	1721	141.1	1765	136.9	1766

Onshore communities in the St. George Basin, North Aleutian Shelf areas would have additional time to become involved in coastal zone management planning, thus potentially lessening the effects of onshore development (i.e., support facilities). It is difficult at this time to project benefits attributed to this factor because district coastal zone planning has not been initiated. However, net environmental effects over the long-term could possibly be reduced through the development of district coastal zone management plans which reflect ecologically sound land use planning and siting of industrial, onshore support facilities. The additional time provided in Alternative IX prior to the proposed sale in Norton Sound may enhance the ability of local governments to participate in the planning for onshore support facilities. However, this will be largely dependent upon the extent of local involvement in coastal zone management planning.

Alternative IX opens up a new frontier area, Hope Basin, for assessment of oil and gas resources. This has two benefits. Assuming the area is hydrocarbon-prone, it would provide for early development and production. Secondly, it would provide a transition area between the Bering Sea and the severe arctic conditions in the Chukchi Sea, thus giving industry additional time and experience for development and refinement of technology related to working in pack ice and shear zone areas.

Another benefit of this option is that the number of statistically probable oil spills greater than 1,000 barrels is slightly over 22, a figure lower than all the other alternatives except Alternatives VIII and X. The potential threat of oil spills being widely dispersed by spring ice break up is reduced, and the potential for spills in pack ice and shear zone areas is lessened since these areas of Beaufort Sea and the proposed Chukchi Sea sale are not included in the alternative.

(2) Costs

Omitting proposed sales in the North Aleutian Shelf, St. George Basin, Chukchi Sea and those areas beyond the landfast ice zone in Beaufort results in an indefinite delay of an assessment of hydrocarbon resources in these areas. This alternative also delays a proposed sale in Kodiak for 2 years and one in Norton Sound for a year, thus also resulting in delayed exploration and production of potential resources in these areas. Alternative IX, as compared to Alternative I, results in a loss in net economic value of $15.8 billion. In comparison with the other alternatives, this alternative ranks tenth in terms of estimated total oil resources and tenth in estimated total gas resources.

Alternative IX would result in potential environmental, social and economic effects on the Hope Basin region. This area is important to marine mammals since it serves as a calving and pupping ground for some species and is adjacent to the Bering Strait, a major migratory pathway for many cetacean and pinniped species, including endangered whales. Marine mammals utilizing the area include sea lions, porpoises, seals, walrus, whales and polar bears. Hope Basin also serves as a major breeding area for seabirds and is important to the migratory patterns of many species of waterfowl and shorebirds. These organisms may be very sensitive to oil spills and could be affected by OCS activities.

The Hope Basin area was significant in the pre-historic period because of its role as a land bridge for migration into North America. As evidence of the archeological importance of the region, a new national monument--the Bering Sea Land Bridge National Monument--is slated for creation to preserve any artifacts associated with man's early arrival in North America. Archeological resources, if they exist offshore, will need to be protected.

The economy and lifestyle of the Hope Basin/Kotzebue Sound area is very traditional. Subsistence hunting and fishing use is high. Socio-economic effects are expected to be similar to those for other Alaskan frontier areas, except Kotzebue is developing a tourism industry based on natural crafts and lifestyle displays depicting traditional Eskimo culture. Some effects to the Hope Basin area have already occurred as a result of mining exploration and development. Potential effects related to OCS development could be partially compensated through enclave development and careful siting of onshore facilities in order to avoid adverse consequences to the Kotzebue tourism industry.

10. Alternative X (No Future OCS Leasing)

a. Description

Alternative X ceases leasing OCS areas for oil and gas development beginning in May 1980. Thus, the proposed schedule for this option calls for no action for each year during the 5-year program. The United States would rely instead upon a combination of conservation of energy resources and development of alternative energy sources to replace its dwindling oil and gas reserves. Energy alternatives could include, in the traditional arena, increased onshore oil and gas exploration and increased coal production. Development of other alternative energy sources, such as solar, thermal, or nuclear power could also contribute to the replacement of the energy resources which could otherwise be produced by the offshore oil and gas leasing program.

Table 24 illustrates characteristics associated with this alternative, and Table 25 shows the estimates of appropriations and staff necessary to implement this alternative.

b. Discussion

(1) Benefits

Alternative X would not cause any of the environmental effects of future OCS oil and gas leasing activity because it involves no further leasing.

A potential benefit of Alternative X is that it might serve as a catalyst in bringing new energy alternatives on line (i.e., solar).

(2) Costs

Alternative X would necessitate development and use of other alternative measures to meet national energy needs. Such measures could range from the direct reduction of U.S. energy consumption to the utilization of other energy sources, i.e., increased imports, solar or nuclear energy, or additional production of onshore oil and gas resources. Additional alternative energy sources include oil shale, tar sands, coal gassification and tight gas reservoirs.

Alternative X does not meet nor make any effort to address DOE's final oil and natural gas production goals. Further, this alternative is not responsive to President Carter's directives to reduce our reliance on expensive imported resources; a goal of the Carter Administration is to reduce imports of foreign oil by 4.5 million barrels per day by 1990. As compared to Alternative I, this alternative results in a loss in net economic value of $74.7 billion.

Table 24. Characteristics of Alternative X.

Oil and Gas Statistics	Alternative X	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	0	(8881 - 4160)	12
Total Gas (trillion cubic feet)**	0	(40.5 - 20.498)	12
Net Economic Value ($ billions)	0	(102 - 57.3)	12
Maximum Acreage Offered (million acres)	0	(39.1 - 27.9)	12
Number of Sales	0	(38 - 25)	12
Number of Frontier Areas	0	(8 - 2)	12
Number of Exploratory Wells	0	(2680 - 1730)	12
Number of Development & Production Wells	0	(6103 - 4424)	12
Number of Platforms	0	(685 - 532)	12
Statistically Probable Number of Oil Spills > 10^3 bbl.	0	(44.56- 19.43)	12

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	--	21	19	18
Norton	--	10	9	13
St. George	--	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	--	15	13	17
Navarin	--	12	11	14
Chukchi	--	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	0
Gulf of Mexico	0
California	0
Alaska	0

*Alternative X results in a rating of zero in all cases.
**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Table 25. Estimated Appropriation and Staff Requirements

Alternative X

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	12.5	217	12.7	217	12.7	217	12.7	217	12.7	217	12.7	217
FWS	.2	5	.4	6	.4	6	.4	6	.4	6	.4	6
Total	12.7	222	13.1	223	13.1	223	13.1	223	13.1	223	13.1	223
Exploration Data:												
USGS	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	11.5	50	5.8	25	5.5	15	5.5	15	5.5	15
USGS	1.4	27	1.4	27	1.4	27	1.4	27	1.4	27	1.4	27
Total	42.7	127	12.9	77	7.2	52	6.9	42	6.9	42	6.9	42
Supervise Lease Operations:												
USGS	31.1	485	33.6	485	33.6	485	33.6	485	33.6	485	33.6	485
General Administrative Activities:												
BLM	10.8	146	5.8	100	4.1	75	3.3	60	3.3	60	3.3	60
USGS	1.4	37	1.5	37	1.5	37	1.5	37	1.5	37	1.5	37
FWS	.1	2	.1	2	11	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.1	3	.1	3	.1	3	.1	3	.1	3
Solicitor	.1	4	.1	4	.1	4	.1	4	.1	4	.1	4
Total	12.9	199	7.6	146	5.9	121	5.1	106	5.1	106	5.1	106
Summary:												
BLM	52.1	246	17.3	150	9.9	100	8.8	75	8.8	75	8.8	75
USGS	48.7	769	51.5	769	51.5	769	51.5	769	51.5	769	51.5	769
FWS	.3	7	.5	8	.5	8	.5	8	.5	8	.5	8
OCS Coordination	.5	10	.1	3	.1	3	.1	3	.1	3	.1	3
Solicitor	.1	4	.1	4		4	.1	4	.1	4		4
Total	101.7	1036	69.5	934	62.1	884	61.0	859	61.0	859	61.0	859

Reduction of consumption or conservation alone do not appear to be viable substitutes for continued OCS development as described on page 33 of the FES. The DOE in establishing the production goals discussed the potential of this alternative and found it inadequate. This issue is discussed in greater depth on pages 17-21 of DOE's publication entitled Federal Leasing and Outer Continental Shelf Energy Production Goals, June 1979.

Adverse environmental effects can be expected, but to a large extent, such effects will depend upon the type, degree and location of alternative energy production. It is likely that the lower 48 States would be particularly affected for several reasons. First, the greatest number of refining centers as well as oil-handling ports exist in the lower 48 States. Second, the Rocky Mountain States contain a substantial amount of alternative energy resources--such as oil shale. Although a benefit of Alternative X is that potentially adverse socio-economic and cultural effects related to Alternative I would be eliminated, these impacts would be offset by land development, infrastructure, employment, and non-indigenous population increases associated with the development of additional coal extraction, increased nuclear and LNG plant construction, oil shale processing or facilities associated with other alternative energy sources. A fuller discussion of these effects appears on pages 27-33, 92 and 342 in the FES.

11. Alternative XI (Addition of Hope Basin)

a. Description

Alternative XI provides for entry to eight frontier areas and calls for 31 sales plus one contingency sale over the 5-year period. Alternative XI is identical to Alternative I except that Hope Basin has been added to the 1985 sales.

The Department previously planned to have the leasing program approved in March 1980 and to have it cover the period March 1980 through February 1985. In order to ensure that the environmental analysis conducted under NEPA was given full consideration in the development of the leasing program, a decision on the proposed final program was delayed until after the FES was completed. This, in turn, delayed final approval until May 1980, and provides an opportunity for the leasing program to cover the period June 1980 through May 1985. The addition of three months will permit the scheduling of an additional sale. Hope Basin, while not as prospective as many of the Alaskan areas included in the proposed program, does have evidence of hydrocarbon potential. A May 1985 sale date would also provide sufficient time for collection of necessary environmental and geotechnical data.

This alternative is an aggressive schedule but is realistic and achievable with additional administrative and funding support. It is also responsive to President Carter's 2nd Energy Message to the nation and reflects a mixture of sales in proven and frontier areas. The State of Alaska believes that the Hope Basin OCS area is appropriate for leasing late in the 1980-85 period.

Table 26 illustrates characteristics associated with this alternative, and Table 27 shows the estimates of appropriations and staff necessary to implement it.

a. Discussion

(1) Benefits

Benefits of Alternative XI are similar to Alternative I with the following exceptions. It will provide more estimated total oil and gas than any other alternative except Alternatives II and XII. It will offer more acreage for lease than any other alternative except Alternative XII, and it ranks third, when compared to the other alternatives in terms of the number of sales.

The major benefit expected is that it will provide for entry into eight frontier areas, more than any other alternative. Assuming commercially economic deposits of hydrocarbon resources are found, this option will result in the development of new domestic energy supplies faster than all other alternatives, except Alternatives II and XII. As compared to Alternative I, this alternative results in an increase in net economic value of $.2 billion.

Table 26. Characteristics of Alternative XI

Oil and Gas Statistics	Alternative XI	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	6646	(8881 - 4160)	3
Total Gas (trillion cubic feet)**	29.108	(40.5 - 20.498)	3
Net Economic Value ($ billions)	74.9	(102 - 57.3)	4
Maximum Acreage Offered (million acres)	32.7	(39.1 - 27.9)	2
Number of Sales	31	(38 - 25)	3
Number of Frontier Areas	8	(8 - 2)	1
Number of Exploratory Wells	2090	(2680 - 1730)	2
Number of Development & Production Wells	4928	(6103 - 4424)	3
Number of Platforms	548	(685 - 532)	2
Statistically Probable Number of Oil Spills > 10^3 bbl.	33.70	(44.56- 19.43)	2

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1982	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	1985	17	10	2
Hope	1985	14	14	19

Number of Sales per Region	
Atlantic	6
Gulf of Mexico	11
California	4
Alaska	10

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Table 27. Estimated Appropriation and Staff Requirements

Alternative XI

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	42.5	603	45.8	635	56.7	635	44.4	640	46.8	640	47.2	645
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	46.2	641	57.2	643	45.0	649	47.5	651	47.9	656
Exploration Data:												
USGS	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	44.4	100	34.2	100	28.4	100	26.7	100	23.3	100
USGS	10.9	112	14.2	127	14.2	127	14.2	127	14.2	127	14.2	127
Total	52.2	212	58.6	227	48.4	227	42.6	227	40.9	227	37.5	227
Supervise Lease Operations:												
USGS	30.3	461	33.6	485	38.1	597	41.1	631	43.5	673	43.9	673
General Administrative Activities:												
BLM	10.8	146	11.4	146	10.2	146	9.7	146	9.6	146	9.3	146
USGS	2.6	62	2.9	62	2.9	62	2.9	62	2.9	62	2.9	62
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	.4	13	.5	14	.5	14	.5	14
Total	14.3	231	15.3	232	14.1	233	13.7	234	13.6	234	13.3	234
Summary:												
BLM	52.1	246	55.8	246	44.4	246	38.1	246	36.3	246	32.6	246
USGS	88.5	1241	98.8	1312	114.2	1424	104.9	1463	109.7	1505	110.5	1510
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
Solicitor	.3	11	.4	12	[illegible]	13	.5	14	.5	14	[illegible]	14
Total	141.7	1515	156.0	1588	160.1	1703	144.7	1744	147.8	1788	144.9	1793

(2) Costs

The major costs associated with Alternative XI are environmentally-oriented since onshore support facilities would need to be developed in the Hope Basin area and because this alternative has the second highest potential for oil spill risk, 33.7 statistically probable spills in excess of 1,000 barrels. Biological resources sensitive to oil and gas OCS activities in Hope Basin include marine mammals. Several species of seals, walrus, sea lions, porpoises, whales and polar bears are known to utilize the area which is also an important calving and pupping area for some of these species. The Bering Strait is a relatively narrow migratory route for many of the cetacean and pinniped species, including endangered whales. Hope Basin is also a prime avian habitat since it is an important migratory route for waterfowl and shorebirds and a breeding area for seabirds. The species mentioned above may be very sensitive to oil spills and could be affected by OCS activities.

The Hope Basin area was significant in the pre-historic period, as mentioned in Alternative IX, because of its role as a land bridge for migration into North America. As evidence of the archeological importance of the region, a new national monument--the Bering Sea Land Bridge National Monument--is slated for creation to preserve any artifacts associated with man's early arrival in North America. Archeological resources, if they exist offshore, will need to be protected.

Social, cultural and economic consequences to the native people of the Hope Basin/Kotzebue Sound area are also anticipated with Alternative XI. Subsistence hunting and fishing are high in this area and could be affected by oil and gas activities. Kotzebue is developing a tourism industry based on the uniqueness of the area in terms of traditional Eskimo lifestyle and crafts. Any potential onshore support facilities or other oil and gas related development near Kotzebue could adversely affect the tourism industry. These effects, however, could be somewhat offset by the careful siting of onshore development, including potential use of enclaves and lease sale stipulations tailored to the specific conditions of Hope Basin.

12. Alternative XII (House Select Committee on the OCS Staff Proposal)

a. Description

Alternative XII is the leasing schedule proposed in the January 1980 report of the House Select Committee on the Outer Continental Shelf. It was developed by the Committee staff and the major thrust of Alternative XII is accelerated OCS oil and gas development. This alternative has 38 sales plus 3 contingency sales over the 5-year period and, as compared to Alternative I, provides for additional sales in known hydrocarbon areas (e.g., Gulf of Mexico) and in frontier areas, particularly Alaska. This alternative includes the following changes to Alternative I:

-- Adds 5 Gulf of Mexico sales (beginning in 1980).

-- Drops the 1980 Gulf of Alaska sale (Representative Forsythe does not support this deletion).

-- Advances the September 1982 Norton Basin sale to November 1981.

-- Adds a Beaufort sale in 1982.

-- Adds a Navarin sale in 1982.

-- Adds a Zhemchug-St. George sale in 1983.

-- Adds a Mid-Atlantic sale in 1984.

-- Adds 2 contingency sales.

-- Adopts second phase constituent mechanism.

Other staff recommendations relating to the 5-year program include the following:

-- The estimated appropriations and staff requirements for the proposed June 5-year leasing program should be met and increased to the extent that such program may be further accelerated.

-- The schedule for environmental studies relating to all proposed frontier lease sale areas should be accelerated.

-- The northern boundary line for the North Aleutian Shelf area should be moved northward by 30' to 57°.

Table 28 illustrates characteristics associated with this alternative, and Table 29 shows the estimates of appropriations and staff necessary to implement it.

Table 28. Characteristics of Alternative XII.

Oil and Gas Statistics	Alternative XII	Range for Alternatives excluding Alternative X* (high to low)	Ranking with other Alternatives
Total Oil (million barrels)**	8881	(8881 - 4160)	1
Total Gas (trillion cubic feet)**	40.5	(40.5 - 20.498)	1
Net Economic Value ($ billions)	102	(102 - 57.3)	1
Maximum Acreage Offered (million acres)	39.1	(39.1 - 27.9)	1
Number of Sales	38	(38 - 25)	1
Number of Frontier Areas	7	(8 - 2)	2
Number of Exploratory Wells	2680	(2680 - 1730)	1
Number of Development & Production Wells	6103	(6103 - 4424)	1
Number of Platforms	685	(685 - 532)	1
Statistically Probable Number of Oil Spills $\geq 10^3$ bbl.	44.56	(44.56 - 19.43)	1

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential: Industry	Resource Potential: Geological Survey
Kodiak	1980	21	19	18
Norton	1981	10	9	13
St. George	1982,1983	9	5	5
North Aleutian Shelf	1983	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1982,1984	12	11	14
Chukchi	1985	17	10	2
Hope	--	14	14	19

Number of Sales per Region	
Atlantic	7
Gulf of Mexico	16
California	4
Alaska	11

*Alternative X results in a rating of zero in all cases.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

Alternative XII

Table 29. Estimated Appropriation and Staff Requirements

Activity	FY 1980 $ million	FY 1980 FTP	FY 1981 $ million	FY 1981 FTP	FY 1982 $ million	FY 1982 FTP	FY 1983 $ million	FY 1983 FTP	FY 1984 $ million	FY 1984 FTP	FY 1985 $ million	FY 1985 FTP
Resource Information:												
USGS	49.9	665	59.4	845	60.2	915	57.2	935	52.9	845	52.7	845
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	50.1	670	59.8	851	60.7	923	57.8	944	53.6	856	53.4	856
Exploration Data:												
USGS	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	41.3	100	47.2	100	35.6	100	29.5	100	26.3	100	23.3	100
USGS	11.2	118	16.8	139	15.4	142	15.2	142	12.4	142	12.4	142
Total	52.5	218	64.0	239	51.0	242	44.7	242	38.7	242	35.7	242
Supervise Lease Operations:												
USGS	31.2	485	34.3	500	37.7	612	39.0	652	41.0	702	40.8	697
General Administrative Activities:												
BLM	10.8	146	11.4	146	10.4	146	9.8	146	9.5	146	9.3	146
USGS	2.8	64	3.4	74	3.5	83	3.4	87	3.3	85	3.2	84
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
OCS Coordination	.5	10	.6	12	.6	12	.6	12	.6	12	.6	12
Solicitor	.4	11	.5	12	.5	15	.5	15	.5	15	.5	15
Total	14.6	233	16.0	246	15.1	258	14.4	262	14.0	260	13.7	259
Summary:												
BLM	52.1	246	58.6	246	46.0	246	39.3	246	35.8	246	32.6	246
USGS	97.4	1335	116.2	1561	119.1	1755	117.1	1819	111.9	1777	111.4	1771
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
OCS Coordination	.5	10	.6	12	.6	12	.6	12	.6	12	.6	12
Solicitor	.4	11	.5	12	[illegible]	15	.5	15	.5	15	[illegible]	15
Total	150.7	1609	176.4	1839	166.8	2038	158.2	2103	149.6	2063	145.9	2057

For purposes of this analysis, the above recommendations are considered a part of the Committee's proposed schedule with the exception of the change to the North Aleutian Shelf boundary which is addressed as a proposed technical adjustment in Section IV.C.3. of this document. Further information concerning the Committee report, including specific timing of the proposed sales, is presented in Section II.C. of this document.

b. Discussion

(1) Benefits

Alternative XII would provide more estimated total oil and gas resources than any other alternative assuming the frontier areas included in this alternative are hydrocarbon prone. It also may provide overall production earlier than would be the case under Alternative I since Alternative XII includes 5 additional sales in the Gulf of Mexico, a known productive area. In comparison to Alternative I, this alternative results in an increase in net economic value of $27.3 billion.

Alternative XII also calls for earlier and multiple sales in frontier areas where the resource potential is believed to be high. For example, Norton Basin in 1981 and Beaufort Sea in 1982, as opposed to 1982 and 1983, respectively, under Alternative I, would result in an earlier evaluation of the resource potential of these areas. Similarly, multiple sales in St. George Basin, Beaufort Sea and Navarin Basin would mean that if commercially recoverable deposits of oil and gas are found, production may begin earlier. According to the risked estimates for total oil and total gas of the U.S. Geological Survey, both the Beaufort Sea and Navarin Basin are two very promising OCS areas. Additionally, as evidenced in the Committee report and in the Committee record, industry has indicated that it has the financial capability to meet this accelerated leasing schedule, and that the needed manpower, capital and equipment will be generally available (Committee report, p. 119).

Alternative XII includes 16 sales during the 5-year period in the Gulf of Mexico, an area which not only contains known oil and gas resources but also is a region of the country where the environmental effects of oil and gas development are better understood than in other areas which have had less experience.

(2) Costs

The potential environmental effects of Alternative XII are similar to those described for Alternative I except in the Gulf of Mexico, the Mid-Atlantic and the Alaskan regions. To the extent that Alternative XII results in the leasing of more acreage and subsequent production in the Gulf of Mexico than in Alternative I, the environmental effects would be greater. With respect to the Mid-Atlantic, the additional sale can be expected to result in slightly increased environmental, socio-economic and socio-cultural effects.

Alternative XII also places heavy reliance on sales in Alaska, 11 sales over the 5-year period. The addition of 3 sales in frontier areas, one each in Navarin Basin. St. George Basin, and the Beaufort Sea can be expected to have moderately increased environmental, and perhaps cumulative, effects in these areas. As discussed under Alternative III, the Bering Sea and Norton Sound regions are unorganized in regard to district coastal zone management efforts, and planning capabilities are very limited.

Increased socio-cultural and socio-economic effects in Alaska are also expected with Alternative XII, in comparison to Alternative I. In particular, it is expected that subsistence activities may be affected more than as anticipated with Alternative I. Additionally, the Marine Mammal Protection Act, the Endangered Species Act, as amended, among other statutes and treaties which protect fish and wildlife have been construed as specifically imposing on the Federal Government a trust responsibility to protect Native Alaskan's rights to subsistence hunting. Thus, the Department must be cognizant of the needs of Native Alaskans' culture and to protect the species necessary for subsistence purposes.

Another consideration is the potential cumulative effect of oil and gas exploration and development in the Beaufort Sea area since Alternative XII proposes sales there in 1982 and 1983. Cumulative effects of OCS oil and gas activities in this area, as described for Alternative II, are also applicable to Alternative XII.

Alternative XII has a somewhat greater risk to the environment in terms of oil spill risk with potentially slightly more than 37 spills statistically probable in excess of 1,000 barrels.

Alternative XII accelerates the proposed timing of some sales in the Alaskan frontier areas. This acceleration would also necessitate expediting the environmental studies and planning specifically in those frontier areas. An obstacle to this relates to the logistics of data collection efforts in Alaska where the majority of the frontier areas are. The problem is not inadequate funds, but rather it relates to relatively short field seasons, a limited number of qualified scientists and geophysicists who have an understanding of the various Alaskan ecosystems and geologic structures, and a fixed number of research vessels equipped to work in the Alaskan environment. For example, adding a Zhemchug-St. George sale in 1983 would allow only one field season for collection of geological hazard data prior to the sale.

Similar problems would also exist for the Norton Basin, Navarin Basin and Beaufort Sea sales, but would be related to the status of environmental studies, the status of socio-economic studies, and the adequacy of public involvement in the OCS process. All three of these latter areas support endangered species, and adequate time must be provided for endangered species consultation and the subsequent biological opinions. This issue is of particular concern in Navarin Basin where environmental studies related to endangered species will not be completed until the end of FY 82.

Another potential constraint relates to the availability of environmental studies program information in Navarin Basin, Norton Basin and Beaufort Sea. The environmental information collected for the 1979 Beaufort sale was limited to nearshore areas. The next Beaufort sale would potentially include areas outside the area studied for the 1979 sale, and scheduling the sale in 1982 would not provide for necessary field seasons to collect new information. The Navarin Basin area is particularly devoid of environmental data, and moving the sale forward does not allow collection of any additional environmental study information other than one regional geohazard study planned in FY 80, for use in the draft ES. In Norton, environmental studies have been contracted and will consist of field work in the spring and summer of 1980. Results are expected in early 1981, but because of the need for these field seasons, studies cannot be accelerated to meet an earlier ES deadline. Earlier scheduling would also mean that the results of socio-economic studies would not be available for the environmental statement on Navarin Basin, and no new information beyond what is being collected this fiscal year would be available for the draft ES on Beaufort.

Potential constraints also relate to the field seasons available for the collection of geohazard data. Earlier scheduling would permit only one field season for data collection in Norton Basin. Should ice conditions in the harsh Alaskan environments prevent field activities, the data would not be available. Holding the Beaufort Sea sale late in 1982 would provide one season of over-the-ice geohazard data collection, which is used to supplement the geohazard data collected during the summer months. This scheduling would also place two Beaufort sales relatively close together. This problem is also of concern in Navarin Basin where a sale held in September 1982 would possibly permit the use of tract specific geohazard data collected during only part of one field season.

Another potential constraint related to Alternative XII is the offering and size of 5 additional Gulf of Mexico sales (as compared to Alternative I). The House report indicates the early sales in the Gulf of Mexico would be approximately 600,000 acres each and the later sales would be 1 million acres or more in size. It is not apparent that additional sales necessarily results in increased oil and gas production. If industry interest through the Call for Nominations indicates that larger offerings are warranted, then the Department may consider increasing the size of sales. This would be more efficient from an administrative standpoint than having smaller but more frequent sales. Further, since there is not time to prepare an ES, a Gulf of Mexico sale could only be held in June 1980 if it were a sale which reoffered tracts for which the bids were not accepted or tracts which did not receive bids since sale #51. While reoffering unsold tracts is basically a good idea, in this case there would be little to offer since we have been regularly reoffering tracts in the Gulf of Mexico.

Alternative XII provides for three contingency sales which can compensate for sale delays due to unanticipated reasons, e.g., litigation, the need for additional information. The House report suggests these sales be located in areas where the most information is available, where development activities have occurred and where State and local governments have had previous experience with oil and gas activities and onshore effects. The report also recommends that as these sales are utilized, planning should commence for additional back-up sales as necessary. While the inclusion of additional contingency sales provides the benefit of having back-up sales in place, the costs appear to outweigh the benefits. States and industry would have to plan for all sales, including contingency sales. Also, contingency sales could undermine the clarity and reliability of the schedule. Additionally, for the concept to be successful, the Federal agencies involved in planning for OCS sales would need to assume that the contingency sale would be held and proceed with planning. At that point, assuming planning is complete, it would be both logical and a cost-efficient use of public resources (financial and manpower) to hold the sale if all other considerations lead the Secretary to that decision. This is true even if no other sales have been deleted from the schedule. Thus, as we have discussed elsewhere, the contingency sale concept does not now appear as useful as when first considered.

As mentioned above, the House report indicates that contingency sales should be held in areas where the most information is available and where previous development has occurred. For purposes of this analysis, it is assumed that this implies the use of contingency sales in the Gulf of Mexico and possibly Southern California. The House report does not provide an indication of the size of contingency sales. However, having more frequent sales would not necessarily result in leasing more acreage but would have higher administrative costs. This issue as it applies to the Gulf of Mexico has been previously discussed. With respect to Southern California, the results of drilling to date have been discouraging. Assuming that at least one of the California sales listed for 1983 and 1984 would include acreage off Southern California, there would not be any additional acreage available for leasing consideration, taking into account the potential for oil and gas production, and environmental and multiple use factors.

Alternative XII also proposes the deletion of the Gulf of Alaska 1980 sale, as proposed under Alternative I, because of low industry interest. However, Representative Forsythe has expressed his support to proceed with this sale. Since considerable resources have already been spent on preparing for sale #55, and much of the pre-sale planning work has been completed, it appears that stopping the process at this point for non-environmental reasons could undermine the reliability of the schedule. The expected benefits in terms of freeing up resources for other OCS areas are, in contrast, very small.

IV. Technical Adjustments to Program

Since the decision was reached on the June proposed program, a number of technical adjustments have been proposed to address both administrative and technical issues. They are discussed below.

A. Rescheduling of Sale #52 - North Atlantic.

The Call for the second North Atlantic sale, sale #52 (August 1982) was delayed by 2 months because of the uncertainty over the timing of sale #42. In order to provide adequate time for the pre-sale planning steps to occur, the recommendation is that the proposed sale date for sale #52 be switched with the proposed sale date for the Gulf of Mexico sale #69. Sale #69 would then be scheduled for August 1982, and Sale #52 for October 1982.

B. Consolidation of ES Preparation for Gulf of Mexico.

For the years 1979, 1980, and 1981 a joint Call for Nominations and a joint environmental impact statement was (or is being) done for each of the two scheduled Gulf of Mexico sales. This procedure has streamlined the administration of the program, has reduced needless paperwork and has received public support. It is proposed that this procedure be adopted for the Gulf sales scheduled for 1982, 1983, and 1984 as well. In 1983 when there are potentially three sales because of one contingency sale, only the first two (Sales #72 and #74) would use this procedure.

C. Boundary Changes

Proposed boundary changes are illustrated on Plate 3.

1. Mid and South Atlantic Boundary

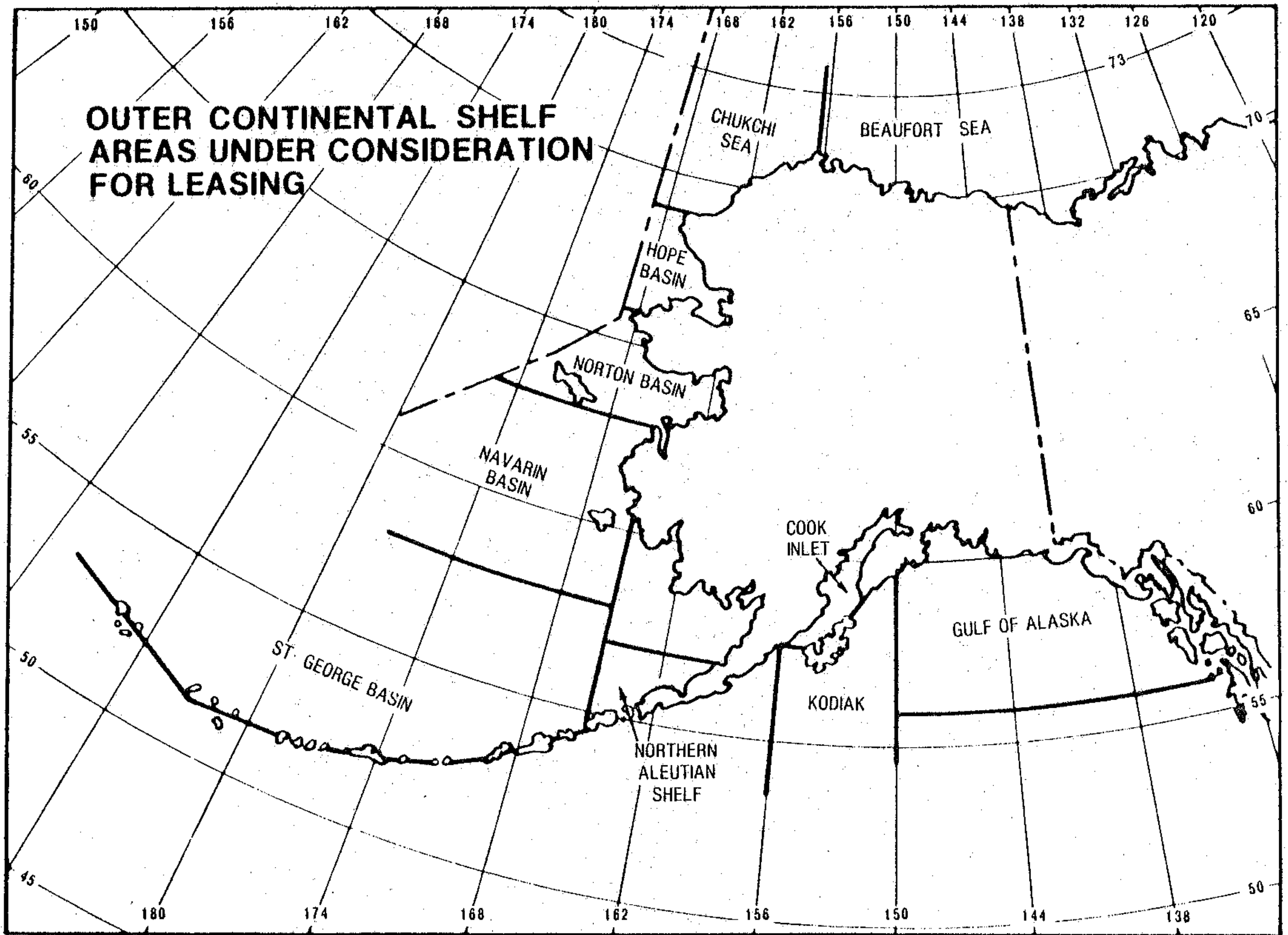
Under the June 1979 proposed leasing schedule, the boundary between the Mid-Atlantic and the South Atlantic leasing areas was the 35° north latitude line. This line was roughly in the middle of North Carolina. This line has proved to be impractical from both a geologic and administrative standpoint. Recognizing this, the Department has already modified its operations by dividing the areas at 36.5° north latitude. It is recommended that this change be incorporated in the final leasing program.

2. South Atlantic and Blake Plateau

In the June 1979 proposed leasing schedule, the boundary between the South Atlantic area and the Blake Plateau area was defined as the area seaward of 200 meters water depth (between 28° and 35° north latitude). The extent and beginning point of the Blake Plateau area have never been defined. Administratively and environmentally there is no compelling reason to split the two areas.

Plate 3.

Plate 3. Outer Continental Shelf Areas Under Consideration for Leasing - February 1980.



U.S. Department of the Interior Map

Plate 3. (continued)

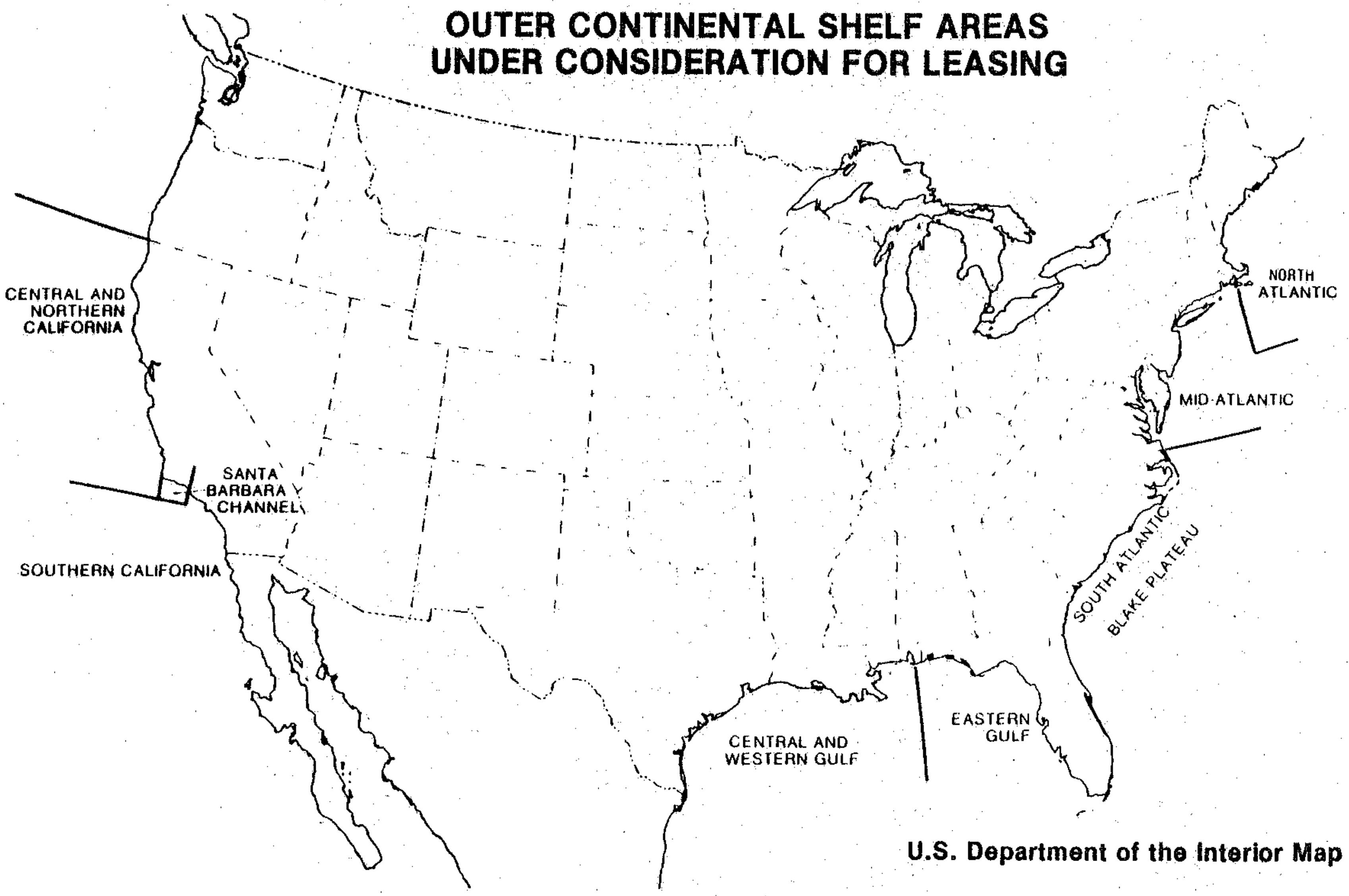


Plate 3 (continued).

The adjustment recommended is to eliminate the distinction between South Atlantic and Blake Plateau and to list it as one area. This would remove any definitional problems and is consistent with the way the two other Atlantic areas are treated.

Sale #78 would simply be called "South Atlantic" and carry a footnote stating that "this area includes in addition what was formerly called the Blake Plateau." This would help to ensure that any data collection efforts would include the deep water portion of the South Atlantic area, as well as the area within the 200 meter line. It would also provide a useful transition to the consolidation of the two areas.

3. North Aleutian Shelf`

In reaching a decision on the proposed leasing program, an attempt was made to reduce potential impacts to the Bristol Bay area by identifying a new area, the North Aleutian Shelf. The objective was to have as small an area as possible and still include all geologic structures identified to date. The North Aleutian Shelf area was described as the area north of the Alaska Peninsula and Unimak Island that is east of 165° west longitude and south of 56° 30' north latitude.

As a result of comments received on the proposed leasing program and further discussions with the Geological Survey, it has been determined that we have inadvertently deleted a portion of a geologic prospect. In order to correct this error, it is proposed that the North Aleutian Shelf be the area north of the Alaska Peninsula and Unimak Island that is east of 165° west longitude and south of 57 north latitude. This new area description will still accomplish the objective of providing protection to the exceptional marine resources in the adjacent area.

4. Chukchi/Beaufort

An eastward shift in the boundary line between the Chukchi and Beaufort Seas is recommended in order to facilitate both environmental and geologic assessment. The Chukchi Sea area previously extended on its eastern boundary to 160° west longitude; the Beaufort Sea area was defined as being east of this point. The proposed revision would move the boundary line to 156° 30' west longitude, with the Chukchi Sea line to the west of that line and the Beaufort Sea to the east. This change is consistent with the definition of the call area used for OCS Sale #71, the second Beaufort Sea Sale.

V. Nationwide Reoffering Sale

A. Background

In order to expedite the reoffering of tracts whose bids have been rejected or tracts which did not receive bids, an annual nationwide reoffering sale is proposed. This sale would be limited to only those rejected bid or no bid tracts which had been offered for sale the preceding year. Leasing of any reoffered tracts could advance near-term domestic oil and gas production by 2 to 3 years with attendant economic and security benefits.

In general, the expedited reoffering of tracts can result in some additional leases being issued. For example, in sale #51 - Gulf of Mexico, eight tracts were reoffered for sale after being rejected in sale #45 eight months earlier. Four of the eight tracts received bids and all bids were higher than the previous bids. (Bids increased from $7.6 million to $10.4 million or 36 percent.) Three of the four tracts were leased. While not directly comparable, experience with the Mid-Atlantic sales may also support this conclusion. In sale #49 there were eight tracts that were reoffered for sale that had either received no bid or were rejected from sale #40 held 2-1/2 years earlier. Five of the six no bid tracts were leased. One of the two rejected bid tracts was leased. The same pattern may occur in the Beaufort Sea. All of the tracts not receiving bids in the just completed first Beaufort Sea sale have been renominated by industry for the second Beaufort Sea sale scheduled 3 years from now.

The closest example of a sale such as proposed here was sale S1 held in 1974. Of 258 tracts offered, only 43 received bids and 19 were leased (18.9 and 7.3 percent respectively).

Although some rejected bid tracts and most no bid tracts will not receive bids when reoffered in another lease sale, we expect that a meaningful number will receive bids and can be leased. The best evaluation available suggests that a maximum of 10 percent of the tracts in such a sale might be leased. This acreage can help increase the effectiveness of the OCS program with little increase in costs and other resources.

B. Proposal

This option would add one additional sale, national in scope, for each year of the schedule starting in 1981. The national reoffering sale (National RS) would be scheduled between April and July (inclusive) of each year. It would exclude the Gulf of Mexico because tracts there are already capable of being reoffered quickly. This timing would allow all sales in the previous year to run their full course, including Attorney General review and lease award. The National RS would reoffer for lease all tracts that had not received bids or had a rejected bid in a past calendar year sale. Tracts previously reoffered would not be included.

Administratively, this sale would use some abbreviated procedures but still fulfill all legal requirements.

° In each environmental statement prepared for individual OCS sales other than in the Gulf of Mexico, BLM would include the reoffering of the tracts as part of the proposed action.

° After all sales from the previous year had been held, an environmental analysis would be prepared by BLM to determine if any significant changes had occurred requiring the preparation of a supplemental environmental impact statement. If a supplemental ES was found to be necessary, the tracts requiring the supplemental ES could be deleted, the area requiring the supplemental ES could be excluded from the reoffering sale, or the entire sale could be cancelled.

° When we send out the proposed notice of sale and ask the Governors for comments on the size, timing, and location of each individual sale, we would also ask for comments on the potential reoffering of tracts. The Office of the Solicitor advises that this would constitute compliance with section 19 of the OCS Lands Act, as amended.

° Consistent with the policy of strong Federal-State coordination, the States affected by the reoffering sale would be sent a letter notifying the Governor of the reoffering sale and enclosing BLM's environmental analysis and any new data. This would be sent about 5 months before the sale is actually held. This would be the second time a State was notified about a reoffering sale.

° Absent the identification of any new issues, tracts would be reoffered with the same stipulations as before.

° Each tract would be reoffered using the same bidding system as before.

° DOE would be sent the proposal to review as per its statutory authority.

° A SID would not necessarily be prepared for the reoffering sale but any matters requiring Secretarial decision would be sent to the Secretary in the decision memorandum.

° USGS would recompute its evaluation of each tract given new price or other data and if new geophysical information was available, a complete reevaluation of the tract would be made. This latter situation is not likely.

° The reoffering sale would be held in Washington, D.C. or a field location, as appropriate.

C. Discussion

No dramatic results should be expected from such a sale. Only a small percentage--10 percent is estimated--of the total tracts offered could be expected to be leased. This would still, however, increase leasing, and speed up development.

The size of such a national sale can be estimated at about 680 to 850 tracts (3.9 to 4.8 million acres). The unleased tracts in the last four calendar years were and estimates* for the next three are:

Year	Unleased Tracts
1976	290
1977	147
1978	334
1979	317 (preliminary)
1980	680 est.
1981	760 est.
1982	850 est.

Using very rough projections from past data, it is conceivable that such a 680-tract sale might result in 68 leases and $129 million in high bids.

It is not unusual for sales of tracts to be held and reheld quickly. For example, Texas and Louisiana hold sales quarterly and monthly respectively. We follow this practice in the Central and Western Gulf of Mexico. Alaska plans to reoffer the tracts not leased at the December 1979 Beaufort Sea sale this April.

Given the administrative adjustments mentioned earlier, it should be possible to hold the sale and comply with the letter and spirit of the OCS Lands Act, as amended, NEPA and other statutory requirements. The five-year leasing schedule would also contain a footnote to indicate that each national sale would consist of the tracts from the prior calendar year. This would satisfy the requirement of section 18 that the schedule indicate as precisely as possible the size, timing, and location of sales. Finally, while not absolutely necessary, the Solicitor's Office suggests that BLM regulations (43 CFR 3315) be amended to clearly allow the reoffering sale.

To conduct the reoffering sale, the BLM and GS Washington staffs will have to assume additional coordinating and operational responsibilities. New administrative procedures will have to be developed. Lease issuance from a reoffering sale is likely to overlap with field office preparations for other sales resulting in an additional burden for the involved BLM and GS field offices. None of the above is unresolvable. Holding a reoffering sale will mean a modest increased administrative burden and costs for the BLM and GS. The estimates of appropriations and staff provide for this sale.

* The estimate was derived by multiplying the estimated tracts offered in that year (taken from tracts in an ES or likely tract selections) by .58. In the last seven sales held outside of the Gulf of Mexico, 620 of 1,075 tracts were not leased (58 percent).

DEPARTMENT of the INTERIOR

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For Release June 18, 1980

FIVE-YEAR OCS LEASING SCHEDULE APPROVED

Final approval of the 5-year planning schedule for oil and gas leasing on the Outer Continental Shelf (OCS) was announced today by Secretary of the Interior Cecil D. Andrus.

Except for two modifications--advancing two of the pre-sale milestones for sale 53 - Central and Northern California, and delaying the proposed dates of three reoffering sales by one month--the schedule remains the same as announced March 28 and submitted to the President and the Congress April 4.

With regard to sale 53, the Secretary said that a great deal of concern has been expressed in California about the inclusion of three of the five sedimentary basins presently under study in an environmental statement. The decision whether to include these basins in a sale will be made following completion of the final environmental statement and announced at the time of the issuance of the proposed notice of sale. "When the concerns that have been expressed are compared to current resource information it causes me to question whether these basins should be offered for lease," Andrus said.

Secretary Andrus has determined that it is possible to accelerate the completion of the final environmental statement and the proposed notice of sale; the final statement will be released in September 1980 and the proposed notice of sale in October 1980. This will allow an earlier decision on an issue of great concern to many residents of California.

With respect to the reoffering sales, a proposed Notice of Sale has been added as part of the planning process. This has resulted in three of these five sales (RS-2, 4, 5) being scheduled one month later than shown on the March 1980 schedule.

The final program, which covers the period June 1980 through June 1985, includes a total of 36 potential sales or an average of a little over seven sales each year. Five of the sales are annual reoffering sales designed to reauction tracts offered for lease in the previous calendar year outside the Gulf of Mexico for which bids were not received or high bids were rejected as inadequate.

"The program I have approved will contribute significantly to our national effort to find new domestic sources of oil and gas and to obtain an increased degree of energy independence," Secretary Andrus said. "It is designed to help meet U.S. energy needs as envisioned by the 1978 Amendments to the OCS Lands Act and the National Energy Plan, as set forth in the Department of Energy's OCS production goals for 1985, 1990, and 1995.

"With the exception of the Kodiak sale, the final program also provides for the earliest possible timing, based on compliance with applicable statutes, of informed decisions on sales in frontier areas, principally in Alaska, where OCS leasing has not previously occurred."

(more)

The program continues the caveat on availability of technology which Secretary Andrus applied to the potential 1985 Chukchi Sea sale when he announced the proposed final leasing program in March. The holding of the Chukchi Sea sale in its proposed 1985 time slot remains dependent upon a reasonable assumption that technology will be available for the exploration and development of the tracts included in the sale.

"As I have consistently stressed, our aim in developing this program over the past 20 months has been to provide for a careful balancing of our need to find and produce oil and gas domestically with our need to protect the human, coastal, and marine environments. I believe this program achieves that objective.

"I hope my friends in State and local government and in the environmental community, as well as in industry, will work with me to make this program a success. It represents one of the most economically-valuable and environmentally-benign sources of domestic energy available to this country today.

"I have worked hard to make certain that the program provides to the public the financial return and the environmental protection it requires and deserves. It would be a crime to prevent us as a Nation from realizing the immense benefits of this unique asset, and force us into deeper dependence on OPEC and greater reliance on much more costly and risky domestic sources of fuel."

The schedule includes 11 sales in the Gulf of Mexico, 6 in the Atlantic, 4 off California, 10 off Alaska, and 5 reoffering sales. Seven of the sales would be in frontier areas off Alaska where leasing has not previously taken place.

The lease sale schedule by years is as follows:

<u>1980</u>: A62 Gulf of Mexico; 55 Gulf of Alaska; 62 Gulf of Mexico

<u>1981</u>: 53 Central and Northern California; RS-1; A66 Gulf of Mexico; 56 South Atlantic; 60 Cook Inlet; 66 Gulf of Mexico; 59 Mid-Atlantic

<u>1982</u>: 67 Gulf of Mexico; RS-2; 68 Southern California; 69 Gulf of Mexico; 57 Norton Basin; 52 North Atlantic; 70 St. George Basin

<u>1983</u>: 71 Beaufort Sea; 72 Gulf of Mexico; 61 Kodiak; 73 California; RS-3; 74 Gulf of Mexico; 75 North Aleutian Shelf; 76 Mid-Atlantic

<u>1984</u>: 78 South Atlantic; 79 Gulf of Mexico; RS-4; 80 California; 81 Gulf of Mexico; 82 North Atlantic; 83 Navarin Basin

<u>1985</u>: 84 Gulf of Mexico; 85 Chukchi Sea; 86 Hope Basin; RS-5
(The RS sales are reoffering sales.)

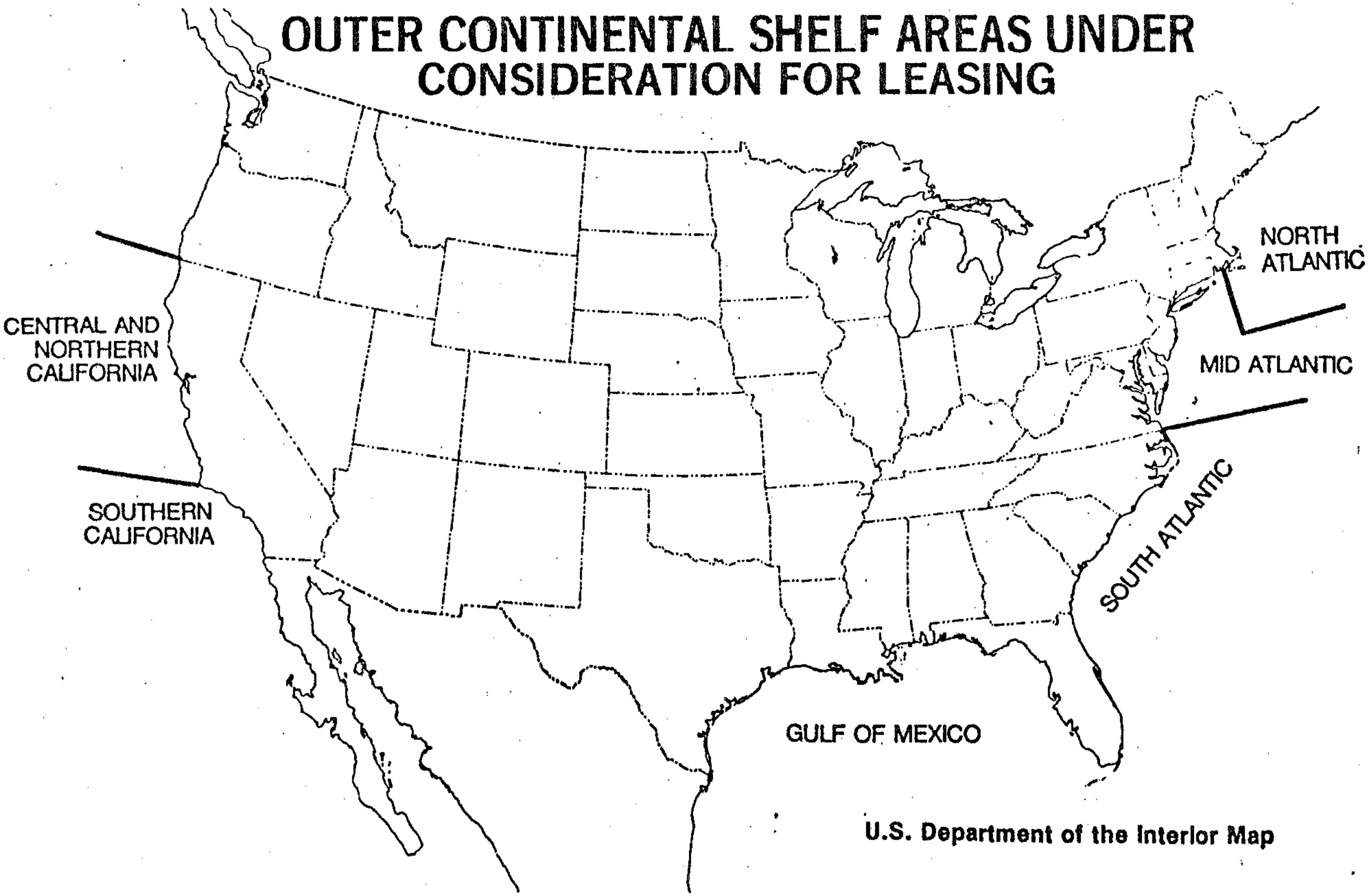
Before making his decision to give final approval to the schedule, Secretary Andrus considered comments from members of the Congress, State officials, oil companies, and others suggesting timing and other changes in the program.

"Many legitimate concerns were expressed in these comments but there were no over-riding new factors presented which persuaded me that a major change in the proposed final program should be made," Secretary Andrus said. "This is especially so since most of the comments suggesting a delay in a sale or removal of certain areas from a proposed sale were more pertinent to the individual sale decisions that will be made according to the schedule I have just adopted. They will be given careful consideration when those future decision points are reached."

Maps are attached showing the location of the offshore areas referenced in the final schedule. A detailed schedule is also attached showing the timing of the pre-sale steps and the expected month for each proposed sale.

x x x

OUTER CONTINENTAL SHELF AREAS UNDER CONSIDERATION FOR LEASING



U.S. Department of the Interior Map

FINAL 5-YEAR OCS OIL & GAS LEASING SCHEDULE

JUNE 1980

1980

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80		F			P	S_c	R	N	S			
55 Gulf of Alaska	10/80			F		P		S_c	R	N	S		
62 Gulf of Mexico	11/80		F				P		S_c	R	N	S	
53 Central N. Calif.	5/81				E		H			F	P		
RS-1 Reoffering Sale	6/81												
A66 Gulf of Mexico	7/81							E		H			F
56 South Atlantic	8/81							E		H			
60 Cook Inlet	9/81								E		H		
66 Gulf of Mexico	10/81							E		H			F
59 Mid-Atlantic	12/81											E	
67 Gulf of Mexico	3/82	C		D		T							
RS-2 Reoffering Sale	6/82												
68 Southern California	6/82		D			T							
69 Gulf of Mexico	8/82	C		D		T							
57 Norton Basin	9/82		T										
52 North Atlantic	10/82		D				T						
70 St. George Basin	12/82		T										
71 Beaufort Sea	2/83			T									
72 Gulf of Mexico	3/83												
61 Kodiak	4/83									C		D	
73 California	5/83											C	
RS-3 Reoffering Sale	6/83												
74 Gulf of Mexico	9/83												
75 No. Aleutian Shelf	10/83					C			D				T
76 Mid-Atlantic	11/83												
78 South Atlantic	1/84												
79 Gulf of Mexico	3/84												
RS-4 Reoffering Sale	5/84												
80 California	6/84												
81 Gulf of Mexico	7/84												
82 North Atlantic	10/84												
83 Navarin Basin	12/84												
84 Gulf of Mexico	1/85												
☆85 Chukchi Sea	2/85												
86 Hope Basin	5/85												
RS-5 Reoffering Sale	6/85												

1981

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80												
55 Gulf of Alaska	10/80												
62 Gulf of Mexico	11/80												
53 Central N. Calif.	5/81		S_c	R	N	S							
RS-1 Reoffering Sale	6/81	P		S_c	R	N	S						
A66 Gulf of Mexico	7/81		P		S_c	R	N	S					
56 South Atlantic	8/81	F		P		S_c	R	N	S				
60 Cook Inlet	9/81		F		P		S_c	R	N	S			
66 Gulf of Mexico	10/81					P		S_c	R	N	S		
59 Mid-Atlantic	12/81	H				F		P		S_c	R	N	S
67 Gulf of Mexico	3/82			E		H			F		P		S_c
RS-2 Reoffering Sale	6/82												
68 Southern California	6/82					E		H				F	
69 Gulf of Mexico	8/82			E		H			F				
57 Norton Basin	9/82						E				H		
52 North Atlantic	10/82									E		H	
70 St. George Basin	12/82										E		
71 Beaufort Sea	2/83												E
72 Gulf of Mexico	3/83	C		D		T							
61 Kodiak	4/83		T										
73 California	5/83	D			T								
RS-3 Reoffering Sale	6/83												
74 Gulf of Mexico	9/83	C		D		T							
75 No. Aleutian Shelf	10/83												
76 Mid-Atlantic	11/83					C		D			T		
78 South Atlantic	1/84			C			D				T		
79 Gulf of Mexico	3/84												
RS-4 Reoffering Sale	5/84												
80 California	6/84										C		D
81 Gulf of Mexico	7/84												
82 North Atlantic	10/84												
83 Navarin Basin	12/84						C			D			
84 Gulf of Mexico	1/85												
☆85 Chukchi Sea	2/85							C			D		
86 Hope Basin	5/85									C			D
RS-5 Reoffering Sale	6/85												

1982

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80												
55 Gulf of Alaska	10/80												
62 Gulf of Mexico	11/80												
53 Central N. Calif.	5/81												
RS-1 Reoffering Sale	6/81												
A66 Gulf of Mexico	7/81												
56 South Atlantic	8/81												
60 Cook Inlet	9/81												
66 Gulf of Mexico	10/81												
59 Mid-Atlantic	12/81												
67 Gulf of Mexico	3/82	R	N	S									
RS-2 Reoffering Sale	6/82		P		S_c/R	N	S						
68 Southern California	6/82	P		S_c	R	N	S						
69 Gulf of Mexico	8/82			P		S_c	R	N	S				
57 Norton Basin	9/82		F		P		S_c	R	N	S			
52 North Atlantic	10/82			F		P		S_c	R	N	S		
70 St. George Basin	12/82	H				F		P		S_c	R	N	S
71 Beaufort Sea	2/83			H				F		P		S_c	R
72 Gulf of Mexico	3/83			E		H			F		P		S_c
61 Kodiak	4/83			E			H			F		P	
73 California	5/83				E		H				F		P
RS-3 Reoffering Sale	6/83												
74 Gulf of Mexico	9/83			E		H			F				
75 No. Aleutian Shelf	10/83								E			H	
76 Mid-Atlantic	11/83										E		H
78 South Atlantic	1/84											E	
79 Gulf of Mexico	3/84	C		D		T							
RS-4 Reoffering Sale	5/84												
80 California	6/84			T									
81 Gulf of Mexico	7/84	C		D		T							
82 North Atlantic	10/84				C		D			T			
83 Navarin Basin	12/84	T											
84 Gulf of Mexico	1/85											C	
☆85 Chukchi Sea	2/85		T										
86 Hope Basin	5/85				T								
RS-5 Reoffering Sale	6/85												

1983

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80												
55 Gulf of Alaska	10/80												
62 Gulf of Mexico	11/80												
53 Central N. Calif.	5/81												
RS-1 Reoffering Sale	6/81												
A66 Gulf of Mexico	7/81												
56 South Atlantic	8/81												
60 Cook Inlet	9/81												
66 Gulf of Mexico	10/81												
59 Mid-Atlantic	12/81												
67 Gulf of Mexico	3/82												
RS-2 Reoffering Sale	6/82												
68 Southern California	6/82												
69 Gulf of Mexico	8/82												
57 Norton Basin	9/82												
52 North Atlantic	10/82												
70 St. George Basin	12/82												
71 Beaufort Sea	2/83	N	S										
72 Gulf of Mexico	3/83	R	N	S									
61 Kodiak	4/83	S_c	R	N	S								
73 California	5/83		S_c	R	N	S							
RS-3 Reoffering Sale	6/83		P		S_c/R	N	S						
74 Gulf of Mexico	9/83				P		S_c	R	N	S			
75 No. Aleutian Shelf	10/83			F		P		S_c	R	N	S		
76 Mid-Atlantic	11/83				F		P		S_c	R	N	S	
78 South Atlantic	1/84		H				F		P		S_c	R	N
79 Gulf of Mexico	3/84			E		H			F		P		S_c
RS-4 Reoffering Sale	5/84												
80 California	6/84					E		H				F	
81 Gulf of Mexico	7/84			E		H			F				
82 North Atlantic	10/84									E		H	
83 Navarin Basin	12/84										E		
84 Gulf of Mexico	1/85	D		T									
☆85 Chukchi Sea	2/85												E
86 Hope Basin	5/85												
RS-5 Reoffering Sale	6/85												

1984

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80												
55 Gulf of Alaska	10/80												
62 Gulf of Mexico	11/80												
53 Central N. Calif.	5/81												
RS-1 Reoffering Sale	6/81												
A66 Gulf of Mexico	7/81												
56 South Atlantic	8/81												
60 Cook Inlet	9/81												
66 Gulf of Mexico	10/81												
59 Mid-Atlantic	12/81												
67 Gulf of Mexico	3/82												
RS-2 Reoffering Sale	6/82												
68 Southern California	6/82												
69 Gulf of Mexico	8/82												
57 Norton Basin	9/82												
52 North Atlantic	10/82												
70 St. George Basin	12/82												
71 Beaufort Sea	2/83												
72 Gulf of Mexico	3/83												
61 Kodiak	4/83												
73 California	5/83												
RS-3 Reoffering Sale	6/83												
74 Gulf of Mexico	9/83												
75 No. Aleutian Shelf	10/83												
76 Mid-Atlantic	11/83												
78 South Atlantic	1/84	S											
79 Gulf of Mexico	3/84	R	N	S									
RS-4 Reoffering Sale	5/84	P		S_c/R	N	S							
80 California	6/84	P		S_c	R	N	S						
81 Gulf of Mexico	7/84		P		S_c	R	N	S					
82 North Atlantic	10/84			F		P		S_c	R	N	S		
83 Navarin Basin	12/84	H				F		P		S_c	R	N	S
84 Gulf of Mexico	1/85	E		H			F		P		S_c	R	N
☆85 Chukchi Sea	2/85			H				F		P		S_c	R
86 Hope Basin	5/85			E			H				F		P
RS-5 Reoffering Sale	6/85												

1985

Proposed Sale Area	Proposed Date	J	F	M	A	M	J	J	A	S	O	N	D
A62 Gulf of Mexico	9/80												
55 Gulf of Alaska	10/80												
62 Gulf of Mexico	11/80												
53 Central N. Calif.	5/81												
RS-1 Reoffering Sale	6/81												
A66 Gulf of Mexico	7/81												
56 South Atlantic	8/81												
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66 Gulf of Mexico	10/81												
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70 St. George Basin	12/82												
71 Beaufort Sea	2/83												
72 Gulf of Mexico	3/83												
61 Kodiak	4/83												
73 California	5/83												
RS-3 Reoffering Sale	6/83												
74 Gulf of Mexico	9/83												
75 No. Aleutian Shelf	10/83												
76 Mid-Atlantic	11/83												
78 South Atlantic	1/84												
79 Gulf of Mexico	3/84												
RS-4 Reoffering Sale	5/84												
80 California	6/84												
81 Gulf of Mexico	7/84												
82 North Atlantic	10/84												
83 Navarin Basin	12/84												
84 Gulf of Mexico	1/85	S											
☆85 Chukchi Sea	2/85	N	S										
86 Hope Basin	5/85		S_c	R	N	S							
RS-5 Reoffering Sale	6/85		P		S_c/R	N	S						

Secretary of the Interior

C - Call For Nominations
D - Nominations Due
T - Tentative Tract Selection
E - Draft Environmental Statement
H - Public Hearing
F - Final Environmental Statement
P - Proposed Notice of Sale
S_c - State Comments Due
R - Energy Review
N - Notice of Sale
S - Sale

☆ The holding of the Chukchi Sale at this time is contingent upon a reasonable assumption that technology will be available for exploration and development of the tracts included in the sale.

INT 4012-80

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JUN 12 1980

Memorandum

To: The Record

From: Assistant Secretary--Policy, Budget and Administration

Subject: Record of Secretary's Decision on Proposed Final OCS Oil and Gas Leasing Program

This memorandum has been prepared, pursuant to 40 CFR 1505.2, to record Secretary Andrus' decision of March 20th at which time he selected a proposed final 5-year OCS oil and gas leasing program.

Section 18 of the OCS Lands Act, as amended, requires the Secretary of the Interior to prepare an OCS oil and gas leasing program to implement the policies of the Act. The statute requires, among other things, that the leasing program consist of a schedule of proposed lease sales indicating as precisely as possible, the size, timing and location of leasing activity which the Secretary determines will best meet national energy needs for the 5-year period following its approval.

On March 28, the lease schedule decision was announced. This proposed final schedule consists of eleven sales in the Gulf of Mexico, six in the Atlantic, four off California, 10 off Alaska and five reoffering sales. The proposed final schedule is included with the attached copy of the April 4, 1980, submission to the President which was prepared pursuant to section 18(d)(2) of the OCS Lands Act, as amended.

The proposed final schedule is the result of a multi-stage process which started in October 1978 and is continuing at this time. The central theme of that process is review and comment by interested parties. As a result, the decision announced on March 28 was a result of pertinent materials and information gathered over a considerable period of time. These include, among other things: the responses to the requests for information made in October 1978; the material sent to the Secretary by the memorandum of February 21, 1979, from the Deputy Assistant Secretary--Policy, Budget and Administration; the comments received on the draft proposed program sent to the Governors of affected coastal States in March 1979; President Carter's Energy Message of April 5, 1979, and the

Fact Sheet on it; the final OCS production goals prepared by the Department of Energy sent to Interior by letter of May 17, 1979; the material sent to the Secretary by memorandum of May 29, 1979, from the Assistant Secretary--Policy, Budget and Administration; the environmental statement prepared on the proposed 5-year oil and gas lease schedule and the comments received on it and on the proposed program of June 1979, including recommendations for both more and less ambitious leasing programs; the material sent to the Secretary by memorandum of February 14, 1980, from the Deputy Assistant Secretary--Policy, Budget and Administration (includes Secretarial Issue Document); the relationship between national energy policy and the 5-year leasing program as set forth in the memorandum of March 6, 1980, from the Deputy Assistant Secretary--Policy, Budget and Administration; and the schedule proposed by NRDC and described in the memorandum of March 6, 1980, from Deputy Assistant Secretary-Policy, Budget and Administration.

Secretary Andrus considered eleven alternatives developed by Departmental staff and one alternative developed by the staff of the House Select Committee on the OCS. These alternative proposals are presented in the Secretarial Issue Document along with an analysis, a table of characteristics, and a table of estimated appropriations and staff requirements for each. He also considered the schedule proposed by NRDC and the recommendations of top policy advisors in the Department. Secretary Andrus noted on his decision sheet, copy attached, that alternatives VIII, IX and X were environmentally preferable.

In addition, the Secretary considered, inter alia, the following items: the timing of sales including, but not limited to, California sales #53, #73, and #80; Alaska sales #57, #70, #71, #61, #75, #83, #85 and #86; and North Atlantic sale #52; inclusion of contingency sales in the schedule; dividing sale #53 into separate sales based on geologic basins; and the inclusion of reoffering sales.

The economic and technical considerations and the statutory missions of the Department which were considered and relate to the decision announced on March 28, are set forth in the pertinent materials and information which are listed earlier in this memorandum. Briefly, the economic considerations include the national economic benefits resulting from OCS production, regional and national energy markets, and the possible environmental and economic costs which could result from OCS oil and gas activity. The technical considerations included, among other things, the availability of technology, the timing and sufficiency of information needed for sale decisions, local CZM plan implementation; and adjustments of the boundaries of certain of the planning areas. The statutory mission is as set out in the OCS Lands Act, as amended, that is, to produce oil and gas from the OCS in an environmentally acceptable manner, and to meet the other purposes and policies of the statute. The Secretary also considered the requirements of other statutes such as the NEPA, the Endangered Species Act, and the DOE Organization Act.

The essential considerations of national policy weighed for this decision include the National Policy set forth in section 3 of the OCS Lands Act, as amended, the relationship between National Energy Policy and the 5-year leasing program, and the possible environmental consequences of selecting a particular program as described in the FES and Secretarial Issue Document.

Upon consideration of the information available to him, the Secretary concluded that there are potentially large national economic benefits which could accrue from OCS oil and gas production and that as advised by DOE, regional markets were not a constraint in determining the pace or location of leasing. He also concluded that there did not appear to be environmental risks of such magnitude as to indicate that planning for sales in any area on the schedule should not go forward. However, his decisions on when potential sales could be scheduled in frontier areas was made on the basis of when sufficient information could reasonably be expected to be available for sale decisions, the time periods required to meet the statutory requirements of the OCS Lands Act, the NEPA, the Endangered Species Act and the DOE Organization Act, and the time needed to meet Interior's administrative policies regarding consultation with other interested parties and the time needed to prepare materials for planning and decisionmaking.

The availability of technology did not affect the selection or timing of any potential sales. If pre-sale planning data for any of the sales indicate that technological uncertainties in those areas are such as to make leasing of all or parts of them inappropriate in the proposed time-frame, the areas or tracts in question can be removed from leasing consideration. The Secretary did decide, however, because of the extraordinary ice conditions in the Chukchi Sea, that the schedule should include a special note that the timing of that sale is contingent upon a reasonable assumption that technology will be available for exploration and development of the tracts included in the sale.

The status of State or local CZM plans did not affect the timing or location of potential sales. There is no formal requirement that such plans be in place before OCS activities proceed, and OCS planning activities, including exploration and development plans and an EIS at the development stage, are sufficient to thoroughly understand proposed activities and impacts affecting the coastal zone, identify and analyze State and local preferences in consultation with those governments, and citizens, and develop appropriate mitigating measures. Authority to control activities in the coastal zone, as elsewhere onshore, resides with State and local governments independent of the status of coastal zone planning.

The Secretary made several adjustments in area boundaries so that they would better reflect logical planning units based on geologic basins and the hydrocarbon potential of areas.

The manner in which the Secretary met the requirements of Section 18 of the OCS Lands Act, as amended, is described in Enclosure 6 of the April 4 letter to the President.

Potential consequences to the environment exist and are described in both the FES and the Secretarial Issue Document. All practicable means of avoiding or minimizing environmental harm from the alternative selected, consistent with the elements of national policy, have been adopted in preparing the 5-year leasing program. The program is a schedule of planning milestones leading up to sale- and site-specific decisions on whether or not to offer tracts for lease and, if offered, what terms and conditions to require. Thus, the term "practicable means" in this context means assuring that the pre-sale planning steps and the sale decisions are organized and scheduled in such a manner that sufficient information will be available for sale decisions and that all practicable mitigating measures for post-sale events can be put in place when sale decisions are made. In this regard, the sales are scheduled based on estimates of the time required to assure that all necessary data for sale decisions, including those having to do with the imposition of appropriate mitigating measures, will be acquired by the time the decisions are made, and that the pre-sale planning process will be conducted in a manner consistent with law and public policy, allowing adequate opportunities for affected groups and individuals to comment and make recommendations regarding decisions. In addition, there are in place, or there is the framework for putting in place, criteria and requirements controlling the operations of lessees in all OCS areas on the schedule. These criteria and requirements are established in regulations, OCS Operating Orders, notices to lessees, review of exploration and development and production plans, and the OCS platform structural verification program.

Section 1505.2(c) requires that a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation. For ongoing mitigation measures such as the criteria and requirements resulting from OCS Operating Orders, the Department has an inspection program. In addition it reviews exploration, drilling, production and pipeline plans. These activities are extensive and, combined with royalty accounting, currently cost in excess of $30 million annually. They are expected to continue through the 5-year program, as projected in Enclosure 4 of the letter to the President of April 4, 1980. Other site-specific, monitoring and enforcement programs will be designed for future sales, as they have been for past sales, where particular situations requiring such treatment are identified during the pre-sale planning for individual sales.

Heather L. Ross

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

March 12, 1980

MEMORANDUM

TO: The Secretary

FROM: Executive Secretary

SUBJECT: 5-Year OCS Leasing Program

Your decision is requested on a final OCS 5-year leasing program to be forwarded to the President and to the Congress under Section 18 of the Outer Continental Shelf Lands Amendments of 1978.

Attachments:

1) Executive Summary of the Secretarial Issue Document

2) Decision Sheets

3) Summary of Recommendations

4) Secretarial Issue Document

5) Summary of Comments on the Final EIS

6) Comments and 5-Year Leasing Schedule Proposed by the Natural Resources Defense Council

7) Memorandum from the Deputy Assistant Secretary - Policy, Budget, and Administration, on the Relationship Between National Energy Policy and the 5-Year Leasing Program

8) Comments and Recommendations from Policy Officials
   a) Assistant Secretary - Energy and Minerals
   b) Assistant Secretary - Fish and Wildlife and Parks
   c) Assistant Secretary - Indian Affairs
   d) Assistant Secretary - Land and Water Resources
   e) Assistant Secretary - Policy, Budget, and Administration
   f) Solicitor

A copy of the FES is provided separately.

UNITED STATES DEPARTMENT OF THE INTERIOR

Office of the Secretary
Washington, D.C. 20240

February 14, 1980

Memorandum

To: The Secretary

Through: Executive Secretariat

From: Deputy Assistant Secretary--Policy, Budget and Administration

Subject: 5-Year OCS Leasing Program

BACKGROUND

The 5-year OCS leasing program is being prepared pursuant to Section 18 of the OCS Lands Act, as amended. Under the process established by that section, you are now asked to decide upon and transmit to the President and the Congress your proposed final program.

This step follows the preparation of your proposed program last June and its transmittal to the Congress, the Attorney General, and the Governors of the affected coastal States, and general availability for public comment. The proposed final program shall be accompanied by any comments received on the June program, along with an indication of why any specific recommendation of the Attorney General or a State or local government regarding that program was not accepted. Subsequent to your decision, a separate document will be prepared for transmittal to the President and the Congress which will represent the proposed final program. As discussed later, a substantial number of comments were received from State and local governments. The Attorney General did not comment.

Your present decision also follows BLM's preparation of a draft environmental statement (DES) on the leasing schedule, comment by interested parties on the DES, and preparation of a final environmental statement (FES). The FES was submitted to EPA on January 18, 1980, and EPA announced its availability on January 28, 1980. A Secretarial Issue Document (SID) has also been prepared to assist you in reaching your decision. In addition to using the SID in reaching your decision, you should carefully consider the treatment given many of the same issues in the FES. To assist you in this, extensive references to appropriate parts of the FES are made throughout the SID. The SID and the FES are attached. A summary of the comments received on the FES will be provided to you by separate memorandum.

In making your decision on a proposed final program you should consider inter alia: the background material prepared for the June proposal, dated May 29, 1979; comments received on the June proposal; the FES; and other pertinent comments raised as a result of the environmental statement process. The transmittal to Congress and the President will, however, only need to include responses to specific recommendations submitted by any State or local government which you did not accept. Technical comments on the DES and those concerning NEPA compliance have been addressed in the FES.

The attachments to this memorandum are:

Attachment 1 - June schedule

Attachment 2 - Maps of leasing areas

Attachment 3 - Secretarial Issue Document

Attachment 4 - Final Environmental Statement

ALTERNATIVE 5-YEAR SCHEDULES

Twelve alternative 5-year schedules have been developed for your consideration as a result of the section 18 consultation, the process conducted under NEPA, the establishment of production goals by the Department of Energy (DOE), a change in the period of time covered by the 5-year program, and the January 1980 report by the House Select Committee on the OCS, Offshore Oil and Gas: The Five-Year Leasing Program and Implementation of the Outer Continental Shelf Lands Act Amendments of 1978.

The proposed program adopted by you last June serves as the core alternative. Alternative schedules have been developed to address the following issues: DOE production goals; status of coastal zone management programs; availability of environmental information; concerns expressed by the State of California; sensitivity of other resources; availability of technology; transportation and processing of Alaskan oil and gas; concerns expressed by the State of Alaska; no future OCS leasing; addition of Hope Basin to the June proposed program; and concerns raised by the staff of the House Select Committee on the OCS. Also developed for your consideration is an annual nationwide reoffering sale.

The proposed program published last June covers the period March 1980 through February 1985. The schedule includes planning for 30 potential sales plus one contingency sale in the Gulf of Mexico. The schedule contains 11 sales in the Gulf of Mexico, six in the Atlantic, four off California, and nine off Alaska. Six of the sales, if held, would be first ever sales in regions off Alaska. The June program is listed as Alternative I. Other alternatives considered are:

Alternative 2, 33 sales (DOE production goals). This is the schedule prepared by DOE in developing OCS production goals, modified slightly by switching St. George Basin and Gulf of Alaska sales with each other (1983 and 1982 in the DOE schedule) and St. George Basin and Chukchi Sea sales with each other (1985 and 1984 in the DOE schedule). These changes were made in order to recognize DOI's criteria concerning timing of sales in frontier areas.

Alternative 3, 30 sales (Status of Coastal Zone Management (CZM) programs). Modify the June schedule by delaying the sales in St. George Basin two years from 1982 to 1984, North Aleutian Shelf one year from 1983 to 1984 and Norton Basin three years from 1982 to 1985 in order to allow more time for district CZM plans to be developed, approved and implemented. The shoreline areas adjacent to these leasing areas are unorganized and the villages have not initiated CZM efforts. They therefore have limited planning capabilities.

Alternative 4, 30 sales (Availability of environmental information). Delay the sale in St. George Basin from 1982 to 1983 in order to assure availability of oceanographic and meteorologic data for use in modelling of oil spills, instead of using preliminary data as would be required under the proposed schedule.

Alternative 5, 29 sales (State of California proposal). Delay Central and Northern California Sale #53 from 1981 until 1983, delete California Sale #73 proposed for 1983, and designate the 1984 proposed California Sale #80 as a Southern California sale, in order to provide additional environmental information on the Central and Northern California area. An additional two years would provide for the completion of a seabird and marine mammal study being conducted by the University of California, Santa Cruz, prior to preparation of the site-specific FES. This study, an aerial survey of populations, is scheduled to be completed in June 1981, with an interim report due in April 1980. The interim report will be used in the FES under the proposed program and the final seabird and marine mammal study results will be used in the review of exploration and development plans. This study supplements existing literature, an ecological characterization study already prepared by the Fish and Wildlife Service (FWS), and a seabird nesting and seasonal use survey being conducted by the FWS. The availability of the results of the FWS studies, together with existing literature, ensures that there will be adequate information for the DES under the timetable included in the proposed schedule.

Alternative 6, 29 sales (Sensitivity of other resources). Omit the North Aleutian Shelf sale from the schedule. Do not consider the area for leasing until some future time because of the value and sensitivity of other marine resources located there. Additional time will delay the occurrence of environmental effects and allow more extensive long-term environmental data collection and assessment.

Alternative 7, 30 sales (Availability of technology). Omit the Chukchi Sea sale and substitute a sale in the Beaufort Sea in 1985 in order to permit more time to develop technology for shear zone and pack ice conditions.

Alternative 8, 25 sales (Transportation and processing of Alaskan oil and gas). Omit sales in St. George Basin, North Aleutian Shelf, Navarin Basin, Norton Basin, and Chukchi Sea in order to reduce the amount of Alaskan oil for which transportation will need to be developed and to address possible problems with the availability of gas processing facilities.

Alternative 9, 28 sales (State of Alaska proposal). Omit sales in the North Aleutian Shelf, St. George Basin, and Chukchi Sea, delay the Kodiak Sale #46 from 1981 to 1983 and Norton Basin Sale #57 from 1982 to 1984, and add Hope Basin to 1985. Omit the pack ice and shear zone areas from the Beaufort Sea Sale #71. The sale deletions are to allow additional time for long-term environmental data collections and environmental impact analyses; the delay in Kodiak and Norton Basin is for additional data collection and analyses, and with respect to Norton Basin it is also to provide additional time for local CZM planning; the addition of Hope Basin is to add a new sale area which meets the planning criteria specified by the State of Alaska; the deletion of tracts located in the pack ice and shear zone areas is to provide additional time for development of technology.

Alternative 10, no sales (No future OCS leasing). Cease OCS leasing in 1980 in order to reduce potential environmental impacts as presented in the FES.

Alternative 11, 31 sales (Addition of Hope Basin). Add a Hope Basin sale in 1985 to the proposed program. The June proposal covered the period March 1980 through February 1985. The period covered by the final proposal extends through May 1985 which makes it possible to add an additional sale area.

Alternative 12, 38 sales (House Select Committee on the OCS staff proposal). Add five Gulf of Mexico sales (beginning in August of 1980), Beaufort Sea and Navarin Basin sales in 1982, a Zhemchug-St. George sale in 1983, and a Mid-Atlantic sale in 1984. Move the Norton Basin sale from September 1982 to November 1981. Delete the 1980 Gulf of Alaska sale. Add two contingency sales. Adopt second sale constituent mechanism.

An additional alternative has been offered by the Natural Resources Defense Council (NRDC). We have analyzed NRDC's alternative and our analysis will be provided to you by separate memorandum prior to our meeting on the 5-year program. The proposal is for 29 sales. Compared with your June proposal, it would: (1) delete four sales off Alaska, one off California and one in the North Atlantic; (2) delay one California and one North Atlantic sale; (3) limit an Alaskan sale and North Atlantic sale to specific areas; and (4) add four sales in the Gulf of Mexico and one in the Hope Basin.

Table 1 illustrates characteristics of alternative leasing schedules and Table 2 provides a sale-by-sale comparison of the schedule alternatives.

COMPARISON OF OCS PRODUCTION ESTIMATES

The ES and the SID contain estimates of oil and gas production associated with alternative leasing schedules. These estimates, developed by the GS, differ markedly as shown below, from those developed and reported in earlier proposals for the 5-year leasing program. The earlier estimates were prepared using data and analysis employed by the DOE in its preparation of final OCS production goals.

Production Estimates - DOE Basis	Oil (million bbl.)	Gas (trillion cu. ft.)
Proposed 5-Year Leasing Program	2600	6.7
DOE Proposed Lease Schedule/Production Goals	3000	7.1
Production Estimates - GS Basis		
Alternative I (Proposed 5-Year Leasing Schedule)	6600	29.0
Alternative II (DOE Production Goals)	6700	30.0

The difference between the DOE production estimates and the GS estimates presented in the FES is attributable to the following four factors:

° DOE and GS applied different assumptions about the rate of petroleum discovery that would result from each lease sale. The GS assumed that 20% of the recoverable resource estimate would be produced from each of five lease sales in a frontier province. DOE assumed a logistic or S-shaped curve relationship between the proportion of acreage leased and the amount of resources that would be discovered. There is at present no empirical basis for projecting with precision what the relationship between acres leased and production realized may be in untested frontier areas.

° The GS and the DOE used different approaches in determining the amount of resources which could be economically produced. The GS relied upon past history and experience for its assumptions pertaining to economics and technology. These assumptions were used in estimating the undiscovered recoverable resources in each basin. The DOE, on the other hand, applied a complex model to the GS estimates of recoverable resources that established costs and economic production for individual 100,000-acre blocks in each OCS region.

° The GS estimate of gas production is higher, in part, because the Survey assumed that gas production would occur in all Alaskan provinces. DOE assumed that the absence of existing and planned transportation systems would probably present a barrier to the development of gas resources in a number of Alaskan provinces. DOE assumed Alaskan gas production would take place only in the Beaufort Sea and the Cook Inlet.

3/6/80

° The GS based its production projections on more recent estimates of recoverable resources for the OCS than were available to DOE at the time it made its estimates. For those provinces where OCS sales are planned, the increased recoverable resource estimates are 10.6% higher for oil and 18.4% higher for gas. Additionally, major changes have occurred in the province ranking by resource potential.

These four factors are differences in the technical methods used in estimating future production and differences in the resource estimates rather than policy differences.

The proposed 5-year leasing program is not expected to exceed DOE's production goals when using comparable data and estimating techniques.

1. On the basis of the estimates prepared in June using DOE's analysis, the proposed 5-year leasing program would provide about 87% of the oil production goal and 94% of the gas.

2. On the basis of the USGS estimates set forth in the EIS and SID, Alternative I (proposed 5-year leasing program) would provide about 98.5% of oil and 96% of gas production achieved by the DOE modified schedule.

Even if the leasing program were to exceed the numerical production goal, it would be consistent with national energy policy. The policy principle underlying DOE's production goals is to seek increased OCS production in order to decrease U.S. energy imports. All economic production possible, given non-market constraints, is desirable under this principle.

COMMENTS

Comments on the June program and the DES can be combined into two general groups--comments on the timing and location of leasing; and other comments which deal with procedures, content of the proposed program or DES, and compliance with section 18 of the OCS Lands Act, as amended.

Timing and Location of Leasing

Alaska--The State of Alaska recommends a less aggressive program offshore Alaska. Governor Hammond has prepared an alternative schedule which groups sales into three categories based on technology, offshore and onshore studies, transportation, potential resource conflicts, onshore impacts, and the State's ability to participate in the planning process. Alternative IX consists of his proposal. Under the State's proposal, early Alaskan sales in the schedule would be Gulf of Alaska and Lower Cook Inlet. Navarin Basin, Norton Basin, Hope Basin, and Kodiak would be delayed until late in the 5-year schedule; Chukchi, North Aleutian Shelf, St. George Basin, Bristol Basin, and the ice shear and pack ice zones of Beaufort would be omitted. An important element in the State's recommendation is coordination of Federal and State leasing programs. The State's schedule for leasing in State waters includes Cook Inlet (1980, 1981, 1983), Norton Basin (1981, 1983), Chukchi (1983) and Beaufort (1983). The State also asks that you give serious consideration to a new study area designation that allows planning and assessment in certain frontier areas without those areas being subjected to the political momentum that it believes sets in once an area is on the schedule.

National and regional environmental organizations, officials of local Alaska government, a spokesman for Alaskan fishermen, and others have recommended scheduling similar to that proposed by Governor Hammond. These groups are especially concerned about environmental risks, onshore impacts, and whether the program proposed in June will allow for collection and analysis of environmental data in time to support sale decisions.

NOAA recommended deletion of the North Aleutian Shelf and St. George Basin areas from the schedule. Both Alternatives VIII and IX delete these two areas.

Oil companies (Exxon, SOHIO, Mobil, and Shell) generally asked for a more aggressive leasing program off Alaska with sales moved up and more frequent sales with emphasis placed on the areas with higher potential--St. George Basin, North Aleutian Shelf, Navarin Basin, Beaufort Sea, Chukchi Sea, and Bristol Basin. Alternative XII addresses these concerns.

California--State and local officials and environmental groups have questioned several aspects of the proposed schedule off California. There is, as you know, considerable opposition to Sale #53 (1981) and a great deal of effort to delay it or delete it from the schedule. Concerns are expressed about environmental risks as compared to the relatively small expected resources, adequacy and timing of environmental and seismic studies, and onshore impacts.

Questions have also been raised about Sales #73 (1983) and #80 (1984) because their location is identified only as being off California. You may recall that this was done in order to maintain flexibility on location decisions. Recommendations have also been received that the California areas be broken up into smaller units based on geologic basins.

Alternative V delays Sale #53 by 2 years, deletes California Sale #73 and identifies California Sale #80 as Southern California.

Other issues raised concerning the timing and location of sales off California include air quality, marine navigational safety, marine sanctuaries, visual degradation, the effectiveness of oil spill clean-up technology and deep water technology, threat to tourism, endangered species and the transportation of production to markets.

North Atlantic--NOAA suggested delaying Sales #52 (1982) and #82 (1984) until the results of Sale #42 are available in order to better assess the risks of additional sales.

South Atlantic--North Carolina and Florida have both questioned the timing of Sale #78 South Atlantic/Blake Plateau, because they believe the environmental studies may not be sufficiently advanced for a sale in 1984. Florida has also questioned whether there will be sufficient environmental information for Sale #56 (1981), especially those portions of the tentative tract selection in the Blake Plateau.

Gulf of Mexico--There is general agreement with the pacing of sales in the Gulf of Mexico although Florida is concerned about the adequacy of studies in the eastern Gulf offshore Florida.

OTHER COMMENTS

General

Some of the other issues raised, and discussed below, deal with aspects difficult to separate from questions about timing and location. Thus, the following discussion will overlap with the preceding section in some instances.

Some commenters believed that you should have available for review detailed information about individual sale areas before they are included in the planning schedule. For example, EPA commented that the ES should analyze the probable extent, impact and possible mitigating measures, as well as cost of mitigating measures, of the most probable catastrophic spill for each region so that regions could be excluded from planning if mitigation costs are prohibitive. This, and other more detailed questions, are more appropriately considered in individual sale ES's rather than in an ES which evaluates the action of putting a set of potential sales in a particular sequence on a planning schedule. No evidence developed to date indicates that suitable mitigating measures will be so costly in any particular area as to preclude exploration and development.

Compliance with Section 18

Numerous comments were received which questioned the Department's compliance with section 18 of the OCS Lands Act, as amended. In order to assure that all the issues raised were fully addressed, Appendix II of the SID provides a detailed analysis of all comments received relating to this section. The following summary attempts to highlight some of the issues raised and responses to them.

Weighing of factors--Section 18 of the OCS Lands Act, as amended, requires *inter alia* that the management of the OCS be based generally upon the factors listed in subsections 18(a)(1) and (4) and that the timing and location of exploration, development and production be based on consideration of eight factors listed in subsection 18(a)(2) and three factors listed in subsection 18(a)(3). Under section 18(a)(2) these factors are as follows: (1) existing information concerning the geographical, geological, and ecological characteristics of such regions; (2) an equitable sharing of developmental benefits and environmental risks among the various regions; (3) the location of such regions with respect to, and the relative needs of, regional and national energy markets; (4) the location of such regions with respect to other uses of the sea and seabed, including fisheries, navigation, existing or proposed sealanes, potential sites of deepwater ports, and other anticipated uses of the resources and space of the Outer Continental Shelf; (5) the interest of potential oil and gas producers in the development of oil and gas resources as indicated by exploration or nomination; (6) laws, goals, and policies of affected States which have been specifically identified by the Governors of such States as relevant matters for the Secretary's consideration; (7) the relative environmental sensitivity and marine productivity of different areas of the Outer Continental Shelf; and (8) relevant environmental and predictive information for different areas of the Outer Continental Shelf. Under subsection 18(a)(3) the three factors are as follows: (1) the potential for environmental damage; (2) the potential for the discovery of oil and gas; and (3) the potential for adverse impact on the coastal zone. The comment has been made by NOAA, New York, California, Massachusetts, NRDC, and others, that the June program and DES do not adequately explain how these factors were weighed. In this regard, one of the recurring suggestions is that the environmental sensitivity of areas be ranked as areas were ranked for their hydrocarbon potential. We have found, however, that it is not meaningful to weigh and rank, for example, the Georges Bank fishery with the bird colonies of the Farallon Islands, the Pacific and Arctic whales, or the coral banks of the Gulf of Mexico. Furthermore, no consensus on such a ranking exists. Given the absence of meaningful measurements, non-comparability of values, and lack of agreement among experts, we provided you in May with a sensitivity matrix which went as far as we felt was credible in displaying relative environmental sensitivities of potential leasing areas. In addition, pages iii-viii of the summary in the FES provides a discussion of the environmental consequences of the ten alternatives analyzed in the FES. This includes risks of oil spills, potential effects on unique or unusual resources and habitats, development effects such as the effects of drill cuttings and muds, potential multiple-use conflicts, socio-economic effects and effects on ecosystems.

California suggested a matrix and parameters which were carefully evaluated. While many of the parameters were judged to provide useful characterizations, the matrix was not adopted, since on the whole it did not constitute a more useful decisionmaking tool than the existing sensitivity matrix developed prior to the decision on the June proposed program or the ES matrix which was similar in approach. (A more detailed discussion of the problems with the California matrix appears at pp. 363-4 in the FES.) One assumption behind California's matrix was that differences in geohazards among regions would cause different spill risks among regions. While this seems intuitively reasonable, data do not exist to support this hypothesis. In fact, the available data indicate that while geohazards can threaten the structural integrity of offshore emplacements, there is no observed relationship between structural failure and spills.

The issue has also been raised as to whether the proposed program results in an equitable sharing of developmental benefits and environmental risks among regions. The law and legislative history do not define "equitable sharing" and as a consequence regional interests have claimed that the resources they are interested in protecting are more important than the ones elsewhere. We believe it is reasonable to interpret the congressional directive as meaning that no area with economically recoverable deposits of hydrocarbons is to be exempt from oil and gas production if it can be achieved without undue risks. In this regard, it is interesting to note that the report by the House Select Committee on the OCS did not conclude that any OCS area should be omitted from the 5-year program for environmental reasons. We also believe that developmental benefits are not only realized regionally as a result of production and refining processes, but also are reaped generally by the consumer of the hydrocarbons and the totality of citizens whose real incomes, and perhaps national security, are improved by the reduction in oil imports.

West Coast Refinery Capacity/Processing of Alaskan Gas

This issue, sometimes referred to as the "West Coast Oil Glut," was raised by California and others. The question concerns whether there is installed refinery capacity on the west coast and transportation capacity to other market areas sufficient to absorb production from offshore California and Alaska which would be added to onshore west coast production and the light crude which California currently imports from Indonesia. DOE in its report on OCS production goals concluded that this argument should not affect your decisions on the pace of leasing off California and Alaska. The recent decision by President Carter to approve the proposal by the Northern Tier Pipeline Company to build a west-to-east crude oil pipeline provides concrete evidence that efforts are already underway to address any temporary imbalance on the west coast.

A related issue is the transportation and processing of potential Alaskan gas finds. While DOE assumed in its development of OCS production goals that gas will not be produced from any Alaskan OCS area except Beaufort Sea and Cook Inlet, BLM has assumed in its ES analysis that other Alaskan gas will be produced. If the gas is produced, it will need to be shipped either by LNG tankers or by pipeline to the lower 48 States. There are currently no LNG processing facilities on the west coast, though one has been proposed and conditionally approved by the Federal Energy Regulatory Commission for Point Conception, California. Because of safety factors, it is unlikely that large volumes of LNG could be tankered through the Panama Canal. Thus, the shipment of Alaskan gas by LNG tankers may require major construction of LNG receiving terminals on the west coast, or near the U.S. in Canada or Mexico. Another option is to export the gas. (A more detailed discussion of these issues appears at pp. 45-50 of the FES.)

It is important for the country to determine through exploration a more precise understanding of the resources it has to draw upon to meet its need for domestic energy supply. Planning for transportation, refining, and processing capacity to handle that supply can only proceed realistically once the location of those hydrocarbons is known.

Contingency Sales

NRDC and others have recommended more contingency sales which could be substituted for frontier area sales. The House Select Committee report also recommended that two additional contingency sales be added in areas where the most information is available, where previous development has taken place, and where State and local government have more experience dealing with the related impacts. The March draft schedule included three contingency sales and the June proposal one. While the concept of contingency sales initially seemed sound, it now appears to undermine the clarity and reliability of the schedule. For example, onshore planners, affected States and industry must assume that all sales, including contingency sales, will be held. Thus, while contingency sales may appear to give you desired flexibility, others must treat them as actual sales. It also can lead to inefficient use of scarce planning resources. It can be argued that if we have the capacity to do the planning for contingency sales along with other sales, we should hold them if the sale preparation activities support proceeding with the sale. This is true even if no other sales have been deleted from the schedule.

5-Year Program as a Leasing Decision

California and the Sierra Club disagreed with DOI's statements that: (1) inclusion of a sale on the schedule is not a decision to lease, and (2) detailed evaluations of impacts of oil and gas operations in a particular locale should be left to the sale ES which considers the actual decision to lease. The regulations for NEPA implementation clearly prohibit a decision on a major Federal action, in this case the decision to lease a specific OCS area, until the ES analyses are performed and the NEPA process completed. Thus, the 5-year program cannot be considered to be a leasing decision for proposed sale areas. Rather, the 5-year program should be viewed as a planning tool that provides an identification of areas where we will be initiating planning and studies which will be valuable in any future decision regarding leasing.

This comment appears to stem in part from the fact that your schedule has been quite reliable for the past 2 years, but it fails to recognize not only the legal requirements but also that the tracts actually offered as a result of the final decision to lease are only a small part of the acreage included in the OCS area as a whole, and sometimes are appreciably less than the total tracts analyzed in the sale ES. Also, it is possible that some scheduled sales will not be held at all, as was the case with the proposed Blake Plateau sale which appeared on your August 1977 schedule. The actual leasing decision is based on information developed in the sale ES, and the 5-year program anticipates that an ES will be prepared for each potential sale. In the case of the Gulf of Mexico, BLM is now preparing one ES covering the offering of tracts for two sales. This should reduce administrative costs while still bringing environmental issues fully to the attention of decisionmakers.

TECHNICAL ADJUSTMENTS IN PROGRAM

Since the decision was reached on the June proposed program, a number of technical adjustments have been proposed to address both administrative and technical issues. These are minor adjustments and would not significantly affect the environmental impact analysis presented in the FES. The proposed adjustments are discussed below.

North Atlantic Sales

The call for the second North Atlantic sale, Sale #52 (August 1982), was delayed by 2 months because of uncertainty over the timing of Sale #42. In order to provide adequate time for the pre-sale planning steps to occur, the recommendation is that the proposed sale date for Sale #52 be switched with the proposed sale date for the Gulf of Mexico Sale #69. Sale #69 would then be scheduled for August 1982, and Sale #52 for October 1982.

Consolidation of Sale Preparation for Gulf of Mexico Sales

For the years 1980 and 1981, we have planned on consolidating the sale preparation for the two Gulf of Mexico sales proposed each year. Because this approach reduces administrative costs while simultaneously fulfilling Interior's statutory mandate, it is recommended that the same approach be followed in 1982, 1983, and 1984. This procedure will produce a more comprehensive environmental statement which parallels the gulf-wide calls for nominations which we are now pursuing.

Boundaries of Leasing Areas

Since the proposed program was prepared, four boundary changes have been suggested as better reflecting the geology and other natural features of the OCS.

Mid and South Atlantic--The tentative tract selection for South Atlantic Sale #56 (1981) includes tracts in the southernmost Mid-Atlantic area, based on resource and environmental planning data. In order for maps to better reflect actual planning units in this area, the boundaries should be revised by moving the Mid/South Atlantic boundary northward to 36° 50' north latitude.

South Atlantic/Blake Plateau--The Blake Plateau area has been defined as the area seaward of 200 meters water depth between 28° and 35° north latitude. The extent and beginning point of the Blake Plateau area have never been subject to definitive resolution. There is no persuasive geologic or environmental basis for separating this area from the South Atlantic area which is shoreward of it. The proposed revision is to consolidate these two areas for planning purposes. There is no other location on the U.S. OCS where separate leasing areas are designated by reference to a water depth demarcation line.

testing all prospective frontier areas, consistent with Section 18, rather than returning quickly to certain of those areas for second sales, based on resource estimates which are relatively attractive and represent the best information currently available, but are recognized to have a high margin of error associated with them.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

MAR 12 1980

Memorandum

To: Executive Secretariat

From: Deputy Solicitor

Subject: Proposed 5-Year OCS Leasing Program

We have reviewed the Secretarial Issue Document and find that the Document complies with the requirements contained in section 18 of the OCS Lands Act, as amended, for the preparation of a 5-Year Oil and Gas Leasing Program.

Alternative XII cannot be legally chosen at this time, because it was not considered in the section 18 Program process. All other eleven alternatives may be legally chosen. I understand that the Office of Policy, Budget and Administration has recommended selection of alternative XI, and I concur with that recommendation.

Frederick N. Ferguson

Frederick N. Ferguson

<u>Compliance with Section 18 of the OCSLA</u>

Section 18 directs you to prepare a schedule of proposed lease sales which you determine will best meet national energy needs for the next five years, consistent with the principles of that section (Sec. 18(a)). National energy needs consistent with those principles can best be met by achieving the greatest value of OCS production (NEP II, DOE production goals) which can be obtained with due consideration of economic, social and environmental values of the renewable and nonrenewable resources contained in the OCS, and the potential impact of oil and gas exploration on the other resource values of the OCS and the marine, coastal, and human environments (Sec. 18(a)(1)).

OCS production is valuable to this country in all locations where the benefits in oil and gas value outweigh the costs, where costs are broadly considered as provided in Sec. 18(a)(2). Information about the potential value of production comes from existing geographical and geological information (Sec. 18(a)(2)(A)) and from the interest of potential producers as indicated by exploration or nomination (Sec. 18(a)(2)(E)). You will recall that a ranking of the 22 OCS areas by estimated resource potential and industry interest in exploration was provided to you in June, based on information requested from USGS and industry.

Costs include:

(1) operator costs, including costs of exploration, development and production, and costs of transportation to points of use reflecting relative needs of regional and national energy markets (Sec. 18(a)(2)(C));

(2) costs imposed on other uses and users of ocean resources, including costs which have a direct market value, such as damage to fishing gear, and costs which do not have such a direct market value, such as preemption of space from fishing or navigation (Sec. 18(a)(2)(D));

(3) costs experienced in light of laws, goals and policies of affected States, either by operators who must modify operations to meet such State requirements or as onshore impacts whose magnitude can be judged in part by the degree to which they may not fully satisfy State goals and policies (Sec. 18(a)(2)(F)); and

(4) intangible costs imposed on sensitive and productive marine environments, which do not lend themselves to easy measurement but can be very sizeable (Sec. 18(a)(2)(G)).

If the anticipated benefits outweigh the anticipated costs for an area, then the proper balance between the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone (Sec. 18(a)(3)) is to schedule the area for leasing consideration. This meets the equity standard of Sec. 18(a)(2)(B)---equitable sharing means undertaking development commensurate with production potential, as long as the costs of that development, broadly construed, do not exceed the benefits. The costs as well as the benefits involved will, of course, be much better known at sale time, but the relative scarcity of information at this point is not a basis for declining to proceed with planning activities in an area unless the best estimate which can be made now is that the costs in that area outweigh the benefits.

The timing of sales which best meets national energy needs is one which moves into the most valuable areas first, where value is calculated as benefits minus the full range of costs discussed above. However, sales in each of those areas can only occur as soon as sufficient information, including existing information concerning geographical, geological and ecological characteristics (Sec. 18(a)(2)(A)) and relevant environmental and predictive information (Sec. 18(a)(2)(H)) is available for decision.

This approach was the basic logic used to develop the alternative you selected in June. Sales were scheduled by starting at the top of the resource potential rankings and determining the earliest date when sufficient information would be available to permit a decision, in light of anticipated costs, on whether to lease and under what terms and conditions. Since that time, an ES has been prepared which provides a basis for a further decision on whether the anticipated costs of OCS development are of such magnitude in the different areas to cause some areas to be omitted from the schedule or to be moved up or down in the net value ranking.

I do not believe, on the basis of the information developed to date, that any area should be omitted or moved significantly in the net value rankings. This is not because some areas do not have more valuable or vulnerable resources than others, but because of the very extensive mitigating measures you have put in place under the OCS Lands Act, as amended, which reduce the risk of actual impact on those resources dramatically. I believe that it is a matter for very serious consideration to omit certain sale areas because they are a source of great concern to many people, but I cannot recommend that you make such omissions within the carefully defined, even handed framework of Section 18.

I am recommending Alternative XI because it follows the logic laid out above, extended from the June proposal to include Hope Basin as a result of the later end date of the 5-year period. However, I do not believe that further sale additions such as those proposed by DOE and the staff of the House Select Committee are appropriate. They do not, in my judgment, allow sufficient time before first sales and between subsequent sales to acquire, assemble, and analyze necessary data for decisions--a principal determinant of Alternative XI. This includes information used to assure receipt of fair market value (Sec. 18(a)(4)). Also, Alternative XI contains what I consider to be a valuable diversification strategy of entering and

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

[illegible] MAR 1980

Memorandum

To: The Secretary

Through: Executive Secretariat

From: Deputy Assistant Secretary—Policy, Budget and Administration

Subject: Recommendation - 5-Year OCS Oil and Gas Leasing Program

I recommend that you make the following decisions:

— adopt Alternative XI as your 5-year program;

— adopt technical changes A through F;

— adopt the annual nationwide reoffering sale;

— reschedule at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale);

— delete the 1983 Gulf of Mexico contingency sale—#77; and

— select Alternatives VIII, IX, X, and the one proposed by NRDC as the environmentally preferable alternatives.

Your decision on the 5-year program should represent a careful balancing between our national energy needs and the high standard of environmental protection called for by the OCS Lands Act, as amended. I believe the adoption of Alternative XI, together with an annual nationwide reoffering sale, strikes this balance. Of the alternatives presented to you, this is the most ambitious program in terms of opening up new areas for exploration. It adds Hope Basin to your June proposal, an area which has been suggested by the State of Alaska and Natural Resources Defense Council as a possible candidate for leasing. Alternative XII, which was proposed by the staff of the House Select Committee on the OCS, includes more sales and schedules some frontier area sales sooner than Alternative XI, but does not allow sufficient time for collection and analysis of environmental and geologic data and may not be adoptable without the preparation of a supplemental environmental statement which would delay implementation of the 5-year program.

Alternative XI allows all regions of the country to contribute to meeting our national energy needs and share in the developmental benefits and environmental risks by including all areas with significant evidence of hydrocarbon potential. Environmental concerns identified to date have been addressed through a careful linking of the studies program with the timing of the pre-sale planning steps. It increases the chances of having a large find on the OCS, similar to the Prudhoe Bay field, by including the largest number of frontier areas of all the alternatives. It is administratively achievable which is an important factor in maintaining a credible program.

The adoption of an annual nationwide reoffering sale will be responsive to the proposal of the staff of the House Select Committee to include a "constituent sale" and should provide for the prompt reoffering of tracts whose bids have been rejected or tracts which did not receive bids.

I also recommend that you drop the one remaining contingency sale in the June proposed program--Gulf of Mexico sale #77. As discussed in the summary memorandum, closer scrutiny of the contingency sale concept has led us to the view that it undermines the clarity and reliability of the schedule. Scarce resources must be allocated to the planning for a sale which may never take place. Further, if the sale preparation activities support proceeding with the contingency sale, the sale should be held independent of whether another sale is deleted.

I am recommending that you adopt all six technical changes. One would switch two sales in order to recognize the effects of delays in sale #42 caused by litigation. The other five are designed to improve the program by modifying or deleting boundaries. One of the boundary changes is to move the northern boundary of the North Aleutian Shelf northward by one-half degree. This change would add a geologically important area to the area you designated last June and would move the boundary to 105 miles from the north shore of Bristol Bay instead of 140 miles as it is now.

CEQ regulations require that you identify the environmentally preferable alternative(s). I recommend that you select Alternatives VIII, IX and X, and the one proposed by NRDC as the environmentally preferable alternatives. As discussed in the summary memorandum, those schedules, if adopted as your 5-year program, would generate less environmental risk than the schedule I am recommending. The schedule I am recommending is more responsive to important national policy and economic issues and is, in my view, more advantageous to the nation than any of the environmentally preferable alternatives.

Finally, a number of commenters addressed the matter of compliance with Section 18. My recommendations are based on an explicit approach to complying with that section, as discussed in the attachment to this memorandum.

Heather L. Ross

Attachment

Summary of Comments on Proposed Program

Numerous comments have been received on the proposed leasing program which was transmitted to the Congress on June 18, 1979, to the Governors of the affected States on June 25, 1979, and to the Attorney General on June 28, 1979. The program was published in the Federal Register on July 23, 1979, with a general request for comment. All comments were to be submitted by September 21, 1979.

All comments received have been summarized and are organized in the following manner: State government, local government, industry, environmental interest groups and the public.

A. State Government Comments

1. Massachusetts - By letter dated September 4, 1979, Governor Edward J. King expressed the following comments:

-- The Commonwealth is pleased that the proposed program schedules sales in the North Atlantic in a manner which allows sufficient time for the collection of environmental data and operating experience necessary to meet the requirements of an accelerated program.

-- Emphasized the importance of section 18 of the OCSLAA.

-- Hoped that their comments would be helpful in preventing any delay in implementation of the lease schedule by indicating where program compliance with the Act would be strengthened.

-- Supports the goal of exploration and development of energy resources in the nation's OCS with proper safeguards.

-- Supports the size, timing, and location of North Atlantic lease sales as proposed in the 5-year program.

-- Supports Interior's policy of scheduling the second lease sale in a frontier area within 2 1/2 to 3 years after initial sale.

-- If proper environmental information is available by the second lease sale, along with resource information and experience with operations, the interval between the second and third lease sales should be shortened to no more than two years.

-- Noted the dispute and negotiations over the Canadian-American maritime boundary with regard to leasing of an additional 1.6 million acres on Georges Bank over the next five years, and the Commonwealth will assist in attempts to resolve the issue in a timely manner.

-- Concerned about the failure of the Department of Energy to set reasonable production goals based on the need to maximize OCS production.

-- Concurs with DOI findings (Tab B-2, p. 3).

-- Feels that a primary problem of the DOE analysis stems from the computer model used to generate the data and that based on its use, the DOE recommended schedule is based on the maximization of net economic values rather than the maximization of production.

-- DOE should revise its analysis to provide Interior with detailed information regarding the maximum expected oil and gas production from each lease sale in each OCS region.

-- Feels that the net energy value is a truer measure of the value of OCS production and DOI and DOE should use this measure.

-- DOE analysis places heavy emphasis on current manpower and budget levels in developing the leasing schedule.

-- DOI and DOE both place too much emphasis on the status quo in developing alternative leasing schedules and many factors (technological problems, legal requirements, and EIS's) legitimately constrain the rate of leasing.

-- Proposed program reveals that administrative requirements are the primary determinant in the leasing schedule and that other factors such as the need to increase production and the factors in section 18 (a)(2) are of secondary importance.

-- Proposed program does not address the State's earlier request to demonstrate how the schedule responded to concerns other than its own administrative requirements.

-- If factors in section 18 require a shift in DOI personnel or increase in budget, then Congress and the Administration should be prepared to act accordingly.

-- Proposed program presents virtually no data on the regional developmental benefits or the regional environmental risks as required under section 18(a)(2) of the OCSLAA, and the Commonwealth re-emphasizes its previous objection to this lack of consideration.

-- Benefits and risks need to be assessed for each OCS region.

-- The developmental benefits are clearly not equally distributed.

-- DOI has inadequately assessed the regional developmental benefits and environmental risks and has not demonstrated that the schedule provides for an equitable sharing of those benefits and risks among OCS regions.

-- Proposed program does not provide the qualitative and quantitative information which is required to rank OCS regions by their relative environmental sensitivity and marine productivity.

-- Proposed program contains little information on the marine productivity of the OCS regions even though Massachusetts previously submitted data on the North Atlantic marine productivity and reference for other regions, and the Secretary of Commerce provided additional information to DOI by letter dated January 18, 1979.

-- Program has not drawn upon BLM's Environmental Studies Program and previous EIS's to compile data for use in ranking the OCS regions by marine productivity.

-- Re-emphasized that the environmental sensitivity analysis must give a heavy emphasis to the presence of critical habitats, including spawning and nursery grounds, whelping areas and rookeries.

-- Oceanographic, meterological and geological processes, low energy-high energy environments must be considered in evaluating environmental sensitivity.

-- OCSLAA requires DOI to consider the relative ranking of OCS regions by environmental sensitivity and marine productivity, and such a ranking has not been developed nor is it clear how the Secretary considered this issue and how it has affected the leasing schedule.

-- There is little indication of how the proposed schedule provides a "proper" balance between the environment and the need for energy as required under section 18(a)(3) of the OCSLAA.

-- Program would benefit from an explanation of how the lease schedule meets the requirements of section 18(a)(3) and how environmental protection and coastal zone impacts were considered in developing the leasing schedule options.

-- Expressed concern regarding the 50 percent reduction in the environmental studies program budget over the 5-year period.

-- Feels that additional information needs to be provided regarding the regional expenditure of funds so that the funding of environmental studies in a specific region can be related to a particular set of leases scheduled.

-- The Secretary should utilize all available information provided by the environmental studies program in carrying out responsibilities under section 18(e).

-- In frontier areas, the environmental studies program should be an integral part of the decision on the size and location of tracts.

2. Rhode Island - By letter received September 26, 1979, Governor J. Joseph Garrahy expressed the following concerns:

-- Rhode Island supports the expeditious development of OCS oil and gas and believes existing legislation will ensure adequate safeguards for their fishing industry, tourism and recreational uses of its coastal areas.

-- Of the four leasing options, option II best achieves our national goals and those of Rhode Island and provides an equitable sharing of development benefits and environmental risks to affected States.

-- Rhode Island will continue to oppose any effort to reduce the number of sales in the North and Mid-Atantic areas or any efforts to delay such sales.

-- Requested that prior to completion of plans for the location of exploratory or production wells, drilling companies consult with representatives of the fishermen to assure that interference with commercial fishing is kept to a minimum.

-- Consultation between the energy and fisheries representatives would complement the best feature of the Intergovernmental Planning Program, collaborative planning.

3. Connecticut - By letter dated August 20, 1979, Governor Ella Grasso expressed the following comments:

-- Thanked the Secretary for his letters regarding the proposed 5-year OCS oil and gas leasing program and Georges Bank sale.

-- Informed us that Mr. Joseph Belanger, Connecticut's representative to the OCS Policy Committee, had been asked to coordinate the review of these documents by appropriate State agencies and that the State's substantive comments would be forwarded to DOI by September 21, 1979.

By letter dated September 7, 1979, Governor Ella Grasso advised the Department of the following views:

-- The staff of State agencies give their unanimous support to the proposed 5-year program.

-- In light of our nation's energy needs and the authorities provided under the OCS Lands Act, as amended, Governor Grasso adds her strong personal support.

4. New York - By letter dated July 20, 1979, Governor Hugh Carey expressed the following comments:

-- Informed us that in regard to the Call for Nominations and Comments on proposed Mid-Atlantic sale #59, the State Department of Environmental Conservation would be coordinating the State review.

-- The State has a vital interest in the development of potential offshore energy resources particularly with regard to the State's existing marine tourism and recreation industry coupled with its need for secure and adequate energy supplies.

-- New York has consistently supported the adoption of the 5-year leasing program as a necessary step in orderly administration of the Federal offshore leasing process.

-- Informed us that the State Department of Environmental Conservation, the lead State agency for OCS matters, has been asked to coordinate State and local government review of the proposed program.

-- Appreciates opportunity to review proposed program and looks forward to continued cooperation.

By letter dated September 25, 1979, Robert F. Flacke, Commissioner of the New York State Department of Environmental Conservation, made the following points on behalf of the Governor:

-- The State views the program as the cornerstone of the offshore leasing process.

-- The final document should provide an integrated discussion of the reasons for the selection and timing of specific proposed lease sales over the 5-year period.

-- New York generally agrees with the proposed timing of sales in the North and Mid-Atlantic, but is concerned about potential conflicts of OCS activities with the commercial and recreational fishing industries and the tourism and recreation industries.

-- The State is concerned also about the risks of development in extremely deepwater geohazard areas on the continental slope.

-- Adequate administrative and financial support must be given by the Federal Government to mitigating measures.

-- Funding should be provided for the OCS State Participation Grants.

5. New Jersey - By letter dated October 1, 1979, David N. Kinsey, Acting Director, Division of Coastal Resources, Department of Environmental Protection, on behalf of Governor Byrne, expressed the following comments:

-- Letter also reflects New Jersey's initial comments on the DEIS for the 5-year schedule.

-- Preparation of the DEIS, as recommended by New Jersey and others, is a clear indication of the commitment of DOI to carry out the spirit of the OCSLAA which requires coordination and consultation with affected States.

-- Indicated that DOI's earlier response that spacing of first and second sales in frontier areas at three-year intervals and successive sales at two-year intervals will provide for an "orderly flow of information from one sale to the next" has not been the experience to date in sales off New Jersey's coast (sales #40 and #49).

-- Information from initial exploration should be available in a timely fashion for inclusion in the DEIS prepared for each sale and may require a more careful linking of the steps in lease sales.

-- New Jersey's earlier comments support DOI's policy of advanced planning for the Alaskan OCS.

-- The proposed program and the DEIS do not fully respond to the leasing sequence in the Alaskan OCS as recommended Governor Hammond of Alaska.

-- The proposed program and DEIS do not recognize and assess the nearshore-offshore distinction in the Beaufort Sea and the Alaskan recommendation that several Alaskan OCS frontier basins be delayed or postponed indefinitely until safe technology is developed.

-- The Department should consider an alternate schedule for the offshore areas of Beaufort and Chukchi Sea or the use of contingency sales.

-- The contingency sale approach, introduced in the March 1979 draft proposed program, is supported by New Jersey and they recommend that contingency sales be used more extensively, particularly in frontier areas such as North Aleutian Shelf, St. George Basin and Chukchi Sea.

-- Part B, Tab 6 of the background material for the proposed program inadequately presents the information required under section 18(a)(2) of OCSLAA, specifically the relative environmental sensitivity and marine productivity of the different areas of the OCS as well as an equitable sharing of developmental benefits and environmental risks among the regions.

-- The information presented in Part B, Tab 6, has several deficiencies of content and approach:

° the information is quite general and limited

° matrix does not facilitate comparisions of environmental sensitivity among regions for an analysis of sharing of environmental risks

° matrix does not appear to make use of information collected in the Environmental Studies Program

° it is not clear how the indicators of "environmental considerations" has been, or can be weighed and considered in establishing the 5-year program

° matrix fails to indicate what weight or value was assigned to coastal barrier islands

-- Recommended that the environmental considerations aspects of the program be more fully developed into a working tool for decisionmakers and then completely integrated with other elements of the program, as required by section 18.

-- Proposed program only includes estimates of appropriations and activities for the pre-sale phase of the Environmental Studies Program.

-- The full cost of essential post-sale and monitoring studies must be included in the program if the Environmental Studies Program is to be fully effective.

-- New Jersey looks forward to continued participation in the Federal OCS program.

6. Virginia - By letter dated July 2, 1979, Maurice B. Rowe, Secretary of Commerce and Resources, on behalf of Governor Dalton, made the following comments:

-- Thanked us for copies of the proposed program.

-- Informed us that Virginia's technical agencies would provide additional review of the final program.

-- This extensive formalization of OCS leasing and exploration activities will materially assist Virginia in participating with DOI in the development of major potential national resources.

By letter dated September 25, 1979, Maurice B. Rowe, Secretary of Commerce and Resources, expressed the following concerns:

-- Industry's interest in the area offshore North Carolina and their nominations for sale #56 underlines the importance of OCS matters to Virginia's tourism, fishing and marine industries and resources.

-- The Department of the Interior has been ineffective in its actions to encourage the Department of Commerce to take those actions the OCSLAA calls for in regard to administrative assistance (funding authorized by Congress but not appropriated).

-- All of the OCS exploration activities are relevant to energy concerns, and it is difficult to make wise decisions when there is no clear definition of the national interest. It is important that the relationship of OCS exploration and development to national energy needs be more clearly defined than the simple directive from the President encouraging the addition of more tracts to OCS sales.

-- Virginia has been anxious to share in the benefits of OCS exploration and to serve in a capacity of assistance to the Federal Government.

-- Opportunity has not been clearly provided for the States to be of assistance in the decisionmaking activities or in the procedural and management phases of the sales.

-- Environmental concerns have not been clearly considered and met in such matters as completing the environmental work prior to holding sales and should be more effectively handled for sale #56.

-- Fishing, oyster and shellfish industry are extremely concerned about oil spills.

-- Emphasis is needed toward completing arrangements to minimize conflicts betwen shipping and OCS exploration.

-- Requested DOI to include consideration of all previous Virginia comments at this time.

7. North Carolina - By letter of September 21, 1979, Governor Hunt made the following points:

-- The State is concerned that sale #78 is scheduled too soon following sale #56 to allow for meaningful assessment of drilling activities.

-- Requests that long in advance of any future sale that a comprehensive and current data base be established prior to the Call for Nominations to insure the opportunity for States and others to have meaningful participation based on facts not conjecture.

-- Delay deepwater exploration until technology is proven.

8. Florida - By letter dated September 7, 1979, Governor Bob Graham made the following points:

-- The State supports OCS operations providing that consideration is given to its coastal environment.

-- Concern is voiced as to whether proper environmental studies will be funded, processed and performed, the data analyzed, and the resulting information sent to the States in time to meet various leasing deadlines.

-- Florida objects to the proposed sale on Blake Plateau until physical-meteorological studies are made and therefore selects Option 4.

-- Florida has no objection to the schedule in the South Atlantic and Eastern Gulf of Mexico providing the environmental studies are completed before Notice of Sale.

-- Disagrees with statement by Secretary Andrus that planning for proposed sales can be started with a high degree of confidence.

-- The South Atlantic States have concerns about completion of studies before sale #56 is scheduled and may object to the sale.

-- Concerned about the effect of the leasing areas on the nature and content of environmental studies.

-- Object to any leasing south of 26° North until completion of at least three years of environmental studies in Florida Bay.

-- Unless the sales proposed in the 5-year schedule are accurately defined geographically and unless continuity of these areas is maintained throughout the schedule, it is impossible for study plans to provide the necessary information because of lead times required for the studies.

9. Alabama - By letter dated August 2, 1979, Thomas J. Joiner, Oil and Gas Supervisor, State Oil and Gas Board, expressed the following comments on behalf of Governor Fob James:

-- Commends the Secretary for the decision to increase the number of sales.

-- Concurs with the scheduling of at least 11 sales in the Gulf of Mexico.

-- Concurs with the additional contingency sale in the Gulf of Mexico.

-- Concurs with the decision to provide earlier consideration for the Alaskan frontier areas.

10. Louisiana - By letter of September 12, 1979, Governor Edwards made the following points:

-- The program's failure to meet the DOE production goals coupled with the period required to realize usable production from newly leased tracts does not offer much encouragement in efforts to reduce dependency on foreign crude. Suggested we may need to further enhance the 5-year program.

-- An average of 180 drilling permits a day are delayed because Federal regulatory agencies cannot agree. Federal agencies should get their permitting procedures aligned by resolving the existent conflicting jurisdictional mandates.

11. Mississippi - By letter of September 18, 1979, Governor Finch expressed the following views:

-- Supported the proposed OCS oil and gas lease sale schedule described for the Gulf of Mexico.

-- Requested that certain technical descriptions be incorporated into the report.

-- Looks forward to continued participation in the review process.

12. California - By letter dated September 19, 1979, Governor Edmund G. Brown, Jr. made the following comments:

-- Proposed program does not evaluate several critical factors required by the OCSLAA.

-- Schedule does not evaluate regions against each other and rank them in priority as required by the OCSLAA.

-- Schedule proposes leasing of vast offshore areas that prevent a proper balancing of environmental risks with resource potential.

-- Future offshore California leasing should be tied (conditioned) to the use of pipelines for transportation.

-- The OCSLAA require balancing of resource production and environmental protection and such balancing indicates that basins offshore San Diego, San Mateo, Bodega Bay and Mendocino would be deleted because of low resource potential and high environmental risk.

-- Strongly urges substantial modification in the final program to reflect State concerns.

-- DOI has not shown how the factors mandated by Congress (section 18) were analyzed together to determine the proposed schedule.

-- Interior has failed to meet the requirement of section 18(a) of OCSLAA which provides that the program shall indicate as precisely as possible the size, timing and location of proposed leasing activity.

-- The broadly defined "California" area nor lease sale #53 conform to the standard set in section 18(a)(2) of selecting OCS areas for development on the basis of oil and gas bearing physiographic regions, which clearly means sedimentary basins.

-- California maintains that due to the lack of data on the environmental impacts of OCS development in Northern and Central California reflected by the status of the Environmental Studies Program for this area, it is not possible for DOI to do the analysis required by section 18(a)(3) of the OCSLAA and make the required balance.

-- The timing of a 1981 sale in Central and Northern California is premature in light of section 18(a)(3).

-- The location of proposed sale #53 is contrary to the requirements of the Act because the balancing cannot seriously be done when such an extensive area is not divided into five physiographic areas (area covers five sedimentary basins).

-- Option 4 of the proposed schedule, filling 100% of the DOE's production goals, best meets the requirement of section 18(a)(1) of the OCSLAA, but even this option does not reflect consideration by DOI of the value of the resources on the OCS and the potential impact on these resources if OCS development occurs because sale #53 is still included and is scheduled for 1981 before the environmental studies on the area will be completed.

-- Proposed schedule does not contain an evaluation of the tourist or recreation industries of California.

-- Impacts on the marine, coastal and human environments, per section 18(a)(1) of the Act, have also been overlooked in the proposed schedule but are discussed in the DEIS; not clear how DOI will incorporate the DEIS analysis into its decisions on the proposed schedule.

-- Concerned about minimizing potential conflicts between OCS development and other uses especially commercial fishing; sections 101(13) and 102(7) of OCSLA express congressional intent to minimize conflicts, but this policy does not seem to have been carried out by DOI in selecting OCS areas for the schedule.

-- California strongly disagrees with DOI approach regarding timing and location and feels that all 8 factors of section 18(a)(2) must be considered and compared in developing the final program as to the timing and location of lease sales.

-- The proposed program does not contain predictive information, as required by law (section 18(a)(2)(H).

-- Concerns such as air and water quality, capacity of an area for industrial development, or aesthetics in an area that supports a thriving tourist or recreational industry are not included as "environmental considerations," thus leaving out important concerns listed in California's CZM program and the laws, goals and policies of the State.

-- The tables which rank environmental sensitivity contain the same deficiencies in scope of information as mentioned in the preceding concern.

-- DOI's environmental studies are mentioned in the proposed program but are not considered in the leasing decision (Tab 7).

-- Many studies have not been completed in time to be used in the schedule or even in the EIS for specific lease sales.

-- Studies described by DOI as "completed" in the proposed program have not been made available to the State.

-- The program contains contradictory information on the status and description of environmental studies.

-- The proposed schedule does not seem to be based on the factors listed in section 18(a)(2)(B) and (G).

-- The definition of the leasing areas is so broad as to make any meaningful ranking and comparing of areas impossible; the Northern and Central California area covers five offshore basins and ten in Southern California.

-- The program should explicitly include analysis of those specific basin-level OCS areas where low petroleum resource potential and high environmental risks merit exclusion from the schedule.

-- Three California sanctuaries, Santa Barbara Channel Islands, Monterey Bay and Farallon Islands-Point Reyes, are in the consideration process by NOAA for potential marine sanctuary designation.

-- Concerned about section 18(a)(2)(C) since "Interior and DOE seem to indicate as much OCS acreage as possible should be leased off the West Coast and Alaska, not because the production can economically be transported to national markets, but because it can and should be transported to Japan."

-- Interior has not met the OCSLAA requirements of section 18(a)(2)(D) to consider the conflicting uses of navigation, existing or proposed sealanes and potential sites of deepwater ports, and such an analysis of conflicting uses should compare these uses at the same level of economic detail as DOE used to support its oil production goals.

-- Coast Guard-established sealanes offshore Southern California and in the Santa Barbara Channel present a use conflict with OCS development, and Interior has permitted leasing in these lanes.

-- Any use conflict analysis must break down areas into single basin areas at least.

-- There is no indication as to how Interior will incorporate the DEIS analysis, particularly regarding use conflicts, in the formulation of the five-year leasing program.

-- It is not clear how industry's ranking of potential resources and interest in exploration was used to formulate the schedule (particularly the Kodiak area).

-- Expressed concern regarding Interior's consideration of State and country government recommendations on lease sale #53.

-- The Interior Department has not adequately considered the factors listed in the OCSLAA of 1978 in developing the proposed program.

-- Requested that the records of the August 29 and 30 House Select Committee on the Outer Continental Shelf hearings in San Francisco on the 5-year schedule and lease sale #53 be incorporated into the State's comments on the 5-year schedule when the final volume of hearings is released.

-- Interior has not considered the California Coastal Management Program nor does the proposed 5-year leasing program provide a "proper balance" among the considerations called for in section 18(a)(3).

-- The background materials accompanying the Secretary's June 25, 1979, letter does not contain an analysis supporting the Secretary's conclusion that he had "not ascertained any impediments to consideration of OCS areas for leasing because of any State laws, goals or policies which have been identified, or because of provisions of any coastal zone management programs."

-- The Department in essence ignored the State's May 31, 1979, comments on the draft proposed program to delete lease sale #53 from the program; the State also recommended that tracts which were deleted from sale #48, based upon the State's CZM program and for other State policies, not be included in future sales.

-- California disagrees with Interior's interpretation that because Congress specifically excluded an area near Point Reyes Wilderness from leasing, Congress intended that no other OCS area anywhere be excluded from petroleum leasing.

-- OCS basins where petroleum resources are low and the potential for environmental damage and adverse impacts on the coastal zone are high should be deleted from the schedule.

-- California has previously informed Interior that specific OCS areas should never be leased due to their unique environmental value (Santa Monica Bay and the OCS around Santa Barbara Channel Islands).

-- The balancing analysis required under section 18(a)(3) of OCSLAA cannot be conducted without defining discrete meaningful OCS areas.

-- Suggested that the Santa Maria Basin and the Eel River Basin might be candidates for further consideration in the 5-year program.

-- Air quality requirements are explicitly incorporated into California's Coastal Zone Management (CZM) program via two provisions of law (section 307(f) of the CZM Act and section 30253(3) of the California Coastal Act).

-- Federal approval of California's CZM program affords the State the right to review OCS oil and gas activities for consistency with the California Coastal Management Program (CCMP).

-- State agrees with the DEIS statements concerning California air quality but is concerned that the draft Federal air quality control program will not provide sufficient protection to the State's air quality; does not meet congressional intent of OCSLAA; and, if finalized, would place extremely serious financial and health burden on California.

-- Requested that attention be directed to the State's comments on the proposed Federal air quality control regulations submitted to the Chief, Conservation Division, USGS, and that the contents of that submission be incorporated by reference.

-- It is the State's policy that pipelines are the preferred transportation method for OCS crude.

-- The proposed schedule fails to adequately address environmental issues as mandated by the OCSLAA of 1978 and by the National Environmental Policy Act (NEPA).

-- The DEIS on the program was published too late to be fully discussed as part of the State's comments on the proposed schedule and thus the process of addressing environmental issues has been fragmented, rather than integrated, as NEPA requires.

-- The administrative record on the proposed 5-year schedule should be held open to incorporate California's comments on the DEIS.

-- Because of the failure to properly integrate the NEPA process into the decisionmaking process, it is unlikely that the final leasing schedule will adequately address environmental concerns, and thus, will violate both the OCSLAA and NEPA.

-- There is a technical limit to the amount of heavy crude which California can refine.

-- Regardless of future OCS leasing activity, there will probably be a crude oil glut on the West Coast by 1985 on the order of 800,000 BPD.

-- It would be helpful to have comparisons of the environmental risks which are necessary to be mitigated in relation to the estimated production which might be achieved for each of the OCS areas under consideration.

-- Recommends that future Federal discussions of the 5-year program provide the Federal assessment of environmental risk in relation to anticipated production for each contemplated sale area and that conclusions be presented in this context.

-- Suggested that a matrix expressing hazard and other development constraints be developed for comparing individual lease sale areas along with recoverable resource potential.

-- Recommended a 6-step scale of significance including fishing grounds and areas of special biological importance for the significance of marine resources.

-- Suggested development of a matrix to analyze general onshore impacts of OCS activities (air quality, secondary industrial development) similar to the environmental risk characterization.

13. Oregon - By letter of October 18, 1979, Governor Victor Atiyeh made the following points:

-- Is pleased by increased number of sales in revised schedule.

-- Requests opportunity to review lease sale #53 notice of sale and subsequent plans for consistency with Oregon's management program.

14. Washington - By letter dated July 27, 1979, Governor Dixy Lee Ray expressed the following comments:

-- Washington has no comments at this time, is grateful for being kept informed on the lease sale program, and requested DOI to continue to include the State in reviews of the program.

15. Alaska - By letters dated August 3, 1979, and September 28, 1979, Governor Jay Hammond made the following points:

-- Requests deletions of the sale scheduled to take place in Bristol Bay because of the importance of the area for fish and wildlife.

-- Opposes early scheduling of lease sales in frontier areas because such placement severely restricts State and Federal timetables for conducting needed studies and to prepare for onshore impacts.

-- Opposes placing new sales early in the schedule because that would require that the Federal Government initiate pre-leasing steps prior to the completion of the public and State participation process developed for review of the schedule.

-- The alternate Federal leasing schedule proposed by Alaska is conspicuous by its absence and is resubmitted for consideration.

-- The disparity between the alternatives identified in June and the DEIS tends to hamper public understanding and questions their usefulness as decisionmaking tools.

-- The State intends to coordinate its offshore sales with the Department's and asks for scheduling which permits such coordination.

-- Administer the program without frequent alteration in order for the State to structure its leasing program in a timely and coordinated manner.

-- Doubts whether the petroleum industry is prepared to implement the program considering constraints on capital and equipment.

-- Wishes to know how production will be transported to markets in the lower 48 States.

-- If oil is found in quantities anticipated, it appears unlikely that refinery capacity in California will be expanded enough to accommodate all resulting production.

-- Reconsider the Federal policy prohibiting the foreign sale of Alaska crude oil.

-- It is contemplated that new LNG facilities will be constructed to process and transport gas; however, attempts to establish LNG receiving facilities have been largely unsuccessful due to the inability to obtain requisite State and Federal permits and the DOE policy of opposing new LNG applications.

-- Rapid hydrocarbon depletion is not in the best interest of the U.S. Alaska OCS hydrocarbons will be more essential to the national economy and national security in the future.

-- Socio-economic impacts to the State are likely to be significant.

-- The Federal Government's attitude toward development of Alaska's energy and mineral resources as manifested by the simultaneously proposed immoderate environmental constraints and massive land withdrawals on upland acreage and rapid development of offshore areas is inconsistent. This portends future problems regarding the development of offshore facilities and transportation and utility systems.

-- The compressed timeframe of September 1982 to February 1983 for three major sales does not afford adequate time for sale preparation by the Federal Government, the State or the oil industry.

-- The ability of State government to properly respond to an accelerated leasing program is dependent upon adequate Federal assistance. CEIP funds were authorized at too low a level, have not been appropriated, and are subject to allocation after the State is well into the pre-leasing process.

-- Alaska's position on leasing in Bristol Basin and the North Aleutian Shelf has been to request indefinite postponement pending acquisition of more comprehensive oceanographic and biological resources information and development of district coastal management programs; a position shared by NMFS and FWS.

-- New findings regardings basic oceanographic properties in the Bering Sea need further scrutiny before leasing.

-- The Federal Government should revise its pre-leasing process by adopting an interim designation that would allow certain investigations to be authorized and funded without highly sensitive frontier areas being prematurely scheduled as "lease areas."

-- The State would like to work with DOI on the development of mitigating measures.

-- The Chukchi Sea presents a combination of several environmental hazards to development and a weak environmental information base and is therefore proposed for premature scheduling.

-- Suggests that Hope Basin and Chukchi Sea be united for planning and research purposes.

-- Evidence from Beaufort sale region indicates that five years of environmental assessment is barely enough to indicate the best approaches for industry and government in frontier lease sales.

-- Alternative DEIS-5 which substitutes a Beaufort sale for a Chukchi sale is confusing because of State reservations about planning sales seaward of the outer edge of landfast ice at this time.

By letter dated December 3, 1979, Governor Jay S. Hammond made the following additional points:

-- Enclosed comments and resolutions from Mr. Norman Cohen, Rural Alaska Community Action Program, Inc. (RurAL CAP).

-- RurAL CAP's Resolution 79-1, calling for a 5-year moratorium on leasing in and off Alaska, underscores the need for the Department to adopt a less aggressive schedule than the proposed program.

-- Stated that he believes the schedule which the State has consistently advocated would satisfy some of RurAL CAP's concerns while recognizing the national pressures for development in offshore Alaska.

-- Resubmitted the State's proposal.

-- The State supports RurAL CAP's Resolution 79-4 which requests Federal agencies to coordinate their OCS research with the information requirements of coastal service area boards in developing coastal management plans.

-- It is essential that BLM's socioeconomic and environmental studies program be attuned to the needs of local planning interests, and Alaska is interested in improving this coordination.

B. Local Government Comments

1. County of San Diego, California - By letter dated August 22, 1979, Tom Hamilton, Chairman, Board of Supervisors, expressed the following comments:

-- Pleased with the decision to prepare an EIS on the leasing program and felt that the final EIS should be published prior to submission of the program to the President or Congress.

-- Concerned about the limitations in the ability of State and local governments to participate in the OCS leasing process because of the length and variety of coastline, the need to monitor OCS development and limitations on available staff.

-- Grants from the Coastal Energy Impact Program cannot fully mitigate the fact that responding to the above issue would detract from the county's ability to deal with other issues.

-- Two lease sales, #73 and #80 should be combined in the interest of efficiency.

-- Pleased with decision not to offer any tracts immediately off San Diego coast in sale #48.

-- Recommended that the following areas in southern California be deleted from the Call for Nominations for the lease sales scheduled in the 5-year program: offshore of the Northern Channel Islands, Offshore Santa Barbara Island itself, offshore San Diego County and within the Vessel Precautionary Area offshore the Ports of Los Angeles and Long Beach.

2. Planning Department, San Luis Obispo, California - By letter dated September 17, 1979, Patricia Beck, Supervisor, Coastal Planning, made the following comments:

-- Comments presented were approved by the County Board of Supervisors and sent to the Governor pursuant to section 19 of the OCSLAA.

-- County supports the California Coastal Commission staff analysis and recommendations.

-- Proposed schedule does not adequately consider the following factors required by the OCSLAA:

° equitable sharing of developmental benefits and environmental risks among regions.

° other uses of the OCS

° laws, goals and policies of the affected States.

° the relative environmental sensitivity and marine productivity of various areas.

° an assessment of future possible impacts.

-- Areas of proposed lease sales are so large that congressionally mandated factors cannot be adequately considered.

-- Reduce the size of the leasing areas; proposed sale #53 consists of 1.3 million acres, five geologic basins, and over 700 miles of coastline.

-- The proposed timing of sale #53 is premature since many of the baseline environmental studies are presently being considered for contract while the DEIS is being written.

-- It is doubtful if the fishery analysis, the marine mammal and seabird survey, and the oceanographic and minerological data analysis for sale #53 will be completed in time for inclusion in DEIS.

-- Felt that during the Call for Nominations for sale #53, the negative nominations of environmentally sensitive areas did not affect BLM's recommendation of tracts to be included in the environmental review process.

-- Recommended that the nomination process be revised to become more sensitive to environmental concerns and that the process be restructured so that industry would first nominate tracts on oil potential and then solicit negative nominations.

3. County of San Mateo, Redwood City, California - By letter dated October 10, 1979, William Rozar, Planner, Department of Environmental Services, offered the following comments:

-- Submitted a resolution of the Board of Supervisors of San Mateo County which supports the California Coastal Commission comments regarding the proposed 5-year leasing schedule for OCS lease sale #53.

-- The proposed schedule for OCS lease sale #53 does not adequately consider the environmental criteria required by the OCSLAA.

4. Western Alaska Villages - By petition dated October 8, 1979, the following proposal was made:

-- Postpone lease sales in Norton Basin for five years to allow formulation of coastal zone management plans, local participation in the Call for Nominations, and planning for OCS development.

5. Rural Alaska Community Action Program, Inc. - By letter dated November 26, 1979, Mr. Norman A. Cohen submitted the following comments to Alaska's Governor Hammond, who subsequently sent them to the Department:

-- The Alaska Federation of Natives, Alaska Native Foundation, Alaska Legal Services Corporation and the Rural Alaska Community Action Program, Inc. co-sponsored a 2-day "Rural Alaska Coastal Management Conference," and the participants unanimously passed six resolutions calling for more control by coastal resource service areas (copies enclosed).

-- Requested the Governor to write Secretary Andrus and request a 5-year moratorium on all OCS lease sales off Alaska (Resolution 79-1) or until coastal zone management district plans are in effect.

-- Resolution 79-4 requests Federal agencies to develop methods to coordinate their OCS research with information needs of the coastal resource service area boards.

-- Submitted forms illustrating the status of district coastal management plans for five western Alaskan regions (Kotzebue Sound; Norton Sound; Yukon-Kuskokwim; Bristol Bay; and Aleutian-Pribilof).

C. Industry Comments

1. American Petroleum Industry - By letter of July 23, 1979, C. J. DiBona made the following points:

-- The national interest would be better served by earlier scheduling of frontier areas, particularly those offshore Western Alaska.

-- Industry's procedures for bringing new OCS resources to market can be completed expeditiously only if necessary planning to meet financial, equipment, and manpower requirements can be carried out within a relatively constant timeframe.

2. Atlantic Richfield Company - By letter of September 20, 1979, E. F. Livaudais, Jr., made the following points:

-- The company is generally supportive of the lease schedule as proposed and urges adoption of the schedule as proposed.

-- Industry is capable of exploring and developing the frontier areas in a safe, efficient and professional manner.

-- Alaskan frontier lease terms should be longer than five years since equipment required for this type of exploration is less readily available than more conventional equipment.

3. Exxon - By letter of July 6, 1979, John J. Loftis, Jr., made the following points:

-- Further acceleration of Alaska area sales would be in the national interest.

-- Recommended several changes to the schedule dates. March sale dates are preferred since the successful bidder can use the summer season for tract clearance surveys.

-- In 1980 and 1981, sales are grouped in sequential months; sales spread throughout the year would allow both industry and government to more efficiently utilize manpower.

-- Shorten the times between call for nominations and the lease sale.

4. Houston Oil and Minerals Corp. - By letter of August 17, 1979, John Gooch made the following points:

-- Pleased with the number of sales scheduled.

-- The proposed increase in the budget and staff should accommodate the additional workload resulting from the upward revision of the number of sales.

-- Alleviate permitting delays which are being encountered with increasing frequency.

-- Money is invested in geophysical and stratigraphic testing on tracts which are withdrawn at the last moment.

-- Concerned about high bid rejection.

5. Mobil Oil Corp. - By letter of September 21, 1979, A. H. Massad, made the following points:

-- Additional lease acceleration must be made in the prime Alaska frontier areas to have any hope of reducing dependency on imported crude oil in the near future.

-- Alaska frontier sales should be initiated earlier in the program.

-- Mobil believes exploration and development can be carried out in Bristol Basin without significant environmental consequences or multiple use conflicts.

-- All of Bristol Basin should be included in the 5-year OCS program.

-- An alternate schedule is recommended for Alaskan OCS areas which will permit exploration to be initiated earlier than the June proposal.

-- Alternate scheduling is proposed for other lease areas as well.

-- Lease terms should be ten years.

6. Shell Oil Company - By letter of September 20, 1979, Jack Threet made the following points:

-- Urges the inclusion of earlier and repeated sales in the high potential geologic basins off Alaska.

-- An accelerated sale program would encounter no signficant constraints due to manpower and equipment requirements if carried out as announced.

-- Proposed an alternate schedule for consideration.

7. SOHIO - By letter of September 14, 1979, C. C. S. Davies made the following points:

-- Extend the northern boundary of the North Aleutian Shelf sale area and advance the sale date.

-- The company is pleased with the advancement of some of the Alaska frontier area sale dates.

-- Chukchi sale should be advanced.

-- Scheduling must be reliable for planning purposes.

-- Ameliorate the excessively severe lease issuance conditions.

-- Retain the traditional size of California initial lease sale areas.

8. Sunmark Exploration Company - By letter of September 19, 1979, Marion D. Noble made the following points:

-- The economic well being of the country and national security may rest upon ability to utilize OCS lands.

-- Areas which have a potential for oil that are in deep water or ice infested areas must be offered early in such a manner that industry will be encouraged to develop the technology to operate in those areas.

-- Speed up sales in basins with proven reserves, e.g., Santa Barbara.

-- Have multiple sales in each of those frontier areas in which industry has indicated their highest interest.

-- Encourage deep water exploration by increasing primary term of the lease and changing the bidding system by decreasing front-end costs.

D. Environmental Organization Comments

1. Environmental Policy Center - By letter dated June 14, 1979, Hope Robertson, Washington Representative, expressed the following concerns:

-- Reiterated their strong support for the March schedule which targeted St. George, North Aleutian Shelf and Chukchi for study with a later determination for possible sale areas.

-- Proposed sales of concern include: the addition of St. George - 1982; North Aleutian Shelf - 1983; deletion of Cook Inlet sale and substitution of Navarin Basin - 1984; and the Chukchi sale - 1985.

-- Urged the Secretary not to speed up the sale process in the above-mentioned areas.

-- Want thorough study of Alaskan ecosystem and the development of new technology to handle the adverse conditions of the Alaskan OCS.

-- Need to have the ability to avoid any adverse impacts on the environment, including potential blow-outs, before we drill.

-- Urged consideration of returning to original five-year leasing program.

-- Questioned if the concept of contingency sales could be applied to these more sensitive areas since this would enable environmental studies to proceed without being locked into holding sales in these controversial areas.

2. Natural Resources Defense Council, Inc. - By letter dated September 21, 1979, Frances Beinecke, Atlantic Coast Project, made the following comments:

-- Expressed great concern regarding the early scheduling of several Alaskan sales: St. George Basin - 1982; Navarin Basin - 1984; Chukchi Sea - 1985; and North Aleutian Shelf - 1983, for which only limited environmental or geological information exists and for which no available development technology exists at the present time.

-- Concerned about the deletion of the use of contingency sales for frontier areas, urged the use of contingency sales and recommended that Chukchi and St. George Basin be treated as contingency sales.

-- Proposed program does not meet the requirements of Section 18(a)(2) or (a)(3) of the OCSLAA since it does not properly balance "the potential for environmental damage, the potential for the discovery for oil and gas, and the potential for adverse impact on the coastal zone." 18(a)(3).

-- Proposed program does not integrate the information on environmental sensitivity/marine productivity, technological availability, geological, geophysical and predictive information into the lease schedule.

-- The Environmental Studies Program is not used as a planning tool in proposing frontier area sale dates, particularly in St. George planning.

-- Proposed program indicates a substantial reduction in the funding of the Environmental Studies Program between now and 1985, ignoring the many decisions made after the lease sale and the need for additional information through the exploration and development process.

-- Expressed support for the March schedule.

-- Strongly recommends the deletion of the North Aleutian Shelf sale from the 5-Year Leasing program.

-- Unavailability of appropriate technologies at this time requires that the St. George, North Aleutian Shelf, Navarin and Chukchi sales be pushed back, if not deleted, in the schedule.

-- Recommended that if St. George Basin is included in the program, that it be a later contingency sale and that the July 29 Federal Register Call for Nominations be withdrawn.

-- Expressed concern regarding geologic hazards in deep offshore waters including the deep areas of sale #59.

-- Concerned about the unavailability of environmental information, reconnaisance information, particularly for the four above-mentioned Alaskan frontier sale areas.

-- The environmental matrix, Tab 6 of the background information, has major shortcomings since it is too broad, allows no comparison of environmental sensitivity of one region to another, has no capability of weighing competing resource values within a region, and does not compare, analyze or weigh the final results.

-- The Environmental Studies Program is not given adequate attention in the proposed leasing schedule.

-- The Area Descriptions sections on the Availability of Environmental and Geotechnical Data is weak due to the paucity of information on areas where studies have been conducted.

-- The scheduling of St. George Basin should be consistent with BLM's analysis of the availability of environmental information.

-- Recommended that the program indicate the pre-lease, post-lease and monitoring needs of the Environmental Studies Program, and the funding requirements needed to accomplish this.

-- Strongly recommended that the full cost of pre- and post-lease sale decisions be presented to the Secretary and Congress in the context of the program.

3. Clean Air Coalition - By letter dated September 19, 1979, Beryl Reichenberg, Chairman, Clean Air Coalition of San Luis Obispo County, California, expressed the following concerns:

— Because the lease sale areas are so large, the environmental analysis required under section 18(a)(2) of the OCSLAA is superficial and often meaningless.

— The environmental analysis provided in the schedule fails to adequately consider air quality impacts and other factors including predictive information.

— Impacts such as refining capacity and transportation (tankering) will continue to have environmental impacts on California, particularly in terms of air quality, and such impacts should be fully considered.

— A more prudent basis for developing a lease schedule would involve substantiating resource estimates and properties of oil by exploratory drilling prior to schedule development and leasing since impacts could then be fully addressed concerning resource values versus social, economic and environmental costs of development.

— The assumption that the OCSLAA have provided the legislative framework to ensure safe development of oil and gas has yet to be substantiated.

— GS's proposed OCS air quality rules will not adequately protect onshore air quality, particularly for San Luis Obispo County.

— Proposed schedule gives excessive weight to estimated but unsubstantiated resource potential and oil industry preferences with little weight to environmental considerations.

— Requested that: lease sale areas be reduced in size; lease sales be delayed until long-term refining and distribution systems are assured; tankering be considered only in extreme cases where production is so far from shore that a pipeline is uneconomical; resource potential and properties of oil through exploratory drilling precede leasing; and that no leasing off California occur until there is a framework for new source review and emission control consistent with onshore regulations.

E. Public Comments

1. League of Women Voters of San Luis Obispo, California - By letter dated September 19, 1979, Louise Radcliff, President, expressed the following comments:

-- Feels strongly that the proposed program does not fulfill the requirements of the OCS Lands Act Amendments.

-- BLM's environmental analysis is mainly confined to marine impacts and onshore impacts are of equal importance particularly in relatively undeveloped, non-industrialized areas such as San Luis Obispo.

-- Concerned about OCS operations impacts on air quality particularly because of the county's low inversion layer.

-- Proposed program gives little attention to air quality.

-- Proposed program does not fully consider the impacts of OCS operations and ancillary facilities as they affect agricultural and recreational economics (socio-economic onshore impacts).

-- Concerned that adequate mitigation measures may not be devised and enforced, particularly in regard to USGS air quality regulations which the local Air Pollution Control District has said will not adequately protect the county from OCS emissions.

2. Anthony W. Kelley - By letter dated October 24, 1979, Mr. Kelley expressed full support of 5-year leasing of the Outer Continental Shelf.

3. Josephine T. Kelley - By letter dated October 24, 1979, Ms. Kelley stated that she does support the 5-year leasing schedule of the Outer Continental Shelf.

SECTION 18 - COMMENTS AND ANALYSIS

Numerous comments were received on issues relating to the requirements of section 18 of the OCS Lands Act, as amended, specifically subsections 18(a) and (b). For convenience, we have addressed each subsection of section 18 using a format of subsection, commenter, comment and response.

Section 18(a):"...The leasing program shall consist of a schedule of proposed lease sales indicating, as precisely as possible, the size, timing and location of leasing activity which he determines will best meet national energy needs for the 5-year period following its approval or reapproval."

(California)

Comment: California stated that Interior failed to meet this requirement since the proposed program does not indicate as precisely as possible the size, timing and location of proposed leasing activity. California interprets subsection 18(a)(2) which refers to "oil- and gas-bearing physiographic regions" as meaning sedimentary basins and thus believes that the location of proposed sale #53 and other proposed California areas do not conform to the standard set in section 18(a)(2).

Response: The program identifies sales off California as either Central and Northern California, Southern California, including Santa Barbara Channel, or as "California" sales. With respect to proposed sale #53 - Central and Northern California, tentative tract selection has already occurred and has resulted in the preliminary selection of 214 tracts. The proposed sale area includes five separate sedimentary basins. The OCS Lands Act, as amended, refers to "physiographic regions" which we have interpreted in a broad sense for several reasons. We believe that the treatment of these basins as separate sale areas would place unnecessary administrative burdens on the Department and others and would result in unnecessary expenditure of public and private funds in sale preparation. The time allotted to planning for a sale, including development of five individual environmental impact statements, could also result in delays in exploration and development. The size of proposed sale #53 is also consistent with those of previous sales held by the Department (e.g., Gulf of Mexico). As planning for the sale proceeds, we will consider the effects of OCS development in each of the five areas and the appropriateness of leasing in each area, particularly during the environmental analysis process. Although the resources of an individual basin included in this sale may be relatively low, we believe that in the aggregate a Central and Northern California sale can make a significant contribution to the nation's energy needs. Further, until exploratory drilling takes place, the extent of reserves in a particular basin is not known. Exploratory drilling may reveal that a basin is dry, or it may reveal that it contains greater than expected amounts of hydrocarbons.

Proposed sale #68 may include areas off both Southern California and in the Santa Barbara Channel. As is the case with sale #53, all basins in the sale proposal will be analyzed on an individual basis. The analyses performed on proposed sales #73 and #80, which are identified as including areas off California, will also include individual basin assessments.

Section 18(a)(2): "Timing and location of exploration, development, and production of oil and gas among the oil- and gas-bearing physiographic regions of the Outer Continental Shelf shall be based on a consideration of--"...the eight criteria listed in (A) through (H).

(County of San Mateo, Redwood City, California; League of Women Voters, San Luis Obispo, California; and Clean Air Coalition, San Luis Obispo, California; Massachusetts; New Jersey; California; Natural Resources Defense Council (NRDC))

Comments: A concern expressed by several commenters involved the interrelationship of the eight criteria specifically mentioned in this subpart and how they were considered and integrated into the proposed program. One commenter expressed concern that DOI had placed too much emphasis on industry's interest in development, section 18(a)(2)(E). Other commenters expressed general concerns that the proposed program did not fulfill the environmental requirements of the OCS Lands Act, as amended, and that the environmental analysis under subpart 18(a)(2) was inadequate, superficial and meaningless.

Response: Subpart (a)(2) sets out factors relevant in establishing the timing and location of lease sales. Disagreement over the role these factors should play in determining the leasing program may be due to differing perceptions of the thrust of section 18, and the Amendments of which it is a part. A primary objective of the program is to increase the contribution the U.S. OCS can make in fulfilling national energy needs, consistent with a high standard of environmental protection. The legislative tools provided by the Act ensure that oil and gas development can be conducted safely in all parts of the U.S. The factors in subpart (a)(2) are not to be viewed as constraints which would preclude leasing in an area, but rather as issues which need to be addressed in the planning process or as factors which would affect the precise timing of a sale. For example, the fact that one area is regarded as being particularly environmentally sensitive would not necessarily remove it as a possible candidate, but rather would trigger the planning for environmental studies to provide sufficient time for evaluation of study results.

Subpart (2)(B) which calls for an equitable sharing of developmental benefits and environmental risks supports the contention that no one region is to bear the burden of supplying our nation with energy supplies, and that all regions should contribute to energy supplies unless the environmental risks are too high. If economically recoverable deposits are located in an OCS area, then the area becomes a candidate for leasing. As we enter an era of resource scarcity, the policy options and associated tradeoffs become more difficult to evaluate. The fact that one of the OCS areas has a biologically rich ecosystem which might be adversely affected by an oil spill or that the scenic beauty of an area would be modified by offshore development are not sufficient reasons, in and of themselves, to remove an area from the schedule for leasing consideration. The OCS Lands Act, as amended, provides for the development of offshore oil and gas resources and does so, with full regard for protection of the environment, including the coastal zone, and legitimate concerns of the coastal States. It is in this context the eight factors have been considered.

Section 18(a)(2)(A):"...existing information concerning the geographical, geological, and ecological characteristics of such regions."

We have not received any comments expressly identifying weaknesses in our treatment of this subsection. However, both Oregon and Mississippi provided additional technical information appropriate to the "Area Descriptions" sections of both the background material (Part B, Tab 7) and the draft environmental statement (Section III). This information will be incorporated into the leasing program when the program is reviewed in accordance with section 18(e) of the OCS Lands Act, as amended. None of the information provided indicated that the timing or location of sales ought to be changed.

Section 18(a)(2)(B):"...an equitable sharing of developmental benefits and environmental risks among the various regions."

(Massachusetts; New Jersey; Virginia; California; Planning Department, San Luis Obispo, California)

Comments: Massachusetts expressed the following concerns: the proposed schedule inadequately assessed these criteria; the developmental benefits were not equally distributed; the schedule did not provide for equitable sharing; and there is a need to assess the benefits and risks associated with each OCS region. California expressed concern that the proposed schedule did not seem to be based on the factors in this subpart while the Planning Department, San Luis Obispo, California, stated that the program did not adequately consider these criteria. New Jersey felt that the environmental matrix did not facilitate comparisons of the environmental sensitivity among regions, so that an analysis could be made of environmental risks. Virginia expressed concerns about potential oil spill risks, particularly to their fishing and shellfishing industries.
Response: Two basic processes were used to fulfill the environmental requirements regarding program development--the development of the background material, particularly an environmental sensitivity matrix (Part B, Tab 6 of Secretarial memorandum dated May 29, 1979) and the environmental analysis conducted pursuant to the National Environmental Policy Act (NEPA). Because of the broad nature of a 5-year planning document, these analyses are general in some aspects. However, we believe they serve to meet the requirements of the OCS Lands Act, as amended, and are valuable in alerting decisionmakers to the relative environmental sensitivites of the various proposed sale areas as well as the potential risks and impacts associated with OCS development. Finally, more specific environmental analyses will be conducted in each region pursuant to NEPA before a decision is made regarding an individual sale.

The information and analysis completed to date has been used in identifying the studies which will be necessary for specific decision points and for estimating the length of time it will take to prepare for a sale decision. The directive to share developmental benefits and environmental risks requires the Department to ensure that all regions of the country with economically recoverable deposits of hydrocarbons participate in the leasing program to the extent that environmental risks are not too high. This mandate addresses the historical inequity which has resulted from over-reliance on the Gulf of Mexico. The proposed program meets this mandate by including promising areas in the lease schedule where it now appears that leasing may be possible. The one area which was not included in the proposed program where there is evidence of hydrocarbon potential was Hope Basin. This omission was due to the length of time the Bureau of Land Management estimated it would take to conduct environmental studies to be used in planning for a sale. Factoring this time estimate in with the necessary pre-sale steps, it was determined that a sale could be scheduled in the spring of 1985, which was outside of the period of time covered by the proposed program. Since the proposed final program will cover the period June 1980 through May 1985, an alternative schedule (Alternative XI in the SID) was developed which includes Hope Basin. Although this specific alternative was not considered per se in the FES, the Hope Basin effects were fully analyzed under Alternative IX in the FES. It is also interesting to note that the report by the House Select Committee on the OCS did not conclude that any OCS area should be omitted from the 5-year program for environmental reasons.

<u>Section 18(a)(2)(C):"...the location of such regions with respect to, and the relative needs of, regional and national energy markets."</u>

(California; Alaska)

<u>Comments:</u> California and Alaska expressed concern regarding adequate consideration of the location of OCS regions to the relative needs of regional and national energy markets. In particular, California stated that Interior and DOE seem to indicate that as much acreage as possible should be leased off the West Coast and Alaska, not because the production can economically be transported to national markets, but because it can and should be transported to Japan.

<u>Response:</u> The final environmental statement has been expanded to include a discussion of the availability of transportation networks to bring supplies to market, particularly as it relates to Pacific and Alaska sales (pages 45-52). Also included is an analysis of West Coast refinery capabilities and an alternative schedule to address this concern. The analysis indicates that DOE believes that existing or planned domestic refinery capacity will not pose a constraint, even if offshore production exceeds what has been estimated for the proposed program.

DOE has thoroughly examined possible constraints on OCS production in consideration of regional energy demand and supply and has concluded that there are no constraints to OCS production resulting from these considerations. DOE also concluded that a lack of transportation facilities should not affect leasing plans off the West Coast or Alaska. Such findings should not be misinterpreted to mean that DOI or DOE supports exporting this production to Japan as this is a policy decision of international importance outside the purview of this proposal. Rather, the DOE finding allows the Secretary of the Interior to select areas for leasing based on a total national energy perspective unlimited by regional requirements.

Further, if the current policy on export of oil to Japan continues and a significant find is made on the West Coast, the find will be the economic incentive to develop ways to bring the supplies to market. There is no justification to invest capital in transportation facilities unless there is some assurance that the resources will be there to transport.

Section 18(a)(2)(D):"...the location of such regions with respect to other uses of the sea and seabed, including fisheries, navigation, existing or proposed sealanes, potential sites of deepwater ports, and other anticipated uses of the resources and space of the Outer Continental Shelf."

(California; Planning Department, San Luis Obispo, California; New York; Rhode Island)

Comments: Comments received from California stated that the proposed program did not consider other uses of the sea and seabed in regard to navigation, sealanes and deepwater ports, and specifically that the Coast Guard established sealanes offshore southern California and in the Santa Barbara Channel which present a use conflict with OCS development. California also stated that DOI has permitted leasing in these lanes, thus setting a priority of ignoring its statutory responsibility in this area of use conflict. The Planning Department of San Luis Obispo believed these criteria were not adequately considered.

Several commenters (New York, Rhode Island, California) expressed concern regarding potential conflicts of OCS activities with the commercial and recreational fishing industry.

Response: The Department of the Interior's action to permit leasing of a particular area where Coast Guard sealanes are established does not necessarily mean use conflicts exist since subsea completions and slant drilling are operational alternatives to eliminate such potential conflict. Further, it is the Coast Guard's responsibility to ensure safe navigation under the Ports and Waterways Safety Act. Following passage of the 1978 Amendments to the Ports and Waterways Safety Act, the Coast Guard initiated studies in all OCS areas which may result in the designation of safe access routes if the studies indicate they are necessary. If safe access routes are designated under the statute in leased OCS areas, all lease rights within the area would be subordinate to the paramount rights of navigational safety. The Department will continue to work closely with the Coast Guard on these matters.

We do not foresee irresolvable conflicts between OCS activities and fishery interests. Geological Survey's OCS Operating Orders, BLM's regulations for leasing and pipeline rights-of-way (43 CFR 3300), Department of Commerce regulations for Title IV of the Fishermen's Contingency Fund, sale-specific lease stipulations, among other mechanisms, provide protective measures for fishery resources. In addition, we believe the Intergovernmental Planning Program, on which both the State and fishery interests will be represented, will offer an opportunity for reconciliation of potential conflicts associated with exploratory and development activities. Finally, experience in the Gulf of Mexico shows that the fishing and offshore oil and gas industries can live side-by-side--it is not necessary for one to give way to the other.

Section 18(a)(2)(E):"...the interest of potential oil and gas producers in the development of oil and gas resources as indicated by exploration or nomination."

(California; Clean Air Coalition, California; NRDC)

Comments: California stated that it was not clear how the above criteria were used to formulate the proposed schedule particularly for the proposed Kodiak sale. Two commenters, Clean Air Coalition and NRDC, expressed concern that too much emphasis was given to estimated resource potential and industry ranking while little weight was given to environmental considerations.

Response: The criteria were used to identify areas where both the potential for discovery and industry's interest in exploration were high. Ranking of this information revealed extremely low interest in exploration and resource potential in several areas, namely Florida Straits, southern Aleutian, and Washington-Oregon. Upon consideration of this factor along with other requirements of section 18, these areas were not included in the schedule. The Kodiak Shelf area also received low rankings, 19th in resource potential and 21st in industry interest. However, because Kodiak was on the former OCS schedule and administrative planning is now in fairly advanced stages, we believe it is a cost-efficient use of public and private funds to proceed with the sale. Moreover, its resource potential could change once some exploratory drilling takes place.

Industry has expressed high interest in OCS activities in the Central and Western Gulf, Bristol Basin, Beaufort Sea, Santa Barbara, Mid-Atlantic and St. George Basin. Their comments on the proposed program generally reveal they are satisfied with the proposal for the "lower 48" but would prefer a faster pace of leasing in the Alaskan frontier areas. The requirements of the OCS Lands Act, as amended, and NEPA were carefully considered in determining what the earliest possible date was to schedule sales in Alaskan frontier areas of high resource potential. Providing for a faster pace of leasing probably would result in having less environmental and geotechnical information at each point in the sale decision process.

Section 18(a)(2)(F):"...laws, goals and policies of affected States which have been specifically identified by the Governors of such States as relevant matters for the Secretary's consideration."

(California; Planning Department, San Luis Obispo, California; Oregon)

Comments: California stated the background information did not contain an analysis supporting the Secretary's conclusion that we had not ascertained any impediments to consideration of OCS areas for leasing because of such issues or provisions in any State coastal zone management program. The San Luis Obispo County felt adequate consideration was not given to this criterion.
Response: In regard to consideration of laws, goals or policies of affected States, we have not determined any absolute impediment to inclusion of any OCS area on the planning schedule. Also, it would be inconsistent with the Coastal Zone Management Act for any approved coastal plan to include provisions which would preclude an entire area from being considered as a candidate for leasing. While the Governors of some affected States have objected to inclusion of some areas on the leasing schedule, when their views are balanced against national energy policy, there does not appear to be any reason to exclude the areas from the planning schedule.

Section 18(a)(2)(G):"...the relative environmental sensitivity and marine productivity of different areas of the Outer Continental Shelf."

(Massachusetts; California; New Jersey; Virginia; Planning Department, San Luis Obispo, California; League of Women Voters, San Luis Obispo, California; NRDC; Clean Air Coalition, San Luis Obispo, California)

Comments: Massachusetts believed the environmental sensitivity analysis contained little information on marine productivity, and it submitted some productivity values for one OCS area. Massachusetts expressed concern that consideration of these factors include heavy emphasis on the presence of critical habitats including spawning and nursery grounds, whelping areas and rookeries. Massachusetts also felt that the Act requires a ranking of the OCS regions based on this factor.

New Jersey expressed concerns that the matrix was too general, limited and inadequate. They also believed the matrix did not appear to use BLM's environmental studies program information.

California stated that the proposed schedule did not seem to be based on the requirements of this subsection. They also proposed another matrix format composed of parameters for OCS lease area comparisons based on geohazards, a six-step scale of significance for marine resources, and other constraints and competitive uses.

Virginia stated that environmental concerns had not been clearly considered prior to the holding of sales. The Planning Department of San Luis Obispo did not believe this factor was adequately considered. The San Luis Obispo League of Women Voters stated that the environmental analysis was too confined to marine impacts. The Clean Air Coalition stated that the analysis failed to consider air quality impacts.

NRDC stated the proposed program did not integrate the geological, geophysical and predictive information into the lease schedule. It also stated that the matrix was too broad; did not provide a comparison between the OCS regions; did not contain capability of weighing competing resource values; and did not analyze final results.
Response: Comments regarding a more quantitative analysis of marine productivity have been seriously considered. Accurate measurements of biological productivity can only be made by assessing basic or primary productivity, the rate at which radiant energy is stored by producer organisms in the form of organic substances which can be used as food materials. Such rates would need to be obtained through biological sampling in each of the proposed OCS planning areas using similar methodologies and specifications, and enough samples would need to be taken in each area to have a statistically valid sample reflecting accurate area-wide productivity. Average productivity rates could then be obtained. However, many limiting factors such as salinity, temperature, tides, depth, circulation patterns, waves and alterations in sedimentary processes effect the energy dynamics of various oceanic areas at any given time. Very conservative and gross primary productivity of open ocean marine ecosystems has been estimated at 1,000 kilocalories per square meter per year. Given the problems of the absence of meaningful measurements, non-comparability of values, and lack of agreement among experts, we have not included quantitative productivity measurements in the matrix. Rather, we have chosen those ecological indicators which we believe reflect the major sensitivities of the various leasing areas. These indicators are useful in determining what types of issues will need to be analyzed in planning for a sale.

Several commenters expressed concerns that the environmental matrix did not facilitate a ranking of the various OCS areas based on this criterion. We believe that a ranking similar to that for hydrocarbon potential or industry's interest in exploration would not be meaningful in terms of comparing the environmental values of the specific biological resources of each individual OCS area. For example, it would not be meaningful to compare the distinct Georges Bank fishery resources with those of the Gulf of Mexico or the Alaskan OCS areas for several reasons. First, comparison and weighing of various fishery species in the Alaskan OCS cannot be equated to the species of Georges Bank since, in general, they are completely different resources, each with their own distinct values (e.g., crabs in Bristol Bay vs. lobsters in the North Atlantic). The ecological conditions of any specific area are responsible for the value or abundance of organisms produced. Second, if the assumption was made to compare commercial fishery statistics for crabs in Bristol Bay with those in the Mid-Atlantic, the results would be fallacious since the economic viability of an area is dependent on both the organisms and the level of exploitation which varies from area to area. Also, the economic values would fluctuate from area to area dependent on supply and demand. Comparisons of catch statistics also are not true measurements of the resources supported by an area since this information merely reflects where the fish were landed rather than where they were caught. Thus, we do not believe it is meaningful to compare statistics which lack a common denominator. For example, indicators of subsistence harvest are not comparable to commercial fishery landings. Similarly, it is not meaningful to compare, by value or rank, the Pacific or Arctic whales with the coral banks in the Gulf of Mexico.

The purpose of the environmental matrix, as set forth in Part B, Tab 6 of the background material dated May 29, 1979, was to illustrate how the biological resources of the various OCS areas are vastly different and unique unto themselves. The sale-specific environmental statements have also attempted to illustrate this by assessing biological productivity in a broad sense, giving consideration to fisheries data, the existence and extent of especially productive biological habitats, and the importance of various areas in the life cycles of different types of species.

In regard to the use of BLM's environmental studies program information in the environmental matrix, some information was used, but due to the vast amount of information acquired through this program, it was not feasible to include all of it in the matrix. We have determined that no existing information obtained to date indicates that OCS planning should be curtailed in any available OCS area.

The environmental matrix and parameters suggested by California were carefully evaluated. While many of the parameters were judged to provide useful characterizations, the matrix was not adopted since on the whole it did not constitute a more useful decisionmaking tool than the existing sensitivity matrix developed prior to the decision on the June proposed program or the ES matrix which was similar in approach. (A more detailed discussion of the problems with the California matrix appears at pp. 363-4 in the FES.) One assumption behind California's matrix was that differences in geohazards among regions would cause different spill risks among regions. While this seems intuitively reasonable, data do not exist to support this hypothesis. In fact, the available data indicate that while geohazards can threaten the structural integrity of offshore emplacements, there is no observed relationship between structural failure and spills.

Some commenters stated that the environmental analysis was too confined to marine impacts and should be expanded to include air quality and other onshore impacts. Since the development of the 5-Year OCS Oil and Gas Leasing Program is integrated with the FES for the proposed schedule, to expand on such impacts would be redundant since information is provided in Section IV of the FES.

Section 18(a)(2)(H):"...relevant environmental and predictive information for different areas of the Outer Continental Shelf."

(California; Planning Department, San Luis Obispo, California; NRDC)

Comments: Several comments were made that the proposed program did not adequately address the relevant environmental and predictive information for different areas of the OCS (section 18(a)(2)(H)).
Response: The purpose of the environmental statement on the proposed schedule is to assess the environmental impacts of the proposal and alternatives to it. The DES attempted to utilize predictive information in assessing potential impacts in sections IV, A.1 and IV B.I. These sections of the DES have been supplemented in the FES to better explain the relationship between hazards and oil spill risk. Moreover, this information was utilized in developing the alternatives for the program which are set out in this document. However, to a large extent, predictive information requires site specificity. Such information will prove very valuable at later stages in the OCS planning process when specific sale areas are identified. Environmental and predictive information are also an integral part of BLM's Environmental Studies Program. No environmental or predictive information has been identified which would indicate that planning for a sale in an area is inappropriate. Moreover, sales are scheduled with sufficient lead time so that deficiencies in DOI's available environmental and predictive information can be addressed.

Section 18(a)(3):"The Secretary shall select the timing and location of leasing, to the maximum extent practicable, so as to obtain a proper balance between the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone."

(Massachusetts; New Jersey; California; NRDC)

Comments: Three commenters (California, New Jersey and Massachusetts) stated it was not clear how these factors were analyzed together and balanced in determining the proposed program. Massachusetts stated that the program would benefit from an explanation of how environmental protection and coastal zone impacts were considered in developing leasing schedule options, while New Jersey suggested that the environmental aspects be more fully developed into a working tool for decisionmakers. California also stated that the proposed OCS areas were too large to properly balance environmental risks with resource potential; such balancing would result in the deletion of 4 areas off its coast due to low resource potential and high risks; there is a lack of data on environmental impacts in northern and central California, and thus it is not possible to satisfy 18(a)(3); and the timing of a 1981 California sale is premature in view of this objection. NRDC stated that the proposed program did not meet the requirements of this subsection.

Response: We believe the proposed program reflects the balancing called for in this subsection of the Act. Review of industry's interest in exploration of the various OCS areas along with its estimates of resource potential indicates, in general, high interest in OCS activities in the Central and Western Gulf, Santa Barbara Channel, Beaufort Sea, Bristol Basin, North and Mid-Atlantic, and St. George Basin. Major comments received from industry on the proposed program reveal that generally it is satisfied with the proposed schedule for the "lower 48" States, but would prefer a faster pace of leasing in the Alaskan frontier areas. However, the Act requires the balancing of the potential for environmental damages along with the other criteria in section 13(a)(2) and information available to us including comments from environmental groups and the States were carefully considered in determining earliest possible sale dates in frontier areas. For example, the Bureau of Land Management's Environmental Studies Program has been carefully integrated with the proposed schedule in order to assure that useful environmental information is acquired for specific sale areas in a timely manner so it can be utilized by decisionmakers. We also believe that the comprehensive set of controls available to States to manage their coastal zone and the continuous coordination with States by the Department of the Interior throughout the pre-sale and post-sale process, will help prevent occurrence of any adverse effects from offshore development. This balancing requirement also has to be considered together with the directive to provide for an equitable sharing of developmental benefits and environmental risks. All regions are being asked to bear their share of the burden.

Section (a)(4) "Leasing activities shall be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government."

No comments were received on the proposed program expressly related to this subsection. However, one comment was received relating to fair market value in response to the draft environmental statement on the proposed program, and a response is provided in the final environmental statement.

Section 18(b) "The leasing program shall include estimates of the appropriations and staff required to - (1) obtain resource information and any other information needed to prepare the leasing program required by this section; (2) analyze and interpret the exploratory data and any other information which may be compiled under the authority of this Act; (3) conduct environmental studies and prepare any environmental impact statement required in accordance with this Act and with section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)); and (4) supervise operations conducted pursuant to each lease in the manner necessary to assure due diligence in the exploration and development of the lease area and compliance with the requirements of applicable law and regulations, and with the terms of the lease."

(Massachusetts, New Jersey, NRDC, California)

Comments: California stated that the Department's OCS environmental studies program, while mentioned in the proposed program, was not considered in the leasing decision. Both Massachusetts and NRDC expressed concerns about the substantial reduction, approximately 50 percent, in the funding of the environmental studies program over the 5-year period. Massachusetts also stated that additional information needs to be provided regarding the regional expenditure of funds so that the funding of environmental studies in one region can be compared to a particular set of leases scheduled. It also stated that in frontier areas, the environmental studies program should be an integral part of the decision on the size and location of tracts and that the Secretary should utilize all available information provided by the studies program in carrying out his responsibilities under section 18(e).

New Jersey expressed concerns that the proposed program only included estimates of appropriations and activities for the pre-sale phase of the environmental studies program and stated that the full cost of essential post-sale and monitoring studies must be included in the 5-year program if the studies program is to be fully effective.

NRDC had similar concerns to New Jersey's and strongly recommended that the full cost of pre- and post-lease sale decisions be presented to the Secretary and Congress in the context of the program. It also stated that the environmental studies program was not used as a planning tool in proposing frontier area sale dates, particularly in St. George Basin. Further, NRDC stated that the substantial reduction in funding of the studies program between 1980 and 1985 fails to recognize the many decisions made after the lease sale and the need for additional information through the exploration and development processes.

Response: The environmental studies program budget estimates have been revised to reflect the full costs of pre-, post- and monitoring studies currently planned for the sales in the 5-year program as well as sales recently held for which monitoring and/or post-sale studies are ongoing or planned. These revised estimates are included in the Secretarial Issue Document and have also been calculated for each of the alternatives. The revised studies program estimates continue to decrease during the 5-year period because the environmental studies program places emphasis on preparing for frontier area sales which decrease over time.

Further, the budget estimates do not reflect the cost of preparing for specific sales to be held after May 1985, although full FY 1985 estimates are included in anticipation of a continuing program. It should be noted that with respect to the monitoring and post-sale phases, much of the financial burden for environmental surveillance is placed on the lessee, either through lease stipulations or through requirements associated with exploration and development plans. In any case, the budget figures after FY 81 reflect initial estimates and have not been evaluated through either internal or Office of Management and Budget processes and are subject to refinement.

The Secretarial Issue Document contains budget estimates for each of the alternatives. A regional expenditure breakout of funding for the environmental studies program, as suggested by Massachusetts, was not done because it was not believed to be particularly useful or meaningful. For example, some OCS areas have been extensively studied, and thus, program funding for these areas would show small costs which certainly would not reflect the wealth of environmental information already gathered.

The environmental studies program was a critical factor in the development of proposed sale dates. The proposed program was closely integrated with the environmental studies program so that environmental studies would help provide useful information in the planning leading to a sale decision. The availability of environmental information had a direct effect upon the time and location of sales, particularly in frontier areas, as evidenced by the discussion of costs for Alternative XII in the SID. The proposed program adopted by Secretary Andrus was designed to ensure that sufficient data would be available to support each of the decision points for all sales. In several cases, alternative schedules were developed to accommodate additional information expected through the environmental studies program (e.g., Alternative IV, V).

Attachment 4

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

6 MAR 1980

Memorandum

To: The Secretary

Through: Executive Secretariat

From: Assistant Secretary--Policy, Budget and Administration

Subject: Comments and 5-Year Leasing Schedule Proposed by Natural Resources Defense Council

This memorandum provides additional information which should be considered together with the decision material dated February 14, 1980, relating to the 5-year OCS leasing program. By letter dated February 8, 1980, the Natural Resources Defense Council provided comments on the final environmental statement for the proposed 5-year OCS oil and gas lease sale schedule. A copy of its letter is attached (attachment 1). I have also attached an analysis of its leasing schedule following the format utilized in the Secretarial Issue Document (SID) dated February 14, 1980 (attachment 2).

Heather L. Ross

Attachments

Attachment 1

Natural Resources Defense Council, Inc.

1725 I STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20006
202 223-8210

New York Office
122 EAST 42ND STREET
NEW YORK, N.Y. 10017
212 949-0049

Western Office
25 KEARNY STREET
SAN FRANCISCO, CALIF. 94108
415 421-6561

February 8, 1980

The Hon. Cecil D. Andrus
Secretary of Interior
18th and C Streets, N.W.
Washington, D.C. 20240

Re: OCS Five Year Leasing Program

Dear Mr. Secretary:

The Natural Resources Defense Council has just completed its initial review of the Final Environmental Impact Statement on the Proposed Five Year Oil and Gas Leasing Program. In this letter, we will give you our preliminary comments on the suggested alternatives in the FEIS in order that they can be factored into your decision on the Program as early in the process as possible. We would also like to propose for your consideration an alternative which combines many features of those alternatives contained in the FEIS, but which we believe is preferable to any of them.

First, turning to the substance of the FEIS, we are dismayed to see that there are virtually no modifications in the way the considerations in Section 18 are discussed. As we are sure you are aware, comments on the DEIS from states and concerned citizens were virtually unanimous in their comment that the requirements of Section 18 had not been met. Section 18 requires that the timing and location of lease sales be based on consideration of, inter alia, the relative environmental sensitivity and marine productivity of different OCS areas and relevant environmental information concerning marine resources in these areas. In addition, the Program must strike a proper balance between potential for environmental damage, potential for discovery of oil and gas, and the potential for adverse impact on the coastal zone. The Program, as proposed in Alternative I, does not adequately consider or balance these environmental considerations as required by the statute. For these reasons as detailed in our earlier comments on the June Program and the DEIS, we must strongly oppose Alternative I.

Recognizing the Administration's intent to have an aggressive Five Year Leasing Program, we would like to propose an alternative which modifies and combines certain alternatives contained in the FEIS which we believe is preferable to any single one suggested therein. This combination is necessary because the FEIS' various alternatives respond only to comments about one region's sensitivity. They do not integrate the concerns about all regions into any single alternative.

The alternative we ask you to consider combines elements of Alternatives II, V and IX; it also proposes modifications for the North Atlantic. The sequence of sales that we propose is listed as an attachment to this letter.

First, our alternative would add three Gulf of Mexico sales to those proposed in Alternative I, bringing the total to 15. This is consistent with DOE's proposal as outlined in Alternative II. Sales in the Gulf of Mexico are preferable to the frontier areas in Alaska because the infrastructure both for processing and transportation is in place; the extent of the resource is better known; and the natural gas in this region can be fully utilized, which it cannot in most frontier areas in Alaska where, according to the FEIS, gas would have to be reinjected. Natural gas is an environmentally preferable energy source because its effects on the marine environment are less than petroleum.

Second, our proposed alternative incorporates your Alternative V, which schedules Northern California Sale 53 in 1983 and omits Sale 73. This responds to concerns of the State of California and environmental organizations that the resources in this area must be fully studied prior to a lease sale. This region provides significant habitat for numerous marine mammals and is also subject to seismic activity which must be fully researched prior to the commencement of drilling operations. This alternative also locates Sale 80 in Southern California, an area with large quantities of undeveloped resources and available infrastructure.

Third, our alternative schedules Sale 52 in the North Atlantic in 1985 and deletes Sale 82. Exploration resulting from Sale 42 must be fully conducted prior to leasing additional acreage in the North Atlantic. Also, we propose that all tracts within 100 fathoms not be included in this sale as this represents the richly productive waters of the Georges Bank.

The Alaskan frontier areas contain extensive fishery resources, marine mammals and bird life. The full extent and vulnerability of these resources needs to be fully studied. Our concerns for these areas stems from the fact that no clean up technology is available for sea ice areas, no development or transportation technology is available for areas of deep water with sea ice conditions, no infrastructure is available to process or transport any developable hydrocarbons, and transportation for all areas but the Beaufort Sea has to be by tanker, and any gas will most probably be reinjected, not utilized. These factors, coupled with no real knowledge that oil will be found in these areas, leads us to recommend that they not be depended on heavily in the Five Year Program.

Our recommendation is to adopt Alternative IX with one modification, which is deletion of the Navarin. It retains sales in the Gulf of Alaska, Cook Inlet, Kodiak, Norton Basin and the nearshore Beaufort Sea. It adds a Hope Basin Sale in 1985 to replace the proposed Chukchi Sea sale.

Our proposal, which consists of 29 sales, concentrates in areas both where technology is available, the extent of hydrocarbon reserves are better known, and can be fully utilized.

As a primary purpose of this Program is to increase domestic petroleum production in the short-term, we think it is advisable to concentrate the Program in areas where this can be assured of happening quickly. The Bering Sea and arctic waters of Alaska, except for the Beaufort Sea, are not such places. There are many problems and uncertainties associated with developing these areas quickly and getting potential petroleum to market.

We still have concerns such as protection of the Flower Garden Banks, the Georges Bank fishery, the sediment-prone slopes of the Mid-Atlantic, and sensitive areas off of California. Many of these concerns must be addressed before leasing in these areas can safely proceed. We request that the Program identify the sensitivities of these areas and state that these will be addressed before lease sales are held.

The alternative that we propose does, we believe, provide the opportunity for an aggressive oil and gas program which provides the balance required by Section 18 of the OCS Lands Act and responds to the serious concerns expressed by many states and concerned citizens in their comments on the June program and the DEIS.

We look forward to meeting with you on February 15 to discuss this proposal more fully.

Sincerely,

Frances Beinecke

Frances Beinecke
Sarah Chasis
Atlantic Coast Project

Attachment
cc: Carolita Kallaur

The Natural Resources Defense Council's Proposed Five Year Program

1980

A62	Gulf of Mexico
55	Gulf of Alaska
62	Gulf of Mexico
46	Kodiak

1981

A66	Gulf of Mexico
56	South Atlantic
60	Cook Inlet
66	Gulf of Mexico
59	Mid Atlantic

1982

67	Gulf of Mexico
68	Southern California
57	Norton Basin
69	Gulf of Mexico
___	Gulf of Mexico

1983

53	Central & Northern California
71	Beaufort Sea (includes landfast areas only)
72	Gulf of Mexico
74	Gulf of Mexico
76	Mid Atlantic
77	Gulf of Mexico

1984

78	South Atlantic/Blake
79	Gulf of Mexico
80	Southern California
81	Gulf of Mexico
___	Gulf of Mexico

1985

	Gulf of Mexico
52	North Atlantic (outside 100 fathoms)
___	Hope Basin
___	Gulf of Mexico

Attachment 2

Natural Resources Defense Council Proposal

a. Description

The Natural Resources Defense Council (NRDC) proposal reflects a combination of elements of Alternative II (DOE Production Goals), Alternative V (State of California Proposal), Alternative IX (State of Alaska Proposal), and modifications in the North Atlantic region. It calls for 29 sales over the 5-year period and places emphasis on sales in areas where technology is available and hydrocarbon reserves are known (e.g., Gulf of Mexico). In contrast to Alternative I, this proposal:

—deletes six sales—#70 St. George (1982), #73 California (1983), #75 North Aleutian Shelf (1983), #82 North Atlantic (1984), #83 Navarin (1984), and #85 Chukchi (1985);

— delays two sales—#53 Central and Northern California two years from 1981 to 1983, and #52 North Atlantic three years from 1982 to 1985;

— limits two sales—delayed sale #52 North Atlantic would exclude water depths less than 100 fathoms (600 feet) to avoid the most productive part of Georges Bank (nearly all of sale #42 was in water shallower than 100 fathoms), and sale #71 Beaufort Sea to nearshore areas to avoid difficult ice conditions;

— adds five sales—four in the Gulf of Mexico, 1982, 1983, 1984, and 1985, and Hope Basin in 1985; and

— designates sale #80 in 1984 as a Southern California sale.

Table 1 illustrates characteristics associated with the NRDC proposal, and Table 2 shows the estimates of appropriations and staff necessary to implement it.

b. Discussion

(1) Benefits

A major benefit associated with this proposal is that oil spill risk is the lowest of any of the alternatives with the exception of Alternative X, the No Future OCS Leasing alternative. Potentially 14.73 oil spills in excess of 1000 barrels would be statistically probable under this proposal.

Another major benefit is that the NRDC proposal would substantially reduce, if not eliminate, all environmental, social and economic effects for the southern Bering Sea and Chukchi Sea areas as described under section III-B and under Alternative I in the Secretarial Issue Document (SID). The southern Bering Sea region is widely recognized as an environmentally sensitive area. The omission of sales in St. George Basin, Navarin Basin, and North Aleutian Shelf would reduce potential

Table 1. Characteristics of NRDC Proposal.

Oil and Gas Statistics	NRDC Proposal	Range for Alternatives excluding Alternative X* (high to low)
Total Oil (million barrels)**	3370	(8881 - 3370)
Total Gas (trillion cubic feet)**	19.754	(40.5 - 19.754)
Net Economic Value ($ billions)***	53.8	(102 - 53.8)
Maximum Acreage Offered (million acres)	30.1	(39.1 - 27.9)
Number of Sales	29	(38 - 25)
Number of Frontier Areas	4	(8 - 2)
Number of Exploratory Wells	2333	(2680 - 1730)
Number of Development & Production Wells	4231	(6103 - 4231)
Number of Platforms	550	(685 - 532)
Statistically Probable Number of Oil Spills 10^3 bbl.	14.73	(44.56 - 14.73)

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential Industry	Resource Potential Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	--	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	--	12	11	14
Chukchi	--	17	10	2
Hope	1985	14	14	19

Number of Sales per Region	
Atlantic	5
Gulf of Mexico	15
California	3
Alaska	6

*Alternative X results in a rating of zero in all cases. The ranges have been altered to include statistics associated with this proposal.

**Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

*** net economic value has been adjusted to refle[illegible] the loss in present value (10% discount) to account for delays in the economic benefits of production. Th[illegible] adjustments do not reflect any offsetting incr[illegible]es in value [illegible] real prices of oil and gas realized as a result of production occurring in later year.

NRDC A[illegible]native

Table 2. Estimat[illegible] Appropriations and Staff Requirements

Activity	FY 80 $ (Mil)	FY 80 FTP	FY 81 $ (Mil)	FY 81 FTP	FY 82 $ (Mil)	FY 82 FTP	FY 83 $ (Mil)	FY 83 FTP	FY 84 $ (Mil)	FY 84 FTP	FY 85 $ (Mil)	FY 85 FTP
Resource Information:												
USGS	42.5	603	44.7	603	54.7	653	45.3	653	47.7	653	47.7	653
FWS	.2	5	.4	6	.5	8	.6	9	.7	11	.7	11
Total	42.7	608	45.1	609	55.2	661	45.9	662	48.4	664	48.4	664
Exploration Data:												
USGS	2.2	3	2.2	3	2.3	3	2.3	3	2.3	3	2.3	3
Environmental Statements and Studies:												
BLM	37.2	100	38.4	100	26.8	100	25.0	100	25.2	100	23.2	100
USGS	10.0	112	14.7	116	14.7	132	12.9	132	12.9	132	12.9	132
Total	48.1	212	53.1	216	41.5	232	37.9	232	38.1	232	36.1	232
Supervise Lease Operations:												
USGS	30.3	461	32.7	461	36.1	567	37.1	607	38.7	647	41.0	647
General Administrative Activities:												
BLM	10.3	146	10.4	146	9.4	146	9.2	146	9.2	146	9.1	146
USGS	2.6	62	2.8	62	3.1	68	2.8	70	2.9	72	3.0	72
FWS	.1	2	.1	2	.1	2	.1	2	.1	2	.1	2
POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
SOL	.3	11	.4	12	.4	12	.4	12	.4	12	.4	12
Total	13.8	231	14.2	232	13.5	238	13.0	240	13.1	242	13.1	242
Summary:												
BLM	47.5	246	48.8	246	36.2	246	34.2	246	34.4	246	32.3	246
USGS	88.5	1241	97.1	1245	110.9	1423	100.4	1465	104.5	1507	106.9	1507
FWS	.3	7	.5	8	.6	10	.7	11	.8	13	.8	13
POCS	.5	10	.5	10	.5	10	.5	10	.5	10	.5	10
SOL	.3	11	.4	12	.4	12	.4	12	.4	12	.4	12
Total	137.1	1515	147.3	1521	148.6	1701	136.2	1744	140.6	1788	140.9	1788

effects on important breeding habitats, migratory routes and feeding areas for seabirds, shorebirds, and migratory waterfowl and breeding and migratory corridors for many species of fish and marine mammals, including endangered species of whales. Potential adverse effects on extensive bottom fisheries and the coastal salmon and crab fisheries would also be reduced. Similar benefits would also be expected in the Chukchi Sea region because if a sale were held there, new onshore service support and transportation facilities would be needed. Effects on subsistence harvesting of fish and marine mammals in the Chukchi Sea area would be reduced, but both of these latter benefits could be somewhat offset by inclusion of the Hope Basin area.

As described under Alternative VII (Availability of Technology) in the SID, the Chukchi Sea has the most harsh operating environment of any of the OCS areas and if a sale were held there, it would involve tracts in the shear zone and pack ice areas. Thus, the omission of the Chukchi Sea sale coupled with omission of those areas seaward of the landfast ice zone in the Beaufort Sea would provide industry additional time to develop and refine operating technology for working in shear zone and pack ice areas.

Onshore communities in the St. George Basin and North Aleutian Shelf areas would have additional time to become involved in district coastal zone management (CZM) planning, thus potentially lessening the effects of onshore development. It is difficult to project benefits attributed to this factor because district CZM planning has not yet been initiated in these areas.

A benefit resulting from this proposal is that it opens up a new frontier area, Hope Basin, for assessment of oil and gas resources. Assuming this area is hydrocarbon prone, it would provide for early development and production and further, would provide a transition area between OCS working conditions in southern Alaskan waters and the relatively harsh conditions in the arctic.

This proposal calls for 15 sales in the Gulf of Mexico, one more sale than that proposed for this region under Alternative II. This has several benefits. It concentrates sales in an area of known potential resources, allows the Department to concentrate its manpower and funding resources used for obtaining environmental and geophysical data in fewer areas, and similarly, it permits industry to focus its geophysical data gathering in fewer areas and perhaps require less onshore infrastructure investment. This proposal would result in the lowest number of estimated development and production wells of any of the other alternatives except Alternative X (No Future OCS Leasing).

Reduced environmental, social, and economic effects would be expected in the North Atlantic because one less sale would be held in this area and because sale #52 would be restricted to those areas deeper than 100 fathoms. This latter action can be expected to reduce potential use conflicts with commercial fishing in the Georges Bank area. However, by restricting sale #52 to the area deeper than 100 fathoms, it cannot be concluded that all potential adverse environmental effects in the Georges Bank area would be eliminated due to the proximity of Georges Bank to the proposed leasing area.

The description and benefits regarding Alternative V (State of California Proposal) in the SID are equally applicable to this proposal.

(2) Costs

The major cost associated with this proposal is that it would result in estimated total oil and total gas resources which are substantially lower than any of the other alternatives, excluding Alternative X (No Future OCS Leasing). This is contrary to a major objective of national energy policy to reduce dependence on imported oil. The lowered resource estimates occur as a result of a combination of factors as described below. In comparison with Alternative I, this proposal would result in a net economic loss of $20.9 billion.

Although this proposal includes four frontier areas in the 5-year program, a major cost is that it does not allow for an early assessment of oil and gas resources in four Alaskan frontier areas where the resource potential is believed to be high--St. George Basin, North Aleutian Shelf, Navarin Basin and Chukchi Sea, thus significantly reducing the probability of finding and developing new domestic energy supplies. Further, the omission of a North Atlantic sale and a California sale, and a three-year delay in exploratory activities for sale #52 - North Atlantic, as compared to Alternative I, also reduce estimated total oil and total gas resources since these areas are considered prospective.

The heavy reliance on the Gulf of Mexico has some major weaknesses with respect to national energy policy. For example, increasing the number of sales in the Gulf of Mexico does not necessarily result in either an increase in the area offered or in increased production. While it was necessary to estimate the size of sales under each of the alternatives, these estimates are by no means binding or indicative of any policy position. As discussed under Part II.D. of the SID, if at the time of tentative tract selection industry interest is higher than presently anticipated and any environmental issues can be satisfactorily addressed, Interior will consider larger offerings. The difference between two sales a year in the Gulf of Mexico versus three sales may in effect be insignificant since virtually the same acreage may end up being offered under both options. This is because the Department has moved to annual calls for nominations which cover the entire Gulf of Mexico each time. Selling the tracts in which industry expresses an interest in three sales rather than two is likely to result in somewhat more acreage being leased, but probably not much. For purposes of this analysis, we have, however, assumed that a greater amount of acreage would be leased in the Gulf of Mexico under the NRDC Alternative than under other alternatives which only have two sales a year.

The concentration of sales in the Gulf of Mexico at the expense of frontier areas weakens the overall exploration strategy for finding new resources. While there is a higher probability that resource estimates are correct for the Gulf of Mexico than for frontier areas because of a better understanding of the geology, the probability of finding a large field similar to Prudhoe Bay in untested areas is better than in the Gulf of Mexico. It is misleading to assume that Gulf of Mexico sales are interchangeable with frontier sales. The figures below illustrate the differences in expected production of oil and gas and in net economic value of holding four additional Gulf of Mexico sales versus the four Alaskan sales this alternative would delete--St. George, North Aleutian Shelf, Navarin and Chukchi.

	Production oil (billion bbl)	gas (trillion cf)	Net Economic Value ($ billion)
4 Gulf of Mexico sales	.26	3.50	8.9
4 Alaskan sales	2.40	8.20	17.0

Related to this point is the belief that the relatively large basins in the Gulf of Mexico have been found and what remains are geologically complex, more subtle accumulations which will require a greater exploration effort that has been necessary in the past. This accounts for the relatively high number of exploratory wells estimated necessary for this alternative. One cannot assume that oil and gas in the Gulf of Mexico is readily available and that it flows easily at the turn of the tap. In 1978, 309 of the holes drilled in the Gulf of Mexico were dry.

Another cost relates to the omission of the Chukchi Sea sale and those areas beyond the landfast ice zone in the Beaufort Sea from consideration in the 5-year program. This action would tend to reduce industry's incentive to develop technology for operating in pack ice and shear zone areas and must be viewed as a disadvantage when consideration is given to the long-term need for such technology.

Costs relating to the two-year delay in sale #53 - Central and Northern California and the flexibility of California sales, as described for Alternative V (State of California Proposal) in the SID, are applicable to this alternative. Similarly, costs regarding environmental and archeological resources, subsistence activities, and onshore support facilities for the Hope Basin region, as described under Alternative XI in the SID, are applicable to this proposal.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 6 1980

Memorandum

To: The Secretary

Through: Executive Secretariat

From: Assistant Secretary - Policy, Budget and Administration

Subject: Relationship Between National Energy Policy and the 5-Year Leasing Program

The purpose of this memorandum is to advise you on the relationship between the 5-year OCS oil and gas leasing program and national energy policy.

The Memorandum of Understanding (MOU) of September 1978 between the Department of Interior (DOI) and the Department of Energy (DOE) on establishment and use of production goals sets the framework for the integration of the OCS oil and gas leasing program with national energy policy. This MOU provides for the development of OCS production goals by the DOE which are to serve as "objectives for the national production of energy resources from Federal lands or interest in lands including the OCS which are necessary to carry out national energy policy and to enable each Department to fulfill its responsibilities under section 801(b)(1) of the Department of Energy Organization Act." One of the factors to be considered in setting these goals is "the overall energy strategy set forth in the current or most recent Annual Report and National Energy Policy Plan."

As one of the first steps in the development of the 5-year program, Acting Secretary of the Interior Joseph, on October 25, 1978, requested Energy Secretary Schlesinger to provide production goals for OCS oil and gas. Draft responses to the October 25 request were received from DOE on an informal basis, prior to preparation of the Secretarial decision material on the draft proposed program. As stated on page 3 of the February 21, 1979, decision memorandum from Deputy Assistant Secretary Policy, Budget and Administration to you, the advice from DOE was as follows:

"The general guidance from DOE on the role of the Outer Continental Shelf in our Nation's overall energy plan, both on a regional and national basis, is that increased OCS production will be necessary to reduce the gap between domestic supply and demand or at least restrain its rate of growth. DOE finds that at both the national and regional levels, the market will not constrain OCS production. That is, unlike the market for coal, the market for oil and gas is such that all resources which can be discovered and economically recovered can be sold in the U.S. The effect of increasing OCS production is simply to decrease energy imports. From the standpoint of economic efficiency, the maximum possible decrease in imports is what DOE believes is needed. We are, therefore, asked to pursue as aggressive a leasing policy as possible, while meeting other statutory and administrative requirement."

This advice, together with draft production goals, was formally transmitted by George S. McIsaac, Assistant Secretary, Resource Applications, to Deputy Assistant Secretary Meierotto on March 2, 1979. As stated in that transmittal, the draft goals were consistent with the National Energy Plan.

Due to the timing of the decision on the draft proposed program the draft goals were not explicitly used in formulating that proposal, whereas the general guidance was. On March 9, 1979, you sent the draft proposed program to the Governors of the affected States for their comment by April 20, 1979. On April 5, 1979, President Carter in his second Energy Message to the Nation, directed you "to propose additional acreage to that in the new leasing schedule."

On May 7, 1979, President Carter transmitted National Energy Plan II to Congress. With respect to OCS, the Presidential directive of April 5, 1979, "to propose additional acreage to that in the new leasing schedule" was cited.

On May 17, 1979, John O'Leary, Deputy Secretary of the Department of Energy, transmitted to Under Secretary James Joseph final OCS oil and gas production goals to be used in developing the proposed leasing program which was scheduled to be submitted to Congress the following month. The supporting document, Federal Leasing and Outer Continental Shelf Energy Production Goals, cited the President's Energy Program, as announced on April 5, 1979, as one of the three recent events which provided the opportunity for formulation of a new approach to OCS lands management that would enhance the Nation's ability to tap the energy potential of the OCS and thereby contribute to the achievement of national energy policy objectives. In determining the role that OCS oil and gas resources should play in addressing our Nation's energy requirements, the DOE utilized preliminary consumption, production and import forecasts prepared for the second National Energy Plan.

The DOE advised that national energy policy calls for increasing OCS production to reduce the gap between domestic supply and demand or at least restrain its growth. That is, the use of energy sources other than oil and gas as set out in the National Energy Plan will still leave the U.S. dependent on imported oil, and domestic oil production is preferred to such imports to the fullest extent possible, although it cannot reduce imports to zero.

The decision material on the proposed leasing program, dated May 29, 1979, contained both the directive from President Carter and the final DOE production goals. Each of the alternative schedules presented was analyzed in terms of its ability to meet the DOE production goals.

Your proposed OCS 5-year leasing program was transmitted to the Congress, the Attorney General and the President on June 18, 1979. The proposed program did not fully meet the final production goals established by DOE, but it did closely approximate them (87% of the oil goal and 94% of the gas goal) and did meet the Department's MOU commitment to do everything possible to achieve the goals in keeping with other statutory and administrative requirements. Thus, the proposed program represented the Department's best effort to make the supply contribution envisaged for it in the National Energy Plan II, as interpreted to us through the DOE production goals, which were based on forecasts prepared for the Plan, and through the President's guidance of April 5 which was incorporated in the Plan.

A chronology of events (attachment 1) and pertinent documents are attached.

Heather L. Ross

Attachments

Attachment 1

Chronology of Events

° September 1978 - MOU signed between DOI and DOE concerning the establishment and use of production goals for energy resources on Federal lands (attachment 2).

° October 25, 1978 - DOI requested of DOE, among other things, an analysis of the needs of regional and national energy markets as they relate to the location of OCS regions, and OCS production goals as called for in above mentioned MOU (attachment 3).

° December 4, 1978 - DOE advised DOI of the status of DOE/DOI discussions and that a draft energy goals production report would be provided in late December (attachment 4).

° March 2, 1979 - DOE transmitted to DOI a draft report of "Federal Leasing and Outer Continental Shelf Energy Production Goals" (attachment 5).

° March 9, 1979 - DOI requested comments from Governors on draft proposed 5-year program; comments due April 20, 1979.

° March 13, 1979 - DOI-DOE Leasing Liaison Committee met. Deputy Secretary O'Leary stressed to Under Secretary Joseph the importance to national energy policy of meeting the production goals.

° April 5, 1979 - President Carter, in his second Energy Message, directed the Secretary of the Interior to propose additional acreage to that in the draft proposed program (attachment 6).

° April 17, 1979 - DOI formally responded to DOE's draft "Federal Leasing and Outer Continental Shelf Energy Production Goals" (attachment 7).

° May 7, 1979 - President Carter submitted National Energy Plan II to Congress.

° May 17, 1979 - DOE formally transmitted "Federal Leasing and Outer Continental Shelf Energy Production Goals" (attachment 8).

° June 18, 1979 - Interior announced proposed 5-year lease sale schedule.

Attachments

Comments and Recommendations from Policy Officials

a) Assistant Secretary - Energy and Minerals

b) Assistant Secretary - Fish and Wildlife and Parks

c) Assistant Secretary - Indian Affairs

d) Assistant Secretary - Land and Water Resources

e) Assistant Secretary - Policy, Budget, and Administration

f) Solicitor

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

March 10, 1980

Memorandum

To: The Secretary

From: Assistant Secretary--Energy and Minerals

Subject: Recommendations for the Proposed 5-Year OCS Leasing Program

After careful consideration of the 13 options set forth in the SID for the 5-Year OCS Leasing Program, I am recommending that you select option 1, the program as proposed in June, modified slightly by elimination of the contingency sale. The options which would allow for rescheduling sales delayed by litigation and for holding nationwide reoffering sales eliminate the need for a contingency sale. While there are no technical or administrative reasons for not adding the Hope Basin (alternative 11) to the June proposal, the heavy tilt of the proposal toward Alaska without yet another sale and the low resource potential of that area argue against this option.

Our positions on the technical changes (II) are indicated on the attached sheet. In addition, we believe you should adopt the annual nationwide reoffering sale (III), and the proposal which would allow you to reschedule, at the earliest possible date, any sale delayed by litigation (IV). Finally, with regard to the identification of environmentally preferable alternatives (V), alternative VIII, alternative IX, and the proposal by the Natural Resources Defense Council are the most preferable. Of these, option IX offered by the State of Alaska is the most realistic in balancing environmental issues with the need for oil and gas.

It is clear that the environmental and technical issues associated with the Alaskan frontier areas present by far the most significant issues in the proposed program. Factors related to environmental sensitivity, availability of environmental data, availability of technology, completion of coastal zone management programs and transportation and processing are addressed by a series of options that would, in general, delay or omit a number of Alaskan sales. These are generally valid concerns that reflect the high level of uncertainty inherent in moving into the Alaskan frontiers. However, the delays proposed for leasing in these areas are relatively short in comparison to the time required to explore these areas, plan for and initiate development, and commence production. This time frame will likely range from six to ten years; and many of the problems will not start to unravel until we are certain that commercial petroleum resources exist and, equally important, whether an area tends to be gas prone or oil prone. Many of the concerns will be addressed by a firm commitment to the needed planning, program, and monitoring resources.

Thus, if you elect alternative 1 or alternative 11, I urge that the program document contain a strong statement that recognizes the problems of the frontier areas and indicates in some detail the steps the Department will be taking to assure that development and production will proceed only when all effects have been adequately studied and considered. Among the points that should be made are:

- Environmental studies in each area will continue until adequate information is available to make informed decisions on leasing and, subsequently, on exploration and development.

- The long lead times anticipated for commencement of production will allow for completion of needed studies and coastal zone management plans prior to approving development and production plans.

- Detailed environmental reports will accompany frontier area development and production proposals for State and public review, and frontier area development environmental impact statements will be prepared for each area.

- Careful scrutiny of proposed operating technology in all areas will take place through the Geological Survey's Best Available and Safest Technology Program, with opportunity for regular public input.

- When environmental and technical conditions so warrant, lease cancellation authority will be used.

- Careful monitoring of all exploration and development activities will take place to identify potential problems and initiate mitigating and enforcement measures.

To give more teeth to these points, I believe it may be necessary to place greater emphasis on the environmental studies program in Alaskan areas, perhaps with a shift of some resources from the more established areas, and to continue to enhance the Geological Survey's capability to anticipate and evaluate technical operating problems in frontier areas. This combination of long lead times, technical and environmental planning, continued public involvement, and careful monitoring and enforcement should result in acceptable operations.

Attachment

I. Alternative Schedules

A. Alternative 1 - Proposed Program (June Schedule)	ASEM
B. Alternative 2 - DOE Production Goals	____
C. Alternative 3 - Status of CZM Programs	____
D. Alternative 4 - Availability of Environmental Information	____
E. Alternative 5 - State of California Proposal	____
F. Alternative 6 - Sensitivity of Other Resources	____
G. Alternative 7 - Availability of Technology	____
H. Alternative 8 - Transportation and Processing of Alaskan Oil and Gas	____
I. Alternative 9 - State of Alaska Proposal	____
J. Alternative 10 - No Future OCS Leasing	____
K. Alternative 11 - Addition of Hope Basin	____
L. Alternative 12 - House Select Committee on the OCS Staff Proposal	____
M. Other Modification:	
1. Delay Atlantic sales for more information	____
2. Other	____

II. Technical Changes

A. Switch sale dates for #52 North Atlantic with #69 Gulf of Mexico	ASEM
B. Consolidate sale preparation for Gulf of Mexico sales	ASEM
C. Revise Mid-Atlantic/South Atlantic boundaries	ASEM
D. Consolidate South Atlantic and Blake Plateau areas	ASEM
E. Move North Aleutian Shelf northern boundary from 56° 30' north latitude to 57° north latitude	ASEM
F. Revise Chukchi/Beaufort boundary	ASEM
G. Other modification	Delete contingen sale from option 1.

III. Adopt Annual Nationwide Reoffering Sale	ASEM
IV. Reschedule at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale)	ASEM
V. Identification of environmentally preferable alternative(s)	IX alternative(s)

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

Memorandum

MAR 5 1980

To: The Secretary

Through: Executive Secretariat

From: Assistant Secretary for Fish and Wildlife and Parks

Subject: 5-Year OCS Oil and Gas Leasing Schedule

3/5/80

We have reviewed the subject proposed schedule and offer the following comments and recommendations:

We believe that decreasing dependence on foreign energy supplies is essential to maintain the well-being of this Nation. In attaining that goal we recognize that conflicts in natural resource allocation will arise. Resolving these conflicts will require careful analysis and prioritization of the total value of all resources to the Nation. Petroleum development is only one of several possible uses of the OCS and should not necessarily be considered an overriding use. If development of multiple resources is to occur simultaneously, care must be exercised that excessive detriment to one resource is minimized in development of others. If such detriment cannot be minimized then development of one resource at the expense of others should be curtailed. When subsequent knowledge is gained, and technology developed which results in an acceptably low level of disruption within the resource mix, then development could again proceed.

The Service has, on numerous occasions in the past, recommended that the whole of Bristol Basin and St. George Basin be removed from consideration on any proposed leasing schedule. Examination of the current proposed schedule reveals, however, that entry into Bristol Basin, titled North Aleutian Shelf, will commence with the call for nominations in March 1980 and a sale date of October 1983. St. George Basin has already undergone tentative tract selection for the proposed sale date in December 1982. The vast concentration of anadromous and marine fish, shellfish, marine mammals, waterfowl and seabirds coupled with the continuing total lack of infrastructure for industrial development in these areas mandate that this Service again make a recommendation for deletions in response to the present proposal.

While industry is to be congratulated on the apparent lack of significant disruption during exploratory operations in the Northeast Gulf of Alaska and Lower Cook Inlet, the Service is not prepared at this time to approve rapid leasing in the more biologically valuable Bristol or St. George Basins. The Service recognizes that these areas offer high prospects for commercially valuable oil and gas discoveries. Leasing in such areas is tantamount to rapid exploration, development, and production. That exploration is a relatively innocuous activity seems to be borne out by experience in the Northeast Gulf of Alaska and Lower Cook Inlet. We have as yet, however, little experience in the greater impact-producing activities of development and production in frontier areas. Lessons learned in Upper Cook Inlet and Prudhoe Bay will be of substantial value in developing other Alaska regions, but the great diversity of Alaska dictates that additional learning is necessary before entering basically different, and, in the case of Bristol and St. George Basin, substantially more ecologically complex areas as identified in the Draft Environmental Statement for the 5-Year Leasing Program.

Not only are there unknown complexities of ecological interaction in these areas, but there are also significant known biological resource values that warrant ultimate protection from disturbance. Both the Bristol and St. George Basins comprise the major migratory corridor for marine mammals and migratory waterfowl between the Bering Sea and the Arctic and Pacific Oceans. The Unimak Pass serves as passage for waterfowl, shorebirds, and marine mammals twice annually (north in the spring and south in the fall) where millions of animals are crowded together in and around this pass and the surrounding waters. Birds protected by the several International Migratory Bird Treaties utilize the passageway to reach nesting areas on the Yukon Delta. They return through the passageway to reach most provinces of Canada, every state in the U.S. and Mexico, all countries of Central and South America, virtually all Pacific Islands, Australia, New Zealand and Antarctica. Of the 170 bird species identified, 100 of them are water dependent. Marine mammals protected by the Marine Mammal Protection Act concentrate in these areas both seasonally and year-round and more specifically the Alaska fur seal is found in abundance on the Pribilof Islands. The resource problems of the Beaufort Sea are compounded greatly in the St. George and Bristol Basins. The Unimak Pass and its surrounding waters support many more species than those of controversy in the Beaufort. Almost all of these species are valued by society and protected by Acts and Treaties that dictate a high standard of care, with little to no allowable risk to their survival or habitat requirements. We do not know that potential biological risks to these resources can be mitigated with the present knowledge of ecological interactions or with technology presently utilized by the oil and gas industry. We cannot emphasize these limiting factors too strongly.

Consequently, the U.S. Fish and Wildlife Service recommends that the schedule be instituted as proposed with the exclusion of Bristol and St.

George Basins. This arrangement will insure progressive development of the remaining offshore areas while still providing a sufficient level of protection for two of the most superlative biological regions in Alaska. Removal of these areas from the schedule at this time will provide not only a significant level of protection for the highly valuable living resources of these areas in the near term, but will also permit the accumulation of additional critical knowledge of frontier infrastructure, to be gained elsewhere (Norton Sound, Kodiak, Navarin), for rational development in the long term.

For the 5-Year Leasing Schedule configuration, the FWS recommends the adoption of Alternative VI, which omits the Northern Aleutian Shelf from the schedule, with the deletion of St. George Basin as well. This reduces the number of sales to 28 and we view the annual reoffering sales as candidate sales to increase the number of sales higher than the 29 total sales as proposed in Alternative VI.

We further recommend the following technical changes to be adopted to accommodate administrative and technical difficulties:

(A) Switch the sale dates for #52 North Atlantic with #69 Gulf of Mexico;

(B) Consolidate sale preparations for Gulf of Mexico sales as long as the biologically unique and valuable areas of the Gulf of Mexico remain adequately highlighted in environmental impact assessment;

(C) Move the Mid/South Atlantic boundary northward to 36.5°north latitude;

(D) Consolidate the South Atlantic and Blake Plateau areas for planning purposes;

(E) Because of our concerns for environmental damage to the Northern Aleutian Shelf ecosystem we do not recommend any oil and gas activities in the Bristol Bay area; therefore, we do not recommend an expansion of the call area by 30 degrees; and

(F) Revise the Chukchi/Beaufort call areas with the extension of the Chukchi eastern boundary to 156°30' west longitude and define the Beaufort as west of this point.

As mentioned above the FWS favors adoption of the Annual Nationwide Reoffering Sale which would include only those tracts offered for sale the preceeding year. These tracts, having already undergone environmental assessment, should be reviewed for supplemental environmental analysis if necessary. Also, the rescheduling of sales delayed by litigation, once adjudicated by the courts, is supported by the Fish and Wildlife Service.

The FWS agrees with the discussion for identifying the environmentally preferable alternative and concurs with the conclusions of this section. The two main sources of oil pollution to date are discharges of crude oil from tankers and discharges of fuel oils from ships of all types. The serious consequences to birds are well documented. This is not to say that OCS oil and gas development does not have its environmental consequences or tradeoffs because of toxic drill rig effluents, but rather to recognize the working controls on OCS drilling activities that are so influential in avoiding catastrophic oil spills.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

March 5, 1980

Memorandum

To: The Secretary

Thru: Executive Secretary

From: Assistant Secretary for Fish and Wildlife and Parks

Subject: 5-Year OCS Oil and Gas Leasing Schedule

Attached as a supplement to my memorandum on the 5-Year OCS Oil and Gas Leasing Schedule is a description and table, in a form analogous to the SID presentation, of my "Alternate VI-A".

ROBERT L. HERBST

Attachment

Alternative VI-A

Brief Description

Alternative VI-A differs from Alternative VI as it not only omits the proposed North Aleutian Shelf sale, located at the seaward edge of Bristol Basin, but also omits St. George Basin from the 5-Year program.

This option was developed because of the environmental sensitivity of the North Aleutian Shelf and St. George Basin. The area supports significant biological resources. Shoreward of the proposed North Aleutian Shelf sale area is the Izembek Lagoon, a National Wildlife Refuge, which ia a major migratory stop for significant portions of the world populations of black brant, cackling Canada geese, Stellar's eiders and speckled eiders. Both the Bristol and St. George Basins comprise the major migratory corridor for marine mammals and migratory waterfowl between the Bering Sea and the Arctic and Pacific Oceans. The Unimak Pass serves as passage for waterfowl, shorebirds, and marine mammals twice annually (north in the spring and south in the fall) where millions of animals are crowded together in and around this pass and the surrounding waters. Birds protected by the several International Migratory Bird Treaties utilize the Passageway to reach nesting areas on Yukon Delta. Marine mammals protected by the Marine Mammal Protection Act concentrate in these areas both seasonally and year-round and more specifically the Alaska fur seal is found in abundance on the Pribilof Islands.

Major Characteristics

Table III-A-VI-A illustrates the major factors associated with this Alternative.

Estimates of Appropriations and Staff

Table III-B-VI reflects the most recent estimate of appropriations and staff necessary to implement this alternative.

Discussion

Major Benefits

This alternative will insure progressive development of the remaining offshore areas while still providing a sufficient level of protection for two of the most superlative biological regions in Alaska. Removal of these areas from the schedule at this time will provide not only a significant level of protection for the highly valuable living resources of these areas in the near term, but will also permit the accumulation of additional critical knowledge of frontier infrastructure, to be gained elsewhere (Norton Sound, Kodiak, Navarin), for rational development in the long term.

Table III-A-VI-A

	Alternatives			Difference with Alt. I		
	St. George	VI	VIA	VI	VIA	I
Total Oil (million barrels)	320	6580	6260	40	360	6620
Peak Oil production/yr. (million barrels/day)	.112/1991	<2.271	<2.159	.014/1991	.126/ 1991	<2.285
Total Gas (trillion cubic feet)	1.24	28.778	27.538	.16	1.40	28.938
Peak Gas production/yr. (billion cubic feet/day)	.32/1991	10.27	9.95	.04/1992	.36/ 1992	<10.31
Maximum acreage offered/ number of sales (million acres)	1/1	31.1/ 29	30.1/ 28	1/1	2/2	32.1/30
Wells-exploratory/ development and production	12/80	2070	2058	12/10	24/90	2082/4924
Platforms	2	546	544	1	3	547
Statistically Probable No. of Oil Spills $>10^3$ bbl.	1.84	33.32	31.48	.23	2.07	33.55

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAR 10 1980

Memorandum

To: Executive Secretariat
Attention: Bruce Weetman

From: Assistant Secretary - Indian Affairs

Subject: Proposed 5-Year OCS Leasing Program

In regards to the above Program, the Bureau of Indian Affairs favors Alternative III (status of Coastal Zone Management Plans). This alternative will allow the Alaskan Natives sufficient time in which to formulate local coastal zone management plans.

Of the technical changes listed, the consolidation of the South Atlantic with the Blake Plateau is preferred. We would also favor adoption of an annual nationwide offering sale and the rescheduling at earliest possible date any sale delayed by litigation (including 1979 Beaufort Sea sale).

If we can be of further assistance to you concerning this report, please advise.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

FEB 29 1980

Memorandum

To: Executive Secretariat

From: Assistant Secretary - Land and Water Resources

Subject: Recommendations on Proposed 5-Year Leasing Program Secretarial Issue Document

This memorandum is in response to your request of February 15, 1980, for the comments and recommendations of the Assistant Secretary for Land and Water Resources on the 5-Year OCS Leasing Program Secretarial Issue Document.

LEASING SCHEDULE

Using the proposed June schedule as the basis, this office recommends the following adjustments in the schedule:

- o Sale 70, St. Georges Basin--Delay one year to 1983 so that environmental information can be developed more fully.

- o Sale 85, Chukchi Sea--Delete from 1980-1985 lease schedule, and reschedule in following five-year period. The basis for this recommendation is to permit further development of information concerning drilling and production technology, oil spill cleanup technology under pack ice conditions, and transportation technology. Even with the five-year lead time incorporated in the June schedule for this sale, it is problemmatical whether sufficient environmental information will be available for the extensive offshore region in question.

- o Substitute a Sale in Hope Basin for Sale 85 (Chukchi) in the 1985 schedule--The State of Alaska has requested the inclusion of the Hope Basin in the sale schedule, and preliminary assessments suggest that the Hope sale is a feasible alternative to the more risky Chukchi region given the state of technology and environmental information which will be available at the time of pre-lease sale preparation.

- o Sale 75, North Aleutian Shelf--Delete the sale because of the risks to the Bristol Bay salmon fishery and other resource values in the area.

The recommendations set forth are partially responsive to the concerns of Alaska with regard to the pace of development in the OCS, and also recognize the limits on technological and environmental information available for the more fragile operating areas. An additional factor in this recommendation acknowledges the limitations on the Bureau's capacity to meet the study needs for sales proposed in areas that have received little study in the past. Unlike areas in the Atlantic or Pacific where scientific and environmental research has been conducted for several decades, arctic waters are nearly devoid of systematic, well-designed and focused research.

The effects of adopting the adjustments to the lease schedule as we recommend on the production goals, acreage, etc., are shown in an attachment to this memorandum.

TECHNICAL ADJUSTMENTS IN THE PROGRAM

Consolidation of Sale Preparation for Gulf of Mexico Sales

This Office recommends the adoption of a procedure which will permit the consolidation of sale preparation.

Boundaries of Leasing Areas

This Office recommends that the Mid/South Atlantic boundary be moved northward to 36° 50' N Lat; that the South Atlantic/Blake Plateau be merged into a single administrative unit; that the Chukchi/Beaufort line be moved to 156° 30' W. Long; and that the boundary for the North Aleutian Shelf be moved northward 30'.

Annual Nationwide Reoffering Sale

This Office recommends that an annual reoffering sale be held each year.

Litigation Delays

This Office recommends that sales delayed by litigation be reoffered as soon as possible following any remedy necessary to satisfy the requirements of the court.

COMMENTS

Need for Pre-Lease Study Activities in Anticipation of Second Five-Year Schedule

The current 5-year schedule should be viewed as the first iteration of a recurring process of planning and scheduling OCS leases. The environmental studies program must have sufficient flexibility to formulate and conduct generic and area-specific studies in advance of immediate prelease activities. The endangered species issues we are encountering for whales and marine mammmals in the Beaufort area are mere precursors of similar problems that will be encountered in other Alaskan sales in the Arctic. This Office recommends that the environmental studies program be reviewed in conjunction with the final 5-year schedule, and that a plan be formulated to enable the implementation of longer term studies which are needed to avoid future delays in the leasing schedule.

Size of Calls

This Office recognizes the need for sales of significant acreage and resource potential to meet the Administrations oil import reduction goals. There are, however, practical limits to the acreage which the BLM and GS is capable of administering through its study program. In formulating the size of calls in the areas designated in the 5-year schedule, we recognize that a balance must be struck between the capacity of the Department to produce high-quality sales information which will withstand judicial secrutiny and the desire to maximize the acreage offered for development.

BUREAU OF LAND MANAGEMENT RECOMMENDATIONS

Attached to this memorandum are the recommendations of the Bureau of Land Management. To the extent that they are not inconsistent with the recommendations outlined in this memorandum, this office fully supports the Bureau's recommendations.

Attachments

James W. Curlin

Characteristics of LWR Alternative

Oil and Gas Statistics

Total Oil (Million barrels)**	5326
Total Gas (trillion cubic feet)**	24.988
Net Economic Value ($ billions)	-
Maximum Acreage Offered (million acres)	31.1
Number of Sales	29
Number of Frontier Areas	6
Number of Exploratory Wells	2072
Number of Development & Production Wells	4710
Number of Platforms	541
Statistically Probable Number of Oil Spills 10^3 bbl.	26.08

Timing of Frontier Sales/Relative Rankings	Year	Industry Interest in Exploration	Resource Potential Industry	Resource Potential Geological Survey
Kodiak	1980	21	19	18
Norton	1982	10	9	13
St. George	1983	9	5	5
North Aleutian Shelf	--	4	6	12
South Atlantic/Blake	1984	15	13	17
Navarin	1984	12	11	14
Chukchi	--	17	10	2
Hope	1985	14	14	19

Number of Sales per Region

Atlantic	6
Gulf of Mexico	11
California	4
Alaska	8

** Resource estimates are "risked estimates," that is, the probability that no oil may be found is factored into the estimates.

DRAFT

IN REPLY REFER TO:
3300 (541)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

Memorandum

MAR 7 1980

To: Assistant Secretary - Land and Water Resources

From: Director, Bureau of Land Management

Subject: BLM Recommendations on the Five-Year OCS Oil and Gas Leasing Program

The Bureau has reviewed the various OCS leasing program decision documents. Our recommended leasing schedule discussed below, reflects our position on the leasing schedule alternatives as well as on the many technical and program modification options addressed in the decision memorandum. Particular attention was given to the issue of balancing the need for offshore hydrocarbon development with environmental protection. The operational aspects of the various leasing alternatives were closely examined, given our lead responsibilities in preparing for and conducting the lease sales.

The BLM Recommended Leasing Schedule

Our recommended leasing schedule, which appears as an enclosure, is a variation of the June 1979 Proposed Schedule. In terms of the alternatives presented in the decision memorandum, our preferred option is a combination of a modified Alternative 1 plus Alternatives 4, 6 and 11. It incorporates many of the technical and program modifications discussed in the decision memorandum.

The BLM recommended leasing schedule includes the following important elements:

1. The June 1979 program is shown as modified to include 31 scheduled sales in the following areas:

Gulf of Mexico	- 12	Sales
Atlantic	- 6	"
California	- 4	"
Alaska	- 9	"
Total	31	Sales

2. We recommend that Alternative 1 be further amended by the incorporation of all the technical adjustments discussed in the decision memorandum. This would include switching the 1981 sale dates for Sales #52 and #69 to reflect the two months lost from the Sale #52 leasing process because of the delay in using the Call for Nominations and Comments. The switching of sales would delay Sale #52 from July to September and advance Sale #69 from September to July.

Three joint calls/tract selections/ES preparations are already underway for pairs of Gulf of Mexico sales. This practice has been useful in reducing administrative burdens and should be continued.

There are four proposed changes to the boundaries of sale areas discussed in the decision memorandum. We recommend that all the proposed changes be made.

3. The St. George Basin Sale #70 would be delayed about 10 months from the proposed December 1982 sale date to October 1983. This change, Alternative 4 in the decision memorandum, would assure the availability of additional environmental information over the entire sale area.

4. The Northern Aleutian Shelf Sale #75 would be deleted from the schedule, per Alternative 6. The area has significant marine resources and serves as migration routes for waterfowl, fish, and marine mammals, including endangered whales. Deletion from this schedule would allow long-term studies of potenti environmental impacts. It would allow time for assessment of onshore and offshore impacts associated with St. George Sale #70, an adjacent sale area seaward of the Northern Aleutian Shelf area.

5. A Hope Basin sale would be proposed for 1985 per Alternative 11. While not an area of high resource potential (ranked 14th among sale areas by industry and 19th by USGS), the addition of the sale to the schedule would allow entry into another Alaska frontier area in a timeframe which is adequate for completion of required environmental studies.

6. The changes discussed above would make our proposal more responsive to the State of Alaska's expressed concerns than the June 1979 leasing schedule. The deletion of Sale #75 and the addition of the Hope Basin sale were recommendations of the State. The delay of Sale #70 from 1982 to 1983 partially meets the State's concern for slower paced sales in that area. Similarly the State's recommendation to delete the Chukchi sale is partially adopted by the scheduling of that sale near the end of the program period. Further, we advocate a gradual entry into Chukchi area by the offering of only nearshore tracts in the first lease sale, if the nearshore resource potential is sufficient to warrant such a sale design.

7. Gulf of Mexico Sale #77 appears as a scheduled sale in 1983 rather than as a contingency sale as shown on the June 1979 schedule. Our proposal contains no contingency sales. We agree with the discussion in the decision memorandum which suggests that contingency sales do not actually increase flexibility nor do they make best use of the planning resources at the State and Federal levels.

8. We recommend that the first national reoffering sale be held in 1982 rather than 1981. Our reasons are discussed at some length below but essentially, we have concerns about potential adverse effects on bidder behavior during the two Alaska sales proposed for 1980. Since there are only two non- Gulf of Mexico sales in 1980 to feed tracts into a reoffering sale, a first such sale in 1981 might not produce adequate results to test this leasing concept.

9. We would like to restate our earlier position than any approved leasing program portray pre-lease activities conducted during the period 1980-1985 for sales proposed for late 1985 and beyond. Offshore leasing will not likely end on May 31, 1985. A leasing program document should display activities as part of an ongoing program in order to present a picture of the Department's plans and requirements to reviewers and participants in the program. Assuming a continuation of the pattern of holding six sales per year, a more complete portrayal of the program would show some activity through 1985 for about fifteen outyear sales. No great amount of detail need be shown nor would it be necessary to continue the schedule period to 1987 to show proposed sale dates.

Such a portrayal would prove beneficial in at least three identifiable ways. First, it would give affected States, the industry, and other interested parties advance notice of our intentions. For example, this memorandum and the various schedules discussed in the decison documents talk to the "deletion" from the program of North Aleutian Shelf Sale #75. However, it would be more accurate to describe such a decision in terms of a sale delayed beyond 1985, with studies and environmental assessments continuing towards a possible decision to lease sometime in the second half of the decade.

Second, a more complete schedule format would avoid potential delays to outyear sales because key early leasing events were omitted from an approved schedule. The two Alaska sales proposed for 1985 are illustrative of this potential problem. Early decisions must be made and the calls depicted on 1980 - 1985 schedule in order to meet proposed sale dates in early 1985. Given a total leasing process time of close to four years and perhaps a full year to revise an approved program, there will always be sales near the end of the program period or at the beginning of the next, for which early commitments must be made and early leasing steps undertaken in order to meet a proposed sale date.

Finally, a full schedule showing outyear proposals would give a more complete picture of the agency's program, budget and staffing requirements. The Department would be able to make a much more consistent presentation than is now the case with the leasing program and the Bureau's four-year authorization being sent to Congress at about the same time but showing different numbers for dollar or program requirements.

10. It is reasonable to assume that opponents of offshore leasing will continue to bring litigation to delay lease sales. We recommend that any approved leasing program package contain a policy statement that a sale delayed by litigation or for any other reason, will be rescheduled for the earliest possible date.

The Annual Reoffering Sale

The Bureau is in agreement with the concept of a national reoffering sale (RS). We could handle the administrative burdens of such sales although some additional analysis would be required to work out the details regarding the coordination among our field offices. However, we do have some reservations concerning the impact of such a sale on the effectiveness of the leasing program and the receipt of fair return to the government such that we cannot recommend that a decision be made to schedule the first RS in 1981.

Our most serious concern about scheduling an RS now for a 1981 sale date involves the potential effect of that decision on bidder behavior for proposed Sales #55 and #46 later this year. There has been very little time allowed and no complete economic analysis done of those effects.

An RS might introduce elements into the bidding process analogous to sequential bidding. There would be two bidding sessions; the lease sale and the later reoffering session at which bidders would have considerable knowledge of the bids, bidding patterns, leased acreage, the Government's tract evaluations, and our acceptance/rejection criteria. Since firms know this and know that all other firms know this, bidding strategy and game theory become important considerations and can affect how firms bid at the first session. For example, some firms may feel it is to their advantage to hold back from the first offering at the regular sale. There could be such effects on bidding at the 1980 sales even though there may be a later determination not to hold a reoffering sale in 1981. We do not know how great the effects might be, but it may be more prudent to delay a decision on the reoffering sale for one year until we have more time for analysis of the concept and the results of the first attempt at sequential bidding under consideration for use at a fall 1980 Gulf of Mexico sale.

We are also concerned that a 1981 sale might not produce adequate results and so tend to condemn the concept without it having been given a fair chance for sucess.

The proposal was not presented in the earlier program package nor treated in the ES. Therefore, crucial industry reaction to the reoffering sale is not available for consideration. Industry response may not be overwhelming if the rather poor results of the 1974, Sale S1 experiment are any indication of the level of future industry interest in reoffered tracts. Further, a sale in 1981 would include the no-bid and rejected bid tracts from only the two Alaska sales proposed for 1980. A first reoffering sale in 1982 on the other hand, could include tracts from four non-Gulf of Mexico lease sales proposed for 1981 and so would likely be a larger sale with a potential for more promising results in terms of the acreage receiving bids and the dollar amounts of the bids.

Discussion of Other Alternative Leasing Schedules

By recommending a leasing program which is a combination of four of the alternatives presented in the decision documents, the Bureau has essentially stated its position and given its rationale for recommendations on all alternatives. A few of the alternatives not recommended warrant additional comment.

Two major alternatives could not be supported since they do not meet the legislative mandate of the OCS Lands Act Amendments to balance orderly resource development with environmental protection. At one end of the spectrum, the "no action" alternative would preclude further resource development. While this alternative has the potential for being identified as the environmentally preferred option required by CEQ regulations, it does not allow for a balance to be achieved. Similarly, the ambitious leasing program contained in the House Select Committee proposal could be carried out only by cutting short the environmental assessment and studies programs in order to meet the advanced sale dates. Again, the balance required by the law could not be easily achieved since under this option, accelerated resource development would take overwhelming precedence over protection of the environment.

As mentioned above, the Bureau's recommended schedule is responsive to the comments of the State of Alaska and incorporates many of the pieces of the State's proposed schedule. Our proposal does not reflect the comments of the State of California which recommended delays and deletions of sales off the coast of that State. We believe that our proposal more closely reflects national energy goals as well as a proper and equitable distribution of the costs and benefits of offshore energy development among regions. Finally the NRDC proposal, while quite responsive to the comments of both California and Alaska, does not call for sufficient entry into frontier areas and so cannot meet the production goals set for offshore resources. It represents a position weighed too heavily on the side of environmental protection to the detriment of orderly resource development, a position not in balance nor in accord with the intent of the OCS Lands Act Amendments.

In conclusion, we believe that our recommended leasing schedule represents a reasonable balance between resource development and environmental protection. It reflects our positions on all of the relevant issues discussed in the decision documents. One related issue not discussed that has emerged during our review involves the need for the close meshing of early leasing decisions and the design of our studies program. Virtually all of the alternatives, including our own proposal, involve entry into large frontier sale areas off Alaska. The potential Call areas are very large and could sometimes encompass two or more regions with totally different environmental characteristics requiring multiple sets of studies and perhaps, multiple environmental impact statements.

Such large Calls strain our ability to collect and analyze environmental data required for subsequent leasing decisions. If geological and environmental factors indicate that it could be desirable to restrict the area of a Call for Nominations and Comments, the Department may wish to consider such a restriction very early in the planning process to better focus attention and resources on a smaller, more manageable area. We are beginning to assess alternative approaches to this issue and have started discussions with our field offices as to how to get an advance warning of potential problems with large Call areas and requisite studies. We intend to involve Departmental staff in early discussions so that all parties are fully aware of the issues and our approaches to resolving them.

North Aleutian Shelf--Several oil companies have recommended that the northern boundary of this area be moved northward one-half degree in order to include some areas with high potential. The GS agrees that this is necessary in order to substantially cover prospective geologic structures.

Chukchi/Beaufort--An eastward shift in the boundary line between the Chukchi and Beaufort areas is recommended in order to facilitate both environmental and geologic assessment. The proposed revision would move the boundary line to 156° 30' longitude, with the Chukchi Sea lying to the west of that line and the Beaufort Sea to the east.

ANNUAL NATIONWIDE REOFFERING SALE

In order to expedite the reoffering of tracts whose bids have been rejected or tracts which did not receive bids, an annual nationwide reoffering sale is proposed. This sale would be held each year and would include only those tracts which had been offered for sale the preceding year in areas outside the Gulf of Mexico and had either received no bid or a bid that was not accepted. Inclusion of such a sale would avoid the situation which currently exists outside the Gulf of Mexico of having to wait 2 or 3 years before being able to reoffer tracts. The practice would be similar to ones followed by Texas, Louisiana, and Alaska. Alaska plans to reoffer the tracts not leased at the December 1979 Beaufort Sea sale this April.

LITIGATION DELAYS

As a result of the rigid procedures which must be followed to schedule sales, opponents of OCS leasing may seek to prevent leasing in certain areas by merely delaying a sale beyond its scheduled date. If this is accomplished they would then maintain that the sale could not be held until a new subsection 18 program is approved with a new date for the sale. To prevent this situation, which we do not believe to be consistent with the OCS Lands Act, as amended, we recommend that you approve rescheduling at the earliest possible date any sale which is delayed as the result of litigation. We would specifically include in this category the only sale from the 1977 schedule which has not yet been completed, the 1979 Beaufort Sea sale.

ALTERNATIVE ENERGY SOURCES

The OCS Lands Act, as amended (OCSLAA) calls for you to prepare a schedule indicating the "size, timing, and location of leasing activity which [you] determine will best meet national energy needs" for the next five years, consistent with the principles of Section 18 of the OCSLAA. The DOE has advised that national energy policy calls for increasing OCS production in order to reduce the gap between domestic supply and demand or at least restrain its rate of growth. Pursuant to the DOI/DOE Memorandum of Understanding, DOE developed energy production goals that are consistent with and an integral part of the National

Energy Plan. The DOE informed us that the production goals and accompanying policy advice were intended to guide us in the development of the 5-year program. Use of energy sources other than oil and gas as set out in the National Energy Plan will still leave the U.S. dependent on imported oil, and domestic oil production is preferred to such imports to the fullest extent possible, although it cannot reduce imports to zero. The relationship between the June proposed program and national energy policy is described more fully in a memorandum to you from me.

Additionally, to insure full NEPA coverage of alternatives, a no leasing option was analyzed in the ES. The discussion of this option in the ES provides references to other documents where the environmental impacts of OCS leasing versus other energy sources are analyzed. The sum of the foregoing materials provides information on the planned use of alternative energy sources to meet the national needs and on the relative environmental impacts of these sources of supply.

SELECTION OF THE ENVIRONMENTALLY PREFERABLE ALTERNATIVES

The CEQ regulations require identification of the environmentally preferable alternative or alternatives. The alternative leasing schedules fall logically into three broad groups, based on production projections and estimates of environmental risk.

Group and Alternative Schedules	Total Oil (barrels x10^9)	Statistically Probable Number of Oil Spills (1000 barrels or greater) From OCS Activities	Spills from Tankering of Foreign Oil
1. I, II, III, IV, V, VI, VII, House Select Committee	≥6.2	30 to 45	Least
2. VIII, IX, NRDC	3.4 to 4.6	15 to 22	Greater
3. X	0	0	Greatest

Arranging these groups by the statistically probable number of oil spills associated with resulting OCS lease activity--an important indicator of environmental risk--shows Group 1 to have more potential for harm than Group 2, and Group 2 more than Group 3.

Alternatives in Group 1 also tend to have a greater variety and broader geographic distribution of environmental effects directly associated with them than sales in Group 2. Alternative X, which constitutes Group 3, has the least variety of impacts associated with its selection--primarily oil spills from tankers importing foreign oil to replace oil that would otherwise be produced by domestic OCS production.

The variety and geographic diversity of possible effects encompasses the wide spectrum of marine, coastal, and human resources which are differentially put at risk as a result of different levels of activity and different emphasis in geographic locations in each of the schedules. The Group 2 schedules significantly reduce or delay environmental effects off Alaska compared to the Group 1 schedules. There would be less disruption of Alaskan Native subsistence culture; less likelihood of disturbance of Alaskan endangered species, including the Bowhead whale; and lessened competition between the fishing and oil and gas industries for Alaska's port space and wharfage.

In schedules VIII and IX, these lesser effects off Alaska are simply reductions from the Group 1 potential. In NRDC, some additional offsetting effects can be expected in the Gulf of Mexico where substitute sales are scheduled, but these effects are not of the same potential magnitude as those avoided, because of less expected production and environmental sensitivity. Also, NRDC provides added protection to California and the North Atlantic by delaying or omitting sales in those areas.

Alternatives involving schedules from Group 1 would only be environmentally preferable if the adverse environmental effects of oil imports were greater than those of OCS production. Adoption of a Group 2 or 3 schedule would increase the possibility of spills from tankering of foreign oil, while selection of a Group 1 schedule would lessen, but not eliminate such effects. There is some evidence to suggest that substituting OCS oil production for tankered imports reduces the risk of very large oil spills along U.S. coasts. However, the estimates of oil spills greater than 1,000 barrels which appear in the FES and SID pertain to potential spills from OCS operations only and do not reflect changes in spills of foreign oil from tankers in U.S. waters due to backing out of imports by OCS production. While continued OCS leasing may ultimately prove to be environmentally superior, especially in light of improvements in environmental protection in OCS activities, the more conservative approach at this point is to regard the schedules of Group 2 and 3 as being environmentally preferable because they, in themselves, are less likely to damage the environment from oil spills than the schedules in Group 1.

Although it is necessary to identify the environmentally preferable alternative or alternatives, implementation of an environmentally preferable alternative is not necessarily most advantageous to the nation. Factors other than environmental effects, such as law or national policy should be considered. For example, section 102 of the 1978 Amendments to the OCS Lands Act specifies, inter alia, that the purposes of the Act are to

> preserve, protect, and develop oil and natural gas resources in the Outer Continental Shelf in a manner which is consistent with the need (A) to make such resources available to meet the needs as rapidly as possible, (B) to balance orderly energy resource development with protection of the human, marine, and coastal environments, (C) to insure the public a fair and equitable return on the resources of the Outer Continental Shelf, and (D) to preserve and maintain free enterprise competition....

Moreover, the requirements in President Carter's National Energy Plan II should also be considered. Alternatives which provide for leasing and development of OCS oil and gas yield important economic and national security benefits from reduction of oil imports. It is appropriate in selecting a program to weigh these benefits against the cost of environmental effects as compared to the environmentally preferable alternative(s). For example, each of the three schedules in Group 2 would generate economic benefits amounting to about $57 billion, or about $18 billion less than the $75 billion that would be achieved through the reduction of oil imports under leasing alternatives such as I or II. Alternative X would forego the entire $75 billion of economic benefits generated by Alternatives I and II. It would be appropriate to choose a leasing program such as Alternative I if the costs of adverse environmental effects under Alternative I are judged to be less than the benefits which would be achieved.

It is difficult to estimate and assign values to all the environmental effects of OCS activity. However, the single most damaging environmental effect by far would be a major spill of oil in a coastal area. All of the available evidence shows that the environmental damages of even the largest coastal oil spills are not likely to exceed $100 million. Thus, even if large oil spills are not reduced by substituting OCS production for tankered imports, the costs of the environmental impacts likely to result from continued OCS leasing are far less than the net economic benefits.

OPTIONS FOR DECISION

You are being asked to make a decision on whether you wish to adopt one of twelve alternative schedules as the proposed final leasing program. You are also being asked whether you wish to have certain technical changes made, to adopt an annual nationwide reoffering sale, and to reschedule at the earliest possible date any sale delayed by litigation (including the 1979 Beaufort Sea sale). Your decision on these three issues will apply, as appropriate, to whatever alternative schedule you choose. Finally, you are being asked to identify the alternative or alternatives which you consider to be environmentally preferable.