

Table IV-1. Proposed Action (Alternative 1) – Exploration and Development Scenario for the Gulf of Mexico

Scenario Elements	Gulf of Mexico
Number of Sales	11
Years of Activity	40
Oil (Bbbl)	4-8
Gas (tcf)	25-40
Platforms	400-500
Exploration and Delineation Wells	800-1,500
Development and Production Wells	4,000-6,000
Miles of New Pipelines	4,000
Vessel Trips/Week	400-500
Helicopter Trips/Week	3,000-5,000
New Pipeline Landfalls	6
New Pipe yards	3
New Gas Processing Facilities	6
Platform Removals with Explosives	700
Drill Muds/Well (bbl)	
Exploration/Delineation	7,860
Development/Production	5,800
Drill Cuttings/Well (bbl)	
Exploration/Delineation	2,680
Development/Production	1,630
Produced Water/Well (bbl)	
Oil Well	450
Gas Well	68
Bottom Area Disturbed (ha)	
Platforms	750
Pipelines	6,000

Table IV-2. Proposed Action (Alternative 1) – Exploration and Development Scenario for Alaska

Scenario Elements	Arctic Subregion	Bering Sea Subregion	South Alaska Subregion
	Beaufort Sea Chukchi Sea	North Aleutian Basin	Cook Inlet
Number of Sales	5	2 ^a	2 ^b
Years of Activity	40	40	40
Oil (Bbbl)	0.5-2.0	0.1-0.2	0.1-0.2
Gas (tcf)	None	5	0.1-0.2
Platforms	3-10	4-6	1-2
Exploration and Delineation Wells	Up to 30	Up to 20	Up to 10
Development and Production Wells	100 - 400	Up to 200	Up to 100
Miles of New Offshore Pipelines	Up to 200	Up to 150	Up to 125
Miles of New Onshore Pipelines	Up to 400	Up to 50	Up to 75
Vessel Trips/Week/Platform	1-3 ^c	1-3	1-3
Helicopter Trips/Day/Platform	1-3	1-3	1-3
New Pipeline Landfalls	1-3	1-2	1-2
New Shore Bases	1-2	1	0
New Waste Facilities	0-1	1	0-1
New Processing Facilities	0-1	1	0-1
Docks/Causeways	1	1	0
Exploration Well Muds, Cuttings, Produced Water	425 tons dry mud with 80% recycled; 525 tons dry rock cuttings, totaling 610 tons discharged at each well site	360 tons dry mud, with 80% recycled; 450 tons dry rock cuttings; totaling 522 tons per site	360 tons dry mud, with 80% recycled; 450 tons dry rock cuttings; totaling 522 tons per site
Development Wells Muds, Cuttings, Produced Water	All muds, cuttings and produced water treated and disposed of in wells	All muds, cuttings and produced water discharged down hole	All muds, cuttings and produced water discharged down hole

^a Sales in the North Aleutian Basin will require that the existing presidential withdrawal is lifted prior to the sales.

^b Lease sales in the Cook Inlet Planning Area will be special interest sales, meaning that a sale will not occur unless industry expresses interest in responses to the call for information.

^c In the Arctic Subregion, service vessel trips will only occur during open-water and broken-ice conditions.

Table IV-3. Proposed Action (Alternative 1) – Exploration and Development Scenario for the Atlantic

Scenario Elements	Atlantic
Number of Sales ^a	1
Years of Activity	40
Oil (Bbbl)	0.05-0.08
Gas (tcf)	0.25-0.50
Platforms	1
Exploration and Delineation Wells	10-15
Development and Production Wells	8-12
Miles of New Pipelines	25-75
Vessel Trips/Week	1-5
Helicopter Trips/Week	5-10
New Pipeline Landfalls	1
New Pipe Yards	1
New Gas Processing Facilities	1
Platform Removals with Explosives	0
Drill Muds/Well (bbl)	
Exploration/Delineation	7,860
Development/Production	5,800
Drill Cuttings/Well (bbl)	
Exploration/Delineation	2,680
Development/Production	1,630
Produced Water/Well (bbl)	
Oil Well	450
Gas Well	68
Bottom Area Disturbed (ha)	
Platforms	2-5
Pipelines	50-125

^a In order for a lease sale to occur in the area offshore Virginia, the current Presidential withdrawal will have to be lifted, and the congressional moratorium will have to be discontinued. The sale offshore Virginia will be a special interest sale, meaning that even if the Presidential withdrawal and congressional moratorium end, the sale will not occur unless industry expresses interest in response to a call for information.

Table IV-4. The Proposed Action (Alternative 1) – Oil-Spill Assumptions

Scenario Elements	Gulf of Mexico	Arctic Subregion	Bering Sea Subregion	South Alaska Subregion	Atlantic
	Central and Western Gulf	Beaufort and Chukchi Seas	North Aleutian Basin	Cook Inlet	Virginia
Oil Production (Bbbl)	4 - 8	0.5 - 2.0	0.1 - 0.2	0.1 - 0.2	0.05 - 0.08
Large Spills \geq 1,000 bbl ^a					
Pipeline Spills	4	1	1 ^b	1 ^b	1 ^c
Platform Spills	4	1			
Tanker Spills	1				
Small Spills					
50 – 999 bbl	50	10	2	2	1 - 2
\geq 1 and < 50 bbl	550	100	10	10	5 - 10

^a Large spill sizes: pipeline – 4,600 bbl; platform – 1,500 bbl; tanker (Gulf of Mexico) – 5,300 bbl; tanker (west coast) – 7,800 bbl

^b Spill in Cook Inlet and North Aleutian Basin occurs from either a platform or a pipeline. North Aleutian Basin spill will be condensate and/or light crude.

^c Atlantic spill will be a 1,500-bbl spill from a tanker or barge.

Table IV-5. Projected Greenhouse Gas Emissions from Proposed 2007-2012 Leasing Program

Emission	2007-2012 Program, Tg ^a CO ₂ Equivalent	Total 2003 U.S. Emissions, All Sources, Tg ^a CO ₂ Equivalent	2007-2012 Program
			as Percentage of Total U.S. Emissions
CO ₂	3.41-6.88	5,842	0.058-0.118
CH ₄	2.36-4.44	545	0.433-0.816
CO ₂ + CH ₄	5.77-11.33	6,387	0.090-0.177
All GHG ^b	5.77-11.33	6,891 ^b	0.084-0.164

^a One teragram (Tg) equal 10¹² g or 10⁶ metric tons.

^b Total U.S. greenhouse gas (GHG) emissions also include nitrous oxides, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions. Estimates of emissions from the 2007-2012 Program were not made for these compounds, but they are assumed to be very small.

Table IV-6. Estimated Air Emissions from OCS Activities in the Gulf of Mexico, Proposed 2007-2012 Leasing Program

Activity	Pollutant (tons/yr)				
	NO _x	SO ₂	PM ₁₀	CO	VOC
Production Platforms	14,982-29,964	666-1,333	151-303	17,688-35,376	11,428-22,857
Exploration Wells	3,238-6,071	546-1,024	80-151	340-638	31-59
Platform Construction/Removal	1,417-1,925	241-328	35-48	176-240	18-25
Pipelaying Vessels	6,653	1,117	166	697	63
Support Vessels	5,539-6,923	946-1,183	138-173	715-894	74-92
Survey Vessels	15-18	2-3	0.4-0.5	1-2	0.1
Helicopters	141-176	17-22	10-13	592-740	223-279
Tanker/Barge Transport	422-844	72-145	11-22	70-141	343-686
Total	32,406-52,575	3,609-5,154	593-876	20,280-38,727	12,182-24,061

Table IV-7. Proposed Action (Alternative 1) –Direct, Indirect, and Induced Employment and Income Projections, Gulf of Mexico Economic Impact Areas (EIA’s)

Area	Total Employment		Average Yearly Employment		Total Labor Income (\$millions)		Average Yearly Labor Income (\$millions)	
	Low	High	Low	High	Low	High	Low	High
Alabama EIA	18,500	29,000	460	730	640	990	15	25
Mississippi EIA	8,500	13,500	210	340	270	430	10	11
Florida EIA	15,500	24,500	390	610	590	940	15	25
Louisiana EIA	415,000	651,500	10,380	16,290	15,440	24,120	385	605
Texas EIA	334,500	547,000	8,360	13,680	13,250	21,660	330	540
Total EIA’s^a	792,000	1,265,500	19,800	31,640	30,190	48,140	755	1,205
Other Gulf of Mexico	239,000	375,000	5,980	9,380	10,340	16,170	260	405
Rest of United States	538,500	860,500	13,460	21,510	26,640	42,560	665	1,065

^a Totals may not add due to rounding.

All estimates are totals of direct, indirect, and induced impacts.

Employment estimates are in employee years.

Labor income includes employee compensation and proprietary income; estimates are in millions of 2007 dollars.

Table IV-8. Estimated Air Emissions from OCS Activities in the Arctic Subregion, Proposed 2007-2012 Leasing Program

Activity	Pollutant (tons/yr)				
	NO _x	SO ₂	PM ₁₀	CO	VOC
Production Platforms	665	31	43	530	265
Exploration Wells	3,413-10,239	136-409	129-387	521-1,563	180-540
Platform Construction/Removal	821-1,642	66-131	58-117	184-368	65-129
Pipelaying Vessels	496-992	42-84	36-71	113-227	38-77
Support Vessels	17-172	3-29	0-4	2-23	0-3
Helicopters	1-11	0-1	0-1	5-48	2-18
Tanker Transport	869-2,896	149-497	22-75	154-514	27-91
Total	6,282-18,450	427-1,262	289-808	1,510-4,557	577-1,748

Table IV-9. Estimated Air Emissions from OCS Activities in the Bering Sea Subregion, Proposed 2007-2012 Leasing Program

Activity	Pollutant (tons/yr)				
	NO _x	SO ₂	PM ₁₀	CO	VOC
Production Platforms	1,969	88	20	2,325	1,502
Exploration Wells	213-427	36-72	5-11	22-45	2-4
Platform Construction/Removal	144	24	4	17	2
Pipelaying Vessels	416-554	70-93	10-14	44-58	4-5
Support Vessels	61-275	10-47	2-7	8-37	1-6
Helicopters	2-7	0.2-1	0.1-0.5	29	2-11
Total	2,805-3,376	228-324	41-55	2,422-2,510	1,513-1,529

Table IV-10. Estimated Air Emissions from OCS Activities in the South Alaska Subregion, Proposed 2007-2012 Leasing Program

Activity	Pollutant (tons/yr)				
	NO _x	SO ₂	PM ₁₀	CO	VOC
Production Platforms	193-386	10-19	13-27	172-344	96-202
Exploration Wells	213-427	36-72	5-11	22-45	2-4
Platform Construction/Removal	144	24	4	17	2
Pipelaying Vessels	554-924	93-155	14-23	58-97	5.3-9
Support Vessels	123-246	21-42	3-6.1	17-35	2-3.7
Helicopters	2-4	0.3-0.6	0.2-0.3	10-19	4-7
Total	1,230-2,131	184-313	39-71	296-556	110-228

Table IV-11. Proposed Action (Alternative 1) – Alaska Employment and Income Forecasts ^a

Planning Area & Geographic Area	Employment	Personal Income ^b (\$million)
Arctic (Beaufort and Chukchi-NSB)		
Total-All Years	23,000	680
Average Year	1,000	32
Bering (North Aleutian Basin-AEB)		
Total-All Years	11,500	340
Average Year	500	16
South Alaska (Cook Inlet-KPB)		
Total-All Years	5,750	170
Average Year	250	8
Rest of Alaska		
Total-All Years	140,000	4,200
Average Year	12,600	192
Rest of United States		
Total-All Year	266,000	9,800
Average Year	11,900	455

^a All estimates are totals of direct, indirect, and induced impacts. For each planning area, the first set of estimates is of the total of all years over the life of the activity (employment or personal income); the second row is the average yearly forecast for the local area. For Rest of Alaska and Rest of United States, the forecasts are the total of all planning areas in the first row and the average per year in the second row

^b Personal income estimates are in millions of 2007 dollars. Personal income is the sum of labor income and income of individual business owners.

NSB = North Slope Borough
 KPB = Kenai Peninsula Borough
 AEB = Aleutians East Borough

Table IV-12. Proposed Action (Alternative 1) – Alaska Direct, Indirect, and Induced Employment and Income, Total All Years

Planning Area & Geographic Area	Employment	Personal Income^a (\$million)
Arctic (Beaufort and Chukchi-NSB)		
Total-All Years	23,000	680
Direct	19,500	580
Indirect	1,400	40
Induced	2,100	60
Bering (North Aleutian Basin-AEB)		
Total-All Years	11,500	340
Direct	9,700	286
Indirect	700	22
Induced	1,100	32
South Alaska (Cook Inlet-KPB)		
Total-All Years	5,750	170
Direct	4,830	144
Indirect	350	10
Induced	520	16
Rest of Alaska		
Total-All Years	140,000	6,400
Direct	117,600	5,500
Indirect	8,400	380
Induced	14,000	520
Rest of United States		
Total-All Year	266,000	12,600
Direct	220,400	10,600
Indirect	20,000	800
Induced	26,000	1,200

^a Personal income estimates are in millions of 2007 dollars. Personal income is the sum of labor income and income of individual business owners.

NSB = North Slope Borough
 KPB = Kenai Peninsula Borough
 AEB = Aleutians East Borough

Table IV-13. Estimated Air Emissions from OCS Activities in the Atlantic, 2007-2012 Leasing Program

Activity	Pollutant (tons/yr)				
	NO _x	SO ₂	PM ₁₀	CO	VOC
Production Platforms	185-300	8-13	2-3	219-354	141-229
Exploration Wells	213-320	36-54	5-8	22-34	2-3
Platform Construction/Removal	144	24	4	17	2
Pipelaying Vessels	554-1,663	93-279	14-42	58-174	5-16
Support Vessels	31-379	5-64	1-9	4-51	1-8
Helicopters	2-7	0-1	0-1	6-29	2-11
Total	1,129-2,813	167-436	25-66	327-659	153-268

Table IV-14. Cumulative Case – Exploration and Development Scenario for the Gulf of Mexico

Scenario Elements	Gulf of Mexico
Years of Activity	40
Oil (Bbbl)	30
Gas (tcf)	140-160
Platforms	3,000
Exploration and Delineation Wells	7,000-9,000
Development and Production Wells	3,000
Miles of New Pipelines	6,000-12,000
Vessel Trips/Week	3,000-4,000
Helicopter Trips/Week	18,000-25,000
New Pipeline Landfalls	40
New Pipe yards	5
New Gas Processing Facilities	41
Platform Removals with Explosives	4,000
Drill Muds/Well (bbl)	
Exploration/Delineation	7,860
Development/Production	5,800
Drill Cuttings/Well (bbl)	
Exploration/Delineation	2,680
Development/Production	1,630
Produced Water/Well (bbl)	
Oil Well	450
Gas Well	68
Bottom Area Disturbed (ha)	
Platforms	3,000-5,000
Pipelines	9,000-12,000

Table IV-15. Cumulative Case – Exploration and Development Scenario for Alaska

Scenario Elements	Arctic Subregion	Bering Sea Subregion	South Alaska Subregion
	Beaufort Sea Chukchi Sea	North Aleutian Basin	Cook Inlet
Oil (Bbbl)	1.0-3.0	0.1-0.2	0.1-0.2
Gas (tcf)	None	5	0.1-0.2
Platforms	5-15	4 - 6	1 - 2
Exploration and Delineation Wells	Up to 60	Up to 20	Up to 10
Development and Production Wells	Up to 600	Up to 200	Up to 100
Miles of New Offshore Pipelines	Up to 300	Up to 150	Up to 125
Miles of New Onshore Pipelines	Up to 500	Up to 50	Up to 75
Vessel Trips/Week/Platform	1-3 ^a	1-3	1-3
Helicopter Trips/Day/Platform	1-3	1-3	1-3
New Pipeline Landfalls	1-3	1-2	1-2
New Shore Bases	2-4	1	0
New Waste Facilities	2-4	1	0-1
New Processing Facilities	2-4	1	0-1
Docks/Causeways	2-4	1	0
Exploration Well Muds, Cuttings, Produced Water	425 tons dry mud with 80% recycled; 525 tons dry rock cuttings, totaling 610 tons discharged at each well site	360 tons dry mud, with 80% recycled; 450 tons dry rock cuttings; totaling 522 tons per site	360 tons dry mud, with 80% recycled; 450 tons dry rock cuttings; totaling 522 tons per site
Development Wells Muds, Cuttings, Produced Water	All muds, cuttings and produced water treated and disposed of in wells	All muds, cuttings and produced water discharged down hole	All muds, cuttings and produced water discharged down hole
Maximum Water Depth for Exploration and Development (m)	100	100	100

^a In the Arctic, service vessel trips will only occur during open-water and broken-ice conditions.

Table IV-16. Cumulative Case – Exploration and Development Scenario for the Atlantic

Scenario Elements	Atlantic
Number of Sales ^a	1
Years of Activity	40
Oil (Bbbl)	0.05-0.08
Gas (tcf)	0.25-0.50
Platforms	1
Exploration and Delineation Wells	10-15
Development and Production Wells	8-12
Miles of New Pipelines	25-75
Vessel Trips/Week	1-5
Helicopter Trips/Week	5-10
New Pipeline Landfalls	1
New Pipe Yards	1
New Gas Processing Facilities	1
Platform Removals with Explosives	0
Drill Muds/Well (bbl)	
Exploration/Delineation	7,860
Development/Production	5,800
Drill Cuttings/Well (bbl)	
Exploration/Delineation	2,680
Development/Production	1,630
Produced Water/Well (bbl)	
Oil Well	450
Gas Well	68
Bottom Area Disturbed (ha)	
Platforms	2-5
Pipelines	50-125

^a In order for a lease sale to occur in the area offshore Virginia, the current Presidential withdrawal will have to be lifted, and the congressional moratorium will have to be discontinued. The sale offshore Virginia will be a special interest sale, meaning that even if the Presidential withdrawal and congressional moratorium end, the sale will not occur unless industry expresses interest in response to a call for information.

Table IV-17. Cumulative Case – Oil-Spill Assumptions

Scenario Elements	Gulf of Mexico	Arctic Subregion	Bering Sea Subregion	South Alaska Subregion	Atlantic
	Central and Western Gulf	Beaufort and Chukchi Seas	North Aleutian Basin	Cook Inlet	Virginia
Oil Production (Bbbl)	30	1 - 3	0.1 - 0.2	0.1 - 0.2	0.05 - 0.08
Large Spills \geq 1,000 bbl ^a					
Pipeline Spills	5		1 ^b	1 ^b	1 ^c
Platform Spills	30	3			
Tanker Spills	10				
Small Spills					
50 – 999 bbl	200	15	2	2	1 - 2
\geq 1 and < 50 bbl	2,500	150	10	10	5 - 10
Import Tankers	42	0	0	0	2

^a Large spill sizes: pipeline – 4,600 bbl; platform – 1,500 bbl; tanker (Gulf of Mexico) – 5,300 bbl; tanker (west coast) – 7,800 bbl

^b Spill in Cook Inlet and North Aleutian Basin occurs from either a platform or a pipeline. North Aleutian Basin spill will be condensate and/or light crude.

^c Atlantic spill will be a 1,500-bbl spill from a tanker or barge.