HISTORICAL AND PROJECTED OIL AND GAS CONSUMPTION

MAY 1998

Alaska Department of
NATURAL RESOURCES
DIVISION OF OIL AND GAS

STATE OF ALASKA

HISTORICAL AND PROJECTED OIL AND GAS CONSUMPTION

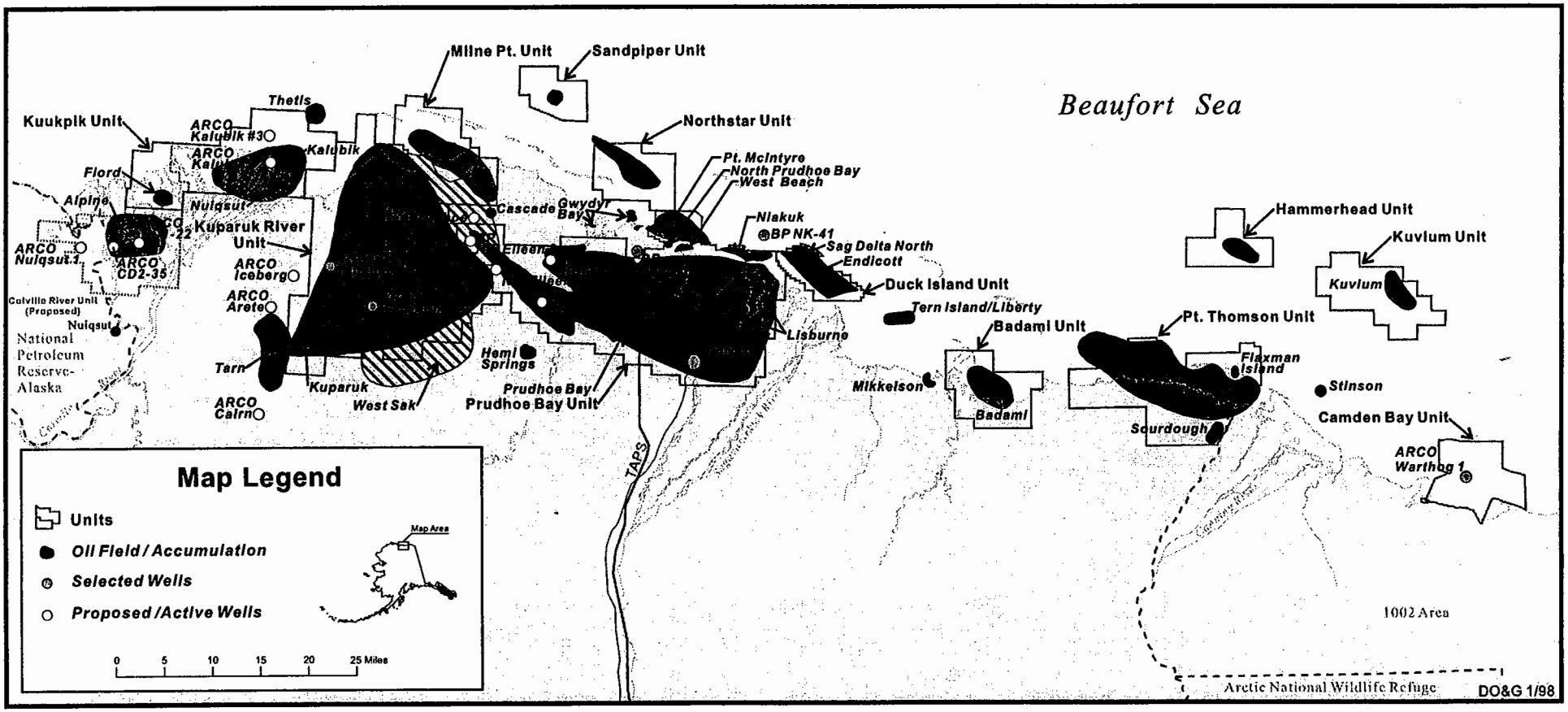
Tony Knowles
Governor

John T. Shively
Commissioner
Department of Natural Resources

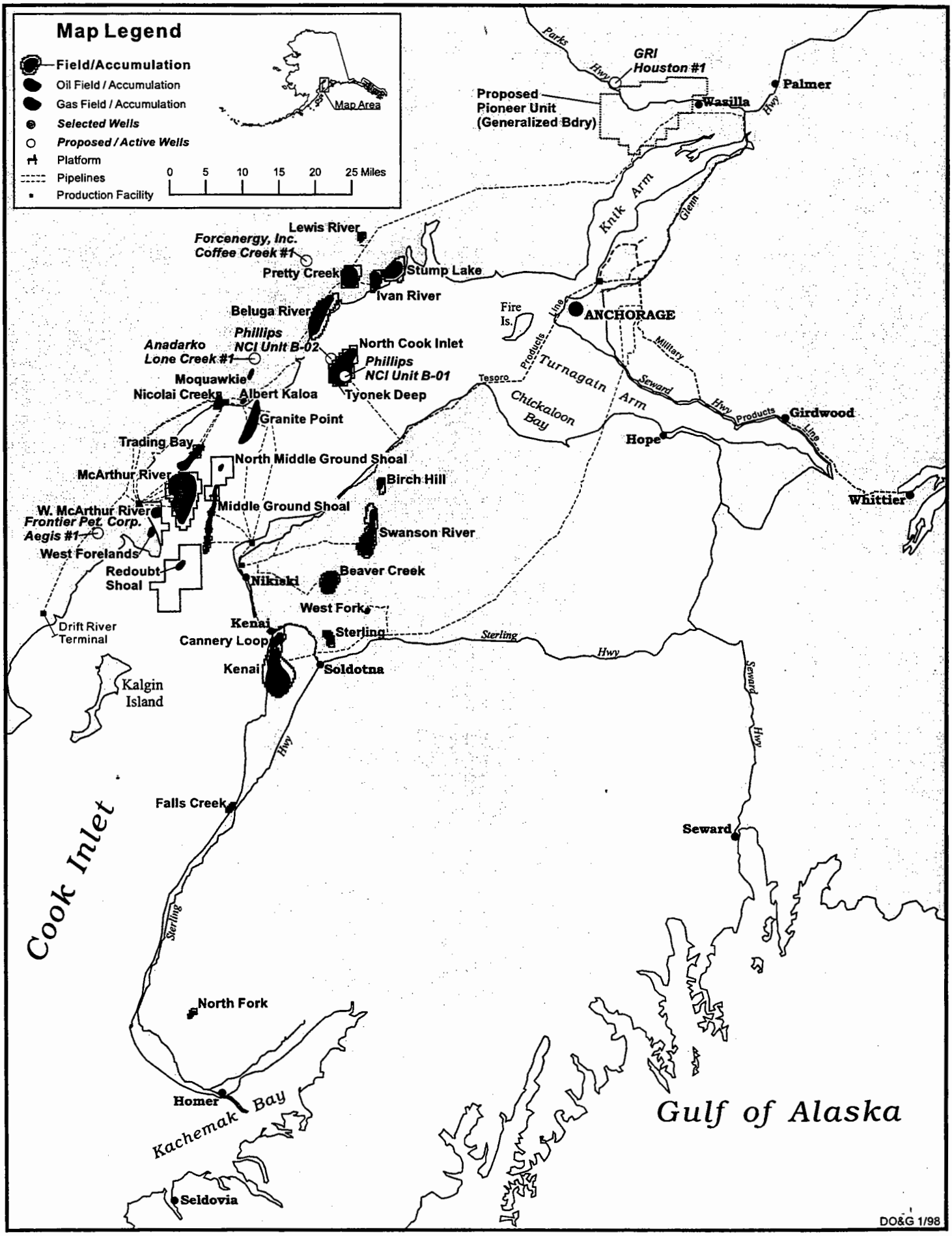
May 1998

Prepared for the Second Session
Twentieth Alaska Legislature

Alaska North Slope



Cook Inlet


Map Legend
Field/Accumulation
Oil Field / Accumulation
Gas Field / Accumulation
Selected Wells
Proposed / Active Wells
Platform
Pipelines
Production Facility
Map Area
0 5 10 15 20 25 Miles
Parks Hwy
GRI Houston #1
Proposed Pioneer Unit (Generalized Bdry)
Palmer
Wasilla
Knik Arm
Glenn Hwy
Lewis River
Forcenergy, Inc. Coffee Creek #1
Pretty Creek
Stump Lake
Ivan River
Beluga River
Phillips NCI Unit B-02
Anadarko Lone Creek #1
North Cook Inlet
Phillips NCI Unit B-01
Tyonek Deep
Moquawkie
Nicolai Creek
Albert Kaloa
Granite Point
Trading Bay
North Middle Ground Shoal
McArthur River
Birch Hill
W. McArthur River
Middle Ground Shoal
Frontier Pet. Corp. Aegis #1
Swanson River
West Forelands
Redoubt Shoal
Nikiski
Beaver Creek
West Fork
Drift River Terminal
Kenai
Cannery Loop
Sterling
Sterling Hwy
Kenai
Soldotna
Kalgin Island
Fire Is.
ANCHORAGE
Tesoro
Products Line
Turnagain Arm
Chickaloon Bay
Military
Seward Hwy
Hope
Girdwood
Products Line
Whittier
Falls Creek
Seward
Seward Hwy
Cook Inlet
Sterling
North Fork
Homer
Kachemak Bay
Seldovia
Gulf of Alaska
DO&G 1/98

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ALASKA OIL AND GAS RESOURCE MANAGEMENT

Alaska's oil and gas resources are owned and administered by three state agencies, two federal agencies and, in a very few cases, by private landowners.

STATE OF ALASKA

Department of Natural Resources, Division of Oil & Gas (DO&G)

- leases or licenses state land for oil and gas exploration and development
- sets the conditions under which state oil and gas leases may be developed
- monitors lease development for consistency with regulations and lease terms
- collects and audits oil and gas royalty revenue
- negotiates and administers oil and gas royalty-in-kind contracts
- estimates the volume and value of oil and gas reserves within proposed lease sale areas
- approves and administers oil and gas unit agreements to insure greatest ultimate recovery and prevent waste

Department of Revenue, Oil and Gas Audit Division (DOR)

- collects oil and gas severance taxes, property taxes and corporate income taxes
- audits oil and gas tax payments
- estimates how much tax and royalty revenue the state will receive. This projection is used to prepare the state's annual budget.

Alaska Oil and Gas Conservation Commission (AOGCC)

- insures the greatest ultimate recovery of oil and gas on private, state and federal leases.
- protects correlative rights of lease holders and land owners
- monitors production meters at each field
- reviews plans of development to verify efficient production and minimize waste of oil and gas
- regulates well drilling, well treatment, well spacing, waste disposal, ground water protection, and production rate.

FEDERAL GOVERNMENT

Department of Interior, Bureau of Land Management (BLM)

- leases and administers onshore federal oil and gas resources.

Department of Interior, Minerals Management Service (MMS)

- leases and administers offshore federal oil and gas resources.

PRIVATE LANDOWNERS

- the only known oil and gas reserves in private ownership belong to Arctic Slope Region Corporation and Cook Inlet Region Inc. Both are Alaska Native corporations formed under the Alaska Native Claims Settlement Act of 1971.

1 OIL AND GAS RESERVES

PROVEN RESERVES

Only a fraction of the original oil or gas in-place in any reservoir can be extracted, and that fraction depends on available technology and the economics of producing the oil or gas. A producer's decision whether or not to develop a new reservoir, or to continue producing a developed field, depends in part on the difference between the cost of extracting the oil or gas and the value of the oil or gas.

Reserves are an estimate of how much oil and gas can be economically extracted from a given reservoir. Reserves can be calculated by many methods, and there often is no consensus on which method is best to apply to each reservoir. Each of the three state agencies that regulate oil and gas production, DO&G, AOGCC and DOR, calculates reserves by different methods for their different requirements; DO&G and AOGCC calculations emphasize geologic and engineering factors, whereas DOR calculations emphasize oil and gas economics and prices.

Reserve estimates of large oil fields typically increase through their development years and ultimate recoveries are often greater than early predictions. In the early 1980's Prudhoe Bay reserves were estimated to be between seven and nine billion barrels. By January 1986 Prudhoe Bay's projected ultimate recovery was 10.2 billion barrels, 4.4 billion produced and 5.8 billion reserves, and by January 1997 the estimate is 13.0 billion barrels, 9.5 billion produced and 3.5 billion reserves. A large portion of these increases in projected ultimate recovery is due to investments in improved technology. Further improvements in technology, expansion of enhanced recovery operations and additional in-fill drilling may further increase future reserve estimates, but the main variables affecting future oil recovery are future oil prices and development costs.

DO&G's estimates of North Slope reserves are derived from Table 2A. Table 2A tabulates how much oil each field likely will produce each year to 2019. Each field's remaining reserves are equal to its total production during the next 22 years. Reserves of each of the Cook Inlet fields were calculated by whichever method was most appropriate for that field. The Cook Inlet gas estimates took into consideration Marathon's, Phillips', Unocal's, and Enstar's recent comprehensive analysis of Cook Inlet reserves. Reserves of undeveloped North Slope and Cook Inlet oil and gas pools are more speculative, primarily because their economics are uncertain and because some are still incompletely delineated.

ROYALTY RESERVES

The state's royalty reserves are calculated by multiplying each field's reserves times the state royaltyinterest in the field. All North Slope reserves are on state land except the gas reserves of East Barrow, South Barrow and Walakpa fields and some of the oil reserves in the Alpine pool. All Cook Inlet reserves are on state land except Swanson River, Beaver Creek and Birch Hill fields and parts of Beluga River, Kenai and Cannery Loop fields

TABLE 1 - OIL AND GAS RESERVES AND ROYALTY SHARE, ESTIMATED AS OF 1/1/98

OIL: MILLIONS OF BARRELS. INCLUDES OIL , CONDENSATE AND NGL
GAS: BILLIONS OF CUBIC FEET

	Reserves		Royalty Share		
	Oil	Gas	Royalty Percent	Oil	Gas
NORTH SLOPE					
Developed or Under Development					
Alpine	277 [6]	60 [6]	10.0% [9]	28	6
Badami	131 [6]	40 [6]	16.7%	22	7
East Barrow	-	5 [5]	[8]	-	-
Endicott [1]	223 [6]	868 [5]	14.4%	32	125
Greater Point McIntyre Area					
Lisburne	47 [6]	320 [5]	12.5%	6	40
Niakuk	98 [6]	42 [5]	12.5%	12	5
Point McIntyre	347 [6]	620 [5]	12.2%	42	76
W. Beach-N.Prudhoe Bay St.	7 [6]		12.5%	1	
Kuparuk River Unit					
Kuparuk	1,073 [6]	627 [5]	12.5%	134	78
Tarn	71 [6]	22 [6]	12.5%	9	3
West Sak [2]	330 [6]	[7]	12.5%	41	-
Liberty	117 [6]	50 [6]	[8]	-	-
Milne Point Unit					
Milne Point	193 [6]	20 [5]	14.6%	28	3
Sag River	18 [6]	[7]	14.6%	3	-
Schrader Bluff	330 [6]	[7]	14.6%	48	-
Northstar	149 [6]	450 [6]	16.0% [9]	24	72
Prudhoe Bay	3,493 [6]	23,000 [6]	12.5%	437	2,875
Satellites [3]	177 [6]	[7]	12.5%	22	-
South Barrow	-	4 [5]	[8]	-	-
Walakpa	-	27 [5]	[8]	-	-
Undeveloped					
Pt. Thomson-Flaxman Is.	200 [6]	5,000 [6]	12.5%	25	625
Other Onshore [4]	104 [6]	[7]	12.5% [9]	13	<1
TOTAL	**7,385**	**31,155**		**927**	**3,915**
COOK INLET					
Developed or Under Development					
Beaver Creek	1 [5]	104 [6]	[8]	-	-
Beluga River	-	669 [6]	7.5%	-	50
Cannery Loop	-	33 [6]	4.0%	-	1
Granite Point	12 [6]	24 [6]	12.5%	2	3
Ivan River, Lewis River, Pretty Creek, Stump Lake	-	48 [6]	12.5%	-	6
Kenai	-	283 [6]	2.1%	-	6
McArthur River	22 [6]	525 [6]	12.5%	3	66
Middle Ground Shoal	9 [6]	13 [5]	12.5%	1	2
North Cook Inlet	-	1,023 [6]	12.5%	-	128
North Trading Bay	-	20 [6]	12.5%	-	3
Sterling	-	23 [6]	12.4%	-	3
Swanson River	3 [5]	182 [6]	[8]	-	-
Trading Bay	3 [6]	28 [5]	12.5%	<1	4
West Fork	-	3 [6]	[8]	-	-
West McArthur River	1 [6]	[7]	12.5%	<1	-
Undeveloped					
Birch Hill	-	11 [5]	[8]	-	-
Falls Creek	-	13 [5]	12.5%	-	2
Nicolai Creek	-	2 [5]	12.5%	-	<1
North Fork	-	12 [5]	12.5%	-	<1
Tyonek Deep	25 [6]	30 [6]	12.5%	3	4
West Foreland	-	20 [5]	12.5%	-	3
TOTAL	**76**	**3,066**		**9**	**278**
STATE					
TOTAL	**7,461**	**34,221**		**935**	**4,193**

Note: See Appendix A for a complete list of Alaska oil and gas discoveries.
[1] Endicott reserves include Endicott and Sag Delta North reserves.
[2] West Sak reserves include K-10, Tabasco and West Sak reserves.
[3] Satellite reserves include wells penetrating several smaller, unnamed reservoirs.
[4] One of several known discoveries which probably will be developed.
[5] Alaska Oil and Gas Conservation Commission.
[6] William VanDyke, Division of Oil and Gas.
[7] No estimate is available.
[8] The state has no leases in this field.
[9] Estimated.
Revised 3/6b/98

2 OIL PRODUCTION FORECAST

NORTH SLOPE

North Slope production of combined oil, condensate and natural gas liquids (NGLs), which peaked at 2.0 million barrels per day in 1988, declined to 1.4 million barrels per day in 1997 and is estimated to decline to 435 thousand barrels per day in 2019. Cumulative production in the 22 years between 1998 and 2019 is estimated to be 7.3 billion barrels. This estimate is a projection of production histories of existing fields and the expected production from to-be-developed fields, and it includes planned and probable field developments.

Some developments are in final stages and others are imminent. BP is continuing development at Milne Point unit and Badami and also is actively exploring for oil and gas in the Point Thompson area. The Prudhoe Bay owners have completed a facility-sharing agreement and have committed to enlarge the enhanaced oil recovery project. Kuparuk River unit owners have implemented a large scale enhanced oil recovery project using a miscible injectant and Endicott and Point McIntyre operators are studying miscible injectants at those fields. Heavy oil development is underway at both the Kuparuk River and Milne Point Units. In addition, satellite field development is underway at Prudhoe Bay and Kuparuk River Units.

COOK INLET

Cook Inlet fields probably will continue to produce well into the next century, but DO&G projects output only to 2003 because regional production depends on economic factors which can not be reasonably estimated beyond then. The projection does not include oil production forecasts from Swanson River and Beaver Creek, because the state holds no leases in these fields, and does not Tyonek Deep and Redoubt Shoal because their development potentials are uncertain.

Cook Inlet oil production, which peaked at 230 thousand barrels per day in 1970, declined to 33 thousand barrels per day in 1997 and is estimated to decline to 7 thousand barrels per day by 2003. Cumulative production in the six years between 1997 and 2003 will be an estimated 50.5 million barrels.

AVAILABLE ROYALTY OIL

The state takes Cook Inlet oil in-value whereas it takes North Slope royalty oil both in-value and in-kind. The state currently sells its in-kind royalty oil through one contract that will expire in 1998 and two contracts that will expire in 2003. A new contract for 28,000 barrels per day of Prudhoe Bay Unit royalty oil awaits legislative approval. This contract will end in 2003. Fortyeight percent of available royalty oil production in 1998, and 21 percent in 1999, is allocated to these contracts. The estimated cumulative royalty share through the 22 year projection period will be 919 million barrels.

PRODUCERS SHARE OF NORTH SLOPE PRODUCTION

North Slope producers allocate monthly production among themselves by offtake percentage that vary from month to month and are somewhat different from their ownership interests. The eight producing North Slope centers, Alpine, Badami, Endicott, Greater Point McIntyre Area, Kuparuk Unit, Milne Point Unit, Northstar, and Prudhoe Bay Unit, are projected to produce 6.9 billion barrels between 1998 and 2019. At the recent average offtake percentages, producers will recover:

Arco	2.1 Billion barrels	31%
BP	3.0 Billion barrels	43%
Exxon	1.2 Billion barrels	18%
Other	.6 Billion barrels	8%

TABLE 2A - OIL PRODUCTION FORECAST AND AVAILABLE ROYALTY OIL

THOUSANDS OF BARRELS PER DAY. INCLUDES OIL, CONDENSATE AND NGLs

	Royalty Percent		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
PRODUCTION FORECAST													
NORTH SLOPE													
Alpine			-	-	30	60	60	60	60	55	50	45	42
Badami			-	35	34	31	28	25	23	21	19	18	16
Endicott [1]			58	48	42	37	35	33	31	30	28	27	26
Greater Point McIntyre Area			180	151	129	109	92	80	73	66	61	56	51
Lisburne			10	11	11	10	9	8	8	7	7	6	6
Niakuk [2]			30	27	25	22	19	17	16	14	13	12	11
Point McIntyre			139	111	91	75	62	54	48	44	40	37	33
West Beach-N. Prudhoe Bay State			2	2	2	2	2	1	1	1	1	1	1
Kuparuk River Unit			266	278	285	275	266	255	235	219	203	189	178
Kuparuk			262	256	244	227	209	190	172	157	142	129	118
Tarn			-	10	19	17	16	15	13	12	11	10	10
West Sak			4	12	22	31	41	50	50	50	50	50	50
Liberty			-	-	-	38	47	40	34	29	24	21	19
Milne Point Unit			53	63	73	78	85	91	86	83	79	77	75
Milne Point			45	45	45	42	40	37	33	30	27	25	23
Sag River			4	6	6	5	4	4	3	3	2	2	2
Schrader Bluff			4	12	22	31	41	50	50	50	50	50	50
Northstar			-	-	-	50	50	46	39	34	29	26	23
Other Onshore [3]			-	-	-	-	30	30	28	25	23	20	18
Prudhoe Bay			700	660	630	610	589	568	545	515	481	447	415
Satellites [4]			5	14	23	32	35	35	37	37	34	31	28
TOTAL			**1,263**	**1,249**	**1,246**	**1,320**	**1,317**	**1,263**	**1,191**	**1,114**	**1,031**	**957**	**891**
COOK INLET [5]													
Beaver Creek			0.31	0.29	0.28	0.27	0.25	0.24	-	-	-	-	-
Granite Point			6.50	6.00	5.50	5.10	4.60	4.30	-	-	-	-	-
McArthur River			12.60	11.35	10.20	9.20	8.27	7.45	-	-	-	-	-
Swanson River			2.20	1.76	1.40	1.13	0.90	0.72	-	-	-	-	-
Middle Ground Shoal			5.50	5.00	4.50	4.00	3.60	3.30	-	-	-	-	-
Trading Bay			1.50	1.45	1.37	1.30	1.24	1.18	-	-	-	-	-
West McArthur River			1.26	0.88	0.62	0.43	0.30	0.21	-	-	-	-	-
TOTAL			**29.87**	**26.73**	**23.87**	**21.43**	**19.16**	**17.40**	-	-	-	-	-
STATE													
TOTAL			**1,293**	**1,276**	**1,270**	**1,341**	**1,336**	**1,280**	**1,191**	**1,114**	**1,031**	**957**	**891**
AVAILABLE ROYALTY OIL													
NORTH SLOPE													
Alpine	10.0%	[9]	-	-	3	6	6	6	6	6	5	5	4
Badami	16.7%		-	6	6	5	5	4	4	4	3	3	3
Endicott [1]	14.4%		8	7	6	5	5	5	4	4	4	4	4
Greater Point McIntyre Area	12.5%		23	19	16	14	12	10	9	8	8	7	6
Lisburne	12.5%		1	1	1	1	1	1	1	1	1	1	1
Niakuk [2]	12.5%		4	3	3	3	2	2	2	2	2	2	1
Point McIntyre	12.5%		17	14	11	9	8	7	6	6	5	5	4
West Beach-N. Prudhoe Bay State	12.5%		0	0	0	0	0	0	0	0	0	0	0
Kuparuk River Unit	12.5%		33	35	36	34	33	32	29	27	25	24	22
Kuparuk	12.5%		33	32	31	28	26	24	22	20	18	16	15
Tarn	12.5%		-	1	2	2	2	2	2	2	1	1	1
West Sak	12.5%		1	2	3	4	5	6	6	6	6	6	6
Liberty		[10]	-	-	-	-	-	-	-	-	-	-	-
Milne Point Unit	14.6%		8	9	11	11	12	13	13	12	11	11	11
Milne Point	14.6%		7	7	7	6	6	5	5	4	4	4	3
Sag River	14.6%		1	1	1	1	1	1	0	0	0	0	0
Schrader Bluff	14.6%		1	2	3	5	6	7	7	7	7	7	7
Northstar	16.0%	[11]	-	-	-	8	8	7	6	5	5	4	4
Other Onshore [3]	12.5%		-	-	-	-	4	4	4	3	3	3	2
Prudhoe Bay	12.5%		88	83	79	76	74	71	68	64	60	56	52
Satellites [4]	12.5%		1	2	3	4	4	4	5	5	4	4	4
TOTAL			**160**	**160**	**159**	**164**	**163**	**157**	**148**	**139**	**129**	**120**	**111**
COOK INLET [5]													
Beaver Creek		[12]	-	-	-	-	-	-	-	-	-	-	-
Granite Point	12.5%		0.81	0.75	0.69	0.64	0.58	0.54	-	-	-	-	-
McArthur River	12.5%		1.58	1.42	1.28	1.15	1.03	0.93	-	-	-	-	-
Swanson River		[12]	-	-	-	-	-	-	-	-	-	-	-
Middle Ground Shoal	12.5%		0.69	0.63	0.56	0.50	0.45	0.41	-	-	-	-	-
Trading Bay	12.5%		0.19	0.18	0.17	0.16	0.16	0.15	-	-	-	-	-
West McArthur River	12.5%		0.16	0.11	0.08	0.05	0.04	0.03	-	-	-	-	-
TOTAL			**3.42**	**3.09**	**2.77**	**2.50**	**2.25**	**2.06**	-	-	-	-	-
STATE													
TOTAL			**163**	**163**	**161**	**167**	**165**	**159**	**148**	**139**	**129**	**120**	**111**
IN-KIND ROYALTY OIL SALES													
Mapco [6]			35	35	35	35	35	35	-	-	-	-	-
Mapco #2 [7]			13	-	-	-	-	-	-	-	-	-	-
Tesoro [8]			32	-	-	-	-	-	-	-	-	-	-
TOTAL			**80**	**35**	**35**	**35**	**35**	**35**	-	-	-	-	-
IN-VALUE ROYALTY OIL													
TOTAL			**83**	**128**	**126**	**132**	**130**	**124**	**148**	**139**	**129**	**120**	**111**

NOTE:"-" = zero or no data; "0" = less than 0.001.

[1] "Endicott" includes Endicott and Sag Delta.

[2] "Niakuk" includes Niakuk, West Niakuk (27), Niakuk 28, and Niakuk 29.

[3] "Other Onshore" includes one of several known discoveries which probably will be developed.

[4] "Satellites" includes Prudhoe Bay and Kuparuk satellite fields.

[5] The Cook Inlet forecast is arbitrarily cut off after 2003 because there are no public estimates of economic limits for the individual fields.

[6] The Mapco contract is for 35,000BPD of Prudhoe Bay Unit royalty production, it expires December 2003.

		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative (MBbl)
PRODUCTION FORECAST													
NORTH SLOPE													
Alpine		39	36	33	30	28	26	24	23	21	20	19	277,765
Badami		15	14	13	13	12	11	11	10	10	5	-	132,860
Endicott [1]		25	24	23	22	20	19	18	17	16	15	14	221,920
Greater Point McIntyre Area		46	43	38	35	33	29	26	24	22	19	18	504,065
Lisburne		5	5	4	4	4	4	3	3	3	2	2	48,180
Niakuk [2]		10	9	8	7	7	6	5	5	4	4	4	100,375
Point McIntyre		30	28	25	23	21	19	18	16	15	13	12	348,210
West Beach-N. Prudhoe Bay State		1	1	1	1	1	-	-	-	-	-	-	7,665
Kuparuk River Unit		168	159	151	143	135	124	117	111	106	98	90	1,478,615
Kuparuk		109	101	93	86	79	72	67	63	60	57	54	1,075,655
Tarn		9	8	8	7	7	6	6	6	6	3	-	72,635
West Sak		50	50	50	50	49	46	44	42	40	38	36	330,325
Liberty		17	15	13	12	11	5	-	-	-	-	-	118,625
Milne Point Unit		73	69	68	66	64	60	56	53	50	47	44	544,945
Milne Point		21	18	17	15	14	13	11	10	9	8	7	195,275
Sag River		2	1	1	1	1	1	1	1	1	1	1	19,345
Schrader Bluff		50	50	50	50	49	46	44	42	40	38	36	330,325
Northstar		20	18	16	15	13	12	11	10	-	-	-	150,380
Other Onshore [3]		17	15	14	12	11	10	9	8	7	7	6	105,850
Prudhoe Bay		391	374	359	342	323	307	291	276	262	249	236	3,493,050
Satellites [4]		25	22	20	19	18	16	15	13	10	8	8	177,025
TOTAL		**836**	**789**	**748**	**709**	**668**	**619**	**578**	**545**	**504**	**468**	**435**	**7,205,465**
COOK INLET [5]													
Beaver Creek		-	-	-	-	-	-	-	-	-	-	-	599
Granite Point		-	-	-	-	-	-	-	-	-	-	-	11,680
McArthur River		-	-	-	-	-	-	-	-	-	-	-	21,561
Swanson River		-	-	-	-	-	-	-	-	-	-	-	2,960
Middle Ground Shoal		-	-	-	-	-	-	-	-	-	-	-	9,454
Trading Bay		-	-	-	-	-	-	-	-	-	-	-	2,935
West McArthur River		-	-	-	-	-	-	-	-	-	-	-	1,351
TOTAL		-	-	-	-	-	-	-	-	-	-	-	**50,538**
STATE													
TOTAL		**836**	**789**	**748**	**709**	**668**	**619**	**578**	**545**	**504**	**468**	**435**	**7,256,003**
AVAILABLE ROYALTY OIL													
	Royalty Percent												
NORTH SLOPE													
Alpine	10.0% [9]	4	4	3	3	3	3	2	2	2	2	2	27,777
Badami	16.7%	3	2	2	2	2	2	2	2	2	1	-	22,188
Endicott [1]	14.4%	4	3	3	3	3	3	3	2	2	2	2	31,956
Greater Point McIntyre Area	12.5%	6	5	5	4	4	4	3	3	3	2	2	63,008
Lisburne	12.5%	1	1	1	1	1	1	0	0	0	0	0	6,023
Niakuk [2]	12.5%	1	1	1	1	1	1	1	1	1	1	1	12,547
Point McIntyre	12.5%	4	4	3	3	3	2	2	2	2	2	2	43,526
West Beach-N. Prudhoe Bay State	12.5%	0	0	0	0	0	-	-	-	-	-	-	958
Kuparuk River Unit	12.5%	21	20	19	18	17	16	15	14	13	12	11	184,827
Kuparuk	12.5%	14	13	12	11	10	9	8	8	8	7	7	134,457
Tarn	12.5%	1	1	1	1	1	1	1	1	1	0	-	9,079
West Sak	12.5%	6	6	6	6	6	6	6	5	5	5	5	41,291
Liberty	[10]	-	-	-	-	-	-	-	-	-	-	-	-
Milne Point Unit	14.6%	11	10	10	10	9	9	8	8	7	7	6	79,289
Milne Point	14.6%	3	3	2	2	2	2	2	1	1	1	1	28,413
Sag River	14.6%	0	0	0	0	0	0	0	0	0	0	0	2,815
Schrader Bluff	14.6%	7	7	7	7	7	7	6	6	6	6	5	48,062
Northstar	16.0% [11]	3	3	3	2	2	2	2	2	-	-	-	24,061
Other Onshore [3]	12.5%	2	2	2	2	1	1	1	1	1	1	1	13,231
Prudhoe Bay	12.5%	49	47	45	43	40	38	36	35	33	31	30	436,631
Satellites [4]	12.5%	3	3	3	2	2	2	2	2	1	1	1	22,128
TOTAL		**105**	**99**	**94**	**89**	**84**	**79**	**74**	**70**	**64**	**59**	**55**	**905,142**
COOK INLET [5]													
Beaver Creek	[12]	-	-	-	-	-	-	-	-	-	-	-	-
Granite Point	12.5%	-	-	-	-	-	-	-	-	-	-	-	1,460
McArthur River	12.5%	-	-	-	-	-	-	-	-	-	-	-	2,695
Swanson River	[12]	-	-	-	-	-	-	-	-	-	-	-	-
Middle Ground Shoal	12.5%	-	-	-	-	-	-	-	-	-	-	-	1,182
Trading Bay	12.5%	-	-	-	-	-	-	-	-	-	-	-	367
West McArthur River	12.5%	-	-	-	-	-	-	-	-	-	-	-	169
TOTAL		-	-	-	-	-	-	-	-	-	-	-	**5,872**
STATE													
TOTAL		**105**	**99**	**94**	**89**	**84**	**79**	**74**	**70**	**64**	**59**	**55**	**911,015**
IN-KIND ROYALTY OIL SALES													
Mapco [6]		-	-	-	-	-	-	-	-	-	-	-	76,650
Mapco #2 [7]		-	-	-	-	-	-	-	-	-	-	-	4,745
Tesoro [8]		-	-	-	-	-	-	-	-	-	-	-	11,787
TOTAL		-	-	-	-	-	-	-	-	-	-	-	93,182
IN-VALUE ROYALTY OIL													
TOTAL		**105**	**99**	**94**	**89**	**84**	**79**	**74**	**70**	**64**	**59**	**55**	**817,833**

[7] The Mapco #2 contract is for 11.6% of Prudhoe Bay Unit royalty production, it expires December 1998.
[8] The Tesoro contract is for 30% of Prudhoe Bay Unit royalty production, it expires December 1998.
[9] This percentage is the state's estimated share of the gross and does not include the royalty share attributable to Arctic Slope Regional Corporation.
[10] Liberty field likely lies entirely within federal leases and so will pay no state royalty.
[11] This is the estimated minimum state royalty share. It does not include federal royalty or the sliding scale Supplementary Royalty.
[12] Beaver Creek and Swanson River fields lie entirely within federal leases and so pay no state royalty.
Revised 3/10/98

Six blank pages (2, 14, 54, 72, 74, and 80) are missing from this report. All text, tables, and graphs are present.

TABLE 2B - OIL PRODUCTION FORECAST FOR PRODUCING AND DEVELOPING NORTH SLOPE FIELDS, BY LESSEE

THOUSANDS OF BARRELS PER DAY. INCLUDES OIL, CONDENSATE, AND NGLs

	Working Interest	Total Offtake [1]	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
PRODUCTION FORECAST FOR NORTH SLOPE														
Alpine			-	-	**30**	**60**	**60**	**60**	**60**	**55**	**50**	**45**	**42**	**39**
Arco	56.00%		-	-	17	34	34	34	34	31	28	25	24	22
Anadarko	22.00%		-	-	7	13	13	13	13	12	11	10	9	9
UTP	22.00%		-	-	7	13	13	13	13	12	11	10	9	9
Badami			-	**35**	**34**	**31**	**28**	**25**	**23**	**21**	**19**	**18**	**16**	**15**
BP	70.00%		-	25	24	22	20	18	16	15	13	13	11	11
FINA	30.00%		-	11	10	9	8	8	7	6	6	5	5	5
Endicott [2]			**58**	**48**	**42**	**37**	**35**	**33**	**31**	**30**	**28**	**27**	**26**	**25**
Amoco		10.33%	6	5	4	4	4	3	3	3	3	3	3	3
Arco		0.02%	0	0	0	0	0	0	0	0	0	0	0	0
BP		57.25%	33	27	24	21	20	19	18	17	16	15	15	14
CIRI		0.66%	0	0	0	0	0	0	0	0	0	0	0	0
Doyon		0.12%	0	0	0	0	0	0	0	0	0	0	0	0
Exxon		20.80%	12	10	9	8	7	7	6	6	6	6	5	5
NANA		0.40%	0	0	0	0	0	0	0	0	0	0	0	0
Unocal		10.41%	6	5	4	4	4	3	3	3	3	3	3	3
Greater Point McIntyre [3]			**180**	**151**	**129**	**109**	**92**	**80**	**73**	**66**	**61**	**56**	**51**	**46**
Arco		28.87%	52	44	37	31	27	23	21	19	18	16	15	13
BP		37.84%	68	57	49	41	35	30	28	25	23	21	19	17
Exxon		33.28%	60	50	43	36	31	27	24	22	20	19	17	15
Kuparuk River Unit [4]			**266**	**278**	**285**	**275**	**266**	**255**	**235**	**219**	**203**	**189**	**178**	**168**
Arco		55.19%	147	153	157	152	147	141	130	121	112	104	98	93
BP		39.15%	104	109	112	108	104	100	92	86	79	74	70	66
Chevron		0.11%	0	0	0	0	0	0	0	0	0	0	0	0
Exxon		0.22%	1	1	1	1	1	1	1	0	0	0	0	0
Mobil		0.37%	1	1	1	1	1	1	1	1	1	1	1	1
Unocal		4.97%	13	14	14	14	13	13	12	11	10	9	9	8
Milne Point Unit [5]			**53**	**63**	**73**	**78**	**85**	**91**	**86**	**83**	**79**	**77**	**75**	**73**
BP		91.19%	48	57	67	71	78	83	78	76	72	70	68	67
Oxy		8.81%	5	6	6	7	7	8	8	7	7	7	7	6
North Star			-	-	-	**50**	**50**	**46**	**39**	**34**	**29**	**26**	**23**	**20**
BP	98.08%		-	-	-	49	49	45	38	33	28	26	23	20
Murphy	1.92%		-	-	-	1	1	1	1	1	1	0	0	0
Prudhoe Bay Unit [6]			**700**	**660**	**630**	**610**	**589**	**568**	**545**	**515**	**481**	**447**	**415**	**391**
Arco		29.01%	203	191	183	177	171	165	158	149	140	130	120	113
BP		37.74%	264	249	238	230	222	214	206	194	182	169	157	148
Chevron		1.04%	7	7	7	6	6	6	6	5	5	5	4	4
Exxon		29.13%	204	192	183	178	172	165	159	150	140	130	121	114
Forcenergy		0.03%	0	0	0	0	0	0	0	0	0	0	0	0
Mobil		1.35%	9	9	9	8	8	8	7	7	7	6	6	5
Phillips		1.34%	9	9	8	8	8	8	7	7	6	6	6	5
Texaco		0.37%	3	2	2	2	2	2	2	2	2	2	2	1
TOTAL Amoco			**6**	**5**	**4**	**4**	**4**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
TOTAL Anadarko			-	-	**7**	**13**	**13**	**13**	**13**	**12**	**11**	**10**	**9**	**9**
TOTAL Arco			**402**	**388**	**394**	**394**	**378**	**362**	**342**	**320**	**297**	**275**	**257**	**241**
TOTAL BP			**518**	**524**	**513**	**542**	**527**	**509**	**476**	**446**	**414**	**388**	**363**	**342**
TOTAL Chevron			**8**	**7**	**7**	**7**	**6**	**6**	**6**	**6**	**5**	**5**	**4**	**4**
TOTAL CIRI			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL Doyon			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL Exxon			**276**	**253**	**236**	**222**	**210**	**199**	**190**	**179**	**167**	**155**	**144**	**135**
TOTAL Fina			-	**11**	**10**	**9**	**8**	**8**	**7**	**6**	**6**	**5**	**5**	**5**
TOTAL Forcenergy			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL Mobil			**10**	**10**	**10**	**9**	**9**	**9**	**8**	**8**	**7**	**7**	**6**	**6**
TOTAL Murphy			-	-	-	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**0**
TOTAL NANA			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL Oxy			**5**	**6**	**6**	**7**	**7**	**8**	**8**	**7**	**7**	**7**	**7**	**6**
TOTAL Phillips			**9**	**9**	**9**	**8**	**8**	**8**	**7**	**7**	**7**	**6**	**6**	**5**
TOTAL Texaco			**3**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**
TOTAL UTP			-	-	**7**	**13**	**13**	**13**	**13**	**12**	**11**	**10**	**9**	**9**
TOTAL Unocal			**19**	**19**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**12**	**11**
TOTAL North Slope			**1,257**	**1,235**	**1,223**	**1,250**	**1,205**	**1,158**	**1,092**	**1,023**	**950**	**885**	**826**	**777**
PROJECTED NORTH SLOPE ROYALTY SHARE FROM ABOVE FIELDS			**162**	**161**	**163**	**163**	**156**	**150**	**141**	**132**	**122**	**114**	**106**	**100**

NOTE: "-" = zero or no data; "0" = less than 0.5.

[1] Average from operator royalty statements of January through December 1997.

[2] "Endicott" production includes Endicott and Sag Delta North.

[3] "Greater Point McIntyre" production includes Lisburne, Niakuk, West Niakuk (27), Niakuk (28), Niakuk (29), North Prudhoe Bay State, Point McIntyre, and West Beach.

[4] "Kuparuk River Unit" includes Kuparuk, Tarn, and West Sak.

[5] "Milne Point" production includes Milne Point, Schrader Bluff, and Sag River.

[6] "Prudhoe Bay Unit" includes Prudhoe Bay and Satellites.

	Working Interest	Total Offtake [1]	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Cumulative (MBbl)
PRODUCTION FORECAST FOR NORTH SLOPE													
Alpine			**36**	**33**	**30**	**28**	**26**	**24**	**23**	**21**	**20**	**19**	**288,715**
Arco	56.00%		20	18	17	16	15	13	13	12	11	11	155,548
Anadarko	22.00%		8	7	7	6	6	5	5	5	4	4	61,108
UTP	22.00%		8	7	7	6	6	5	5	5	4	4	61,108
Badami			**14**	**13**	**13**	**12**	**11**	**11**	**10**	**10**	**5**	**-**	**132,860**
BP	70.00%		10	9	9	8	8	8	7	7	4	-	93,002
FINA	30.00%		4	4	4	4	3	3	3	3	2	-	39,858
Endicott [2]			**24**	**23**	**22**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**256,230**
Amoco		10.33%	2	2	2	2	2	2	2	2	2	1	22,934
Arco		0.02%	0	0	0	0	0	0	0	0	0	0	51
BP		57.25%	14	13	13	11	11	10	10	9	9	8	127,054
CIRI		0.66%	0	0	0	0	0	0	0	0	0	0	1,476
Doyon		0.12%	0	0	0	0	0	0	0	0	0	0	276
Exxon		20.80%	5	5	5	4	4	4	4	3	3	3	46,152
NANA		0.40%	0	0	0	0	0	0	0	0	0	0	885
Unocal		10.41%	2	2	2	2	2	2	2	2	2	1	23,092
Greater Point McIntyre [3]			**43**	**38**	**35**	**33**	**29**	**26**	**24**	**22**	**19**	**18**	**504,065**
Arco		28.87%	12	11	10	10	8	8	7	6	5	5	145,542
BP		37.84%	16	14	13	12	11	10	9	8	7	7	190,752
Exxon		33.28%	14	13	12	11	10	9	8	7	6	6	167,771
Kuparuk River Unit [4]			**159**	**151**	**143**	**135**	**124**	**117**	**111**	**106**	**98**	**90**	**1,478,615**
Arco		55.19%	88	83	79	75	68	65	61	59	54	50	816,072
BP		39.15%	62	59	56	53	49	46	43	41	38	35	578,832
Chevron		0.11%	0	0	0	0	0	0	0	0	0	0	1,612
Exxon		0.22%	0	0	0	0	0	0	0	0	0	0	3,224
Mobil		0.37%	1	1	1	0	0	0	0	0	0	0	5,414
Unocal		4.97%	8	8	7	7	6	6	6	5	5	4	73,461
Milne Point Unit [5]			**69**	**68**	**66**	**64**	**60**	**56**	**53**	**50**	**47**	**44**	**544,945**
BP		91.19%	63	62	60	58	55	51	48	46	43	40	496,940
Oxy		8.81%	6	6	6	6	5	5	5	4	4	4	48,005
North Star			**18**	**16**	**15**	**13**	**12**	**11**	**10**	**-**	**-**	**-**	**150,380**
BP	98.08%		18	16	15	13	12	11	10	-	-	-	147,493
Murphy	1.92%		0	0	0	0	0	0	0	-	-	-	2,887
Prudhoe Bay Unit [6]			**374**	**359**	**342**	**323**	**307**	**291**	**276**	**262**	**249**	**236**	**3,512,030**
Arco		29.01%	108	104	99	94	89	84	80	76	72	68	1,013,263
BP		37.74%	141	135	129	122	116	110	104	99	94	89	1,318,131
Chevron		1.04%	4	4	4	3	3	3	3	3	3	2	36,166
Exxon		29.13%	109	105	100	94	89	85	80	76	73	69	1,017,415
Forcenergy		0.03%	0	0	0	0	0	0	0	0	0	0	1,163
Mobil		1.35%	5	5	5	4	4	4	4	4	3	3	47,301
Phillips		1.34%	5	5	5	4	4	4	4	4	3	3	46,830
Texaco		0.37%	1	1	1	1	1	1	1	1	1	1	12,851
TOTAL Amoco			**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	22,934
TOTAL Anadarko			**8**	**7**	**7**	**6**	**6**	**5**	**5**	**5**	**4**	**4**	61,108
TOTAL Arco			**229**	**217**	**205**	**193**	**180**	**170**	**161**	**153**	**143**	**134**	2,130,477
TOTAL BP			**324**	**309**	**295**	**278**	**260**	**245**	**232**	**210**	**194**	**179**	2,952,203
TOTAL Chevron			**4**	**4**	**4**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	37,779
TOTAL CIRI			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1,476
TOTAL Doyon			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	276
TOTAL Exxon			**129**	**122**	**116**	**110**	**103**	**97**	**92**	**87**	**82**	**78**	1,234,562
TOTAL Fina			**4**	**4**	**4**	**4**	**3**	**3**	**3**	**3**	**2**	**-**	39,858
TOTAL Forcenergy			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,163**
TOTAL Mobil			**6**	**5**	**5**	**5**	**5**	**4**	**4**	**4**	**4**	**4**	**52,715**
TOTAL Murphy			**0**	**0**	**0**	**0**	**0**	**0**	**0**	-	-	-	2,887
TOTAL NANA			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	885
TOTAL Oxy			**6**	**6**	**6**	**6**	**5**	**5**	**5**	**4**	**4**	**4**	48,005
TOTAL Phillips			**5**	**5**	**5**	**4**	**4**	**4**	**4**	**4**	**3**	**3**	47,267
TOTAL Texaco			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**12,851**
TOTAL UTP			**8**	**7**	**7**	**6**	**6**	**5**	**5**	**5**	**4**	**4**	61,108
TOTAL Unocal			**10**	**10**	**9**	**9**	**8**	**8**	**7**	**7**	**6**	**6**	96,553
TOTAL North Slope			**737**	**701**	**666**	**628**	**588**	**554**	**524**	**487**	**453**	**421**	6,804,037
			94	**90**	**85**	**80**	**75**	**71**	**67**	**62**	**58**	**53**	**878,145**

TABLE 2C - OIL PRODUCTION FORECAST FOR PRODUCING COOK INLET FIELDS, BY LESSEE

THOUSANDS OF BARRELS PER DAY. INCLUDES OIL, CONDENSATE, AND NGLs

	Total Offtake	1998	1999	2000	2001	2002	2003	Cumulative (MBbl)
PRODUCTION FORECAST [1]								
Beaver Creek [2]		0.31	0.29	0.28	0.27	0.25	0.24	597
Marathon	100.00%	0.31	0.29	0.28	0.27	0.25	0.24	597
Granite Point		6.50	6.00	5.50	5.10	4.60	4.30	11,680
Mobil	31.55%	2.05	1.89	1.74	1.61	1.45	1.36	3,685
Unocal	68.45%	4.45	4.11	3.76	3.49	3.15	2.94	7,995
McArthur River		12.60	11.35	10.20	9.20	8.27	7.45	21,561
Forcenergy	45.75%	5.76	5.19	4.67	4.21	3.78	3.41	9,864
Unocal	54.25%	6.84	6.16	5.53	4.99	4.49	4.04	11,697
Middle Ground Shoal		5.50	5.00	4.50	4.00	3.60	3.30	9,454
Shell	81.12%	4.46	4.06	3.65	3.24	2.92	2.68	7,669
Unocal	18.88%	1.04	0.94	0.85	0.76	0.68	0.62	1,785
Swanson River [2]		2.20	1.76	1.40	1.13	0.90	0.72	2,960
Unocal	100.00%	2.20	1.76	1.40	1.13	0.90	0.72	2,960
Trading Bay		1.50	1.45	1.37	1.30	1.24	1.18	2,935
Forcenergy	50.00%	0.75	0.73	0.69	0.65	0.62	0.59	1,467
Unocal	50.00%	0.75	0.73	0.69	0.65	0.62	0.59	1,467
West McArthur River		1.26	0.88	0.62	0.43	0.30	0.21	1,351
Forcenergy	100.00%	1.26	0.88	0.62	0.43	0.30	0.21	1,351
TOTAL FORCENERGY		**7.77**	**6.80**	**5.97**	**5.29**	**4.70**	**4.21**	**12,682**
TOTAL MOBIL		**2.05**	**1.89**	**1.74**	**1.61**	**1.45**	**1.36**	**3,685**
TOTAL SHELL		**4.46**	**4.06**	**3.65**	**3.24**	**2.92**	**2.68**	**7,669**
TOTAL UNOCAL		**13.07**	**11.93**	**10.83**	**9.89**	**8.93**	**8.20**	**22,944**

[1] The projection is not extended beyond 2003 because production is very sensitive to short term economics.
[2] Beaver Creek and Swanson River fields lie entirely within federal leases.
Revised 4/5/98

FIGURE 2A-1 - OIL PRODUCTION FORECAST FOR NORTH SLOPE, BY AREA

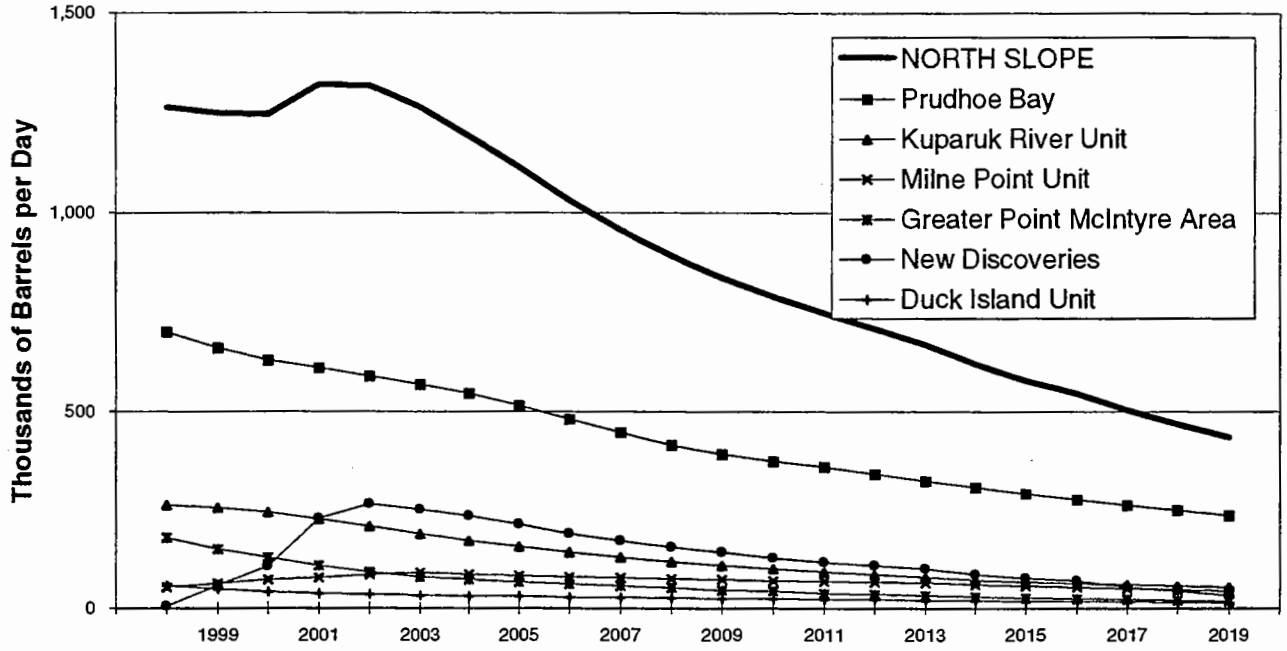


FIGURE 2A-2 - OIL PRODUCTION FORECAST FOR GREATER POINT McINTYRE AREA

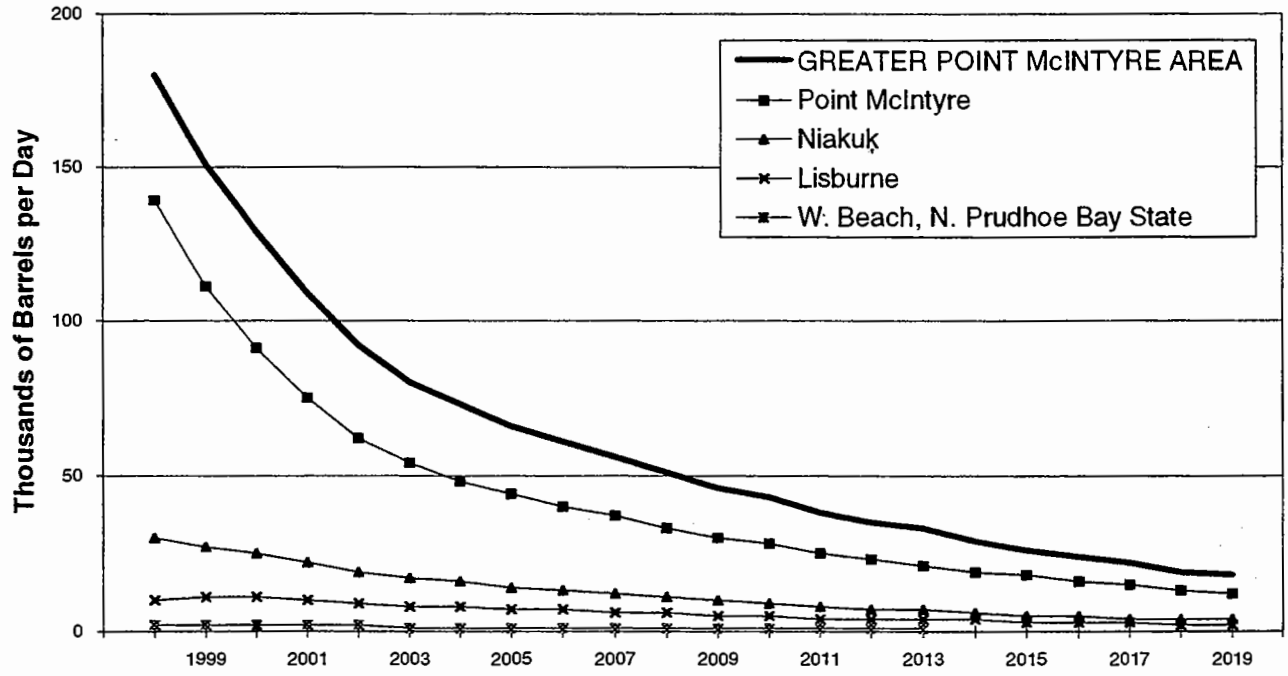


FIGURE 2A-3 - OIL PRODUCTION FORECAST FOR KUPARUK RIVER AREA

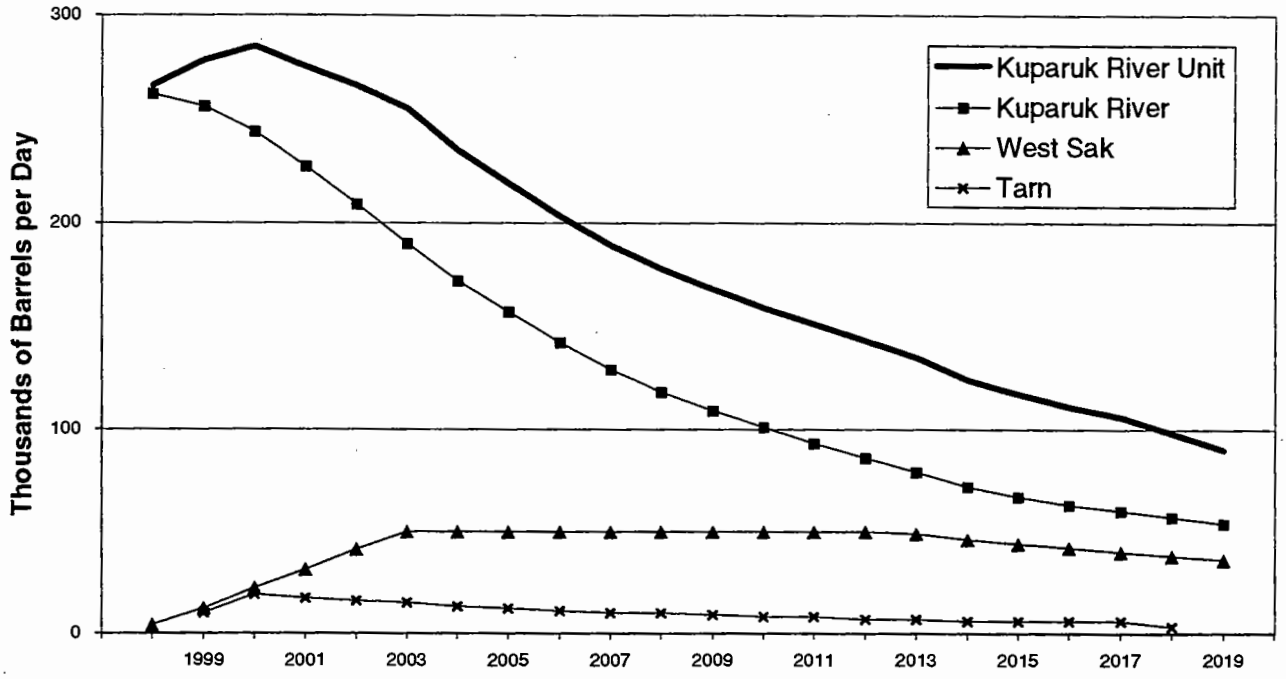


FIGURE 2A-4 - OIL PRODUCTION FORECAST FOR NEW DISCOVERIES

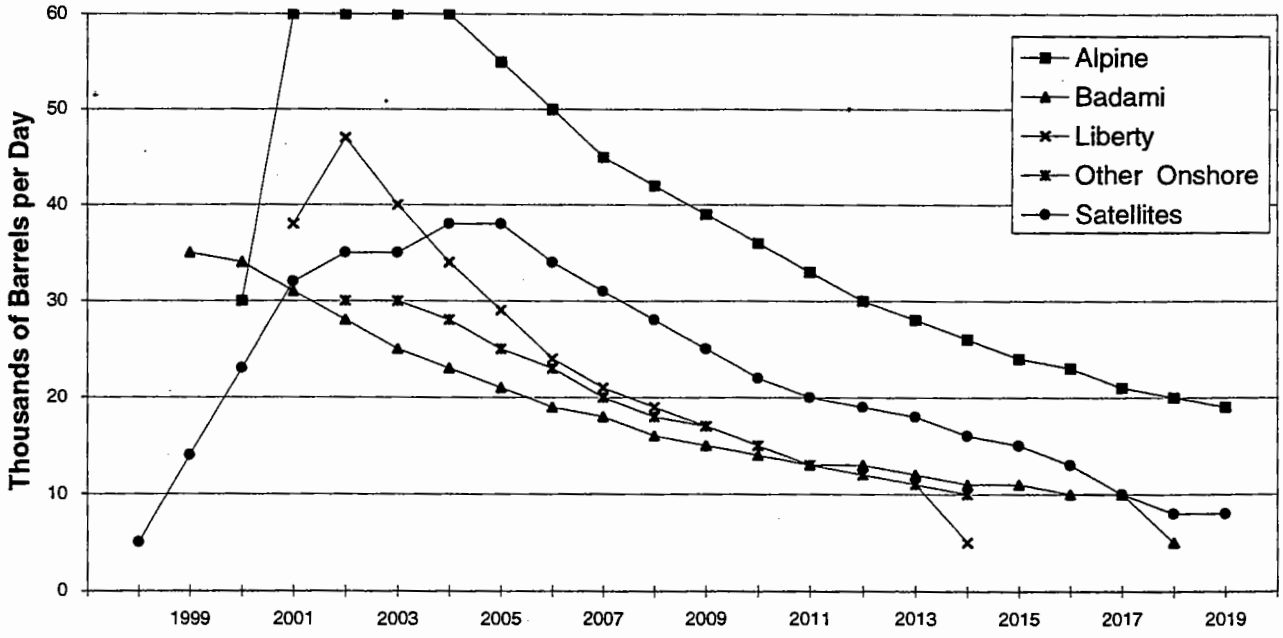


FIGURE 2A-5 - OIL PRODUCTION FORECAST FOR COOK INLET

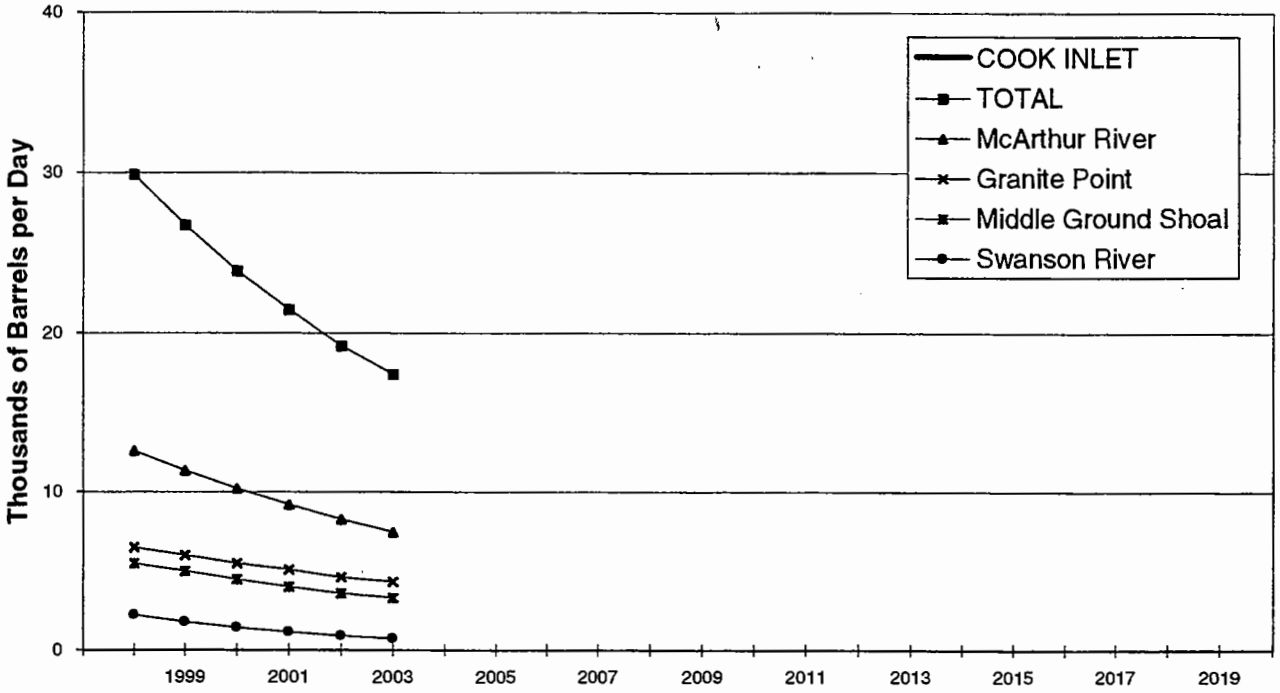
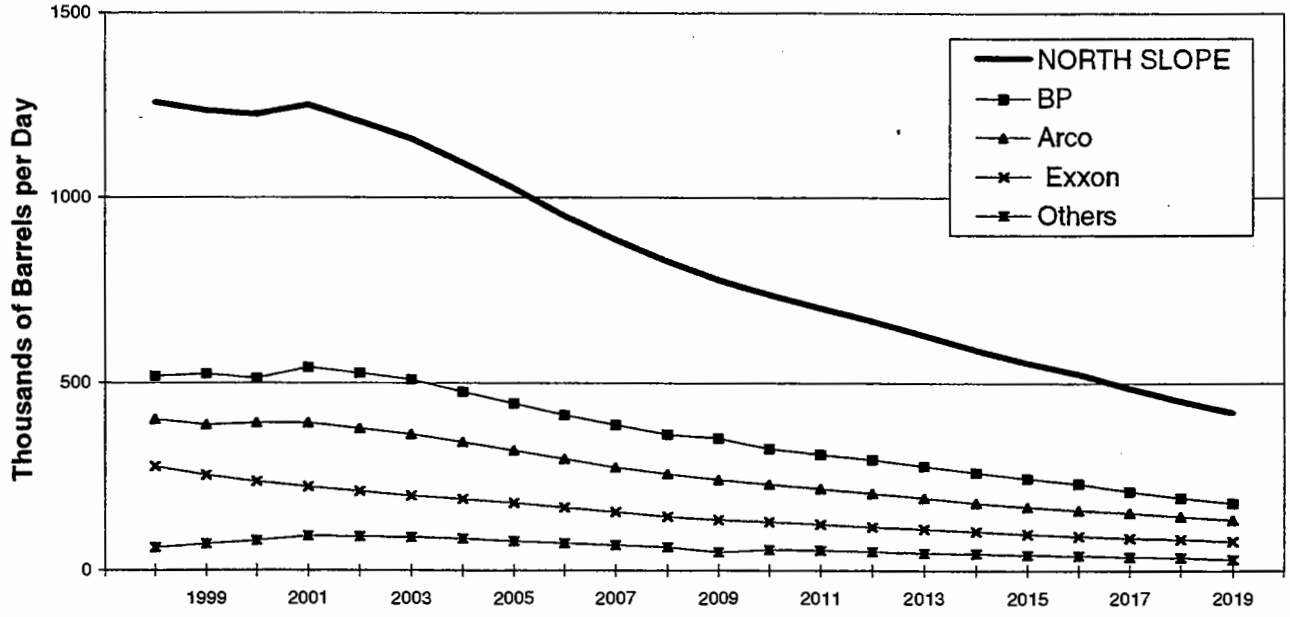


FIGURE 2B - OIL PRODUCTION FORECAST FOR NORTH SLOPE, BY PRODUCER



3 OIL PRODUCTION HISTORY

PRE-1950'S PRODUCTION

Dozens of wildcat wells were drilled in Alaska in the late 1800's and early 1900's, mostly along the coasts of the Gulf of Alaska, Cook Inlet and the National Petroleum Reserve, Alaska (NPRA). Of all these prospects, only Katalla field, near Cordova, produced commercial quantities of oil.

COOK INLET

Alaska's first significant oil field, Swanson River, was discovered in 1957 and began production in 1959. Five other fields were discovered nearby and brought to production between 1965 and 1972. Two fields, Tyonek Deep and West McArthur River, were discovered in 1991 and, though Tyonek Deep development remains uncertain, West McArthur River began production in 1993.

At present all Cook Inlet oil is transported to the Tesoro refinery. Oil from fields on the westside of Cook Inlet is transported by pipeline to the Drift River Terminal, then shipped to Nikiski, then piped to the refinery. Oil from the eastside fields is piped directly to the Regional production peaked at 83 million barrels per year in 1970 and has declined to 15.2 million barrels in 1996. By the end of 1996 Cook Inlet fields have produced 1.2 billion barrels of oil, 48% from McArthur River, 18% from Swanson River and 34% from the combined other fields.

NORTH SLOPE

Atlantic Richfield discovered the first commercial North Slope oil field at Prudhoe Bay in 1968. At that time the only land transport system of any kind north of the Brooks Range was a few miles of local road at Barrow. During the next several years the field was delineated and partially developed and simultaneously a transport system was designed and built. Construction of the Trans Alaska Pipeline System (TAPS) began in 1975 and was completed in 1977. While waiting for pipeline completion Prudhoe Bay field produced small amounts of oil and gas to fuel the field operations and surplus crude and residual oil was injected back into the reservoir. Kuparuk, Lisburne and Milne Point fields were subsequently developed including direct pipelines to TAPS. Endicott field, like Prudhoe Bay field, was developed before its pipeline to TAPS was completed and, during its isolation, produced and injected a small volume of oil.

From the beginning of Prudhoe Bay production, the dissolved gas and water have been separated from the crude oil and, augmented with seawater, injected back into the reservoir. Inevitably, the reservoir's proportion of both gas-and-water to oil increased and eventually, oil production was constricted by the rate at which the separating plants could process gas and water. To alleviate this constraint the gas and water handling facilities were expanded in 1986, 1991 and 1993-1994.

North Slope production, including oil, condensate and NGLs, peaked at 744 million barrels per year (2.0 million barrels per day) in 1988 and has steadily declined to 496 million barrels per year (1.4 million barrels per day) in 1997. The combined fields have produced 12.1 billion barrels by end of 1997, 81% of it from Prudhoe Bay, 12% from Kuparuk and 7% from the combined other pools.

Recent additions from Point McIntyre, North Prudhoe Bay State, West Beach and Niakuk pools and an increase in Milne Point production have somewhat offset the decline at Prudhoe Bay Unit. Planned production at North Star, Badami, Alpine and satellite pools at Kuparuk River and Prudhoe Bay also will soften the decline.

NATURAL GAS LIQUIDS

Most North Slope fields and the largest Cook inlet fields have produced NGLs at some time in their histories. Most of the North Slope NGLs are blended with the TAPS oil stream and transported to West Coast refineries and. Since 1996, the balance has been piped to the Kuparuk River Unit and injected as miscible injectant.

TABLE 3 - OIL PRODUCTION HISTORY

MILLIONS OF BARRELS PER YEAR

	Type[1]	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
NORTH SLOPE												
Duck Island Unit												
Endicott	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Sag Delta North	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Greater Point McIntyre Area		-										
Lisburne	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Niakuk [2]	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Point McIntyre	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Other		-										
North Prudhoe Bay Stat	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
West Beach	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Kuparuk River Unit		-										
Kuparuk	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
West Sak	oil	-	-	-	-	-	-	-	-	-	-	-
Milne Point Unit		-										
Milne Point	oil	-	-	-	-	-	-	-	-	-	-	-
Sag River	oil	-	-	-	-	-	-	-	-	-	-	-
Schrader Bluff	oil	-	-	-	-	-	-	-	-	-	-	-
Prudhoe Bay [3]	oil [3]	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
TOTAL OIL [3]		-	-	-	-	-	-	-	-	-	-	-
TOTAL NGL		-	-	-	-	-	-	-	-	-	-	-
TOTAL INJECTION		-	-	-	-	-	-	-	-	-	-	-
TOTAL NET		-	-	-	-	-	-	-	-	-	-	-
COOK INLET												
Beaver Creek	oil	-	-	-	-	-	-	-	-	-	-	-
Cannery Loop [4]	NGL	-	-	-	-	-	-	-	-	-	-	-
Granite Point	oil	-	-	-	-	-	-	-	0.002	-	7.052	13.131
Kenai [4]	NGL	-	-	-	-	-	-	-	-	-	-	-
McArthur River	oil	-	-	-	-	-	-	-	0.001	0.003	0.749	21.782
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	0.001	0.003	0.749	21.782
Middle Ground Shoal	oil	-	-	-	-	-	-	-	0.027	2.649	7.404	14.134
Redoubt Shoal	oil	-	-	-	-	-	-	-	-	-	-	0.002
Swanson River	oil	0.036	0.187	0.558	6.327	10.259	10.740	11.054	11.099	11.712	12.980	13.619
	NGL	-	-	-	-	-	-	-	-	-	-	0.004
	net	0.036	0.187	0.558	6.327	10.259	10.740	11.054	11.099	11.712	12.980	13.624
Trading Bay	oil	-	-	-	-	-	-	-	0.002	-	0.729	3.477
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	0.002	-	0.729	3.477
West McArthur River	oil	-	-	-	-	-	-	-	-	-	-	-
TOTAL OIL		**0.036**	**0.187**	**0.558**	**6.327**	**10.259**	**10.740**	**11.054**	**11.131**	**14.364**	**28.913**	**66.146**
TOTAL NGL		-	-	-	-	-	-	-	-	-	-	**0.004**
TOTAL NET		**0.036**	**0.187**	**0.558**	**6.327**	**10.259**	**10.740**	**11.054**	**11.131**	**14.364**	**28.913**	**66.150**
STATE												
TOTAL OIL [3][5]		**0.036**	**0.187**	**0.558**	**6.327**	**10.259**	**10.740**	**11.054**	**11.131**	**14.364**	**28.913**	**66.146**
TOTAL NGL		-	-	-	-	-	-	-	-	-	-	**0.004**
TOTAL INJECTION		-	-	-	-	-	-	-	-	-	-	-
TOTAL NET		**0.036**	**0.187**	**0.558**	**6.327**	**10.259**	**10.740**	**11.054**	**11.131**	**14.364**	**28.913**	**66.150**

NOTE: "-" = zero ro no data; "0" = less than 0.001.

Source: Alaska Oil and Gas Conservation Commission (AOGCC), "Alaska Production Summary by Field and Pool", monthly report.

[1] oil = crude oil, NGL = natural gas liquids, liq = liquids: oil + NGL, inj = injection, net = oil+NGL-inj.

[2] "Niakuk" production and reserves include Niakuk, West Niakuk (27), Niakuk (28), and Niakuk (29).

[3] Prudhoe Bay oil production includes oil and condensates.

[4] Gas field temporarily produced NGL.

	Type[1]	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
NORTH SLOPE												
Duck Island Unit												
Endicott	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Sag Delta North	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Greater Point McIntyre Area												
Lisburne	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Niakuk [2]	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Point McIntyre	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Other												
North Prudhoe Bay Stat	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
West Beach	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Kuparuk River Unit												
Kuparuk	oil	-	0.006	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	0.006	-	-	-	-	-	-	-	-	-
West Sak	oil	-	-	-	-	-	-	-	-	-	-	-
Milne Point Unit												
Milne Point	oil	-	-	-	-	-	-	-	-	-	-	-
Sag River	oil	-	-	-	-	-	-	-	-	-	-	-
Schrader Bluff	oil	-	-	-	-	-	-	-	-	-	-	-
Prudhoe Bay [3]	oil [3]	0.277	1.193	1.157	0.922	0.944	2.170	2.870	4.604	115.258	397.679	468.412
	NGL	-	-	-	-	-	-	-	-	-	-	-
	inj	0.217	0.879	0.833	0.792	0.817	1.640	2.147	3.611	2.075	-	-
	net	0.060	0.314	0.324	0.130	0.127	0.530	0.723	0.993	113.183	397.679	468.412
TOTAL OIL [3]		**0.277**	**1.199**	**1.157**	**0.922**	**0.944**	**2.170**	**2.870**	**4.604**	**115.258**	**397.679**	**468.412**
TOTAL NGL		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL INJECTION		**0.217**	**0.879**	**0.833**	**0.792**	**0.817**	**1.640**	**2.147**	**3.611**	**2.075**	**-**	**-**
TOTAL NET		**0.060**	**0.320**	**0.324**	**0.130**	**0.127**	**0.530**	**0.723**	**0.993**	**113.183**	**397.679**	**468.412**
COOK INLET												
Beaver Creek	oil	-	-	-	0.002	0.416	0.375	0.322	0.302	0.276	0.223	0.211
Cannery Loop [4]	NGL	-	-	-	-	-	-	-	-	-	-	-
Granite Point	oil	9.183	7.522	5.577	4.663	4.767	4.237	4.361	4.471	4.711	4.867	4.613
Kenai [4]	NGL	0.002	0.002	0.001	0.002	0.001	0.000	0.001	0.001	0.000	0.001	0.000
McArthur River	oil	31.301	40.165	40.537	40.774	38.884	39.145	40.876	35.810	33.235	30.223	25.440
	NGL	-	0.426	0.593	0.570	0.661	0.654	0.644	0.653	0.733	0.730	0.541
	net	31.301	40.591	41.130	41.344	39.545	39.798	41.520	36.464	33.968	30.953	25.981
Middle Ground Shoal	oil	10.467	12.719	11.304	9.719	10.239	9.001	8.670	8.864	7.617	6.382	5.545
Redoubt Shoal	oil	-	-	-	-	-	-	-	-	-	-	-
Swanson River	oil	13.151	12.408	11.466	8.896	10.064	9.765	8.754	7.591	5.981	4.870	4.344
	NGL	0.070	0.063	0.077	0.012	0.098	0.096	0.089	0.090	0.086	0.065	0.080
	net	13.221	12.471	11.543	8.908	10.163	9.861	8.843	7.681	6.066	4.935	4.424
Trading Bay	oil	9.936	9.600	8.744	8.585	7.825	7.552	6.128	5.366	4.276	3.567	2.892
	NGL	-	0.039	0.039	0.025	0.051	0.043	0.031	0.026	0.044	0.019	0.014
	net	9.936	9.639	8.782	8.610	7.877	7.594	6.158	5.392	4.320	3.587	2.906
West McArthur River	oil	-	-	-	-	-	-	-	-	-	-	-
TOTAL OIL		**74.038**	**82.415**	**77.628**	**72.640**	**72.196**	**70.074**	**69.111**	**62.404**	**56.095**	**50.132**	**43.045**
TOTAL NGL		**0.073**	**0.530**	**0.710**	**0.608**	**0.812**	**0.793**	**0.765**	**0.770**	**0.863**	**0.815**	**0.635**
TOTAL NET		**74.111**	**82.945**	**78.338**	**73.248**	**73.007**	**70.867**	**69.876**	**63.175**	**56.958**	**50.946**	**43.680**
STATE												
TOTAL OIL [3][5]		**74.315**	**83.614**	**78.785**	**73.562**	**73.139**	**72.244**	**71.980**	**67.009**	**171.353**	**447.810**	**511.457**
TOTAL NGL		**0.073**	**0.530**	**0.710**	**0.608**	**0.812**	**0.793**	**0.765**	**0.770**	**0.863**	**0.815**	**0.635**
TOTAL INJECTION		**0.217**	**0.879**	**0.833**	**0.792**	**0.817**	**1.640**	**2.147**	**3.611**	**2.075**	**-**	**-**
TOTAL NET		**74.171**	**83.265**	**78.661**	**73.378**	**73.134**	**71.397**	**70.598**	**64.168**	**170.141**	**448.625**	**512.092**

[5] Does not include Katalla production.
[6] "Endicott" reserves includes Endicott and Sag Delta North.
[7] "North Prudhoe Bay State" reserves includes North Prudhoe Bay State and West Beach.
[8] West Sak reserves includes K-10, Tabasco and West Sak.
Revised 3/10/98

	Type[1]	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NORTH SLOPE												
Duck Island Unit												
Endicott	oil	-	-	-	-	-	-	0.011	8.796	37.441	35.746	36.181
	NGL	-	-	-	-	-	-	-	0.003	0.492	0.839	0.845
	inj	-	-	-	-	-	-	0.007	0.014	-	-	-
	net	-	-	-	-	-	-	0.004	8.785	37.933	36.584	37.027
Sag Delta North	oil	-	-	-	-	-	-	-	-	-	0.349	1.542
	NGL	-	-	-	-	-	-	-	-	-	0.005	0.028
	net	-	-	-	-	-	-	-	-	-	0.354	1.569
Greater Point McIntyre Area												
Lisburne	oil	-	0.002	0.208	0.087	0.294	1.123	3.594	16.199	15.095	13.737	14.669
	NGL	-	-	-	-	-	-	-	0.458	1.008	1.093	1.204
	net	-	0.002	0.208	0.087	0.294	1.123	3.594	16.657	16.103	14.830	15.873
Niakuk [2]	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Point McIntyre	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Other												
North Prudhoe Bay Stat	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
West Beach	oil	-	-	-	-	-	-	-	-	-	-	-
	NGL	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-
Kuparuk River Unit												
Kuparuk	oil	-	1.092	32.406	39.876	46.084	78.926	93.900	102.448	110.891	109.770	107.206
	NGL	-	-	-	-	-	0.761	1.072	1.257	0.256	-	-
	net	-	1.092	32.406	39.876	46.084	79.687	94.972	103.705	111.146	109.770	107.206
West Sak	oil	-	-	-	0.006	0.124	0.326	0.300	-	-	-	-
Milne Point Unit												
Milne Point	oil	-	-	-	-	-	0.704	4.709	0.040	-	3.715	6.624
Sag River	oil	-	-	-	-	-	-	-	-	-	-	-
Schrader Bluff	oil	-	-	-	-	-	-	-	-	-	0.000	0.004
Prudhoe Bay [3]	oil [3]	555.394	555.170	558.889	560.837	561.952	568.534	561.538	572.045	559.412	505.940	470.140
	NGL	0.254	0.450	0.500	0.311	0.317	0.056	0.230	14.610	19.274	16.928	16.094
	inj	-	-	-	-	-	-	-	-	-	-	-
	net	555.648	555.620	559.389	561.148	562.269	568.590	561.767	586.655	578.686	522.869	486.235
TOTAL OIL [3]		**555.394**	**556.264**	**591.503**	**600.806**	**608.454**	**649.613**	**664.052**	**699.527**	**722.840**	**669.258**	**636.366**
TOTAL NGL		**0.254**	**0.450**	**0.500**	**0.311**	**0.317**	**0.817**	**1.302**	**16.328**	**21.029**	**18.864**	**18.171**
TOTAL INJECTION		**-**	**-**	**-**	**-**	**-**	**-**	**0.007**	**0.014**	**-**	**-**	**-**
TOTAL NET		**555.648**	**556.714**	**592.003**	**601.117**	**608.771**	**650.430**	**665.347**	**715.841**	**743.869**	**688.123**	**654.538**
COOK INLET												
Beaver Creek	oil	0.214	0.180	0.182	0.170	0.159	0.146	0.158	0.185	0.141	0.227	0.212
Cannery Loop [4]	NGL	-	-	-	-	-	-	-	-	-	-	-
Granite Point	oil	4.394	3.975	3.467	3.550	3.287	3.052	3.169	2.803	2.677	2.275	1.462
Kenai [4]	NGL	-	-	-	-	-	-	-	-	-	-	-
McArthur River	oil	20.894	18.022	15.806	13.564	11.707	7.454	7.942	7.375	7.143	6.955	4.265
	NGL	0.412	0.484	0.449	0.332	0.317	0.194	0.228	0.196	0.162	-	-
	net	21.306	18.506	16.255	13.896	12.024	7.648	8.170	7.571	7.305	6.955	4.265
Middle Ground Shoal	oil	4.854	4.291	3.573	3.381	3.238	3.098	3.211	2.834	2.742	2.769	2.688
Redoubt Shoal	oil	-	-	-	-	-	-	-	-	-	-	-
Swanson River	oil	3.724	2.938	2.999	3.017	2.517	2.165	2.055	2.059	2.127	1.875	1.878
	NGL	0.064	0.048	0.048	0.045	0.039	0.026	0.054	0.030	0.033	0.024	0.019
	net	3.787	2.986	3.047	3.062	2.556	2.191	2.109	2.089	2.159	1.899	1.897
Trading Bay	oil	2.167	1.669	1.384	1.081	1.075	1.029	1.046	0.935	0.886	1.264	0.643
	NGL	0.006	0.005	0.002	0.004	0.005	0.004	0.002	0.001	0.000	-	-
	net	2.173	1.675	1.386	1.085	1.080	1.032	1.048	0.936	0.887	1.264	0.643
West McArthur River	oil	-	-	-	-	-	-	-	-	-	-	-
TOTAL OIL		**36.247**	**31.075**	**27.411**	**24.763**	**21.984**	**16.944**	**17.580**	**16.191**	**15.716**	**15.366**	**11.147**
TOTAL NGL		**0.481**	**0.538**	**0.499**	**0.381**	**0.361**	**0.223**	**0.284**	**0.227**	**0.195**	**0.024**	**0.019**
TOTAL NET		**36.728**	**31.613**	**27.910**	**25.144**	**22.344**	**17.167**	**17.865**	**16.418**	**15.911**	**15.390**	**11.167**
STATE												
TOTAL OIL [3][5]		**591.641**	**587.339**	**618.914**	**625.569**	**630.437**	**666.557**	**681.632**	**715.718**	**738.555**	**684.625**	**647.514**
TOTAL NGL		**0.735**	**0.988**	**0.999**	**0.692**	**0.678**	**1.040**	**1.586**	**16.555**	**21.224**	**18.888**	**18.191**
TOTAL INJECTION		**-**	**-**	**-**	**-**	**-**	**-**	**0.007**	**0.014**	**-**	**-**	**-**
TOTAL NET		**592.376**	**588.327**	**619.913**	**626.261**	**631.115**	**667.597**	**683.211**	**732.259**	**759.780**	**703.513**	**665.705**

	Type[1]	1991	1992	1993	1994	1995	1996	1997	Cumulative (MMBBL)	Reserves (MMBBL)	Field Depletion
NORTH SLOPE											
Duck Island Unit											
Endicott	oil	38.996	40.603	38.433	33.916	32.998	26.450	21.121	350.692		
	NGL	1.170	1.468	1.551	1.481	1.203	1.013	1.550	11.616		
	inj	-	-	-	-	-	-	-	0.021		
	net	40.165	42.071	39.985	35.397	34.201	27.463	22.671	362.287	223 [6]	62%
Sag Delta North	oil	2.309	1.002	0.761	0.368	0.235	0.199	0.255	7.019	[6]	
	NGL	0.048	0.011	0.007	0.003	0.001	0.001	0.002	0.105		
	net	2.356	1.013	0.768	0.372	0.236	0.200	0.257	7.124		
Greater Point McIntyre Area											
Lisburne	oil	13.316	12.517	8.473	6.846	5.454	4.465	3.002	119.082		
	NGL	1.337	1.464	1.277	0.939	0.823	0.674	0.416	10.692		
	net	14.653	13.981	9.750	7.785	6.277	5.139	3.418	129.775	47	73%
Niakuk [2]	oil	-	-	-	3.383	7.004	10.937	10.265	31.629		
	NGL	-	-	-	0.028	0.077	0.108	0.136	0.250		
	net	-	-	-	3.411	7.081	11.045	10.401	31.878	98 [2]	25%
Point McIntyre	oil	-	-	7.543	37.684	50.225	57.926	58.498	211.876		
	NGL	-	-	0.090	0.548	0.679	0.825	1.042	3.184		
	net	-	-	7.609	38.093	50.833	58.751	59.540	215.059	347	38%
Other											
North Prudhoe Bay Stat	oil	-	-	0.418	0.727	0.702	0.126	-	1.973		
	NGL	-	-	0.015	0.031	0.034	0.003	-	0.083		
	net	-	-	0.433	0.758	0.736	0.129	-	2.056	7 [7]	23%
West Beach	oil	-	-	0.724	0.512	0.163	0.474	0.319	2.193		
	NGL	-	-	0.009	0.012	0.005	0.025	0.027	0.078		
	net	-	-	0.733	0.524	0.168	0.499	0.346	2.272	[7]	
Kuparuk River Unit											
Kuparuk	oil	113.571	118.506	115.166	111.795	106.999	99.459	95.970	1,484.071		
	NGL	-	-	-	-	-	-	-	3.346		
	net	113.571	118.506	115.166	111.795	106.999	99.459	95.970	1,487.417	1,073	58%
West Sak	oil	-	-	-	-	-	-	0.001	0.756	330 [8]	0%
Milne Point Unit											
Milne Point	oil	6.701	5.812	5.704	5.648	7.352	12.665	17.055	76.728	193	28%
Sag River	oil	-	-	-		0.173	0.346	0.363	0.882	18	5%
Schrader Bluff	oil	0.756	1.135	1.060	1.030	1.167	1.090	1.536	7.776	330	2%
Prudhoe Bay [3]	oil [3]	465.399	432.587	385.811	351.493	313.629	282.060	252.421	9,508.738		
	NGL	21.307	23.902	23.879	22.825	26.810	30.549	31.580	249.877		
	inj	-	-	-	-	-	-	-	13.013		
	net	486.706	456.490	409.690	374.318	340.439	312.609	284.001	9,745.602	3,493	74%
TOTAL OIL [3]		**641.048**	**612.162**	**564.093**	**553.402**	**526.101**	**496.197**	**460.806**	**11,803.416**		
TOTAL NGL		**23.861**	**26.845**	**26.830**	**25.867**	**29.632**	**33.198**	**34.753**	**279.231**		
TOTAL INJECTION		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**13.034**		
TOTAL NET		**664.909**	**639.008**	**590.922**	**579.269**	**555.733**	**529.395**	**495.559**	**12,069.613**		
COOK INLET											
Beaver Creek	oil	0.179	0.175	0.153	0.140	0.132	0.125	0.119	5.123	1	84%
Cannery Loop [4]	NGL	-	-	-	0.000	0.000	0.000	-	0.000		
Granite Point	oil	2.064	2.522	2.488	2.209	2.580	2.556	2.443	130.132	12	92%
Kenai [4]	NGL	-	-	-	-	-	-	-	0.012		
McArthur River	oil	7.247	7.397	6.636	7.091	6.622	6.102	5.059	586.207		
	NGL	-	-	-	-	-	-	-	8.979		
	net	7.247	7.397	6.636	7.091	6.622	6.102	5.059	595.186	22	96%
Middle Ground Shoal	oil	2.670	2.423	2.160	2.785	2.823	2.396	2.223	178.902	9	95%
Redoubt Shoal	oil	-	-	-	-	-	-	-	0.002		
Swanson River	oil	1.962	1.773	1.576	1.672	1.712	1.521	1.065	224.497		
	NGL	0.023	0.019	0.018	0.023	0.017	0.019	0.012	1.390		
	net	1.985	1.792	1.593	1.696	1.729	1.540	1.077	225.887	3	99%
Trading Bay	oil	1.216	0.886	0.742	0.743	0.722	0.589	0.602	97.358		
	NGL	-	-	-	-	-	-	-	0.360		
	net	1.216	0.886	0.742	0.743	0.722	0.589	0.602	97.718	3	97%
West McArthur River	oil	0.002	0.002	0.098	0.921	0.922	1.296	0.645	3.885	1	80%
TOTAL OIL		**15.340**	**15.179**	**13.853**	**15.561**	**15.513**	**14.585**	**12.155**	**1,226.105**		
TOTAL NGL		**0.023**	**0.019**	**0.018**	**0.024**	**0.017**	**0.019**	**0.012**	**10.741**		
TOTAL NET		**15.363**	**15.198**	**13.871**	**15.585**	**15.530**	**14.604**	**12.167**	**1,236.846**		
STATE											
TOTAL OIL [3][5]		**656.388**	**627.341**	**577.946**	**568.964**	**541.614**	**510.782**	**472.960**	**13,029.521**		
TOTAL NGL		**23.884**	**26.864**	**26.848**	**25.891**	**29.649**	**33.217**	**34.765**	**289.972**		
TOTAL INJECTION		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**13.034**		
TOTAL NET		**680.272**	**654.206**	**604.793**	**594.854**	**571.263**	**543.999**	**507.725**	**13,306.459**		

FIGURE 3-1 - OIL PRODUCTION HISTORY OF NORTH SLOPE, BY AREA

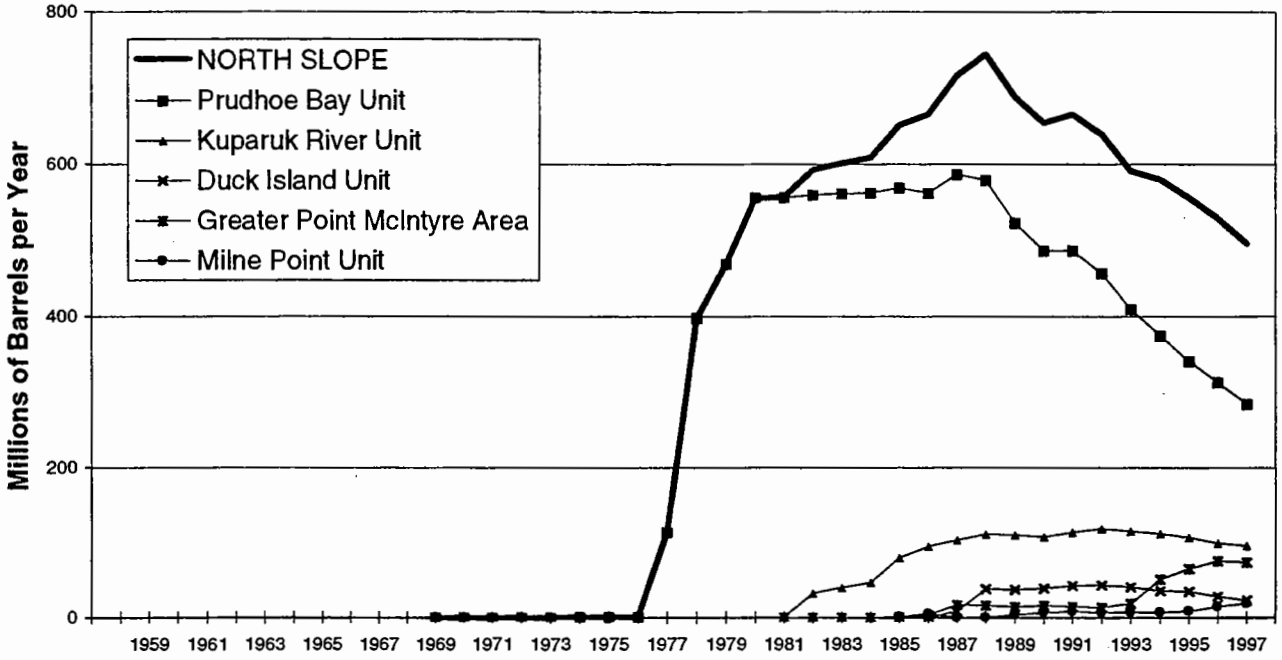
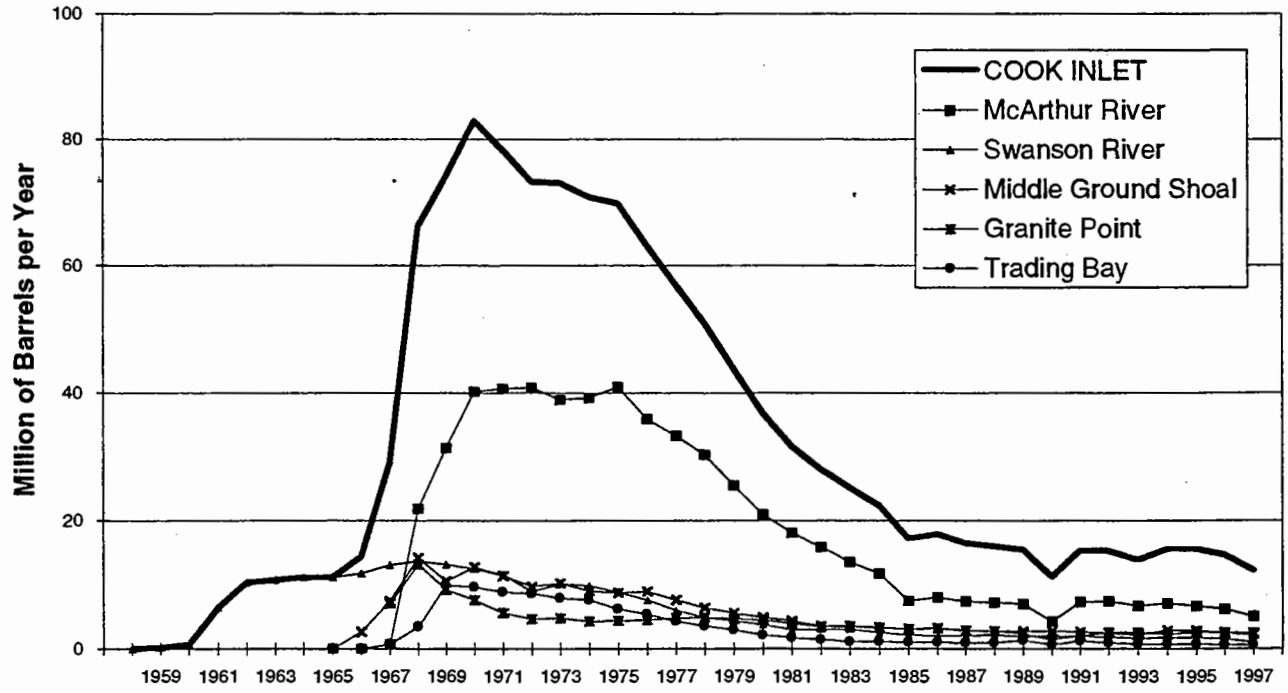


FIGURE 3-2 - OIL PRODUCTION HISTORY OF COOK INLET, FIVE LARGEST FIELDS



4 GAS PRODUCTION HISTORY

NORTH SLOPE AT BARROW

A small amount of gas has been produced near Barrow since the mid 1940's, though records are available only from 1949, to fuel a nearby military base. Gas service was extended to the village after World War II and two other fields, East Barrow and Walakpa, have been developed since 1980 to provide gas to Barrow.

COOK INLET

Cook Inlet gas production began in 1959 as a by-product of Swanson River oil development. As more oil and gas fields were discovered nearby, Anchorage and Kenai markets sprouted and grew. In 1969 a ammonia-urea plant and a liquid natural gas (LNG) plant were constructed at Nikiski. Gas production remained low until 1966 but quickly increased from that year's 12 billion cubic feet to 1970's 145 billion cubic feet. Production then rose gradually to 217 billion cubic feet per year in 1985, fell in 1986-1987 and has since rebounded to 215 billion cubic feet per year in 1997. Cook Inlet fields have produced a cumulative net 5.4 trillion cubic feet by the end of 1997.

Swanson River's gas production history differs from those of other Cook Inlet fields. Whereas the other fields used their own gas to fuel production, Swanson River imported gas from other fields and injected it into its oil reservoir. The field operator revised this program in 1992 and no gas is now imported from other fields. Of the gas extracted from the oil, some is now injected back into the reservoir and some is sold.

NORTH SLOPE AT PRUDHOE BAY

North Slope fields are so isolated that the only current economic use for their gas is to fuel the region's oil field equipment and operations. During field development a small amount of oil and gas was produced for fuel. Since then a large amount of dissolved and free gas has been produced with the oil, separated from the oil, then injected back into the reservoir. Through seventeen years of production, as oil and gas have been withdrawn and the gas returned to the reservoir, gas has become an increasingly greater proportion of field production.

Gross gas production in 1997 was 3.1 trillion cubic feet, but 92% of this was injected back into various oil reservoirs. The net production of 264 billion cubic feet, which fueled oil operations and transportation, is nearly equal to the total gas production of Cook Inlet. The 1997 net was a little less than in 1996 but is expected to increase for the next several years. North Slope fields produced a cumulative net 3.3 trillion cubic feet by the end of 1997

TABLE 4 - GAS PRODUCTION HISTORY

BILLIONS OF CUBIC FEET PER YEAR

	Type [1]	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
NORTH SLOPE													
East Barrow	dry	-	-	-	-	-	-	-	-	-	-	-	-
Duck Island Unit													
Endicott	csg	-	-	-	-	-	-	-	-	-	-	-	-
	dry [2]	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Sag Delta	csg	-	-	-	-	-	-	-	-	-	-	-	-
Greater Point McIntyre Area													
Lisburne [3]	csg	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Niakuk [3] [4]	csg	-	-	-	-	-	-	-	-	-	-	-	-
Point McIntyre [3]	csg	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Other													
N. Prudhoe Bay State [3]	csg	-	-	-	-	-	-	-	-	-	-	-	-
West Beach [3]	csg	-	-	-	-	-	-	-	-	-	-	-	-
Kuparuk River Unit													
Kuparuk	csg	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
West Sak	csg	-	-	-	-	-	-	-	-	-	-	-	-
Milne Point Unit													
Milne Point	csg	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Sag River	csg	-	-	-	-	-	-	-	-	-	-	-	-
Schrader Bluff	csg	-	-	-	-	-	-	-	-	-	-	-	-
Prudhoe Bay	csg	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
South Barrow	dry	0.033	0.091	0.135	0.137	0.075	0.027	0.115	0.103	0.114	0.119	0.132	0.172
Walakpa	dry	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL GROSS		**0.033**	**0.091**	**0.135**	**0.137**	**0.075**	**0.027**	**0.115**	**0.103**	**0.114**	**0.119**	**0.132**	**0.172**
TOTAL INJECTED		-	-	-	-	-	-	-	-	-	-	-	-
TOTAL NET		**0.033**	**0.091**	**0.135**	**0.137**	**0.075**	**0.027**	**0.115**	**0.103**	**0.114**	**0.119**	**0.132**	**0.172**
COOK INLET													
Albert Kaloa	dry	-	-	-	-	-	-	-	-	-	-	-	-
Beaver Creek	csg	-	-	-	-	-	-	-	-	-	-	-	-
	dry	-	-	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Beluga River	dry	-	-	-	-	-	-	-	-	-	-	-	-
Birch Hill	dry	-	-	-	-	-	-	-	-	-	-	-	-
Cannery Loop	dry	-	-	-	-	-	-	-	-	-	-	-	-
Falls Creek	dry	-	-	-	-	-	-	-	-	-	-	-	-
Granite Point	csg	-	-	-	-	-	-	-	-	-	-	-	-
	dry	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Ivan River	dry	-	-	-	-	-	-	-	-	-	-	-	-
Kenai	dry	-	-	-	-	-	-	-	-	-	-	-	-
Lewis River	dry	-	-	-	-	-	-	-	-	-	-	-	-
McArthur River	csg	-	-	-	-	-	-	-	-	-	-	-	-
	dry	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Middle Ground Shoal	csg	-	-	-	-	-	-	-	-	-	-	-	-
	dry	-	-	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-	-	-
Moquawkie	dry	-	-	-	-	-	-	-	-	-	-	-	-
Nicolai Creek	dry	-	-	-	-	-	-	-	-	-	-	-	-
North Cook Inlet	dry	-	-	-	-	-	-	-	-	-	-	-	-
North Trading Bay Unit	dry	-	-	-	-	-	-	-	-	-	-	-	-
North Fork	dry	-	-	-	-	-	-	-	-	-	-	-	-
Pretty Creek	dry	-	-	-	-	-	-	-	-	-	-	-	-
Redoubt Shoal	csg	-	-	-	-	-	-	-	-	-	-	-	-
Sterling	dry	-	-	-	-	-	-	-	-	-	-	-	-
Stump Lake	dry	-	-	-	-	-	-	-	-	-	-	-	-
Swanson River [5] [6]	csg	-	-	-	-	-	-	-	-	-	0.006	0.027	0.099
	dry	-	-	-	-	-	-	-	-	-	-	-	0.020
	inj	-	-	-	-	-	-	-	-	-	-	-	46.482
	net	-	-	-	-	-	-	-	-	-	0.006	0.027	-46.363
Trading Bay	csg	-	-	-	-	-	-	-	-	-	-	-	-
West Fork	dry	-	-	-	-	-	-	-	-	-	-	-	-
W. McArthur River	csg	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL GROSS		-	-	-	-	-	-	-	-	-	**0.006**	**0.027**	**0.137**
TOTAL INJECTED		-	-	-	-	-	-	-	-	-	-	-	**46.482**
TOTAL NET		-	-	-	-	-	-	-	-	-	**0.006**	**0.027**	**-46.345**
STATE													
TOTAL GROSS		**0.033**	**0.091**	**0.135**	**0.137**	**0.075**	**0.027**	**0.115**	**0.103**	**0.114**	**0.124**	**0.159**	**0.309**
TOTAL INJECTED		-	-	-	-	-	-	-	-	-	-	-	**46.482**
TOTAL NET		**0.033**	**0.091**	**0.135**	**0.137**	**0.075**	**0.027**	**0.115**	**0.103**	**0.114**	**0.124**	**0.159**	**-46.173**

NOTE: "-" = zero or no data; "0" = less than 0.001

Source: Alaska Oil and Gas Conservation Commission, "Alaska Production Summary by Field and Pool."

[1] dry = dry gas, csg = casinghead gas, inj = injected, net = dry + csg-inj.

[2] The small Endicott dry gas value for 1996 was an injection of processed gas into Endicott when the field resumed operation.

	Type [1]	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
NORTH SLOPE											
East Barrow	dry	-	-	-	-	-	-	-	-	-	-
Duck Island Unit											
Endicott	csg	-	-	-	-	-	-	-	-	-	-
	dry [2]	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
Sag Delta	csg	-	-	-	-	-	-	-	-	-	-
Greater Point McIntyre Area											
Lisburne [3]	csg	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
Niakuk [3] [4]	csg	-	-	-	-	-	-	-	-	-	-
Point McIntyre [3]	csg	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
Other											
N. Prudhoe Bay State [3]	csg	-	-	-	-	-	-	-	-	-	-
West Beach [3]	csg	-	-	-	-	-	-	-	-	-	-
Kuparuk River Unit											
Kuparuk	csg	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
West Sak	csg	-	-	-	-	-	-	-	-	-	-
Milne Point Unit											
Milne Point	csg	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
Sag River	csg	-	-	-	-	-	-	-	-	-	-
Schrader Bluff	csg	-	-	-	-	-	-	-	-	-	-
Prudhoe Bay	csg	-	-	-	-	-	-	-	-	0.243	1.037
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	0.243	1.037
South Barrow	dry	0.172	0.197	0.211	0.249	0.389	0.438	0.475	0.504	0.582	0.619
Walakpa	dry	-	-	-	-	-	-	-	-	-	-
TOTAL GROSS		**0.172**	**0.197**	**0.211**	**0.249**	**0.389**	**0.438**	**0.475**	**0.504**	**0.825**	**1.655**
TOTAL INJECTED		-	-	-	-	-	-	-	-	-	-
TOTAL NET		**0.172**	**0.197**	**0.211**	**0.249**	**0.389**	**0.438**	**0.475**	**0.504**	**0.825**	**1.655**
COOK INLET											
Albert Kaloa	dry	-	-	-	-	-	-	-	-	-	0.095
Beaver Creek	csg	-	-	-	-	-	-	-	-	-	-
	dry	-	-	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-	-	-
Beluga River	dry	-	-	0.014	0.137	-	-	0.168	2.018	3.038	3.571
Birch Hill	dry	-	-	-	-	0.065	-	-	-	-	-
Cannery Loop	dry	-	-	-	-	-	-	-	-	-	-
Falls Creek	dry	-	-	-	-	-	0.019	-	-	-	-
Granite Point	csg	-	-	-	-	-	-	4.890	10.036	8.043	9.211
	dry	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	4.890	10.036	8.043	9.211
Ivan River	dry	-	-	-	-	-	-	-	-	-	-
Kenai	dry	0.215	1.460	3.106	4.493	5.985	33.375	39.624	46.014	59.340	80.612
Lewis River	dry	-	-	-	-	-	-	-	-	-	-
McArthur River	csg	-	-	-	-	-	-	0.220	6.124	9.565	14.989
	dry	-	-	-	-	-	-	-	0.032	4.629	4.699
	net	-	-	-	-	-	-	0.220	6.155	14.194	19.688
Middle Ground Shoal	csg	-	-	-	-	0.010	1.200	3.215	6.654	6.006	6.137
	dry	-	-	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	1.200	3.215	6.654	6.006	6.137
Moquawkie	dry	-	-	-	-	-	-	0.034	0.353	0.514	0.083
Nicolai Creek	dry	-	-	-	-	-	-	-	0.026	0.387	0.202
North Cook Inlet	dry	-	-	-	-	-	-	-	-	7.881	40.947
North Trading Bay Unit	dry	-	-	-	-	-	-	-	-	-	-
North Fork	dry	-	-	-	-	-	0.105	-	-	-	-
Pretty Creek	dry	-	-	-	-	-	-	-	-	-	-
Redoubt Shoal	csg	-	-	-	-	-	-	-	0.000	-	-
Sterling	dry	-	0.025	0.046	0.058	0.120	0.157	0.180	0.198	0.265	0.265
Stump Lake	dry	-	-	-	-	-	-	-	-	-	-
Swanson River [5] [6]	csg	1.293	1.914	2.808	3.233	3.831	5.622	13.541	25.434	40.756	50.396
	dry	-	0.157	4.838	3.943	2.141	0.740	-	-	-	-
	inj	-	0.259	6.478	5.620	4.843	28.770	37.944	58.316	67.215	73.139
	net	1.293	1.813	1.168	1.556	1.129	-22.407	-24.403	-32.882	-26.459	-22.743
Trading Bay	csg	-	-	-	-	0.001	0.315	0.722	2.961	7.119	7.156
West Fork	dry	-	-	-	-	-	-	-	-	-	-
W. McArthur River	csg	-	-	-	-	-	-	-	-	-	-
TOTAL GROSS		**1.508**	**3.557**	**10.810**	**11.865**	**12.155**	**41.534**	**62.593**	**99.852**	**147.543**	**218.363**
TOTAL INJECTED		-	**0.259**	**6.478**	**5.620**	**4.843**	**28.770**	**37.944**	**58.316**	**67.215**	**73.139**
TOTAL NET		**1.508**	**3.298**	**4.333**	**6.245**	**7.311**	**12.764**	**24.649**	**41.535**	**80.328**	**145.224**
STATE											
TOTAL GROSS		**1.680**	**3.753**	**11.021**	**12.114**	**12.543**	**41.971**	**63.069**	**100.355**	**148.368**	**220.019**
TOTAL INJECTED		-	**0.259**	**6.478**	**5.620**	**4.843**	**28.770**	**37.944**	**58.316**	**67.215**	**73.139**
TOTAL NET		**1.680**	**3.495**	**4.543**	**6.494**	**7.700**	**13.201**	**25.124**	**42.039**	**81.153**	**146.879**

[3] Oil from Lisburne, Point McIntyre, Niakuk, North Prudhoe Bay State and West Beach flow to the Lisburne Production Center (LPC). Gas from these oil streams is extracted at the LPC. Some of the extracted Point McIntyre gas is returned to that field for extraction, but gas from the other fields is injected into Lisburne and Point McIntyre only. Consequently, production, injection, and reserves values may appear anomalous.

	Type [1]	1971	1972	1973	1974	1975	1976	1977	1978
NORTH SLOPE									
East Barrow	dry	-	-	-	-	-	-	-	-
Duck Island Unit									
Endicott	csg	-	-	-	-	-	-	-	-
	dry [2]	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
Sag Delta	csg	-	-	-	-	-	-	-	-
Greater Point McIntyre Area									
Lisburne [3]	csg	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
Niakuk [3] [4]	csg	-	-	-	-	-	-	-	-
Point McIntyre [3]	csg	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
Other									
N. Prudhoe Bay State [3]	csg	-	-	-	-	-	-	-	-
West Beach [3]	csg	-	-	-	-	-	-	-	-
Kuparuk River Unit									
Kuparuk	csg	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
West Sak	csg	-	-	-	-	-	-	-	-
Milne Point Unit									
Milne Point	csg	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
Sag River	csg	-	-	-	-	-	-	-	-
Schrader Bluff	csg	-	-	-	-	-	-	-	-
Prudhoe Bay	csg	0.889	0.658	0.699	2.022	3.046	5.077	94.936	307.966
	inj	-	-	-	-	-	-	68.118	271.854
	net	0.889	0.658	0.699	2.022	3.046	5.077	26.818	36.111
South Barrow	dry	0.627	0.675	0.707	0.765	0.799	0.832	0.879	0.893
Walakpa	dry	-	-	-	-	-	-	-	-
TOTAL GROSS		1.516	1.333	1.406	2.787	3.845	5.909	95.814	308.859
TOTAL INJECTED		-	-	-	-	-	-	68.118	271.854
TOTAL NET		1.516	1.333	1.406	2.787	3.845	5.909	27.696	37.004
COOK INLET									
Albert Kaloa	dry	0.024	-	-	-	-	-	-	-
Beaver Creek	csg	-	0.002	0.153	0.130	0.104	0.095	0.090	0.092
	dry	-	-	0.054	0.020	0.218	0.166	0.113	0.237
	inj	-	-	-	0.019	-	0.091	0.100	0.144
	net	-	-	0.207	0.131	0.322	0.170	0.103	0.185
Beluga River	dry	4.055	4.142	4.929	5.596	6.980	11.211	13.353	14.253
Birch Hill	dry	-	-	-	-	-	-	-	-
Cannery Loop	dry	-	-	-	-	-	-	-	-
Falls Creek	dry	-	-	-	-	-	-	-	-
Granite Point	csg	7.753	5.773	4.518	3.265	3.390	3.205	3.634	3.860
	dry	-	-	-	-	-	-	-	-
	net	7.753	5.773	4.518	3.265	3.390	3.205	3.634	3.860
Ivan River	dry	-	-	-	-	-	-	-	-
Kenai	dry	72.184	76.007	71.345	68.485	77.175	79.467	81.886	97.290
Lewis River	dry	-	-	-	-	-	-	-	-
McArthur River	csg	15.732	15.477	14.178	12.739	13.474	12.202	11.969	10.923
	dry	3.572	4.245	4.885	6.861	7.997	6.825	7.737	7.662
	net	19.304	19.722	19.063	19.599	21.471	19.027	19.706	18.585
Middle Ground Shoal	csg	5.147	4.075	4.826	4.260	4.199	4.347	4.108	3.290
	dry	-	-	-	-	-	-	-	-
	net	5.147	4.075	4.826	4.260	4.199	4.347	4.108	3.290
Moquawkie	dry	-	-	-	-	-	-	-	-
Nicolai Creek	dry	0.141	0.066	0.006	0.011	0.083	0.108	0.032	-
North Cook Inlet	dry	45.024	41.580	42.709	44.238	45.622	45.091	47.201	46.757
North Trading Bay Unit	dry	-	-	-	-	-	-	-	-
North Fork	dry	-	-	-	-	-	-	-	-
Pretty Creek	dry	-	-	-	-	-	-	-	-
Redoubt Shoal	csg	-	-	-	-	-	-	-	-
Sterling	dry	0.267	0.172	0.027	0.032	0.035	0.035	0.029	0.024
Stump Lake	dry	-	-	-	-	-	-	-	-
Swanson River [5] [6]	csg	66.569	67.441	74.067	80.869	90.665	101.427	106.911	106.934
	dry	-	-	-	-	-	-	-	-
	inj	73.892	76.133	87.482	86.793	97.976	113.279	118.279	114.557
	net	-7.323	-8.692	-13.415	-5.924	-7.311	-11.852	-11.368	-7.623
Trading Bay	csg	9.097	5.668	3.539	3.312	2.613	2.473	2.890	2.427
West Fork	dry	-	-	-	-	-	-	-	0.052
W. McArthur River	csg	-	-	-	-	-	-	-	-
TOTAL GROSS		229.566	224.647	225.236	229.817	252.554	266.651	279.955	293.800
TOTAL INJECTED		73.892	76.133	87.482	86.812	97.976	113.370	118.379	114.701
TOTAL NET		155.674	148.514	137.754	143.005	154.578	153.281	161.575	179.099
STATE									
TOTAL GROSS		231.081	225.980	226.642	232.604	256.399	272.560	375.769	602.659
TOTAL INJECTED		73.892	76.133	87.482	86.812	97.976	113.370	186.497	386.555
TOTAL NET		157.189	149.847	139.160	145.792	158.423	159.190	189.272	216.104

[4] "Niakuk" includes Niakuk, Niakuk 27 and West Niakuk.

[5] The very high gas injection figure for 1960 was an accounting adjustment.

[6] Gas from other fields was injected into Swanson River field to maintain reservoir pressure. Consequently, production, injection, and reserves values may appear anomalous.

	Type [1]	1979	1980	1981	1982	1983	1984	1985	1986
NORTH SLOPE									
East Barrow	dry	-	-	0.037	0.717	0.689	0.693	0.632	0.589
Duck Island Unit									
Endicott	csg	-	-	-	-	-	-	-	0.195
	dry [2]	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	0.195
Sag Delta	csg	-	-	-	-	-	-	-	-
Greater Point McIntyre Area									
Lisburne [3]	csg	-	-	0.003	0.374	0.154	0.343	1.902	8.677
	inj	-	-	-	-	-	-	-	-
	net	-	-	0.003	0.374	0.154	0.343	1.902	8.677
Niakuk [3] [4]	csg	-	-	-	-	-	-	-	-
Point McIntyre [3]	csg	-	-	-	-	-	-	-	-
	inj	-	-	-	-	-	-	-	-
	net	-	-	-	-	-	-	-	-
Other									
N. Prudhoe Bay State [3]	csg	-	-	-	-	-	-	-	-
West Beach [3]	csg	-	-	-	-	-	-	-	-
Kuparuk River Unit									
Kuparuk	csg	-	-	0.615	22.989	44.391	57.389	104.279	114.889
	inj	-	-	-	17.822	38.277	47.930	85.909	90.449
	net	-	-	0.615	5.166	6.114	9.459	18.370	24.440
West Sak	csg	-	-	-	-	0.005	0.079	0.134	0.108
Milne Point Unit									
Milne Point	csg	-	-	-	-	-	-	0.253	1.644
	inj	-	-	-	-	-	-	-	0.197
	net	-	-	-	-	-	-	0.253	1.447
Sag River	csg	-	-	-	-	-	-	-	-
Schrader Bluff	csg	-	-	-	-	-	-	-	-
Prudhoe Bay	csg	432.475	597.148	647.768	756.884	818.993	846.674	936.613	970.290
	inj	390.136	546.510	595.106	697.812	754.044	768.899	846.786	882.882
	net	42.339	50.638	52.662	59.071	64.950	77.776	89.827	87.407
South Barrow	dry	0.913	1.027	1.009	0.532	0.541	0.650	0.678	0.589
Walakpa	dry	-	-	-	-	-	-	-	-
TOTAL GROSS		**433.388**	**598.175**	**649.431**	**781.496**	**864.775**	**905.828**	**1,044.491**	**1,096.981**
TOTAL INJECTED		**390.136**	**546.510**	**595.106**	**715.635**	**792.321**	**816.829**	**932.695**	**973.528**
TOTAL NET		**43.252**	**51.665**	**54.325**	**65.861**	**72.454**	**89.000**	**111.796**	**123.453**
COOK INLET									
Albert Kaloa	dry	-	-	-	-	-	-	-	-
Beaver Creek	csg	0.094	0.091	0.080	0.082	0.092	0.101	0.094	0.078
	dry	0.088	0.090	0.137	0.314	8.252	9.234	10.833	17.694
	inj	0.079	0.029	0.020	0.037	0.031	-	-	-
	net	0.103	0.151	0.197	0.359	8.313	9.335	10.927	17.773
Beluga River	dry	16.994	17.002	17.248	18.653	18.084	19.833	22.571	25.357
Birch Hill	dry	-	-	-	-	-	-	-	-
Cannery Loop	dry	-	-	-	-	-	-	-	-
Falls Creek	dry	-	-	-	-	-	-	-	-
Granite Point	csg	3.287	3.233	3.509	2.780	2.578	2.340	2.147	2.415
	dry	-	-	-	-	-	-	-	-
	net	3.287	3.233	3.509	2.780	2.578	2.340	2.147	2.415
Ivan River	dry	-	-	-	-	-	-	-	-
Kenai	dry	97.029	98.846	105.800	115.913	112.978	110.109	115.842	82.470
Lewis River	dry	-	-	-	-	-	0.696	1.644	1.338
McArthur River	csg	8.849	8.043	7.651	7.521	6.444	5.834	4.073	4.397
	dry	7.756	7.547	7.555	8.719	7.931	9.242	6.603	9.163
	net	16.605	15.590	15.206	16.240	14.375	15.076	10.676	13.560
Middle Ground Shoal	csg	2.744	2.628	2.502	2.277	2.293	2.212	2.129	1.199
	dry	-	-	-	0.097	0.371	0.514	0.493	0.394
	net	2.744	2.628	2.502	2.374	2.663	2.726	2.622	1.593
Moquawkie	dry	-	-	-	-	-	-	-	-
Nicolai Creek	dry	-	-	-	-	-	-	-	-
North Cook Inlet	dry	49.448	41.540	49.486	45.368	47.877	46.981	45.819	43.838
North Trading Bay Unit	dry	-	0.104	0.192	0.411	0.631	0.626	0.417	0.385
North Fork	dry	-	-	-	-	-	-	-	-
Pretty Creek	dry	-	-	-	-	-	-	-	0.067
Redoubt Shoal	csg	-	-	-	-	-	-	-	-
Sterling	dry	0.025	0.026	0.023	0.024	0.022	0.018	0.012	0.002
Stump Lake	dry	-	-	-	-	-	-	-	-
Swanson River [5] [6]	csg	116.068	118.787	103.592	105.654	97.507	96.710	92.104	95.083
	dry	0.198	0.068	-	-	-	-	-	-
	inj	120.268	120.636	106.137	113.023	95.353	93.687	89.025	93.602
	net	-4.002	-1.781	-2.545	-7.369	2.154	3.023	3.079	1.481
Trading Bay	csg	1.713	1.448	1.232	1.221	0.925	0.934	1.115	0.994
West Fork	dry	0.770	0.476	0.030	0.086	0.067	0.037	0.022	-
W. McArthur River	csg	-	-	-	-	-	-	-	-
TOTAL GROSS		**305.063**	**299.929**	**299.038**	**309.121**	**306.051**	**305.421**	**305.919**	**284.874**
TOTAL INJECTED		**120.347**	**120.665**	**106.157**	**113.060**	**95.384**	**93.687**	**89.025**	**93.602**
TOTAL NET		**184.716**	**179.264**	**192.881**	**196.062**	**210.667**	**211.733**	**216.893**	**191.272**
STATE									
TOTAL GROSS		**738.451**	**898.104**	**948.469**	**1,090.617**	**1,170.826**	**1,211.249**	**1,350.410**	**1,381.855**
TOTAL INJECTED		**510.482**	**667.175**	**701.263**	**828.695**	**887.705**	**910.516**	**1,021.720**	**1,067.130**
TOTAL NET		**227.969**	**230.929**	**247.206**	**261.922**	**283.121**	**300.733**	**328.690**	**314.725**

[7] "Endicott reserves include Endicott and Sag Delta reserves.
[8] Not calculated.
[9] Ivan River, Lewis River, Pretty Creek, and Stump Lake reserves are computed as a single reservoir.
Revised 3/3/98

	Type [1]	1987	1988	1989	1990	1991	1992	1993	1994
NORTH SLOPE									
East Barrow	dry	0.590	0.661	0.475	0.488	0.583	0.439	0.259	0.223
Duck Island Unit									
Endicott	csg	8.237	34.834	41.194	42.490	60.246	97.047	120.116	116.810
	dry [2]	-	-	-	-	-	-	-	-
	inj	5.615	28.023	33.033	35.523	51.136	85.082	100.682	102.534
	net	2.622	6.812	8.161	6.967	9.110	11.964	19.434	14.276
Sag Delta	csg	-	-	0.236	1.416	2.347	0.703	0.529	0.259
Greater Point McIntyre Area									
Lisburne [3]	csg	64.906	94.670	104.746	107.592	124.360	154.468	130.882	101.260
	inj	56.741	87.815	102.248	101.542	112.457	141.598	122.991	99.748
	net	8.164	6.855	2.498	6.049	11.903	12.870	7.891	1.512
Niakuk [3] [4]	csg	-	-	-	-	-	-	-	2.471
Point McIntyre [3]	csg	-	-	-	-	-	-	5.392	38.795
	inj	-	-	-	-	-	-	3.979	34.461
	net	-	-	-	-	-	-	1.413	4.334
Other									
N. Prudhoe Bay State [3]	csg	-	-	-	-	-	-	1.103	2.646
West Beach [3]	csg	-	-	-	-	-	-	0.592	1.119
Kuparuk River Unit									
Kuparuk	csg	125.089	119.883	107.519	116.579	123.207	122.767	120.599	120.273
	inj	89.191	87.906	83.323	91.273	95.982	96.625	94.339	93.288
	net	35.898	31.977	24.196	25.306	27.225	26.141	26.260	26.986
West Sak	csg	-	-	-	-	-	-	-	-
Milne Point Unit									
Milne Point	csg	0.011	-	0.978	2.718	3.515	3.015	2.967	3.524
	inj	-	-	0.320	1.401	1.704	1.632	1.836	2.305
	net	0.011	-	0.658	1.318	1.811	1.383	1.131	1.219
Sag River	csg	-	-	-	-	-	-	-	-
Schrader Bluff	csg	-	-	-	-	0.244	0.536	0.518	0.515
Prudhoe Bay	csg	1,228.527	1,404.992	1,412.853	1,481.462	1,768.837	1,951.156	2,116.808	2,402.584
	inj	1,105.023	1,248.094	1,244.284	1,317.106	1,583.472	1,764.648	1,921.633	2,204.235
	net	123.503	156.898	168.568	164.356	185.365	186.508	195.175	198.349
South Barrow	dry	0.622	0.598	0.758	0.733	0.662	0.628	0.441	0.261
Walakpa	dry	-	-	-	-	-	0.252	0.585	0.858
TOTAL GROSS		**1,427.982**	**1,655.639**	**1,668.758**	**1,753.478**	**2,084.001**	**2,331.009**	**2,500.789**	**2,791.599**
TOTAL INJECTED		**1,256.570**	**1,451.837**	**1,463.208**	**1,546.845**	**1,844.751**	**2,089.585**	**2,245.459**	**2,536.571**
TOTAL NET		**171.411**	**203.801**	**205.550**	**206.633**	**239.250**	**241.424**	**255.330**	**255.028**
COOK INLET									
Albert Kaloa	dry	-	-	-	-	-	-	-	-
Beaver Creek	csg	0.053	0.039	0.064	0.058	0.049	0.048	0.042	0.038
	dry	15.475	14.307	12.257	12.416	10.354	7.320	6.294	1.266
	inj	-	-	-	-	-	-	-	-
	net	15.528	14.346	12.321	12.474	10.403	7.368	6.294	1.266
Beluga River	dry	23.971	25.586	30.126	39.512	38.494	36.534	31.739	34.212
Birch Hill	dry	-	-	-	-	-	-	-	-
Cannery Loop	dry	-	9.400	11.255	12.502	12.318	10.635	9.516	6.361
Falls Creek	dry	-	-	-	-	-	-	-	-
Granite Point	csg	2.431	2.543	2.251	1.431	1.586	2.246	2.435	2.077
	dry	-	-	-	-	-	-	0.009	-
	net	2.431	2.543	2.251	1.431	1.586	2.246	2.444	2.077
Ivan River	dry	-	-	-	0.676	2.132	1.774	8.238	15.996
Kenai	dry	90.014	76.299	65.706	38.393	25.581	24.187	23.826	18.853
Lewis River	dry	0.345	0.045	0.095	1.485	1.420	0.706	0.383	0.244
McArthur River	csg	3.393	4.120	4.317	2.559	5.121	5.175	4.107	4.205
	dry	9.884	12.603	26.683	48.897	56.075	64.895	58.406	45.821
	net	13.277	16.722	31.000	51.456	61.196	70.070	62.512	50.027
Middle Ground Shoal	csg	1.274	1.223	1.250	1.334	1.074	1.015	0.937	1.209
	dry	0.312	0.411	0.715	1.246	0.513	1.362	2.004	1.837
	net	1.586	1.635	1.965	2.579	1.587	2.377	2.941	3.025
Moquawkie	dry	-	-	-	-	-	-	-	-
Nicolai Creek	dry	-	-	-	-	-	-	-	-
North Cook Inlet	dry	42.889	44.989	45.287	45.014	44.695	44.411	45.529	52.689
North Trading Bay Unit	dry	0.443	0.191	0.141	0.003	-	-	-	-
North Fork	dry	-	-	-	-	-	-	-	-
Pretty Creek	dry	0.776	0.871	0.641	0.607	0.742	0.762	0.333	0.203
Redoubt Shoal	csg	-	-	-	-	-	-	-	-
Sterling	dry	-	-	-	-	-	-	0.007	0.224
Stump Lake	dry	-	-	-	0.528	1.608	1.504	0.778	0.454
Swanson River [5] [6]	csg	83.508	101.685	102.910	101.685	102.113	101.619	95.495	122.501
	dry	0.555	0.915	1.184	2.710	2.944	2.915	2.206	1.919
	inj	87.013	99.734	107.802	106.031	105.157	104.724	93.052	97.148
	net	-2.949	2.866	-3.709	-1.636	-0.100	-0.191	5.167	27.787
Trading Bay	csg	0.991	1.120	1.291	0.465	0.944	0.705	0.619	0.641
West Fork	dry	-	-	-	-	0.460	1.364	0.625	0.206
W. McArthur River	csg	-	-	-	-	-	0.000	0.031	0.216
TOTAL GROSS		**276.314**	**296.347**	**306.173**	**311.519**	**308.224**	**309.176**	**294.075**	**311.668**
TOTAL INJECTED		**87.013**	**99.734**	**107.802**	**106.031**	**105.157**	**104.724**	**93.052**	**97.148**
TOTAL NET		**189.302**	**196.614**	**198.370**	**205.488**	**203.067**	**204.452**	**201.024**	**214.521**
STATE									
TOTAL GROSS		**1,704.296**	**1,951.986**	**1,974.931**	**2,064.996**	**2,392.225**	**2,640.185**	**2,794.864**	**3,103.267**
TOTAL INJECTED		**1,343.583**	**1,551.571**	**1,571.011**	**1,652.875**	**1,949.908**	**2,194.309**	**2,338.511**	**2,633.719**
TOTAL NET		**360.713**	**400.415**	**403.920**	**412.121**	**442.317**	**445.876**	**456.353**	**469.548**

	Type [1]	1995	1996	1997	Cumulative (BCF)	Reserves (BCF)	Field Depletion
NORTH SLOPE							
East Barrow	dry	0.099	0.064	0.114	7.352	5	60%
Duck Island Unit							
Endicott	csg	127.191	123.934	124.737	897.033		
	dry [2]	-	0.034	-	0.034		
	inj	113.839	111.638	111.495	778.601		
	net	13.352	12.330	13.242	118.466	868 [7]	12%
Sag Delta	csg	0.152	0.099	0.157	5.898	[7]	
Greater Point McIntyre Area							
Lisburne [3]	csg	80.866	67.013	39.999	1,082.214		
	inj	104.272	93.000	75.249	1,097.661		
	net	-23.406	-25.987	-35.250	-15.447	320	0%
Niakuk [3] [4]	csg	7.241	8.757	10.523	28.991	42	41%
Point McIntyre [3]	csg	46.637	56.584	70.009	217.416		
	inj	21.687	30.444	35.945	126.516		
	net	24.950	26.140	34.064	90.900	620	13%
Other							
N. Prudhoe Bay State [3]	csg	2.482	0.206	-	6.436	[8]	
West Beach [3]	csg	0.446	2.720	2.739	7.615	[8]	
Kuparuk River Unit							
Kuparuk	csg	112.418	107.805	106.796	1,627.488		
	inj	84.317	83.632	89.763	1,270.025		
	net	28.101	24.173	17.033	357.464	627	36%
West Sak	csg	-	-	0.000	0.327	[8]	
Milne Point Unit							
Milne Point	csg	4.340	6.120	9.463	38.548		
	inj	3.399	4.307	6.998	24.098		
	net	0.955	1.825	2.465	14.450	20	42%
Sag River	csg	0.113	0.299	0.437	0.849	[8]	
Schrader Bluff	csg	0.656	0.464	0.644	3.577	[8]	
Prudhoe Bay	csg	2,716.959	2,750.907	2,794.735	28,453.237		
	inj	2,497.702	2,535.603	2,577.617	25,818.313		
	net	219.257	215.304	217.118	2,634.925	23,000	10%
South Barrow	dry	0.052	0.051	0.041	22.049	4	85%
Walakpa	dry	1.109	1.160	1.126	5.090	27	16%
TOTAL GROSS		**3,100.761**	**3,126.217**	**3,161.521**	**32,404.156**		
TOTAL INJECTED		**2,825.216**	**2,858.624**	**2,897.067**	**29,115.214**		
TOTAL NET		**275.545**	**267.593**	**264.454**	**3,288.942**		
COOK INLET							
Albert Kaloa	dry	-	-	-	0.119	[8]	
Beaver Creek	csg	0.035	0.034	0.033	1.870		
	dry	1.880	3.008	4.593	136.620		
	inj	-	-	-	0.551		
	net	1.880	3.008	4.593	136.069	109	56%
Beluga River	dry	35.645	36.930	35.002	596.958	704	46%
Birch Hill	dry	-	-	-	0.065	11	1%
Cannery Loop	dry	5.535	2.072	3.130	82.724	36	70%
Falls Creek	dry	-	-	-	0.019	13	0%
Granite Point	csg	1.894	2.121	2.540	113.421		
	dry	0.048	0.130	0.017	0.204		
	net	1.942	2.251	2.557	113.217	27	81%
Ivan River	dry	12.027	6.605	5.297	52.745	54 [9]	49%
Kenai	dry	16.484	13.294	12.672	2,142.375	296	88%
Lewis River	dry	0.126	0.114	0.066	8.707	[9]	
McArthur River	csg	4.403	3.763	3.559	235.126		
	dry	50.511	63.512	63.279	624.765		
	net	54.914	67.275	66.838	859.890	592	59%
Middle Ground Shoal	csg	0.901	0.846	0.756	87.278		
	dry	1.237	0.006	0.295	11.808		
	net	2.138	0.852	1.051	99.086	14	88%
Moquawkie	dry	-	-	-	0.985	[8]	
Nicolai Creek	dry	-	-	-	1.062	2	35%
North Cook Inlet	dry	53.541	55.976	52.466	1,304.893	1,075	55%
North Trading Bay Unit	dry	-	0.022	0.511	4.076	20	17%
North Fork	dry	-	-	-	0.105	12	1%
Pretty Creek	dry	0.256	0.301	0.383	5.942	[9]	
Redoubt Shoal	csg	-	-	-	0.000	[8]	
Sterling	dry	0.184	0.037	0.005	2.545	23	10%
Stump Lake	dry	0.288	0.185	0.132	5.476	[9]	
Swanson River [5] [6]	csg	100.368	74.910	50.511	2,705.874		
	dry	1.413	1.249	1.387	31.499		
	inj	73.086	42.820	23.163	2,868.916		
	net	28.695	33.339	28.735	-131.544	211 [6]	0%
Trading Bay	csg	0.541	0.363	1.108	68.310	28	71%
West Fork	dry	0.016	-	-	4.212	3	58%
W. McArthur River	csg	0.231	0.309	0.152	0.940	[8]	
TOTAL GROSS		**287.564**	**265.787**	**237.894**	**8,230.724**		
TOTAL INJECTED		**73.086**	**42.820**	**23.163**	**2,869.467**		
TOTAL NET		**214.478**	**222.967**	**214.731**	**5,361.256**		
STATE							
TOTAL GROSS		**3,388.324**	**3,392.005**	**3,399.414**	**40,634.879**		
TOTAL INJECTED		**2,906.104**	**2,901.444**	**2,920.230**	**31,984.681**		
TOTAL NET		**482.220**	**490.561**	**479.184**	**8,650.198**		

FIGURE 4-1 - GAS PRODUCTION HISTORY OF NORTH SLOPE , BY AREA

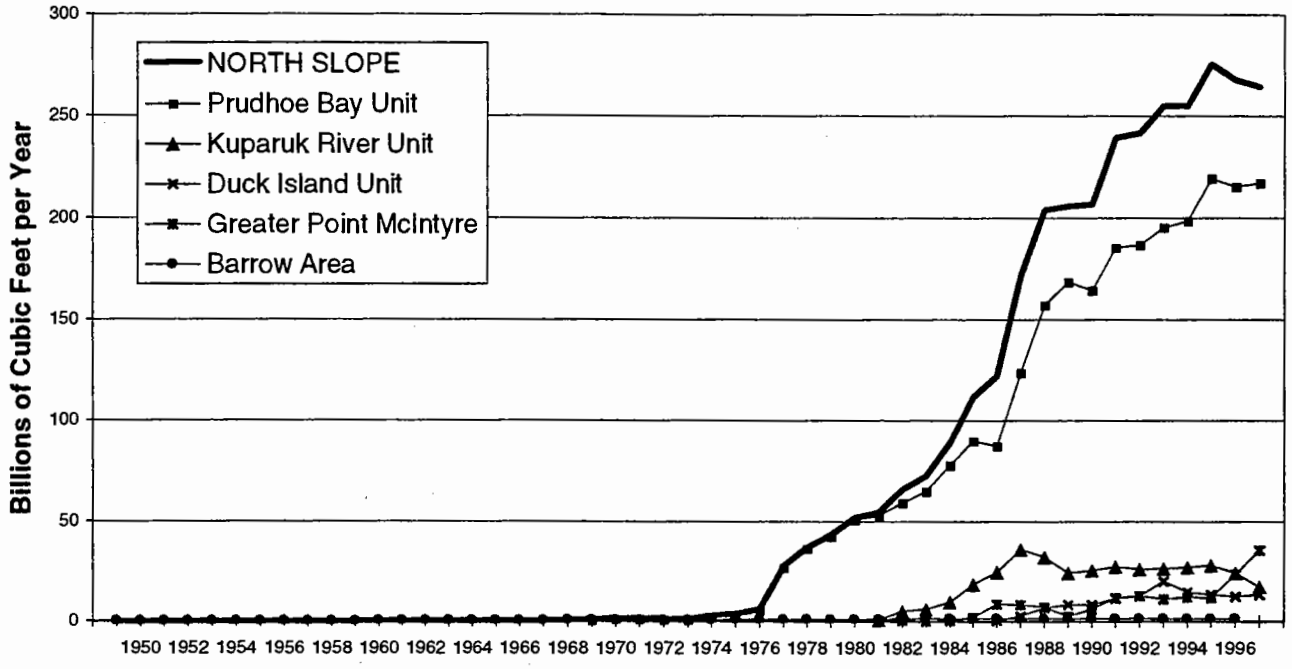
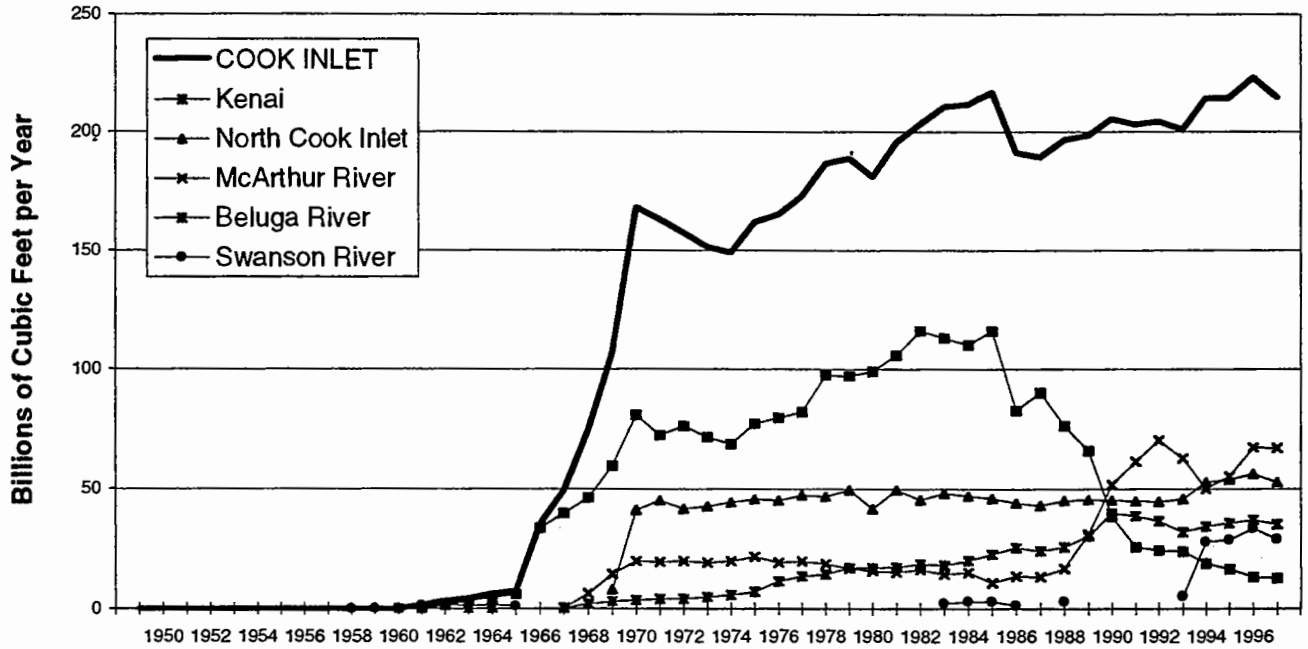


FIGURE 4-2 - GAS PRODUCTION HISTORY OF COOK INLET, FIVE LARGEST FIELDS



5 OIL CONSUMPTION HISTORY

REFINED FUEL CONSUMPTION

Refined fuels are the only oil consumed in Alaska. No significant amount of crude oil has ever been consumed directly for manufacturing or commercial use other than refining. Much of Alaska's fuel demand is supplied by four in-state refineries and two small distillation plants at Prudhoe Bay and Kuparuk River. The balance is imported from West Coast refineries. The proportion of fuels refined in-state versus out-of-state can not be calculated from public data.

The DOR compiles the only publicly available data on state fuel consumption. For tax purposes, the department collects data from distributors on how much fuel they have sold within the state. DOR's fuel categories, which reflect Alaska's economic dependence on transportation, differentiate fuels by type; aviation, diesel and gasoline and by transport mode; aviation, highway and marine. Tax exempt end-uses are sub-categorized. The DOR records do not include fuel consumed in Alaska but purchased outside the state, including most military fuel, and does not include fuel shipped into the Free Trade Zone at the Port of Anchorage and the Anchorage International Airport.

In 1996 distributors sold 1.6 billion gallons of fuel, of which 1.5 billion gallons were consumed in-state and 112 million gallons were shipped out-of-state. An impressive conclusion from the data is that close to half - 48% (732 million gallons) - of all the fuel sold in Alaska is Aviation Jet. Diesel accounts for 29% (453 million gallons) and gasoline accounts for 23% (358 million gallons).

REFINERY THROUGHPUT OF CRUDE OIL

Alaska's four industrial refineries do not report how much fuel they produce. Public data in Table 5 does report, however, how much crude oil flows into and, for three cases, how much residual oil flows out of the refineries. These data give some measure of in-state refining activity.

TABLE 5A - FUEL CONSUMPTION HISTORY

MILLIONS OF GALLONS PER YEAR

	1983	1984	1985	1986	1987
Exempt [1]					
Foreign Flights	163.100	230.044	141.862	192.596	225.607
Heating Fuel	93.269	99.191	105.469	114.318	97.277
Bulk Sales (Jet Fuel)	3.624	-	-	-	-
Gasohol	-	-	-	.171	.416
Public Utilities	92.894	96.311	102.425	111.157	109.167
State and Local Governme	29.891	28.624	44.207	44.054	24.361
Federal Government	23.730	21.773	24.820	24.281	25.852
Exported as Cargo	20.571	21.776	100.840	372.853	458.016
Exempt Power Plants	.847	6.691	14.098	12.968	18.718
Charitable Institutions	.137	.105	.116	.115	.175
Consigned to Foreign Cou	78.280	59.722	84.655	.021	42.960
Losses	.001	.605	.225	.338	.335
Other	1.796	.466	.042	-	-
Not categorized on monthly Fuel Sales reports					
Oil and Gas Operations	-	-	-	-	-
Oil and Gas Drilling Op	-	-	-	-	-
Foreign Trade Zone [3]	-	-	-	-	-
Foreign Trade Zone [x]	-	-	-	-	-
Domestic - Non-Alaska	-	-	-	-	-
Taxable					
Aviation Gas	14.746	16.825	17.482	16.957	18.108
Aviation Jet	274.760	299.494	294.457	311.966	326.128
Highway Diesel	241.785	245.113	274.151	338.557	259.740
Highway Gas	187.081	212.150	219.728	212.924	203.718
Marine Diesel	72.174	73.542	88.851	95.121	88.650
Marine Gas	8.516	8.835	14.413	10.173	11.327
Total Fuel Sales [1]	**1,307.203**	**1,421.266**	**1,527.840**	**1,858.570**	**1,910.554**
Total Fuel Sales, net of "Exported as Cargo" and "Consigned to Foreign countries"	**1,208.352**	**1,339.768**	**1,342.345**	**1,485.696**	**1,409.578**

Source: Department of Revenue, "Motor Fuel Activity Report." Data from 1977 to 1982 are available but are somewhat incompatible with recent data.
Data for 1983 to 1993 are summations of monthly reports and the 1995-1997 data are fiscal year summaries.
[1] Bonded category is not included.
[2] Fuel claimed by taxpayers under their interpretation of the foreign flight exemption. These claims are under dispute with the department.
[3] Fuel voluntarily reported on tax returns.
[4] Fuel used in conjunction with oil and gas drilling operations.
Revised 12/30/97

TABLE 5B - REFINERY THROUGHPUT HISTORY

MILLIONS OF BARRELS PER YEAR

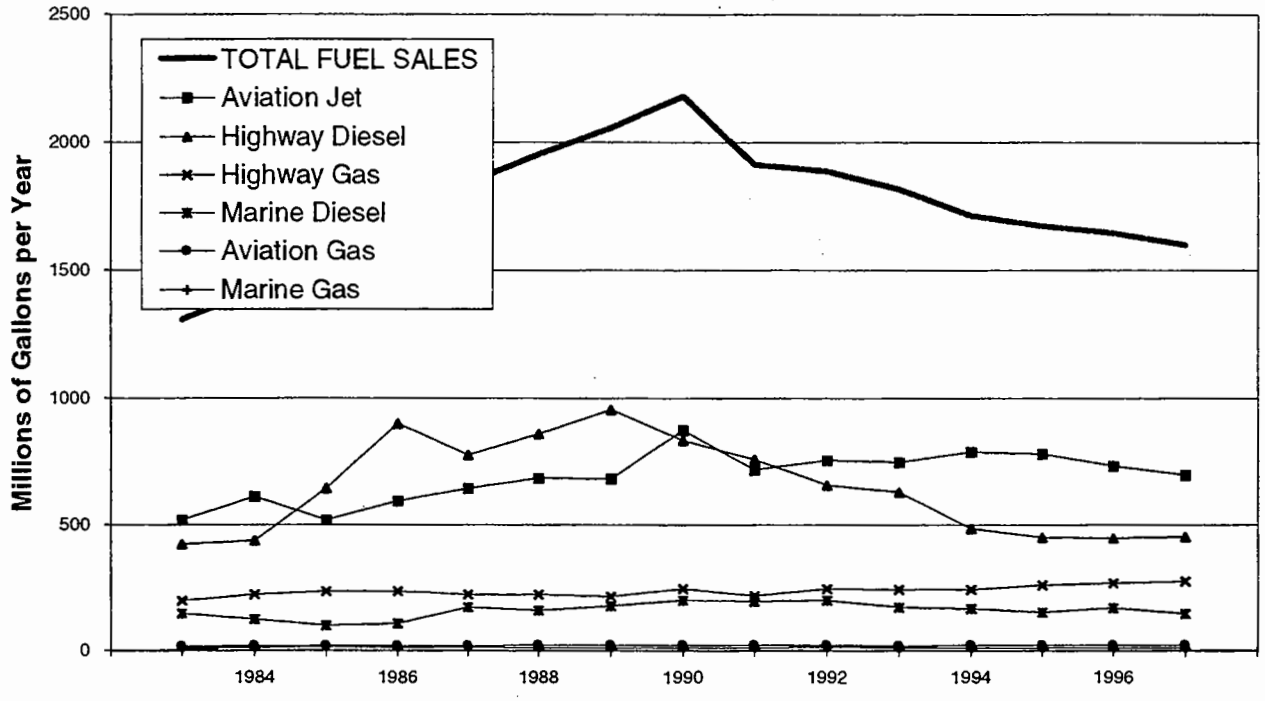
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Taps Flow [1]											
Throughput at PS #1	112.315	397.149	467.939	554.934	556.067	591.142	600.859	608.836	649.887	665.435	716.662
Liftings at Valdez	96.669	394.080	464.394	548.895	547.026	583.370	592.319	596.588	643.512	653.028	700.878
Net	**15.646**	**3.069**	**3.545**	**6.039**	**9.041**	**7.772**	**8.540**	**12.248**	**6.375**	**12.407**	**15.784**
Golden Valley Pipeline [2][3]											
Deliveries	-	-	-	-	-	-	-	-	-	-	-
Receipts	-	-	-	-	-	-	-	-	-	-	-
Net	-	-	-	-	-	-	-	-	-	-	-
Petrostar Refinery [3][4]											
Deliveries	-	-	-	-	-	-	-	-	-	-	-
Receipts	-	-	-	-	-	-	-	-	-	-	-
Net	-	-	-	-	-	-	-	-	-	-	-
Tesoro Refinery [3][5]											
Thruput	-	-	-	-	-	-	-	-	-	-	-

NOTE: "-" = zero or no data; "0" = less than 0.001.
[1] 1977-1981: Alaska Oil and Gas Conservation Commission, "Statistical Report."
1982-1997: Alyeska Pipeline Company.
[2] Flow to and from Mapco and Petrostar refineries at North Pole.
[3] Data prior to 1993 is not available.
[4] Flow to and from Petrostar refinery at Valdez.
[5] Tesoro Alaska Petroleum Company.
Revised 3/10/98

	1988	1989	1990	1991	1992	1993	FY 1994	FY 1995	FY 1996	FY 1997
Exempt [1]										
Foreign Flights	242.202	258.757	303.044	257.623	236.556	198.916	338.188	407.515	346.505	329.820
Heating Fuel	103.136	113.602	113.159	110.922	128.800	144.387	159.170	164.061	151.795	154.387
Bulk Sales (Jet Fuel)	-	-	-	-	-	87.422	-	-	-	-
Gasohol	.215	.022	6.045	-	17.118	17.157	-	30.296	79.327	91.663
Public Utilities	95.960	69.472	157.955	104.764	116.262	69.026	33.208	28.365	28.265	47.580
State and Local Governme	24.971	24.576	21.293	28.937	28.317	30.859	27.625	24.032	23.272	25.919
Federal Government	50.587	29.813	36.242	24.057	25.397	25.976	98.653	64.180	69.014	68.403
Exported as Cargo	436.760	457.604	358.678	298.407	194.442	221.140	82.205	81.854	112.151	57.895
Exempt Power Plants	14.426	11.637	12.104	9.714	5.260	5.790	4.321	4.236	1.893	7.648
Charitable Institutions	.120	.196	.195	1.153	.254	.360	.632	.659	.838	.555
Consigned to Foreign Cou	.035	62.835	.001	-	.800	6.092	-	.378	-	-
Losses	.345	.003	.000	.003	.001	.000	-	-	.032	-
Other	-	-	-	1.559	28.011	16.092	.205	18.325	.236	.803
Not categorized on monthly Fuel Sales reports										
Oil and Gas Operation	-	-	-	-	-	-	2.357	1.945	2.731	-
Oil and Gas Drilling Op	-	-	-	-	-	-	-	-	-	18.106
Foreign Trade Zone [3]	-	-	-	-	-	-	-	-	8.451	-
Foreign Trade Zone [x]	-	-	-	-	-	-	-	-	-	47.280
Domestic - Non-Alaska	-	-	-	-	-	-	-	-	17.038	17.787
Taxable										
Aviation Gas	18.571	18.493	19.788	18.887	19.481	18.463	20.657	21.165	20.951	20.252
Aviation Jet	351.207	370.434	449.753	374.475	379.448	346.049	242.930	251.603	225.375	224.098
Highway Diesel	282.097	281.435	273.083	285.625	272.294	230.301	197.813	200.591	219.650	179.038
Highway Gas	207.122	200.017	235.157	209.228	232.386	225.960	225.327	219.220	166.742	161.977
Marine Diesel	115.199	147.725	182.600	178.342	188.041	162.226	155.424	144.293	160.742	135.491
Marine Gas	10.479	10.008	10.238	9.662	12.938	10.535	10.416	10.262	10.771	10.526
Total Fuel Sales [1]	**1,953.432**	**2,056.630**	**2,179.338**	**1,913.356**	**1,885.805**	**1,816.750**	**1,599.131**	**1,672.980**	**1,645.779**	**1,599.228**
Total Fuel Sales, net of "Exported as Cargo" and "Consigned to Foreign countries"	**1,516.638**	**1,536.191**	**1,820.658**	**1,614.949**	**1,690.563**	**1,589.519**	**1,516.926**	**1,590.748**	**1,533.628**	**1,541.333**

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Taps Flow [1]											
Throughput at PS #1	744.108	688.062	654.551	665.175	639.390	591.220	579.320	555.939	525.565	487.017	
Liftings at Valdez	731.663	672.461	636.199	647.345	623.217	570.707	559.082	535.790	503.726	462.139	
Net	**12.445**	**15.601**	**18.352**	**17.830**	**16.173**	**20.513**	**20.238**	**20.149**	**21.839**	**24.878**	28,154
Golden Valley Pipeline [2][3]											
Deliveries	-	-	-	-	-	48.430	48.267	50.874	52.901	53.080	
Receipts	-	-	-	-	-	33.970	33.705	34.563	35.124	35.552	
Net	-	-	-	-	-	**14.460**	**14.562**	**16.311**	**17.777**	**17.528**	Almanac
Petrostar Refinery [3][4]											
Deliveries	-	-	-	-	-	9.204	10.597	11.949	14.062	14.126	38,701
Receipts	-	-	-	-	-	6.821	8.021	9.038	10.514	10.709	29,540
Net	-	-	-	-	-	**2.383**	**2.576**	**2.911**	**3.548**	**3.417**	9,342
Tesoro Refinery [3][5]											
Thruput	-	-	-	-	-	18.176	16.848	18.608	17.693	18.670	51,151

FIGURE 5 - REFINED FUEL CONSUMPTION HISTORY OF STATE



6 GAS CONSUMPTION HISTORY

NORTH SLOPE

The only present market for the North Slope gas reserves near Prudhoe Bay is as fuel for oil production and transportation facilities and related activities. Consequently, 92% of the extracted gas is injected back into the fields to maintain reservoir pressure, to conserve the gas resources, and to produce incremental oil. Of the estimated 270 billion cubic feet that were consumed in 1996, 80% went to field related activities of which the largest consumers were the gas handling and gas injection systems. A further 14% was reported as NGLs, 4% was sold to TAPS for fuel and 2% went to all other uses, including heat and electricity generation at Barrow. The volume of gas consumed on the North Slope to produce oil is larger than the combined Anchorage and Kenai domestic, commercial and industrial markets.

COOK INLET

Anchorage and Kenai markets, field operations and exports consume all the gas extracted from Cook Inlet fields except for a decreasing amount injected each year into Swanson River field. Of the 225 billion cubic feet consumed in 1996, 36% went to Phillips-Marathon's LNG plant for combined fuel use and product, 24% went to Union's ammonia-urea plant for combined fuel use and feed stock, 16% to power generation, 14% to utility gas, 8% to field operations and 1% to other uses.

TABLE 6 - GAS CONSUMPTION HISTORY

BILLIONS OF CUBIC FEET PER YEAR

	1971	1972	1973	1974	1975	1976	1977	1978
NORTH SLOPE								
Field Operations [1]	-	-	-	2.650	2.808	3.856	24.444	29.231
Vented and Flared	-	-	-	1.076	1.061	1.254	10.882	2.313
Used on Lease	-	-	-	1.574	1.747	2.602	13.562	26.918
Sold [1]	-	-	-	0.136	1.037	2.054	3.347	7.802
Power generation [2]	-	-	-	-	-	-	-	0.219
Gas Utilities [2]	-	-	-	-	-	-	-	0.291
TAPS [3]	-	-	-	-	-	-	1.754	6.949
NGL [4]	-	-	-	-	-	-	-	-
Unaccounted [5]	-	-	-	-	-	-	-	-
TOTAL	**-**	**-**	**-**	**2.786**	**3.845**	**5.910**	**27.791**	**37.033**
COOK INLET								
Field Operations [1]	45.250	36.560	20.900	49.834	28.830	24.467	24.416	25.949
Vented and Flared	33.180	20.980	6.930	7.978	9.496	5.421	4.848	3.870
Used on Lease	12.070	15.580	13.970	41.856	19.334	19.046	19.568	22.079
Sold [1]	121.717	123.717	130.937	130.509	140.717	143.710	152.437	164.300
Power generation	16.529	19.253	21.752	22.801	25.461	27.628	28.717	29.883
Public [6]	9.980	12.780	15.683	17.117	19.619	22.204	23.717	24.757
Military [7]	6.549	6.473	6.069	5.684	5.842	5.424	5.000	5.126
Gas Utilities [7]	10.238	13.099	14.757	15.128	12.092	12.551	12.683	13.454
Residential	5.440	6.027	6.519	6.717	5.548	5.916	6.010	6.536
Commercial	4.798	7.072	8.238	8.411	6.544	6.635	6.673	6.918
LNG [8]	63.240	57.133	60.570	61.656	63.904	62.090	65.449	60.102
Ammonia-Urea [9]	19.490	20.580	20.640	22.100	23.888	24.257	28.620	48.879
Rental Gas [10]	-	13.400	12.590	10.410	12.477	11.588	6.703	10.523
Unaccounted [5]	12.220	0.252	0.628	-1.586	2.895	5.596	10.265	1.459
TOTAL	**166.967**	**160.277**	**151.837**	**180.343**	**169.547**	**168.177**	**176.853**	**190.249**
STATE								
Field Operations [1]	45.250	36.560	20.900	52.484	31.638	28.323	48.860	55.180
Vented and Flared	33.180	20.980	6.930	9.054	10.557	6.675	15.730	6.183
Used on Lease	12.070	15.580	13.970	43.430	21.081	21.648	33.130	48.997
Sold [1]	121.717	123.717	130.937	130.645	141.754	145.764	155.784	172.102
Power generation	16.529	19.253	21.752	22.801	25.461	27.628	28.717	30.102
Public [2][6]	9.980	12.780	15.683	17.117	19.619	22.204	23.717	24.976
Military [7]	6.549	6.473	6.069	5.684	5.842	5.424	5.000	5.126
Gas Utilities	10.238	13.099	14.757	15.128	12.092	12.551	12.683	13.454
Residential [2][7]	5.440	6.027	6.519	6.717	5.548	5.916	6.010	6.536
Commercial [7]	4.798	7.072	8.238	8.411	6.544	6.635	6.673	6.918
LNG [8]	63.240	57.133	60.570	61.656	63.904	62.090	65.449	60.102
Ammonia-Urea [9]	19.490	20.580	20.640	22.100	23.888	24.257	28.620	48.879
Rental Gas [10]	-	13.400	12.590	10.410	12.477	11.588	6.703	10.523
TAPS [3]	-	-	-	-	-	-	1.754	6.949
NGL [4]	-	-	-	-	-	-	-	-
Unaccounted [5]	12.220	0.252	0.628	-1.586	2.895	5.596	10.265	1.459
TOTAL [11]	**166.967**	**160.277**	**151.837**	**183.129**	**173.392**	**174.087**	**204.644**	**227.282**

NOTE: "-" = zero or no data: "0" = less than 0.001.

[1] Alaska Oil and Gas Conservation Commission (AOGCC), "Report of Gas Disposition." AOGCC modified its consumption classification in 1994 but the classes in this table are equivalent throughout the time series.

[2] Barrow Utilities and Electric Cooperative Inc..

[3] Royalty reports from Arco to Division of Oil and Gas, sales to TAPS from Prudhoe Bay field.

[4] Alaska Oil and Gas Conservation Commission, "Alaska Production Summary by Field and Pool", monthly reports. NGLs volumes are reported in barrels, here converted to billions of cubic feet by: 1 Bbl=1.2 Mcf.

[5] Calculated difference between "Sold" and sum of listed "Sold" items.

[6] 1971-91: Alaska Energy Authority, "Alaska Electric Power Statistics, 1960-1991"
1992-97: Chugach Electric and Municipal Light & Power.

[7] 1971-82: Annual reports from Alaska Pipeline Co., Enstar and Kenai Utility Service Co. to Alaska Public Utilities Commission
1983-97: Enstar Natural Gas Co..

[8] Phillips Petroleum Co.

[9] 1971-74: Stanford Research Institute, "Natural Gas Demand and Supply to the Year 2000 in the Cook Inlet Basin of South Central Alaska," Nov 1977.
1975-79: Sum of
1) sales from Kenai and Beaver Creek gas fields to Collier Chemical in: Alaska Oil and Gas Conservation Commission, "Kenai Gas Sales" and
2) sales from McArthur River gas field in: Alaska Oil and Gas Conservation Commission, "Monthly Report of Gas Disposition."
1980-85: Royalty reports from producers to Division of Oil and Gas.
1986-97: Unocal Corp.

[10] Gas produced and sold from other fields and injected into Swanson River field to maintain reservoir pressure.
1972-90: Royalty reports from Unocal to Division of Oil and Gas, item: Swanson River Rental Gas.
1991-92: Unocal Corp.

[11] AOGCC tabulates gas produced, reported in Table 4, and gas sold, reported in this table. The two tabulations differ slightly

Revised 2/25/98

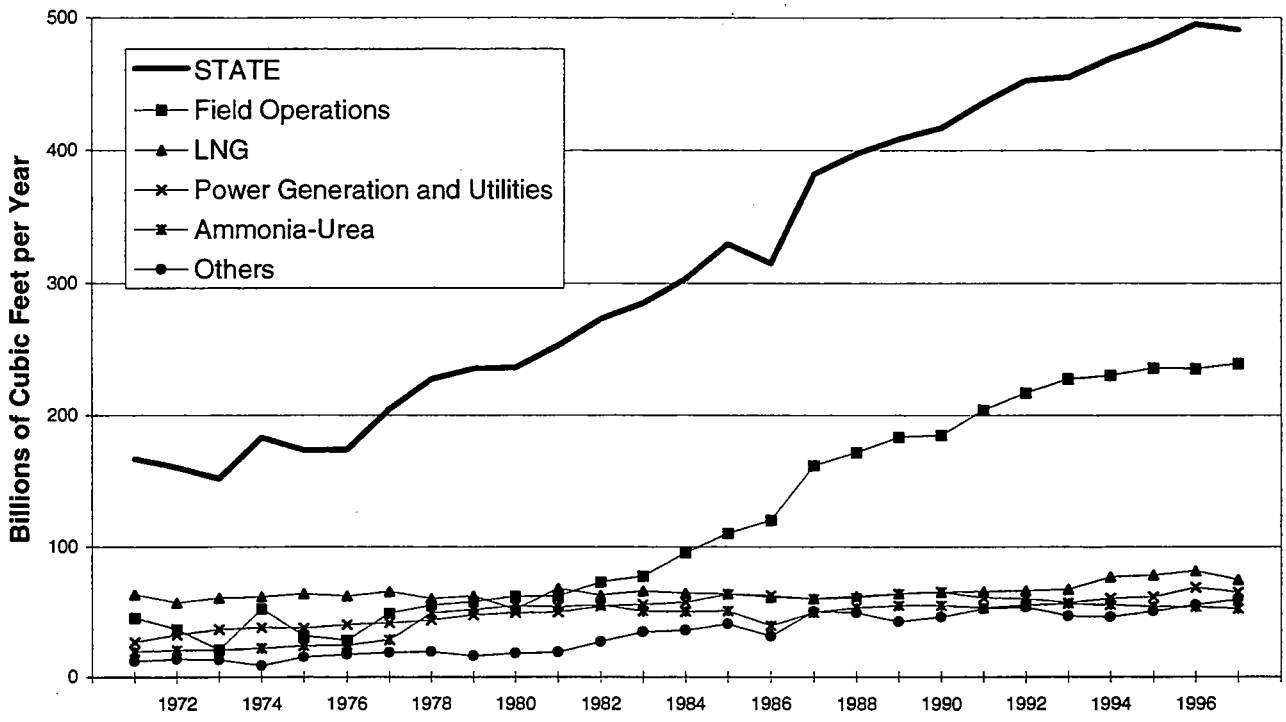
1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
33.763	39.697	41.607	51.921	58.210	74.732	91.388	101.722	143.272	152.558	163.955
1.840	1.801	2.485	3.490	2.524	5.814	3.437	5.802	12.952	5.747	6.792
31.923	37.896	39.122	48.431	55.686	68.918	87.951	95.920	130.320	146.811	157.163
9.512	12.007	12.791	14.000	14.589	15.088	20.089	20.001	42.719	48.287	39.546
0.235	0.235	0.315	0.404	0.482	0.480	0.486	0.559	0.544	0.620	0.620
0.317	0.400	0.435	0.539	0.407	0.508	0.453	0.486	0.493	0.519	0.484
8.648	10.686	11.106	11.952	13.277	12.856	14.381	15.166	16.624	17.855	16.147
-	0.305	0.540	0.600	0.373	0.380	0.980	1.562	19.594	25.235	22.637
0.312	0.381	0.395	0.505	0.050	0.864	3.789	2.228	5.464	4.058	-0.342
43.275	**51.704**	**54.398**	**65.921**	**72.799**	**89.820**	**111.477**	**121.723**	**185.991**	**200.845**	**203.501**
24.101	22.304	20.559	20.957	19.380	20.516	18.637	18.408	18.529	19.142	19.433
2.710	3.045	3.175	3.494	2.560	3.260	2.893	3.095	2.746	3.244	2.940
21.391	19.259	17.384	17.463	16.820	17.256	15.744	15.313	15.783	15.898	16.493
168.106	162.201	178.082	185.913	192.578	192.752	199.311	174.563	177.660	177.471	185.767
33.166	33.526	33.632	34.943	36.143	35.909	38.724	38.774	36.240	36.854	37.933
28.180	28.763	29.071	30.113	31.547	31.571	34.194	34.243	31.583	32.038	32.917
4.986	4.763	4.561	4.830	4.596	4.338	4.530	4.531	4.657	4.816	5.016
14.045	15.521	15.778	19.025	19.111	20.903	24.419	23.235	23.063	23.249	25.238
6.911	7.773	7.950	9.981	10.202	10.999	12.445	11.935	12.027	12.292	13.564
7.134	7.748	7.828	9.044	8.909	9.904	11.974	11.300	11.036	10.957	11.674
62.231	51.915	67.943	62.853	66.042	64.229	63.926	61.062	60.111	62.168	63.836
51.657	54.699	53.836	55.220	50.338	50.083	50.688	43.052	49.450	53.140	49.965
6.958	5.190	5.601	11.383	12.698	18.362	21.532	14.785	16.733	8.722	6.705
0.049	1.350	1.292	2.489	8.246	3.266	0.022	-6.345	-7.937	-6.662	2.090
192.207	**184.505**	**198.641**	**206.870**	**211.958**	**213.268**	**217.948**	**192.971**	**196.189**	**196.613**	**205.120**
57.864	62.001	62.166	72.878	77.590	95.248	110.025	120.130	161.801	171.700	183.388
4.550	4.846	5.660	6.984	5.084	9.074	6.330	8.897	15.698	8.991	9.732
53.314	57.155	56.506	65.894	72.506	86.174	103.695	111.233	146.103	162.709	173.656
177.618	174.208	190.873	199.913	207.167	207.840	219.400	194.564	220.379	225.758	225.313
33.401	33.761	33.947	35.347	36.625	36.389	39.210	39.333	36.784	37.474	38.553
28.415	28.998	29.386	30.517	32.029	32.051	34.680	34.802	32.127	32.658	33.537
4.986	4.763	4.561	4.830	4.596	4.338	4.530	4.531	4.657	4.816	5.016
14.045	15.521	15.778	19.025	19.111	20.903	24.419	23.235	23.063	23.249	25.238
6.911	7.773	7.950	9.981	10.202	10.999	12.445	11.935	12.027	12.292	13.564
7.134	7.748	7.828	9.044	8.909	9.904	11.974	11.300	11.036	10.957	11.674
62.231	51.915	67.943	62.853	66.042	64.229	63.926	61.062	60.111	62.168	63.836
51.657	54.699	53.836	55.220	50.338	50.083	50.688	43.052	49.450	53.140	49.965
6.958	5.190	5.601	11.383	12.698	18.362	21.532	14.785	16.733	8.722	6.705
8.648	10.686	11.106	11.952	13.277	12.856	14.381	15.166	16.624	17.855	16.147
-	0.305	0.540	0.600	0.373	0.380	0.980	1.562	19.594	25.235	22.637
0.361	1.731	1.687	2.994	8.296	4.130	3.811	-4.117	-2.473	-2.604	1.748
235.482	**236.209**	**253.039**	**272.791**	**284.757**	**303.088**	**329.425**	**314.694**	**382.180**	**397.458**	**408.621**

TABLE 6 - GAS CONSUMPTION HISTORY, Continued

BILLIONS OF CUBIC FEET PER YEAR

	1990	1991	1992	1993	1994	1995	1996	1997
NORTH SLOPE								
Field Operations [1]	169.343	183.711	196.055	208.539	211.020	218.056	216.395	222.063
Vented and Flared	8.753	6.795	10.092	19.081	10.585	6.968	5.616	6.255
Used on Lease	160.590	176.916	185.963	189.458	200.435	211.088	210.779	215.807
Sold [1]	37.067	45.475	48.402	46.202	44.190	47.870	53.407	54.389
Power generation [3]	0.644	0.667	0.721	0.676	0.680	0.680	0.661	0.640
Gas Utilities [2]	0.495	0.486	0.530	0.508	0.541	0.522	0.519	0.554
TAPS [3]	14.543	15.349	14.583	12.342	12.017	11.426	10.624	9.616
NGL [4]	21.805	28.633	32.276	32.209	31.098	35.558	39.836	41.704
Unaccounted [5]	-0.420	0.340	0.292	0.467	-0.146	-0.316	1.767	1.875
TOTAL	**206.410**	**229.186**	**244.457**	**254.741**	**255.210**	**265.926**	**269.802**	**276.451**
COOK INLET								
Field Operations [1]	15.570	20.256	21.014	18.964	19.122	17.839	19.029	17.137
Vented and Flared	2.214	3.900	4.088	3.419	2.727	1.815	1.493	2.058
Used on Lease	13.356	16.356	16.926	15.545	16.395	16.024	17.536	15.079
Sold [1]	194.877	186.366	187.233	181.542	194.880	196.627	206.373	197.323
Power generation	38.858	35.329	33.504	32.045	33.045	33.965	36.102	37.747
Public [6]	33.918	30.629	28.549	27.361	28.360	29.255	31.012	32.773
Military [7]	4.940	4.700	4.955	4.684	4.685	4.710	5.090	4.974
Gas Utilities [7]	25.892	24.700	25.946	24.242	26.607	26.709	29.047	26.645
Residential	13.968	13.440	14.333	13.413	14.769	14.847	16.220	14.872
Commercial	11.924	11.260	11.613	10.829	11.838	11.862	12.827	11.773
LNG [8]	65.135	65.429	66.219	67.328	76.651	78.144	81.407	74.450
Ammonia-Urea [8]	54.770	52.609	55.000	56.210	55.400	54.000	54.011	52.318
Rental Gas [10]	3.182	3.683	3.719	-	-	-	-	-
Unaccounted [5]	7.040	4.616	2.845	1.717	3.177	3.809	5.806	6.163
TOTAL	**210.447**	**206.622**	**208.247**	**200.506**	**214.002**	**214.466**	**225.402**	**214.460**
STATE								
Field Operations [1]	184.913	203.967	217.069	227.503	230.142	235.895	235.424	239.200
Vented and Flared	10.967	10.695	14.180	22.500	13.312	8.783	7.109	8.314
Used on Lease	173.946	193.272	202.889	205.003	216.830	227.112	228.315	230.886
Sold [1]	231.944	231.841	235.635	227.744	239.070	244.497	259.780	251.711
Power generation	39.502	35.996	34.225	32.721	33.725	34.645	36.763	38.387
Public [2][6]	34.562	31.296	29.270	28.037	29.040	29.935	31.673	33.413
Military [7]	4.940	4.700	4.955	4.684	4.685	4.710	5.090	4.974
Gas Utilities	25.892	24.700	25.946	24.242	26.607	26.709	29.047	26.645
Residential [2][7]	13.968	13.440	14.333	13.413	14.769	14.847	16.220	14.872
Commercial [7]	11.924	11.260	11.613	10.829	11.838	11.862	12.827	11.773
LNG [8]	65.135	65.429	66.219	67.328	76.651	78.144	81.407	74.450
Ammonia-Urea [9]	54.770	52.609	55.000	56.210	55.400	54.000	54.011	52.318
Rental Gas [10]	3.182	3.683	3.719	-	-	-	-	-
TAPS [3]	14.543	15.349	14.583	12.342	12.017	11.426	10.624	9.616
NGL [4]	21.805	28.633	32.276	32.209	31.098	35.558	39.836	41.704
Unaccounted [5]	6.620	4.956	3.137	2.184	3.031	3.492	7.573	8.038
TOTAL [11]	**416.857**	**435.808**	**452.704**	**455.247**	**469.212**	**480.392**	**495.204**	**490.911**

FIGURE 6 - GAS CONSUMPTION HISTORY OF STATE



7 OIL AND GAS CONSUMPTION FORECAST

OIL CONSUMPTION

The use of motor fuels in the state is driven by the level of economic and demographic activity. The Alaska Gross State Product (GSP) describes this activity through measures of the economic output of each sector in the economy. The Institute of Social and Economic Research (ISER) estimates the GSP and prepares forecasts of population and economic output[1]. These economic estimates and forecasts, in conjunction with past patterns of motor fuel consumption, are used as the basis for the projections in this report.

Aviation Jet Fuel

Since production of oil began from the giant Prudhoe Bay field in 1977, and Alaska's economy began it's long, oil-driven expansion, consumption of aviation jet fuel has steadily increased at an annual average rate of 8%. Even higher annual rates (13%) occurred during the boom years of 1981-1984. In the early nineties, annual growth slowed to about 2.5 percent then grew again with the emergence of increased international cargo transfers at the state's international airports.

Using industry data sources, the amount of aviation jet fuel sold statewide grew nine percent from 1994 to 1995 and six percent from 1995 to 1996. Much of the source of the increase is the growth of the international cargo transshipment and refueling activity at the international airports in Anchorage and Fairbanks. Anchorage International Airport reported that fuel purchases by carrier increased by 8.2% between FY1995 –1996 and Fairbanks International showed an increase of 5.4% during that same period[2]. One domestic refiner has launched a $70 million plant expansion to be completed in 1998 to meet this growing demand for jet fuel. Another expanded their plant's hydrocracker to allow increased jet fuel production in late 1997.

Future growth in international freight handling may be affected by international trade activity between the US and Asia. Recent currency devaluation problems in Asia affect the flow of trade and may level the rate of jet fuel consumption after 1997. This may be mitigated by the changing patterns of trade, as markets enjoying their new comparative advantage afforded by weaker currencies will find improved export opportunities.

These factors indicate that consumption of jet fuel will continue to increase, albeit at a lower rate than in previous years. This forecast assumes a four- percent growth through 1998 and then a reversion to the 2.5% annual rate that characterized the early 1990s.

Aviation Gas

Commercial flight operators who run charters and guide services as well as the general public use aviation gasoline (AVGAS). To a lesser extent (2% in FY 1997) local, state, and federal government activities require the use of AVGAS.

During the period 1983 - 1990, total consumption increased by an annual average of 5 percent. This growth was generally spurred by an average annual increase in per-capita consumption of three percent, which peaked in 1990 at 37.6 gallons per person (20.8 million gallons total). In the period that followed, total consumption declined slightly to the 1993 level of 18.8 million gallons, then increased to over 21 million gallons for the next three years. Per-capita consumption leveled at 35 gallons and has been consistent since fiscal year 1994.

Projections of annual consumption of AVGAS use the percapita rate of 35.1 gallons applied to the statewide population forecast.

Marine Gas

[1] Goldsmith, Scott and Alexandra Hill. *Alaska's Economy and Population, 1959-2020:* ISER 1997. This study provided statewide and regional economic and demographic projections for the Alaska Department of Transportation and Public Facilities.

[2] Anchorage and Fairbanks International Airport Statistical System, 1996.

Excluding a sharp spike in 1992, per capita consumption of marine gas has exhibited a stable but slightly downward trend since 1987. This slight, per capita decline has kept total consumption constant under the pressure of annual population increases.

Projections of annual consumption of marine gas use the past three-year's average per capita rate of 17.7 gallons applied to the statewide population forecast.

Marine Diesel

Marine diesel is the fuel that powers many commercial fishing boats, marine cargo transportation and private sport or charter boats. Fluctuations in total consumption mirror the historical changes in per capita use. Along with some fluctuations in the early eighties, total consumption steadily increased from 1977 to peak during the period 1990 to 1992. Population growth does not seem to influence total consumption of marine diesel fuel and the trend since 1992 has declined. Total consumption for the past three years have fluctuated around an average of 158 million gallons and this number is used for future consumption estimates.

Highway Gas

Since 1977, total consumption of highway gas has followed a linear trend and increased at an annual rate of 2.3%. Annual consumption of highway gas is closely correlated with the annual number of Alaska tourists and an increasing Alaskan population. The trend from 1990 is continued through the forecast period showing an annual average increase of 2% to 2008.

Highway Diesel

Motor fuels classified in the highway diesel category are used for heating fuel, refinery residuals used for ship bunker fuels, as well as other diesel fuel used for transportation. From 1985 to 1993 the refinery residual fuels shipped out as cargo dominated the volumes "consumed" as highway diesel. Since that time, highway diesel exported as cargo has stabilized and per capita consumption has been steady, deviating by less than 1% from the average. The trend for the last three years is continued and average per capita consumption is applied to population forecasts for future consumption estimates of highway diesel.

GAS CONSUMPTION FORECAST

North Slope

Natural gas consumption on the Alaska North Slope (ANS) is used most heavily for field operations consisting of oil and gas processing and reinjection of gas and fluids to maintain reservoir pressure. The Trans-Alaska-Pipeline (TAPS) uses ANS gas to operate northern pump stations. Natural gas liquids (NGL) are used to blend with crude oil transported through TAPS and as miscible injectant for enhanced oil recovery (EOR).

Use of natural gas for field operations will expand to 2001 as developing fields move into oil production. The NGL production sent through TAPS will decline in proportion to the amount of crude oil throughput in TAPS. No new major export projects are included in this forecast.

Cook Inlet

The consumption pattern of natural gas in the Cook Inlet area is well established. Since 1969 two industrial plants have dominated the market and in 1997 together accounted for 59 percent of total gas consumption. Natural gas used for power generation and utilities represent another 30 percent, with the balance used to produce oil and gas.

One of the two industrial plants liquefies natural gas (LNG) for export and operates under authorization issued by the U.S. Department of Energy, Office of Fossil Energy (OFE). The existing export authorization expires in the first quarter of 2004. The plant owners have requested a five-year extension but competing users of the area's natural gas reserves have protested the request. The protests have focused on the potential for future area-wide shortages if the natural gas continues to be exported to foreign markets. Given the uncertainty of the OFE decision, it cannot automatically be assumed, nor projected, that there will be continued export of LNG beyond the existing authorization period. At a minimum, non-export related uses of LNG could continue beyond the first quarter, 2004, but are not considered in this forecast.

Natural gas used for space and water heating (gas utilities) and electrical generation are each a function of population/demographic growth and their continued desirability as the fuel for these uses. The Institute of Social and Economic Research (ISER) at the University of Alaska, Anchorage, has recently produced statewide and regional economic/demographic projections.[3] These projections are used where appropriate when forecasting future consumption.

Power Generation

Natural gas used for generating electrical power can be separated into two categories: military and public utilities. Total annual military use of natural gas for power generation has not changed appreciably for twenty years. The bases have a coal-fired backup that is tested periodically. Barring a base closedown or other sudden event, gas use from this source should remain constant. To smooth annual variations in climatic temperatures, the last three years of gas usage have been averaged and this number is used as a baseline for the annual projections.

Non-military electric power generation contributes to an intertie that serves an area from the Kenai Peninsula to the south, the Municipality of Anchorage, and communities along the Alaska Railroad to the Fairbanks North Star Borough. ISER reports that the annual average growth rate since 1980 has trailed that of population growth due to fuel switching by consumers[4]. Natural gas service has extended into communities where many of the households previously used electricity for space heating. Consumers responded by connecting to the newly available gas service and substituted a gas furnace to replace electric heaters.

This trend has abated in recent years and the trend in power generation is expected to follow the population trend of 1.5% per year growth for the Southern Railbelt. This premise is consistent with the reported growth forecasted by the two Anchorage utilities[5].

Gas Utilities

Gas used for space and water heating is a function of economic and demographic trends. Residential utility gas consumption grew steadily in Southcentral Alaska through the 1980s, as gas service became available to areas previously unserved. While some projects have been publicized to extend gas service to Homer and Seward, and even ship LNG to coastal communities, no extension of gas to additional Southcentral areas are assumed at this time.

ISER projections of population were used, as were the reported projections for continued expansion of gas service to the existing populace. To smooth annual variations in climatic temperatures, consumption for the last three years is averaged and expected to grow by two percent each year through the forecast period.

Liquefied Natural Gas (LNG)

In 1997, 35 percent of Cook Inlet natural gas production was exported to Japan as LNG. Current contracts with Tokyo Electric Power Company, Inc. and Tokyo Gas Company, Ltd. call for annual delivery of 64.4 billion cubic feet of gas (bcf), which takes about 78 bcf as feedstock for liquefaction and boil-off during shipping. Sales may be permitted for an additional six- percent above the contract quantities[6]. The slowdown in the Japanese economy was blamed for the drop in 1997 to 74.5 bcf[7] and Japanese buyers may buy at the minimum contracted levels in 1998.[8]

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[3] Goldsmith, Scott and Alexandra Hill. *Alaska's Economy and Population, 1959-2020:* ISER 1997.

[4] Goldsmith, Scott. *Two Memoranda on Cook Inlet Gas: Cook Inlet Gas Consumption Projection & The Financial Cost of Premature Loss of Gas to the Railbelt, 1997.* This study was prepared for Enstar Natural Gas Company.

[5] IBID. Pg. A-3.

[6] Phillips Alaska Natural Gas Corporation and Marathon Oil Company. *Application to Amend Authorization To Export Liquefied Natural Gas,* 1996. p. 5.

[7] Oil and Gas Journal. January 19, 1998, p. 54.

[8] Petroleum Intelligence Weekly. January 5, 1998, p. 5.

The current export authorization extends to March 31, 2004. Average annual contract quantity of 78 bcf is forecasted to the end of the authorization period and prorated for the first quarter of the last year.

Ammonia-Urea (Fertilizer) Manufacture

Natural gas feedstock used in the manufacture of ammonia and urea has varied slightly over the last several years following worldwide product demand. Currency devaluation in Southeast Asian markets (a drop of 72% in Indonesia and 41% in South Korea against the U.S. dollar over the past six months) puts all American exports to that market area, including fertilizer pellets, at a disadvantage. Near-term export opportunities for ammonia/urea products may suffer as a result. To smooth annual variations the last three year's consumption of gas for the fertilizer plant are averaged and assumed constant. These projections assume that domestic users will get precedence over gas exports if future natural gas shortages appear in Cook Inlet. Therefore, fertilizer production will continue for the forecast period.

Field Operations

Natural gas used in field operations may be thought of as a fixed amount per active field or platform. This is due to an increase in water production in place of oil as oil production declines. In fact, total liquid production may actually increase over time. Natural gas used to support these operations will not decline at the same rate as the drop in oil production.

For example, from 1980 to 1996 the annual mean (average) amount of gas used for field operations was 14.6 bcf with a standard deviation of 1 bcf (7%). In contrast, during that same period the mean amount of oil produced was 14 million barrels per year with a standard deviation of 7, which is 37% of the mean. This indicates that sixty-eight percent of the time (one standard deviation) use of field gas fluctuates much less than annual oil production and does not decline in lockstep with it.

To smooth annual variations, the last three years of reported gas consumption in field operations are averaged and remain constant through the forecast period. The overall area forecast of reduced gas consumption after 2004 will not result in the cessation of operations of any currently active fields in Cook Inlet to 2008.

New uses of Gas

New sources of gas consumption from Cook Inlet range from the emergence of new industrial plants to projects aimed at transporting LNG to coastal areas. While these ventures are often discussed each year few, if any, bear fruition. An exception in this history is the transporting of LNG to Fairbanks. This project is well advanced and some gas will be consumed for this purpose in 1998. Through the forecast period, the price of this gas at the burner tip is expected to keep the Fairbanks market confined to the industrial area, with small increases in response to growth in that sector. Except for the Fairbanks project, no new uses are included in the forecast.

Unaccounted

The account of total gas consumed is tabulated and reported by the Alaska Oil and Gas Conservation Commission. The amount consumed for each use is reported separately by individual end users. These two numbers differ slightly due to reporting inconsistencies. The average of the difference from the three most recent years is used for this category and extended through the forecast period.

TABLE 7A - FUEL CONSUMPTION FORECAST

MILLIONS OF GALLONS PER YEAR

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Cumulative
Aviation Jet	902	925	948	972	996	1,021	1,047	1,073	1,099	1,127	1,155	11,265
Aviation Gas	21	22	22	23	23	23	23	24	24	24	25	254
Highway Diesel	550	559	571	579	586	592	599	605	613	621	632	6,509
Highway Gas	276	282	288	294	300	306	312	318	324	330	336	3,367
Marine Diesel	158	158	158	158	158	158	158	158	158	158	158	1,738
Marine Gas	11	11	11	11	12	12	12	12	12	12	12	128
Total	**1,919**	**1,957**	**1,999**	**2,037**	**2,074**	**2,112**	**2,151**	**2,189**	**2,230**	**2,273**	**2,318**	**23,261**

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TABLE 7B - GAS CONSUMPTION FORECAST

BILLIONS OF CUBIC FEET PER YEAR

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Cumulative
NORTH SLOPE												
Field Operations	218.8	228.8	238.8	248.8	248.8	248.8	248.8	248.8	248.8	248.8	248.8	2,676.8
Power generation	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	7.3
Gas Utilities	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.9
TAPS	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	105.6
NGL [1]	30.4	29.2	30.1	29.3	26.3	24.3	23.4	22.8	21.7	21.5	22.3	281.4
TOTAL	**260.0**	**268.8**	**279.7**	**288.9**	**285.9**	**283.9**	**283.0**	**282.4**	**281.3**	**281.1**	**281.9**	**3,077.0**
COOK INLET												
Field Operations	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	205.7
Power Generation	36.4	36.9	37.3	37.8	38.3	38.8	39.3	39.8	40.4	40.9	41.4	427.3
Gas Utilities	29.8	30.3	30.9	31.4	32.0	32.5	33.1	33.7	34.3	34.9	35.5	358.5
LNG Manufacture	78.0	78.0	78.0	78.0	78.0	78.0	19.7	-	-	-	-	487.7
Ammonia-Urea	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	605.0
New Uses	0.2	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	4.8
Other	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	58.3
TOTAL	**223.4**	**224.6**	**225.6**	**226.7**	**227.7**	**228.8**	**171.6**	**153.0**	**154.1**	**155.3**	**156.5**	**2,147.3**
STATE												
TOTAL	**483.4**	**493.4**	**505.3**	**515.6**	**513.6**	**512.7**	**454.6**	**435.4**	**435.4**	**436.4**	**438.4**	**5,224.3**

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8 ROYALTY OIL AND GAS SALES

The state of Alaska owns the oil and gas on its own land and some of the oil and gas royalty under federal lands, native lands, and a few private parcels. The state receives a royalty of approximately 12.5 percent of the oil and gas produced from its holdings and may take its share of oil production "in-kind" or "in-value". When oil is taken in value (RIV), the state's lessees who produce the oil market the state's share along with their own share of production. The lessees are obligated to pay the state the value of the state's RIV share. When the state takes its royalty share of the oil "in-kind" (RIK), it assumes ownership of the oil, and the commissioner disposes of the oil through either negotiated, competitive, or quasi-competitive sales.

Negotiated sales are held when the state's best interests do not require competitive bidding or when no competition exists. In every case the state has negotiated these sales with in-state refiners. The state negotiates short- and long-term sales. Short-term sales are for one year or less and do not require legislative approval whereas long-term sales are for longer than one year and require legislative approval.

Competitive sales dispose of predetermined lots of oil for one year or less. Buyers bid a fixed per-barrel price that equal or exceed the state's volume weighted average of the lessee's reported RIV prices. Sale procedures are not negotiated and the state usually gives preference to in-state bidders.

Quasi-competitive sales are very similar to competitive sales. They dispose of predetermined barrel lots of oil during one year or less. Buyers bid a fixed per-barrel price that equals or exceeds the state's volume weighted average of the lessee's reported RIV prices. They differ from competitive sales in that negotiated sale procedures are used and in-state bidder preference may be waived.

TABLE 8A - NORTH SLOPE OIL ROYALTY SALES

BARRELS PER YEAR

	1979	1980	1981	1982	1983	1984	1
ROYALTY-IN-KIND (RIK)	**5,296,627**	**26,401,006**	**55,382,331**	**15,829,683**	**33,120,176**	**38,980,324**	**65,823,**
NORTH SLOPE	**446,996**	**22,306,777**	**51,821,595**	**12,764,524**	**30,401,132**	**36,548,337**	**64,440,**
Alpetco	-	12,020,950	26,046,878	898,714	-	-	
Alpetco	-	5,450,147	25,227,290	898,714	-	-	
Alpetco	-	6,570,803	819,589	-	-	-	
Chevron	-	882,414	859,928	-	11,674,998	14,053,279	7,804,
Chevron 1	-	382,850	808,704	-	-	-	
Chevron 1-C	-	499,564	51,224	-	-	-	
Chevron 2	-	-	-	-	3,963,604	2,757,632	
Chevron 3	-	-	-	-	-	3,976,103	6,819,
Chevron/Petrostar Kuparuk	-	-	-	-	-	-	
Chevron - Kuparuk Resid. Purchases	-	-	-	-	-	-	
Chevron/Tesoro Exchange	-	-	-	-	7,711,395	7,319,544	984,
Golden Valley (GVEA)	-	-	398,051	764,762	1,208,406	1,870,505	1,928,
GVEA 1	-	-	398,051	764,762	1,208,406	776,933	34,
GVEA 2	-	-	-	-	-	1,093,572	1,417,
GVEA 3	-	-	-	-	-	-	476,
Mapco	446,996	5,976,024	8,808,400	9,632,099	11,723,755	13,093,397	13,260,
Mapco 2	-	-	-	-	-	-	
North Pole	446,996	1,876,991	8,572,768	9,632,099	11,723,755	13,093,397	13,260
North Pole (Control)	-	4,099,033	235,632	-	-	-	
Tesoro	-	3,427,388	1,661,385	36,841	5,793,973	7,531,155	17,218
Chevron/Tesoro Exchange	-	-	-	-	-7,711,383	-7,319,532	-984
Tesoro 1	-	381,232	808,703	-	-	-	
Tesoro 1 (Control)	-	496,157	51,224	-	-	-	
Tesoro 2	-	821,100	-	-	-	-	
Tesoro 2 (Control)	-	1,728,900	-	-	-	-	
Tesoro 3	-	-	801,458	36,841	-	-	
Tesoro 4	-	-	-	-	13,505,356	14,850,687	15,723
Tesoro 5	-	-	-	-	-	-	2,480
Tesoro 5 Reservation Fee	-	-	-	-	-	-	
Tesoro 6	-	-	-	-	-	-	
Tesoro 7	-	-	-	-	-	-	
Petrostar	-	-	-	-	-	-	
Petro-Star	-	-	-	-	-	-	
1st Competitive Sale	-	-	14,046,953	1,432,108	-	-	
Alaska Petroleum	-	-	622,698	-	-	-	
Arco Products	-	-	1,847,668	-	-	-	
Oasis Petroleum	-	-	801,750	36,855	-	-	
Shell (Nonpriority)	-	-	2,305,936	110,522	-	-	
Shell (Nonpriority) Dec-81	-	-	98,406	-	-	-	
Shell (Priority)	-	-	1,537,287	73,681	-	-	
Shell (Priority) Dec-81	-	-	65,604	-	-	-	
Sohio	-	-	3,072,268	577,421	-	-	
Union 1 (Nonpriority)	-	-	1,748,062	316,815	-	-	
Union 1 (Nonpriority) Dec-81	-	-	99,606	-	-	-	
Union 1 (Priority)	-	-	1,748,062	316,815	-	-	
Union 1 (Priority) Dec-81	-	-	99,606	-	-	-	
2nd Competitive Sale	-	-	-	-	-	-	22,51
Chevron 4-B	-	-	-	-	-	-	4,29
Chevron 5-C	-	-	-	-	-	-	95
Chevron 6-A	-	-	-	-	-	-	1,13
Chevron 7-A	-	-	-	-	-	-	1,13
Sohio C	-	-	-	-	-	-	95
Texaco 1-C	-	-	-	-	-	-	2,86
Texaco 2-B	-	-	-	-	-	-	7,16
Union 2-A	-	-	-	-	-	-	1,13
US Oil & Refinery B	-	-	-	-	-	-	2,8
Quasi-competitive Sale	-	-	-	-	-	-	1,71
Chevron 8	-	-	-	-	-	-	4
Union 3	-	-	-	-	-	-	3
US Oil & Refinery 1	-	-	-	-	-	-	3
US Oil & Refinery 2	-	-	-	-	-	-	3
US Oil & Refinery 3	-	-	-	-	-	-	2
COOK INLET	4,849,631	4,094,229	3,560,736	3,065,159	2,719,044	2,431,987	1,3
East Side and West Side Fields	4,849,631	4,094,229	3,560,736	3,065,159	2,719,044	2,431,987	1,3
Tesoro	4,849,631	4,094,229	3,560,736	3,065,159	2,719,044	2,431,987	1,3
West Side Fields - Export	-	-	-	-	-	-	
Chinese Petroleum	-	-	-	-	-	-	
ROYALTY-IN-VALUE (RIV)	**10,584,481**	**47,047,583**	**17,666,128**	**61,136,212**	**44,599,235**	**39,396,031**	**16,6**
STATE (RIK + RIV)	**15,881,108**	**73,448,589**	**73,048,459**	**76,965,895**	**77,719,411**	**78,376,356**	**82,4**

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	1986	1987	1988	1989	1990	1991	1992
ROYALTY-IN-KIND	**52,123,907**	**44,998,325**	**44,809,568**	**41,194,601**	**39,061,808**	**35,429,795**	**21,517,251**
NORTH SLOPE	**52,123,907**	**44,383,020**	**44,009,630**	**39,920,122**	**38,494,983**	**35,099,255**	**21,517,251**
Alpetco	-	-	-	-	-	-	-
Alpetco	-	-	-	-	-	-	-
Alpetco	-	-	-	-	-	-	-
Chevron	6,934,482	9,330,563	9,315,264	8,611,606	8,099,292	6,290,546	-
Chevron 1	-	-	-	-	-	-	-
Chevron 1-C	-	-	-	-	-	-	-
Chevron 2	-	-	-	-	-	-	-
Chevron 3	6,772,350	7,251,438	7,093,977	6,450,345	6,013,846	4,040,480	-
Chevron/Petrostar Kuparuk	132,184	1,611,815	1,732,529	1,703,946	1,665,641	1,765,133	-
Chevron - Kuparuk Resid. Purchases	29,948	467,310	488,758	457,315	419,806	484,933	-
Chevron/Tesoro Exchange	-	-	-	-	-	-	-
Golden Valley (GVEA)	1,881,232	2,013,539	1,981,998	1,784,782	1,670,494	1,670,699	801,795
GVEA 1	-	-	-	-	-	-	-
GVEA 2	-	-	-	-	-	-	-
GVEA 3	1,881,232	2,013,539	1,981,998	1,784,782	1,670,494	1,670,699	801,795
Mapco	13,168,483	14,094,537	13,814,522	12,529,175	12,735,412	11,183,462	6,303,005
Mapco 2	-	-	-	-	-	-	-
North Pole	13,168,483	14,094,537	13,814,522	12,529,175	12,735,412	11,183,462	6,303,005
North Pole (Control)	-	-	-	-	-	-	-
Tesoro	23,538,192	18,404,806	18,307,014	16,387,093	15,368,565	15,336,301	14,412,451
Chevron/Tesoro Exchange	-	-	-	-	-	-	-
Tesoro 1	-	-	-	-	-	-	-
Tesoro 1 (Control)	-	-	-	-	-	-	-
Tesoro 2	-	-	-	-	-	-	-
Tesoro 2 (Control)	-	-	-	-	-	-	-
Tesoro 3	-	-	-	-	-	-	-
Tesoro 4	17,306,883	18,458,776	18,307,014	16,387,093	15,368,565	15,336,301	14,412,451
Tesoro 5	9,782,529	10,399,030	10,293,669	9,297,797	5,111,875	-	-
Tesoro 5 Reservation Fee	-3,551,220	-10,453,000	-10,293,669	-9,297,797	-5,111,875	-	-
Tesoro 6	-	-	-	-	-	-	-
Tesoro 7	-	-	-	-	-	-	-
Petrostar	52,667	539,575	590,832	607,468	621,220	618,247	-
Petro-Star	52,667	539,575	590,832	607,468	621,220	618,247	-
1st Competitive Sale	-	-	-	-	-	-	-
Alaska Petroleum	-	-	-	-	-	-	-
ARCO Products	-	-	-	-	-	-	-
Oasis Petroleum	-	-	-	-	-	-	-
Shell (Nonpriority)	-	-	-	-	-	-	-
Shell (Nonpriority) Dec-81	-	-	-	-	-	-	-
Shell (Priority)	-	-	-	-	-	-	-
Shell (Priority) Dec-81	-	-	-	-	-	-	-
Sohio	-	-	-	-	-	-	-
Union 1 (Nonpriority)	-	-	-	-	-	-	-
Union 1 (Nonpriority) Dec-81	-	-	-	-	-	-	-
Union 1 (Priority)	-	-	-	-	-	-	-
Union 1 (Priority) Dec-81	-	-	-	-	-	-	-
2nd Competitive Sale	4,686,801	-	-	-	-	-	-
Chevron 4-B	1,406,056	-	-	-	-	-	-
Chevron 5-C	-	-	-	-	-	-	-
Chevron 6-A	-	-	-	-	-	-	-
Chevron 7-A	-	-	-	-	-	-	-
Sohio C	-	-	-	-	-	-	-
Texaco 1-C*	-	-	-	-	-	-	-
Texaco 2-B	2,343,409	-	-	-	-	-	-
Union 2-A	-	-	-	-	-	-	-
US Oil & Refinery B	937,336	-	-	-	-	-	-
Quasi-competitive Sale	1,862,051	-	-	-	-	-	-
Chevron 8	496,547	-	-	-	-	-	-
Union 3	372,409	-	-	-	-	-	-
US Oil & Refinery 1	372,410	-	-	-	-	-	-
US Oil & Refinery 2	372,410	-	-	-	-	-	-
US Oil & Refinery 3	248,274	-	-	-	-	-	-
COOK INLET	-	615,305	799,938	1,274,479	566,825	330,540	-
East Side and West Side Fields	-	-	-	-	-	-	-
Tesoro	-	-	-	-	-	-	-
West Side Fields - Export	-	615,305	799,938	1,274,479	566,825	330,540	-
Chinese Petroleum	-	615,305	799,938	1,274,479	566,825	330,540	-
ROYALTY-IN-VALUE	**30,262,651**	**43,899,311**	**44,068,971**	**40,833,646**	**37,242,490**	**42,537,362**	**60,174,977**
STATE	**82,386,558**	**88,897,636**	**88,878,540**	**82,028,247**	**76,304,298**	**77,967,157**	**81,692,228**

	1993	1994	1995	1996	1997	Cumulative
ROYALTY-IN-KIND	**18,900,591**	**22,124,728**	**26,384,415**	**27,373,266**	**26,139,553**	**640,891,462**
NORTH SLOPE	**18,900,591**	**22,124,728**	**26,384,415**	**27,373,266**	**26,139,553**	**615,200,849**
Alpetco	-	-	-	-	-	**38,966,543**
Alpetco	-	-	-	-	-	**31,576,151**
Alpetco	-	-	-	-	-	**7,390,392**
Chevron	-	-	-	-	-	**83,856,765**
Chevron 1	-	-	-	-	-	**1,191,553**
Chevron 1-C	-	-	-	-	-	**550,788**
Chevron 2	-	-	-	-	-	**6,721,236**
Chevron 3	-	-	-	-	-	**48,418,344**
Chevron/Petrostar Kuparuk	-	-	-	-	-	**8,611,247**
Chevron - Kuparuk Resid. Purcha	-	-	-	-	-	**2,348,070**
Chevron/Tesoro Exchange	-	-	-	-	-	**16,015,527**
GVEA	-	-	-	-	-	**17,974,807**
GVEA 1	-	-	-	-	-	**3,182,282**
GVEA 2	-	-	-	-	-	**2,511,063**
GVEA 3	-	-	-	-	-	**12,281,462**
Mapco	9,086,280	11,812,241	12,680,470	13,027,645	13,117,616	**206,494,273**
Mapco 2	-	-	-	-	465,988	**465,988**
North Pole	9,086,280	11,812,241	12,680,470	13,027,645	12,651,629	**201,693,621**
North Pole (Control)	-	-	-	-	-	**4,334,664**
Tesoro	9,814,311	10,312,487	13,703,946	14,345,621	13,021,937	**218,622,378**
Chevron/Tesoro Exchange	-	-	-	-	-	**-16,015,501**
Tesoro 1	-	-	-	-	-	**1,189,935**
Tesoro 1 (Control)	-	-	-	-	-	**547,381**
Tesoro 2	-	-	-	-	-	**821,100**
Tesoro 2 (Control)	-	-	-	-	-	**1,728,900**
Tesoro 3	-	-	-	-	-	**838,299**
Tesoro 4	9,814,311	10,312,487	-	-	-	**179,783,385**
Tesoro 5	-	-	-	-	-	**47,364,935**
Tesoro 5 Reservation Fee	-	-	-	-	-	**-38,707,561**
Tesoro 6	-	-	13,703,946	-	-	**13,703,946**
Tesoro 7	-	-	-	14,345,621	13,021,937	**27,367,558**
Petrostar	-	-	-	-	-	**3,030,009**
Petro-Star	-	-	-	-	-	3,030,009
1st Competitive Sale	-	-	-	-	-	**15,479,061**
Alaska Petroleum	-	-	-	-	-	**622,698**
ARCO Products	-	-	-	-	-	**1,847,668**
Oasis Petroleum	-	-	-	-	-	**838,604**
Shell (Nonpriority)	-	-	-	-	-	**2,416,458**
Shell (Nonpriority) Dec-81	-	-	-	-	-	**98,406**
Shell (Priority)	-	-	-	-	-	**1,610,968**
Shell (Priority) Dec-81	-	-	-	-	-	**65,604**
Sohio	-	-	-	-	-	**3,649,689**
Union 1 (Nonpriority)	-	-	-	-	-	**2,064,877**
Union 1 (Nonpriority) Dec-81	-	-	-	-	-	**99,606**
Union 1 (Priority)	-	-	-	-	-	**2,064,877**
Union 1 (Priority) Dec-81	-	-	-	-	-	**99,606**
2nd Competitive Sale	-	-	-	-	-	**27,198,210**
Chevron 4-B	-	-	-	-	-	**5,703,996**
Chevron 5-C	-	-	-	-	-	**955,688**
Chevron 6-A	-	-	-	-	-	**1,135,518**
Chevron 7-A	-	-	-	-	-	**1,135,518**
Sohio C	-	-	-	-	-	**955,688**
Texaco 1-C	-	-	-	-	-	**2,867,172**
Texaco 2-B	-	-	-	-	-	**9,506,588**
Union 2-A	-	-	-	-	-	**1,135,522**
US Oil & Refinery B	-	-	-	-	-	**3,802,521**
Quasi-competitive Sale	-	-	-	-	-	**3,578,804**
Chevron 8	-	-	-	-	-	**954,349**
Union 3	-	-	-	-	-	**715,759**
US Oil & Refinery 1	-	-	-	-	-	**715,761**
US Oil & Refinery 2	-	-	-	-	-	**715,761**
US Oil & Refinery 3	-	-	-	-	-	**477,174**
COOK INLET	-	-	-	-	-	**25,690,613**
East Side and West Side Fields	-	-	-	-	-	**22,103,526**
Tesoro	-	-	-	-	-	**22,103,526**
West Side Fields - Export	-	-	-	-	-	**3,587,087**
Chinese Petroleum	-	-	-	-	-	**3,587,087**
ROYALTY-IN-VALUE	**55,796,583**	**50,657,903**	**43,664,553**	**39,396,515**	**35,359,288**	**760,957,167**
STATE	**74,697,174**	**72,782,631**	**70,048,968**	**66,769,781**	**61,498,841**	**1,401,848,629**

TABLE 8B - STATE OIL ROYALTY-IN-KIND CONTRACTS, BY PURCHASER

MILLIONS OF BARRELS PER YEAR

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
NORTH SLOPE	**0.447**	**22.307**	**51.822**	**12.765**	**30.401**	**36.548**	**64.441**	**52.124**	**44.384**	**44.008**
KUPARUK	-	-	-	-	-	-	5.123	2.077	2.619	2.811
Chevron 3	-	-	-	-	-	-	-	0.162	2.079	2.221
Chevron 8	-	-	-	-	-	-	2.729	0.497	-	-
Petro Star	-	-	-	-	-	-	-	0.053	0.540	0.590
Union 3	-	-	-	-	-	-	1.479	0.372	-	-
US Oil & Refining 1, 2, 3	-	-	-	-	-	-	0.916	0.993	-	-
PRUDHOE BAY	**0.447**	**22.307**	**51.822**	**12.765**	**30.401**	**36.548**	**59.318**	**50.047**	**41.765**	**41.197**
Alaska Petroleum	-	-	0.623	-	-	-	-	-	-	-
ARCO Products	-	-	1.848	-	-	-	-	-	-	-
Charter (Alpetco)	-	12.021	26.047	0.899	-	-	-	-	-	-
Chevron	-	0.882	0.860	-	3.964	6.734	6.820	6.772	7.251	7.094
Chevron 4-B, 5-C	-	-	-	-	-	-	5.254	1.406	-	-
Golden Valley (GVEA)	-	-	0.398	0.765	1.208	1.871	1.929	1.881	2.014	1.982
Mapco (North Pole)	0.447	5.976	8.808	9.632	11.724	13.093	13.261	13.168	14.095	13.815
Oasis Petroleum	-	-	0.802	0.037	-	-	-	-	-	-
Shell	-	-	4.007	0.184	-	-	-	-	-	-
Sohio	-	-	3.072	0.577	-	-	0.956	-	-	-
Tesoro	-	3.427	1.661	0.037	13.505	14.851	18.203	23.538	18.405	18.307
Texaco 2-B, 1-C	-	-	-	-	-	-	10.030	2.343	-	-
Union	-	-	3.695	0.634	-	-	-	-	-	-
US Oil & Refinery B	-	-	-	-	-	-	2.865	0.937	-	-
COOK INLET	**4.850**	**4.094**	**3.561**	**3.065**	**2.719**	**2.432**	**1.383**	**-**	**0.615**	**0.800**
Chinese Petroleum	-	-	-	-	-	-	-	-	0.615	0.800
Tesoro	4.850	4.094	3.561	3.065	2.719	2.432	1.383	-	-	-
STATE	**5.297**	**26.401**	**55.383**	**15.830**	**33.120**	**38.980**	**65.824**	**52.124**	**44.999**	**44.808**

Revised 3/31/98

TABLE 8C - STATE OIL ROYALTY-IN-KIND CONTRACTS, BY TYPE

MILLIONS OF BARRELS PER YEAR

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
NORTH SLOPE	**0.447**	**22.307**	**51.822**	**12.765**	**30.401**	**36.548**	**64.441**	**52.124**	**44.384**	**44.008**
KUPARUK	-	-	-	-	-	-	**5.123**	**2.077**	**2.619**	**2.811**
Long Term	-	-	-	-	-	-	-	**0.215**	**2.619**	**2.811**
Chevron	-	-	-	-	-	-	-	0.162	2.079	2.221
Petro Star	-	-	-	-	-	-	-	0.053	0.540	0.590
1985 6 Month Competitive	-	-	-	-	-	-	**5.123**	**1.862**	-	-
Chevron 6	-	-	-	-	-	-	1.136	-	-	-
Chevron 7	-	-	-	-	-	-	1.136	-	-	-
Chevron 8	-	-	-	-	-	-	0.458	0.497	-	-
Union 2	-	-	-	-	-	-	1.136	-	-	-
Union 3	-	-	-	-	-	-	0.343	0.372	-	-
US Oil & Refinery 1, 2, 3	-	-	-	-	-	-	0.916	0.993	-	-
PRUDHOE BAY	**0.447**	**22.307**	**51.822**	**12.765**	**30.401**	**36.548**	**59.317**	**50.047**	**41.765**	**41.197**
Long Term	**0.447**	**21.429**	**36.915**	**11.332**	**30.401**	**36.548**	**40.213**	**45.360**	**41.765**	**41.197**
Charter (Alpetco)	-	12.021	26.047	0.899	-	-	-	-	-	-
Chevron	-	0.882	0.860	-	3.964	6.734	6.820	6.772	7.251	7.094
GVEA	-	-	0.398	0.765	1.208	1.871	1.929	1.881	2.014	1.982
Mapco (North Pole)	0.447	5.976	8.808	9.632	11.724	13.093	13.261	13.168	14.095	13.815
Tesoro	-	2.550	0.801	0.037	13.505	14.851	18.203	23.538	18.405	18.307
1984 1 Year Competitive	-	-	-	-	-	-	**14.326**	**4.687**	-	-
Chevron 4	-	-	-	-	-	-	4.298	1.406	-	-
Texaco 2	-	-	-	-	-	-	7.163	2.343	-	-
US Oil & Refinery B	-	-	-	-	-	-	2.865	0.937	-	-
1984 6 Month Competitive	-	-	-	-	-	-	**4.779**	-	-	-
Chevron 5	-	-	-	-	-	-	0.956	-	-	-
Sohio	-	-	-	-	-	-	0.956	-	-	-
Texaco 1	-	-	-	-	-	-	2.867	-	-	-
Short Term	-	**0.877**	**14.907**	**1.432**	-	-	-	-	-	-
Alaska Petroleum	-	-	0.623	-	-	-	-	-	-	-
Arco Products	-	-	1.848	-	-	-	-	-	-	-
Oasis Petroleum	-	-	0.802	0.037	-	-	-	-	-	-
Shell	-	-	4.007	0.184	-	-	-	-	-	-
Sohio	-	-	3.072	0.577	-	-	-	-	-	-
Tesoro	-	0.877	0.860	-	-	-	-	-	-	-
Union	-	-	3.695	0.634	-	-	-	-	-	-
COOK INLET	**4.850**	**4.094**	**3.561**	**3.065**	**2.719**	**2.432**	**1.383**	**-**	**0.615**	**0.800**
Long and Short Term RIK	**4.850**	**4.094**	**3.561**	**3.065**	**2.719**	**2.432**	**1.383**	**-**	**0.615**	**0.800**
Chinese Petroleum	-	-	-	-	-	-	-	-	0.615	0.800
Tesoro	4.850	4.094	3.561	3.065	2.719	2.432	1.383	-	-	-
STATE	**5.297**	**26.401**	**55.383**	**15.830**	**33.120**	**38.980**	**65.823**	**52.124**	**44.999**	**44.808**

Revised 4/7/98

	1989	1990	1991	1992	1993	1994	1995	1996	1997	Cumu
NORTH SLOPE	**39.920**	**38.495**	**35.099**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**61**
KUPARUK	**2.769**	**2.706**	**2.868**	-	-	-	-	-	-	**20**
Chevron 3	2.161	2.085	2.250	-	-	-	-	-	-	**10**
Chevron 8	-	-	-	-	-	-	-	-	-	**3**
Petro Star	0.608	0.621	0.618	-	-	-	-	-	-	**3**
Union 3	-	-	-	-	-	-	-	-	-	**1**
US Oil & Refining 1, 2, 3	-	-	-	-	-	-	-	-	-	**1**
PRUDHOE BAY	**37.151**	**35.789**	**32.230**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**59**
Alaska Petroleum	-	-	-	-	-	-	-	-	-	**0**
ARCO Products	-	-	-	-	-	-	-	-	-	**1**
Charter (Alpetco)	-	-	-	-	-	-	-	-	-	**38**
Chevron	6.450	6.014	4.040	-	-	-	-	-	-	**56**
Chevron 4-B, 5-C	-	-	-	-	-	-	-	-	-	**0**
Golden Valley (GVEA)	1.785	1.670	1.671	0.802	-	-	-	-	-	**17**
Mapco (North Pole)	12.529	12.735	11.183	6.303	9.090	11.812	12.680	13.027	13.118	**206**
Oasis Petroleum	-	-	-	-	-	-	-	-	-	**0**
Shell	-	-	-	-	-	-	-	-	-	**4**
Sohio	-	-	-	-	-	-	-	-	-	**4**
Tesoro	16.387	15.369	15.336	14.412	9.814	10.312	13.704	14.346	13.022	**234**
Texaco 2-B, 1-C	-	-	-	-	-	-	-	-	-	**12**
Union	-	-	-	-	-	-	-	-	-	**4**
US Oil & Refinery B	-	-	-	-	-	-	-	-	-	**3**
COOK INLET	**1.274**	**0.567**	**0.331**	-	-	-	-	-	-	**28**
Chinese Petroleum	1.274	0.567	0.331	-	-	-	-	-	-	**3**
Tesoro	-	-	-	-	-	-	-	-	-	**22**
STATE	**41.194**	**39.062**	**35.429**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**640**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	Cumula
NORTH SLOPE	**39.920**	**38.495**	**35.098**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**616**
KUPARUK	**2.769**	**2.706**	**2.868**	-	-	-	-	-	-	**20**
Long Term	**2.769**	**2.706**	**2.868**	-	-	-	-	-	-	**13**
Chevron	2.161	2.085	2.250	-	-	-	-	-	-	**10**
Petro Star	0.608	0.621	0.618	-	-	-	-	-	-	**3**
1985 6 Month Competitive	-	-	-	-	-	-	-	-	-	**6**
Chevron 6	-	-	-	-	-	-	-	-	-	**1**
Chevron 7	-	-	-	-	-	-	-	-	-	**1**
Chevron 8	-	-	-	-	-	-	-	-	-	**0**
Union 2	-	-	-	-	-	-	-	-	-	**1**
Union 3	-	-	-	-	-	-	-	-	-	**0**
US Oil & Refinery 1, 2, 3	-	-	-	-	-	-	-	-	-	**1**
PRUDHOE BAY	**37.151**	**35.789**	**32.230**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**594**
Long Term	**37.151**	**35.789**	**32.230**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**553**
Charter (Alpetco)	-	-	-	-	-	-	-	-	-	**38**
Chevron	6.450	6.014	4.040	-	-	-	-	-	-	**56**
GVEA	1.785	1.670	1.671	0.802	-	-	-	-	-	**17**
Mapco (North Pole)	12.529	12.735	11.183	6.303	9.090	11.812	12.680	13.027	13.118	**206**
Tesoro	16.387	15.369	15.336	14.412	9.814	10.312	13.704	14.346	13.022	**232**
1984 1 Year Competitive	-	-	-	-	-	-	-	-	-	**19**
Chevron 4	-	-	-	-	-	-	-	-	-	**5**
Texaco 2	-	-	-	-	-	-	-	-	-	**9**
US Oil & Refinery B	-	-	-	-	-	-	-	-	-	**3**
1984 6 Month Competitive	-	-	-	-	-	-	-	-	-	**4**
Chevron 5	-	-	-	-	-	-	-	-	-	**0**
Sohio	-	-	-	-	-	-	-	-	-	**0**
Texaco 1	-	-	-	-	-	-	-	-	-	**2**
Short Term	-	-	-	-	-	-	-	-	-	**17**
Alaska Petroleum	-	-	-	-	-	-	-	-	-	**0**
Arco Products	-	-	-	-	-	-	-	-	-	**1**
Oasis Petroleum	-	-	-	-	-	-	-	-	-	**0**
Shell	-	-	-	-	-	-	-	-	-	**4**
Sohio	-	-	-	-	-	-	-	-	-	**3**
Tesoro	-	-	-	-	-	-	-	-	-	**1**
Union	-	-	-	-	-	-	-	-	-	**4**
COOK INLET	**1.274**	**0.567**	**0.331**	-	-	-	-	-	-	**25**
Long and Short Term RIK	**1.274**	**0.567**	**0.331**	-	-	-	-	-	-	**25**
Chinese Petroleum	1.274	0.567	0.331	-	-	-	-	-	-	**3**
Tesoro	-	-	-	-	-	-	-	-	-	**22**
STATE	**41.194**	**39.062**	**35.429**	**21.517**	**18.904**	**22.124**	**26.384**	**27.373**	**26.140**	**640**

TABLE 8D - ROYALTY VOLUME AND REVENUE; 1996,1997
ROYALTY-IN-VALUE (RIV) AND ROYALTY-IN-KIND (RIK)

OIL VOLUME IN BARRELS
GAS VOLUME IN THOUSANDS OF CUBIC FEET
VALUE IN DOLLARS

	1996 Volume	1997 Volume	1996 Revenue	1997 Revenue
ROYALTY OIL				
STATE (RIK AND RIV)	68,397,385	62,809,842	$1,035,805,320	$876,463,272
NORTH SLOPE (RIV and RIK)	66,779,227	61,498,841	$1,007,331,713	$852,822,427
NORTH SLOPE (RIV)	39,396,515	35,359,288	$570,954,867	$469,121,714
NORTH SLOPE (RIK)	27,382,712	26,139,553	$436,376,846	$383,700,713
PRUDHOE BAY UNIT (RIV and RIK)	48,341,503	44,539,193	$732,478,273	$626,041,779
PRUDHOE BAY UNIT (RIV)	20,958,791	18,399,640	$296,101,427	$242,341,066
OIL RIM-GAS CAP	17,025,745	14,818,732	$238,258,410	$190,900,933
Amerada Hess	0	0	-$118,215	$34,097
Arco	4,891,829	4,509,022	$72,769,635	$61,356,850
BP	6,768,529	5,615,459	$90,091,295	$70,228,385
Chevron	103,024	86,751	$1,511,242	$1,091,078
Exxon	4,715,998	4,165,175	$66,340,404	$52,635,583
Forcenergy	0	4,726	$0	$63,207
L L & E	4,592	0	$68,283	$0
Marathon	5,862	0	$84,474	$1,392
Mobil	234,673	195,312	$3,354,001	$2,453,475
Phillips	230,737	190,355	$3,175,436	$2,377,433
Shell	7,176	0	$101,774	-$4,601
Texaco	63,325	51,931	$880,081	$664,035
SAMBUCA PROSPECT	0	560	$0	$7,217
Arco	0	560	$0	$7,217
Exxon	0	0	$0	$0
LISBURNE PRODUCTION CENTER	3,933,046	3,580,348	$57,843,017	$51,432,917
Lisburne PA	276,378	174,274	$4,079,057	$2,179,732
Arco	110,551	69,710	$1,756,449	$896,901
BP	55,275	34,855	$799,573	$387,125
Exxon	110,551	69,710	$1,523,036	$895,706
West Beach PA	26,513	17,713	$395,259	$240,210
Arco	13,257	8,856	$204,141	$124,272
Exxon	13,257	8,856	$191,118	$115,938
N. Prudhoe Bay State PA	2,888	1	$29,322	-$14,257
Arco	1,444	0	$23,536	-$14,871
Exxon	1,444	1	$5,787	$614
Point McIntrye PA	3,043,472	2,874,794	$45,541,396	$42,953,191
Arco	484,199	429,472	$6,648,793	$6,482,616
BP	1,832,370	1,785,162	$28,143,419	$26,999,611
Exxon	726,902	660,159	$10,749,184	$9,470,964
Niakuk PA # 13/14	21,800	9,170	$317,716	-$34,377
BP	21,800	9,170	$317,716	-$34,377
Niakuk PA # 19	0	29,642	$0	$416,380
BP	0	29,642	$0	$416,380
Niakuk PA	467,553	378,850	$6,125,553	$4,513,505
BP	467,553	378,850	$6,125,553	$4,513,505
West Niakuk PA #27	81,322	70,802	$1,152,372	$883,847
Arco	40,661	35,651	$590,962	$457,093
Exxon	40,661	35,152	$561,410	$426,754
West Niakuk PA #28/29	13,120	24,292	$202,340	$279,995
Arco	6,563	12,146	$102,686	$145,371
Exxon	6,557	12,146	$99,654	$134,624
P-109 (X001)	0	810	$0	$14,693
Arco	0	810	$0	$14,693
PRUDHOE BAY UNIT (RIK)	27,382,712	26,139,553	$436,376,846	$383,700,713
Mapco, 1997 Contract	0	465,988	$0	$6,032,134
Mapco, 1978 Contract	13,037,159	12,651,629	$207,138,217	$184,999,869
Tesoro	14,345,554	13,021,937	$229,238,629	$192,668,709
KUPARUK RIVER UNIT	12,403,783	10,978,270	$188,462,122	$150,137,432
Kuparuk PA	12,403,783	10,978,128	$188,462,195	$150,135,758
Arco	6,843,780	6,053,032	$108,080,327	$85,794,347
BP	4,860,241	4,304,689	$69,631,563	$55,808,684
Chevron	13,463	11,922	$201,317	$171,739
Exxon	26,964	23,835	$405,578	$317,860
Mobil	45,255	41,494	$680,865	$572,687
Unocal	614,081	543,157	$9,462,546	$7,470,440
West Sak	0	142	$0	$1,674
Arco	0	82	$0	$1,000
BP	0	59	$0	$667
Mobil	0	1	$0	$7
2T-TAB-01 WELL	0	0	-$74	$0
BP	0	0	-$74	$0
DUCK ISLAND UNIT	4,005,134	3,324,412	$57,987,542	$42,866,427
Endicott PA	3,966,160	3,274,275	$57,395,365	$42,199,274
Amoco	360,245	297,395	$5,403,122	$3,674,233
Arco	1,285	1,061	$5,850	$15,067
BP	2,457,254	2,028,556	$35,005,254	$26,078,753
CIRI	35,460	29,274	$504,408	$405,279
DOYON	7,095	5,853	$100,793	$79,993
Exxon	722,090	596,113	$10,640,217	$7,708,811
NANA	21,201	17,566	$301,766	$244,188
Unocal	361,530	298,457	$5,433,955	$3,992,950
Sag Delta PA	38,974	50,138	$592,177	$667,153
BP	37,295	47,977	$568,075	$635,932
CIRI	933	1,200	$13,390	$17,387
DOYON	187	240	$2,678	$3,406
NANA	560	720	$8,034	$10,428
BADAMI WELL #5	0	0	-$13	$0
BP	0	0	-$13	$0
MILNE POINT UNIT	2,028,806	2,656,966	$28,403,789	$33,776,789
Kuparuk PA	1,797,429	2,224,143	$25,055,069	$28,140,486
BP	1,661,310	2,051,809	$23,085,219	$25,827,653
Chevron	0	0	$0	$8,724

	1996 Volume	1997 Volume	1996 Revenue	1997 Revenue
Oxy	136,119	172,335	$1,969,850	$2,304,108
Cascade	82,544	221,809	$1,280,614	$2,860,681
BP	75,403	202,268	$1,164,695	$2,606,297
Oxy	7,141	19,541	$115,919	$254,384
Schrader Bluff PA	148,834	211,013	$2,068,106	$2,775,622
BP	137,568	194,843	$1,906,183	$2,553,700
Chevron	0	0	$0	$2,070
Oxy	11,266	16,170	$161,923	$219,852
COOK INLET OIL	1,618,158	1,311,001	$28,473,607	$23,640,845
GRANITE POINT FIELD	320,281	303,533	$5,824,597	$5,175,340
ADL 18761	132,862	146,235	$2,422,411	$2,504,613
Mobil	99,659	109,677	$1,809,619	$1,881,913
Unocal	33,203	36,559	$612,792	$622,700
ADL 17586	9,419	9,024	$174,421	$153,868
Unocal	9,419	9,024	$174,421	$153,868
ADL 17587	1,683	1,172	$27,985	$19,439
Unocal	1,683	1,172	$27,985	$19,439
ADL 18742	176,318	147,101	$3,199,781	$2,497,420
Unocal	176,318	147,101	$3,199,781	$2,497,420
CANNERY LOOP UNIT	9	0	-$5,528	$0
Upper Tyonek PA	9	0	-$5,528	$0
Marathon	9	0	-$5,528	$0
MIDDLE GROUND SHOAL	267,097	192,573	$5,266,261	$4,418,993
ADL 17595	50,622	41,959	$1,000,134	$764,403
Unocal	50,622	41,959	$1,000,134	$764,403
ADL 18754	131,236	132,055	$2,587,005	$2,301,832
Shell	131,236	132,055	$2,587,005	$2,301,832
ADL 18756	85,240	18,559	$1,679,121	$1,352,759
Shell	85,240	18,559	$1,679,121	$1,352,759
SOUTH MIDDLE GROUND SHOAL	32,460	26,795	$613,057	$490,468
ADL 18744	4,841	5,622	$95,393	$96,121
Unocal	4,841	5,622	$95,393	$96,121
ADL 18746	27,619	21,173	$517,664	$394,347
Unocal	27,619	21,173	$517,664	$394,347
TRADING BAY FIELD	73,629	75,064	$1,188,184	$1,192,008
Forcenergy	0	37,537	$0	$616,020
Marathon	36,815	0	$585,126	-$347
Unocal	36,814	37,527	$603,058	$576,335
TRADING BAY UNIT	762,714	632,387	$13,330,480	$10,568,839
Hemlock PA	436,889	369,038	$7,605,520	$6,166,749
Forcenergy	0	155,175	$0	$2,608,531
Marathon	183,212	0	$3,172,762	$3,789
Unocal	253,678	213,863	$4,432,757	$3,554,429
West Foreland PA	39,452	33,552	$693,085	$555,512
Forcenergy	0	17,111	$0	$288,338
Marathon	20,121	0	$347,384	-$7,138
Unocal	19,332	16,440	$345,701	$274,312
Middle Kenai G PA	222,629	185,951	$3,922,269	$3,109,961
Forcenergy	0	94,835	$0	$1,594,642
Marathon	113,541	0	$1,974,068	-$1,009
Unocal	109,088	91,116	$1,948,201	$1,516,328
Jurassic Pool - No PA	63,743	43,846	$1,109,606	$736,617
Forcenergy	0	21,917	$0	$367,078
Marathon	31,872	0	$546,294	$5,279
Unocal	31,872	21,929	$563,312	$364,260
WEST McARTHUR RIVER UNIT	161,967	80,650	$2,256,556	$1,795,197
A 1 PA ADL 359111	161,967	80,650	$2,256,556	$1,795,197
Forcenergy	0	50,387	$0	$691,364
Stewart	161,967	30,263	$2,256,556	$1,103,834
ROYALTY GAS				
STATE	20,214,272	19,186,494	$30,093,509	$30,389,938
NORTH SLOPE	1,617,513	1,489,427	$1,475,056	$1,277,804
PRUDHOE BAY UNIT	1,463,168	1,334,977	$1,314,192	$1,152,548
Oil Rim-Gas Cap PA	1,463,168	1,334,977	$1,314,192	$1,152,548
Arco	346,762	325,492	$292,608	$272,733
BP	684,316	607,711	$564,373	$497,617
Chevron	17,786	16,561	$47,435	$33,157
Exxon	295,418	282,994	$228,556	$205,852
Mobil	101,256	84,433	$168,198	$127,870
Phillips	17,630	17,786	$13,021	$15,319
POINT McINTYRE	4,626	2,324	$4,240	$2,047
Arco	2,493	1,130	$2,619	$888
BP	291	0	$305	-$314
Exxon	1,842	1,194	$1,315	$1,472
KUPARUK RIVER UNIT	107,807	90,487	$96,452	$63,482
Kuparuk PA	107,807	90,487	$96,171	$63,482
Arco	38,506	74,273	$31,518	$51,867
BP	69,301	16,214	$64,653	$11,615
2T-TAB-01 WELL	0	0	$281	$0
Arco	0	0	$0	$0
BP	0	0	$281	$0
Unocal	0	0	$0	$0
DUCK ISLAND UNIT	32,446	35,605	$30,497	$31,402
Endicott PA	30,778	25,930	$29,447	$23,282
NANA	30,778	25,930	$29,447	$23,282
Sag Delta PA	1,668	9,675	$1,049	$8,120
BP	0	9,675	-$285	$8,120
NANA	1,668	0	$1,334	$0
MILNE POINT UNIT	9,466	26,034	$29,676	$28,326
Kuparuk PA	9,466	26,034	$29,676	$28,326
BP	7,954	24,046	$28,711	$26,397
Oxy	1,512	1,988	$964	$1,929
COOK INLET	18,596,759	17,697,067	$28,618,453	$29,112,134
BELUGA RIVER UNIT	2,777,105	2,628,297	$3,942,906	$4,598,164
Beluga River Gas Pool PA	2,777,105	2,628,297	$3,942,906	$4,598,164
Arco	930,529	812,591	$1,352,425	$1,411,208
Chevron	809,536	830,436	$1,073,740	$1,551,102

	1996 Volume	1997 Volume	1996 Revenue	1997 Revenue
Shell	1,037,039	985,270	$1,516,741	$1,635,854
CANNERY LOOP UNIT	122,528	186,477	$205,833	$325,190
Beluga PA	25,995	36,335	$42,588	$72,231
Marathon	25,995	36,335	$42,588	$72,231
Upper Tyonek PA	96,533	150,142	$163,246	$252,959
Marathon	96,533	150,142	$163,246	$252,959
GRANITE POINT FIELD	109,798	141,763	$180,076	$191,592
ADL 18761	30,362	65,473	$33,051	$83,874
Mobil	22,815	50,177	$19,482	$47,489
Unocal	7,547	15,296	$13,569	$36,385
ADL 17586	10,768	2,595	$26,814	$3,490
Unocal	10,768	2,595	$26,814	$3,490
ADL 17587	6,692	86	$9,867	$121
Unocal	6,692	86	$9,867	$121
ADL 18742	61,975	73,610	$110,344	$104,107
Unocal	61,975	73,610	$110,344	$104,107
IVAN RIVER UNIT	1,167,827	935,228	$1,995,187	$1,318,780
Ivan River PA	1,167,827	935,228	$1,995,187	$1,318,780
Unocal	1,167,827	935,228	$1,995,187	$1,318,780
KENAI UNIT	159,084	140,655	$250,307	$249,102
Sterling PA	159,084	140,655	$250,307	$249,102
Marathon	159,084	140,655	$250,307	$249,102
LEWIS RIVER UNIT	11,389	7,057	$19,865	$9,943
PA#1 WELL 1-A	9,275	5,012	$16,704	$7,076
Unocal	9,275	5,012	$16,704	$7,076
PA #2 WELL C-1	2,114	2,045	$3,161	$2,867
Unocal	2,114	2,045	$3,161	$2,867
MIDDLE GROUND SHOAL	1,399	17,965	$15,189	$23,979
ADL 17595	403	17,965	$14,576	$23,979
Unocal	403	17,965	$14,576	$23,979
ADL 18754	996	0	$613	$0
Shell	996	0	$613	$0
SOUTH MIDDLE GROUND SHOAL	489	0	$72	$0
ADL 18744	489	0	$72	$0
Unocal	489	0	$72	$0
NORTH COOK INLET UNIT	6,910,165	6,490,318	$11,615,706	$12,054,437
North Cook Inlet PA	6,910,165	6,490,318	$11,615,706	$12,054,437
Phillips	6,910,165	6,490,318	$11,615,706	$12,054,437
PRETTY CREEK UNIT	41,347	53,928	$69,483	$75,855
Beluga PA	41,347	53,928	$69,483	$75,855
Unocal	41,347	53,928	$69,483	$75,855
SPARK PLATFORM	2,814	62,872	$3,796	$94,178
Marathon	2,814	62,872	$3,796	$94,178
STERLING UNIT	558	81	$1,514	$140
Danco	85	0	$799	$0
Marathon	473	81	$715	$140
NORTH TRADING BAY UNIT	57	0	$77	$0
Spark Platform	57	0	$77	$0
Marathon	57	0	$77	$0
STUMP LAKE UNIT	44,183	30,942	$31,502	$0
Stump Lake Gas Pool #1 PA	44,183	30,942	$31,502	$0
Unocal	44,183	30,942	$31,502	$0
TRADING BAY FIELD	0	19,031	$0	$22,797
NON POOL, A-6 & A-15 *11	0	19,031	$0	$22,797
Forcenergy	0	0	$0	$0
Unocal	0	19,031	$0	$22,797
TRADING BAY UNIT	7,248,017	6,982,452	$10,286,938	$10,147,976
Grayling Gas Sands PA	7,032,157	6,982,452	$9,737,042	$10,147,976
Marathon	4,190,118	3,605,699	$5,720,545	$5,392,596
Unocal	2,842,039	3,376,753	$4,016,496	$4,755,380
Middle Kenai PA	215,860	0	$549,896	$0
Unocal	215,860	0	$549,896	$0

Revised 4/4/98

APPENDIX A OIL AND GAS FIELDS

OIL AND GAS FIELDS

Field	Type	Location	Discovery	Operator	Production
ALBERT KALOA	Gas	Cook Inlet, west side, onshore	1/4/68	CIRI	shut-in 1971
ALPINE	Oil	North Slope, Colville Delta, onshore	3/27/94	Arco	underway
BADAMI	Oil & Gas	North Slope, Canning R., offshore	4/27/90	BP	underway
BEAVER CREEK	Oil & Gas	Cook Inlet, east side, onshore	12/17/72	Marathon	prod. began 1973
BELUGA RIVER	Gas	Cook Inlet, west side, onshore	12/1/62	Arco	prod. began 1968
BIRCH HILL	Gas	Cook Inlet, east side, onshore	6/9/65	Arco	shut-in 1965
BURGER	Oil & Gas	OCS, Beaufort Sea, offshore	10/14/89	Shell	undeveloped
CANNERY LOOP	Gas	Cook Inlet, east side, onshore	6/24/79	Marathon	prod. began 1988
CASCADE	Oil	North Slope, central, onshore.	3/14/93	BP	prod. began 1996
COLVILLE DELTA	Oil	North Slope, Colville Delta, onshore	4/26/85	Arco	undeveloped
EAST BARROW	Gas	North Slope, western, onshore	5/4/74	NS Borough	prod. began 1981
EAST KURUPA	Gas	North Slope, foothills, onshore	3/1/76		undeveloped
EAST UMIAT	Gas	North Slope, foothills, onshore	3/28/64	UMC Pet.	shut-in, no production
ENDICOTT	Oil	North Slope, central, onshore	2/14/78	BP	prod. began 1987
FALLS CREEK	Gas	Cook Inlet, east side, onshore	4/10/61	Marathon	shut-in 1961
FIORD	Oil	North Slope, Colville Delta, onshore	4/18/92	Arco	undeveloped
FISH CREEK	Oil	North Slope, NPRA, onshore	9/4/49		undeveloped
FLAXMAN ISLAND	Oil	North Slope, Canning R., offshore	9/6/75	Exxon	undeveloped
GRANITE POINT	Oil & Gas	Cook Inlet, west side, offshore	5/16/65	Unocal	prod. began 1967
GUBIK	Gas	North Slope, foothills, onshore	8/11/51		undeveloped
GWYDYR BAY	Oil	North Slope, central, onshore	11/25/69	BP	undeveloped
HAMMERHEAD	Oil	OCS, Beaufort Sea, offshore	10/11/86	Chevron	undeveloped
HEMI SPRINGS	Oil	North Slope, central, onshore	4/3/84		undeveloped
IVAN RIVER	Gas	Cook Inlet, west side, onshore	10/8/66	Unocal	prod. began 1990
KALUBIK	Oil	North Slope, Colville Delta, offshore	5/1/92	Arco	undeveloped
KATALLA	Oil	Gulf of Alaska, onshore	1/1/02		abandoned 1933
KAVIK	Gas	North Slope, foothills, onshore	11/5/69	Arco	undeveloped
KEMIK	Gas	North Slope, foothills, onshore	6/17/72	BP	undeveloped
KENAI	Gas	Cook Inlet, east side, onshore	10/11/59	Marathon	prod. began 1961
KUPARUK RIVER	Oil & Gas	North Slope, central, onshore	4/7/69	Arco	prod. began 1981
KUVLUM	Oil	OCS, Beaufort Sea, offshore	10/1/92	Chevron	undeveloped
LEWIS RIVER	Gas	Cook Inlet, west side, onshore	10/1/75	Unocal	prod. began 1984
LIBERTY = TERN ISLAND	Oil	OCS, Beaufort Sea, offshore	3/3/83	BP	undeveloped
LISBURNE	Oil & Gas	North Slope, central, onshore	12/19/67	Arco	prod. began 1986
MCARTHUR RIVER	Oil & Gas	Cook Inlet, west side, offshore	9/29/65	Unocal	prod. began 1967
MEADE	Gas	North Slope, NPRA, onshore	8/21/50		undeveloped
MIDDLE GROUND SHOAL	Oil & Gas	Cook Inlet, mid channel, offshore	6/10/62	Unocal/Shell	prod. began 1967
MIKKELSON	Oil	North Slope, central, onshore	11/11/78	Exxon/Arco	undeveloped
MILNE POINT	Oil	North Slope, central, onshore	8/9/69	BP	prod. began 1985
MOQUAWKIE	Gas	Cook Inlet, west side, onshore	11/28/65	CIRI	shut-in 1979
NIAKUK	Oil	North Slope, central, offshore	3/7/85	BP/Arco	prod. began 1994
NICOLAI CREEK	Gas	Cook Inlet, west side, onshore	4/28/66	Unocal	shut-in 1977
NORTH COOK INLET	Gas	Cook Inlet, mid channel, offshore	8/21/62	Phillips	prod. began 1970
NORTH FORK	Gas	Cook Inlet, east side, onshore	12/20/65	Gas-Pro	shut-in 1965
N. MIDDLE GROUND SHOA	Oil & Gas	Cook Inlet, mid channel, offshore	11/15/64	Unocal	undeveloped
NORTH PRUDHOE	Oil & Gas	North Slope, central, onshore	3/31/70	Arco	prod. began 1993
NORTHSTAR	Oil & Gas	North Slope, central, offshore	1/30/84	BP	undeveloped
NORTH TRADING BAY	Oil	Cook Inlet, offshore		various	abandoned 1933
NORTH TRADING BAY	Gas	Cook Inlet, offshore		Marathon	prod. began 1996
POINT MCINTYRE	Oil & Gas	North Slope, central, offshore	3/22/88	Arco	prod. began 1993
POINT THOMSON	Oil & Gas	North Slope, Canning R., offshore	12/8/77	Exxon	undeveloped
PRETTY CREEK	Gas	Cook Inlet, west side, onshore	2/20/79	Unocal	prod. began 1986
PRUDHOE BAY	Oil & Gas	North Slope, central, onshore	12/19/67	BP/Arco	prod. began 1977
REDOUBT SHOAL	Oil	Cook Inlet, west side, offshore	9/21/68	Forcenergy	proposed
SAG DELTA NORTH	Oil	North Slope, central, onshore	1/25/82	BP	prod. began 1989
SAG RIVER	Oil	North Slope, central, onshore	8/9/69	BP	prod. began 1994
SANDPIPER	Oil	OCS, Beaufort Sea, offshore	1/25/86	Murphy	undeveloped
SCHRADER BLUFF	Oil	North Slope, central, onshore	8/9/69	BP	prod. began 1991
SIKULIK	Gas	North Slope, western, onshore	4/18/88	NS Borough	undeveloped
SIMPSON	Oil	North Slope, NPRA, onshore	10/23/50		undeveloped
SOURDOUGH	Oil	North Slope, Canning R., offshore	4/27/94	BP	undeveloped
SOUTH BARROW	Gas	North Slope, western, onshore	4/15/49	NS Borough	prod. began 1950
SQUARE LAKE	Gas	North Slope, NPRA, onshore	4/18/52		undeveloped
STARICHKOF	Oil	Cook Inlet, east side, offshore	4/1/67	Forcenergy	undeveloped

Field	Type	Location	Discovery	Operator	Production
STERLING	Gas	Cook Inlet, east side, onshore	7/11/61	Marathon	prod. began 1962
STINSON	Oil	North Slope, Canning R., offshore	8/20/90	Arco	undeveloped
STUMP LAKE	Gas	Cook Inlet, west side, onshore	5/14/78	Unocal	prod. began 1990
SUNFISH = TYONEK DEEP	Oil & Gas	Cook Inlet, mid channel, offshore	11/5/91	Phillips	undeveloped
SWANSON RIVER	Oil & Gas	Cook Inlet, east side, onshore	7/19/57	Unocal	prod. began 1958
TABASCO	Oil	North Slope, central, onshore	1/1/92	Arco	proposed
TARN	Oil	North Slope, central, onshore	2/3/91	Arco	underway
TERN ISLAND = LIBERTY	Oil	OCS, Beaufort Sea, offshore	3/3/83	BP	undeveloped
THETIS ISLAND	Oil	North Slope, central, offshore	4/28/93	Anadarko	undeveloped
TRADING BAY	Oil & Gas	Cook Inlet, west side, offshore	6/17/65	Unocal	prod. began 1967
TYONEK DEEP = SUNFISH	Oil & Gas	Cook Inlet, mid channel, offshore	11/5/91	Phillips	undeveloped
UGNU	Oil	North Slope, central, onshore	8/9/69	Arco	undeveloped
UMIAT	Oil	North Slope, foothills, onshore	7/29/50	U.S. Dept Interio	undeveloped
WALAKPA	Gas	North Slope, western, onshore	2/7/80	NS Borough	prod. began 1992
WEST BEACH	Oil & Gas	North Slope, central, onshore	7/22/76	Arco	prod. began 1994
WEST FORELAND	Gas	Cook Inlet, west side, onshore	3/29/62	Phillips	shut-in 1962
WEST FORK	Gas	Cook Inlet, east side, onshore	9/26/60	CIRI	prod. began 1978
WEST MCARTHUR RIVER	Oil & Gas	Cook Inlet, west side, onshore	12/2/91	Forcenergy	prod. began 1994
WEST SAK	Oil	North Slope, central, onshore	8/9/69	Arco	undeveloped
WOLF CREEK	Gas	North Slope, NPRA, onshore	6/4/51		undeveloped

Revised 3/10/98

APPENDIX B PRODUCING STATE OIL AND GAS LEASES

PRODUCING STATE OIL AND GAS LEASES

NOTE: This table lists only those state leases that have produced oil or gas, as of June 25, 1996. It does not list the many leases that have never produced oil or gas.

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
BADAMI (Oil)							
367011		100.0000000	100.0000000			BP	100.0000000
BELUGA RIVER (Gas)							
17592		-	8.0024000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
17599		-	5.0210000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
17658		-	12.7251000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
21126		-	0.7855000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
21127		-	9.4019000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
21128		-	14.5560000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
21129		-	0.5803000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
58815	28	-	0.0162000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
58820	29	-	1.5889000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
58831	30	-	7.7629000	12.5		ARCO	33.3333333
						CHEVRON	33.3333333
						SHELL	33.3333334
CANNERY LOOP (Gas)							
BELUGA							
2397	5A	-	5.1844565	12.5		MARATHON	100.0000000
324602	4A	-	16.3008805	12.5		MARATHON	100.0000000
324604	5B	-	0.1470714	12.5		MARATHON	100.0000000
359153	7	-	6.3585128	12.5		MARATHON	100.0000000
364395	7C	-	1.8936392	12.5		MARATHON	100.0000000
365454	12	-	0.4381660	16.7		MARATHON	100.0000000
373302	14	-	3.9605254	12.5		MARATHON	100.0000000
373302	19	-	0.1905070	12.5		MARATHON	100.0000000
373302	20	-	0.4271166	12.5		MARATHON	100.0000000
TYONEK DEEP							
002397	5A	-	5.4125000	12.5		MARATHON	100.0000000
324602	4A	-	29.2068900	12.5		MARATHON	100.0000000
359153	7	-	13.5137500	12.5		MARATHON	100.0000000
UPPER TYONEK							
2397	5A	7.3449200	7.3449200	12.5		MARATHON	100.0000000
324602	4A	29.8726200	29.8726200	12.5		MARATHON	100.0000000
359153	7	13.5705700	13.5705700	12.5		MARATHON	100.0000000
365454	12	1.3091500	1.3091500	16.7		MARATHON	100.0000000
OTHER		47.9027356				OTHER	100.0000000
DUCK ISLAND UNIT (Oil and Gas)							
ENDICOTT PARTICIPATING AREA							
34633	13	26.7609000	26.7609000	12.5		BP	100.0000000
34634	12	0.0675000	0.0675000	12.5		BP	100.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
34636	14	5.2911000	5.2911000	12.5		BP	100.0000000
47502	1	22.3357000	22.3357000	12.5		AMOCO	25.0000000
						EXXON	50.0000000
						UNION	25.0000000
47503	2	19.6233000	19.6233000	12.5		AMOCO	25.0000000
						EXXON	50.0000000
						UNION	25.0000000
47504	3	0.0036000	0.0036000	12.5		EXXON	100.0000000
47505	4	0.0140000	0.0140000	12.5		EXXON	100.0000000
47506	5	0.0084000	0.0084000	12.5		AMOCO	50.0000000
						UNION	50.0000000
312828	15	25.8252000	25.8252000	20.0	79.5935000	BP	95.5000000
						CIRI	2.5000000
						DOYON	0.5000000
						NANA	1.5000000
312834	16	0.0703000	0.0703000	20.0	48.8703100	ARCO	33.3400000
						EXXON	33.3300000
						UNION	33.3300000
SAG DELTA PARTICIPATING AREA							
34633	13	6.3656000	6.6356000	12.5		BP	100.0000000
312828	15	93.3644000	93.3644000	20.0		BP	95.5000000
						CIRI	2.5000000
						DOYON	0.5000000
GRANITE POINT (Oil and Gas)							
GRANITE POINT 1							
18761		100.0000000	100.0000000	12.5		MOBIL	75.0000000
GRANITE POINT 2						UNION	25.0000000
17586		100.0000000	100.0000000	12.5		UNION	100.0000000
17587		100.0000000	100.0000000	12.5		UNION	100.0000000
18742		100.0000000	100.0000000	12.5		UNION	100.0000000
IVAN RIVER (Gas)							
17600	1	-	6.5064900	12.5		UNION	100.0000000
17600	1A	-	5.8516900	12.5		UNION	100.0000000
302282	6	-	3.4922500	12.5		UNION	100.0000000
302284	5	-	18.7468100	12.5		UNION	100.0000000
326058	7	-	10.4767400	62.2		UNION	100.0000000
32930	2	-	25.8426100	12.5		UNION	100.0000000
32930	2A	-	7.9348200	12.5		UNION	100.0000000
32930	2B	-	13.1103200	12.5		UNION	100.0000000
33637	3	-	8.4686900	12.5		UNION	100.0000000
KENAI (Gas)							
588	175	-	6.7607000	12.5		MARATHON	50.0000000
						UNION	50.0000000
593	176	-	7.4430000	12.5		MARATHON	50.0000000
						UNION	50.0000000
594	177	-	0.6717000	12.5		MARATHON	50.0000000
						UNION	50.0000000
2411	178	-	0.7608000	12.5		MARATHON	50.0000000
						UNION	50.0000000
308223	166	-	0.0083000	12.5		MARATHON	50.0000000
						UNION	50.0000000
324598	014	-	0.9065000	12.5		MARATHON	50.0000000
						UNION	50.0000000
KUPARUK (Oil and Gas)							
25512	2	1.4735860	1.4735860	12.5		ARCO	50.0000000
						BP	50.0000000
25513	3	1.5236360	1.5264080	12.5		ARCO	50.0000000
						BP	50.0000000
25519	4	1.9116500	1.1938260	12.5		ARCO	50.0000000
						BP	50.0000000
25520	5	1.4607080	1.4633820	12.5		ARCO	50.0000000
						BP	50.0000000
25521	6	1.3352840	1.3377160	12.5		ARCO	50.0000000
						BP	50.0000000
25522	1	0.4698620	0.4707200	12.5		ARCO	50.0000000
						BP	50.0000000
25523	7	1.2821780	1.2845220	12.5		ARCO	50.0000000
						BP	50.0000000
25524	8	0.6061440	0.6073260	12.5		ARCO	50.0000000
						BP	50.0000000
25531	11	1.3929870	1.4118300	12.5		ARCO	33.3300000
						BP	33.3400000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
						UNION	33.3300000
25532	10	0.3695580	0.3745770	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25546	25	0.0096480	0.0097770	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25547	24	1.1384040	1.1537730	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25548	29	0.6795600	0.6886410	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25549	28	0.0217470	0.0220380	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25568	45	0.5314530	0.5386140	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25569	44	1.3048920	1.3224420	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25570	50	2.3393670	2.3709780	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25571	49	1.0792860	1.1120730	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25585	69	0.1280070	0.1297290	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25586	68	1.2058890	1.2221160	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25587	67	1.4199780	1.4390430	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25588	76	1.0910610	1.1056650	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25589	75	0.9073680	0.9195330	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25590	74	0.3004800	0.3045000	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25603	90	0.0594180	0.0602130	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25604	89	0.3232440	0.3275640	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25605	88	0.3342240	0.3386940	12.5		ARCO	33.3300000
						BP	33.3400000
						UNION	33.3300000
25607	96	0.2166180	0.2166180	12.5		ARCO	50.0000000
						BP	33.3333330
						UNION	16.6666670
25608	95	0.1778400	0.1778400	12.5		ARCO	50.0000000
						BP	33.3333330
						UNION	16.6666670
25627	16	0.1184060	0.1186420	12.5		ARCO	50.0000000
						BP	50.0000000
25628	15	0.8091100	0.8106060	12.5		ARCO	50.0000000
						BP	50.0000000
25629	14	1.4903880	1.4931320	12.5		ARCO	50.0000000
						BP	50.0000000
25630	13	1.6485780	1.6516080	12.5		ARCO	50.0000000
						BP	50.0000000
25631	12	1.2009180	1.2031160	12.5		ARCO	50.0000000
						BP	50.0000000
25632	23	2.7594980	2.7649440	12.5		ARCO	50.0000000
						BP	50.0000000
25633	22	1.9153360	1.9189380	12.5		ARCO	50.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
						BP	50.0000000
25634	21	1.7157940	1.7190340	12.5		ARCO	50.0000000
						BP	50.0000000
25635	20	1.6856780	1.6889100	12.5		ARCO	50.0000000
						BP	50.0000000
25636	19	0.3644340	0.3651640	12.5		ARCO	50.0000000
						BP	50.0000000
25637	18	0.0000080	0.0000080	12.5		ARCO	50.0000000
						BP	50.0000000
25638	35	0.2902760	0.2915260	12.5		ARCO	100.0000000
25639	34	1.1359980	1.1407940	12.5		ARCO	100.0000000
25640	33	2.9568520	2.9628780	12.5		ARCO	50.0000000
						BP	50.0000000
25641	32	3.1257620	3.1319620	12.5		ARCO	50.0000000
						BP	50.0000000
25642	31	3.5743240	3.5814540	12.5		ARCO	50.0000000
						BP	50.0000000
25643	30	3.0342260	3.0403020	12.5		ARCO	50.0000000
						BP	50.0000000
25644	43	2.8728060	2.8784420	12.5		ARCO	50.0000000
						BP	50.0000000
25645	42	4.3588520	4.3676360	12.5		ARCO	50.0000000
						BP	50.0000000
25646	41	3.8375640	3.8452920	12.5		ARCO	50.0000000
						BP	50.0000000
25647	40	2.4399560	2.4501690	12.5		ARCO	100.0000000
25648	39	1.5166970	1.5230730	12.5		ARCO	100.0000000
25649	38	1.1124560	1.1172230	12.5		ARCO	100.0000000
25650	56	1.3828370	1.3887620	12.5		ARCO	100.0000000
25651	55	2.3755260	2.3854910	12.5		ARCO	100.0000000
25652	54	2.8477940	2.8533180	12.5		ARCO	50.0000000
						BP	50.0000000
25653	53	2.8243460	2.8298240	12.5		ARCO	50.0000000
						BP	50.0000000
25654	52	2.2380640	2.2423640	12.5		ARCO	50.0000000
						BP	50.0000000
25655	51	2.9259080	2.9315920	12.5		ARCO	50.0000000
						BP	50.0000000
25656	66	1.7669080	1.7701820	12.5		ARCO	50.0000000
						BP	50.0000000
25657	65	1.9730720	1.9766800	12.5		ARCO	50.0000000
						BP	50.0000000
25658	64	1.7151400	1.7182860	12.5		ARCO	50.0000000
						BP	50.0000000
25659	63	2.0741840	2.0512600	12.5		ARCO	50.0000000
						BP	50.0000000
25660	62	1.6401410	1.6471110	12.5		ARCO	100.0000000
25661	61	0.9257080	0.9296650	12.5		ARCO	100.0000000
25662	82	0.0341340	0.0341360	12.5		ARCO	50.0000000
						EXXON	50.0000000
25663	81	0.6849940	0.6877920	12.5		ARCO	100.0000000
25664	80	1.1201700	1.1249040	12.5		ARCO	100.0000000
25665	79	0.8569900	0.8587160	12.5		ARCO	50.0000000
						BP	50.0000000
25666	78	0.6524580	0.6536860	12.5		ARCO	50.0000000
						BP	50.0000000
25667	77	1.1007180	1.1027280	12.5		ARCO	50.0000000
						BP	50.0000000
25668	87	0.1838680	0.1842180	12.5		ARCO	50.0000000
						BP	50.0000000
25670	85	0.1036620	0.1036620	12.5		ARCO	50.0000000
						EXXON	50.0000000
25671	84	0.1425000	0.1424920	12.5		ARCO	50.0000000
						EXXON	50.0000000
28242	37	0.1226720	0.1226760	12.5		ARCO	50.0000000
						BP	50.0000000
28243	57	0.5124000	0.5124000	12.5		ARCO	32.9672400
						BP	17.0327600
						MOBIL	50.0000000
28244	58	0.0316320	0.0316340	12.5		ARCO	50.0000000
						EXXON	50.0000000
28248	60	0.1377010	0.1382940	12.5		ARCO	100.0000000
355023	122	0.5238680	0.5259540	12.5	30.0000000	ARCO	100.0000000
355024	123	0.0720740	0.0723610	12.5	30.0000000	ARCO	100.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
355030	124	0.0007270	0.0007300	12.5	30.0000000	ARCO	100.0000000
355032	125	0.1747880	0.1755130	12.5	30.0000000	ARCO	100.0000000
355501	126	0.0235130	0.0236150	12.5		ARCO	100.0000000
373301	122	0.2854090	0.2859290	12.5		ARCO	59.2286800
						BP	40.7713200
47449	36	0.2172000	0.2172000	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
LEWIS RIVER (Gas)							
PARTICIPATING AREA 1							
58798		-	16.6670000	12.5		UNION	100.0000000
58801		-	61.1110000	12.5		UNION	100.0000000
58802		-	22.2220000	12.5		UNION	100.0000000
PARTICIPATING AREA 2							
58798		-	76.1905000	12.5		UNION	100.0000000
58801		-	14.2857000	12.5		UNION	100.0000000
58802		-	9.5238000	12.5		UNION	100.0000000
McARTHUR RIVER (Oil and Gas)							
HEMLOCK OIL POOL PARTICIPATING AREA							
17579		12.9480000	12.9480000	12.5		UNOCAL	100.0000000
17594		28.6480000	28.6480000	12.5		MARATHON	50.0000000
						UNION	50.0000000
17602		3.7000000	3.7000000	12.5		UNOCAL	100.0000000
18716		2.6730000	2.6730000	12.5		UNOCAL	100.0000000
18729		17.8330000	17.8330000	12.5		MARATHON	50.0000000
						UNION	50.0000000
18730		16.6480000	16.6480000	12.5		MARATHON	50.0000000
						UNION	50.0000000
18758		2.7750000	2.7750000	12.5		UNOCAL	100.0000000
18772		9.2490000	9.2490000	12.5		UNOCAL	100.0000000
18777		4.6010000	4.6010000	12.5		UNOCAL	100.0000000
21068		0.9250000	0.9250000	12.5		UNOCAL	100.0000000
HEMLOCK K-26 WELL TRACT OPERATION							
17579		12.9480000	12.9480000	12.5		UNION	100.0000000
17594		28.6480000	28.6480000	12.5		UNION	100.0000000
17602		3.7000000	3.7000000	12.5		UNION	100.0000000
18716		2.6730000	2.6730000	12.5		UNION	100.0000000
18729		17.8330000	17.8330000	12.5		UNION	100.0000000
18730		16.6480000	16.6480000	12.5		UNION	100.0000000
18758		2.7750000	2.7750000	12.5		UNION	100.0000000
18772		9.2490000	9.2490000	12.5		UNION	100.0000000
18777		4.6010000	4.6010000	12.5		UNION	100.0000000
21068		0.9250000	0.9250000	12.5		UNION	100.0000000
MIDDLE KENAI							
17594		26.6700000	26.6700000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18729		34.8100000	34.8100000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18730		32.5900000	32.5900000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18772		5.9300000	5.9300000	12.5		MARATHON	51.0000000
						UNION	49.0000000
GRAYLING							
17594	3	-	38.5542200	12.5		MARATHON	50.0000000
						UNION	50.0000000
18729	10	-	27.7108400	12.5		MARATHON	50.0000000
						UNION	50.0000000
18730	11	-	33.7349400	12.5		MARATHON	50.0000000
						UNION	50.0000000
STEELHEAD JURASSIC							
18730	11	100.0000000	100.0000000	12.5		MARATHON	50.0000000
						UNION	50.0000000
WEST FORELAND							
17594		30.2500000	30.2500000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18729		29.4100000	29.4100000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18730		33.6200000	33.6200000	12.5		MARATHON	51.0000000
						UNION	49.0000000
18772		6.7200000	6.7200000	12.5		MARATHON	51.0000000
						UNION	49.0000000
MIDDLE GROUND SHOAL (Oil and Gas)							
MIDDLE GROUND SHOAL 1							

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
17595		100.0000000	100.0000000	12.5		UNION	100.0000000
MIDDLE GROUND SHOAL 2							
18754		100.0000000	100.0000000	12.5		SHELL	100.0000000
MIDDLE GROUND SHOAL 3							
18756		100.0000000	100.0000000	12.5		SHELL	100.0000000
SOUTH MIDDLE GROUND SHOAL UNIT							
18744	1	6.8965520	6.8965520	12.5		UNION	100.0000000
18746		93.1034480	93.1034480	12.5		UNION	100.0000000
MILNE POINT (Oil and Gas)							
KUPARUK PARTICIPATING AREA							
25509	10	7.9081900	7.9081900	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25515	12	0.0131500	0.0131500	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25516	4	0.9062000	0.9062000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25518	9	0.4260300	0.4260300	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
28231	8	1.9054500	1.9054500	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
315848	4A	0.0643500	0.0643500	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
355017	15	15.6552600	15.6552600	12.5	40.0000000	BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
355018	16	38.9730300	38.9730300	12.5	30.0000000	BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
355021	18	4.0954700	4.0954700	12.5	30.0000000	BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
47433	2	2.8695800	2.8695800	20.0		BPXA	26.8100030
						BPXO	73.1899970
47433	2A	0.2772300	0.2772300	12.5		OXY	100.0000000
47434	3	12.8337200	12.8337200	20.0		BPXA	26.8100030
						BPXO	73.1899970
47434	3A	1.2398900	1.2398900	12.5		OXY	100.0000000
47437	5	9.1447200	9.1447200	20.0		BPXA	26.8100030
						BPXO	73.1899970
47437	5A	0.8834900	0.8834900	12.5		OXY	100.0000000
47438	6	2.5571900	2.5571900	20.0		BPXA	26.8100030
						BPXO	73.1899970
47438	6A	0.2470500	0.2470500	12.5		OXY	100.0000000
E-9 TRACT OPERATION							
28231	8	100.0000000	100.0000000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
E-20 TRACT OPERATION							
25518	9	100.0000000	100.0000000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
E-22 TRACT OPERATION							
28231	8	100.0000000	100.0000000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
H-05 TRACT OPERATION							
380109		100.0000000	100.0000000	12.5		BPXA	91.1900000
						OXY	8.8100000
J-6 TRACT OPERATION							
315848	4A	100.0000000	100.0000000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
J-10 TRACT OPERATION							
25906	14	100.0000000	100.0000000	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
L-12 TRACT OPERATION							

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
25509	10	14.6741200	14.6741200	12.5		BPXO	91.1900000
						OXY	8.8100000
25515	12	0.0244000	0.0244000	12.5		BPXO	91.1900000
						OXY	8.8100000
25516	4	1.6815000	1.6815000	12.5		BPXO	91.1900000
						OXY	8.8100000
25518	9	0.7905300	0.7905300	12.5		BPXO	91.1900000
						OXY	8.8100000
28231	8	3.5356800	3.5356800	12.5		BPXO	91.1900000
						OXY	8.8100000
315848	4A	0.1194100	0.1194100	12.5		BPXO	91.1900000
						OXY	8.8100000
355017	15	10.0328700	10.0328700	12.5		BPXO	91.1900000
						OXY	8.8100000
47433	2	5.3246700	5.3246700	20.0		BPXO	100.0000000
47433	2A	0.5142200	0.5142200	12.5		OXY	100.0000000
47434	3	23.8137600	23.8137600	20.0		BPXO	100.0000000
47434	3A	2.3006800	2.3006800	12.5		OXY	100.0000000
47437	5	16.9686000	16.9686000	20.0		BPXO	100.0000000
47437	5A	1.6393600	1.6393600	12.5		OXY	100.0000000
47438	6	4.7450200	4.7450200	20.0		BPXO	100.0000000
47438	6A	0.4584200	0.4584200	12.5		OXY	100.0000000
L-13 TRACT OPERATION							
25509	10	19.1591700	19.1591700	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
25515	12	0.0318600	0.0318600	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
25516	4	2.1954400	2.1954400	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
25518	9	1.0321500	1.0321500	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
28231	8	4.6163400	4.6163400	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
315848	4A	0.1559100	0.1559100	12.5		BPXA	23.5828400
						BPXO	64.3800000
						OXY	12.0371600
47433	2	6.7060846	6.7060846	20.0		BPXA	26.8100030
						BPXO	73.1899970
47433	2A	0.9176854	0.9176854	12.5		OXY	100.0000000
47434	3	29.9919507	29.9919507	20.0		BPXA	26.8100030
						BPXO	73.1899970
47434	3A	4.1042093	4.1042093	12.5		OXY	100.0000000
47437	5	21.3708886	21.3708886	20.0		BPXA	26.8100030
						BPXO	73.1899970
47437	5A	2.9244714	2.9244714	12.5		OXY	100.0000000
47438	6	5.9760546	5.9760546	20.0		BPXA	26.8100030
						BPXO	73.1899970
47438	6A	0.8177854	0.8177854	12.5		OXY	100.0000000
SCHRADER BLUFF PARTICIPATING AREA							
25509	10	1.0053900	1.0053900	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25514	11	4.9181500	4.9181500	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25515	12	10.3360400	10.3360400	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25516	4	6.3159600	6.3159600	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25518	9	19.0431900	19.0431900	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
25906	14	25.6086200	25.6086200	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
28231	8	5.0879600	5.0879600	12.5		BPXA	26.8100000
						BPXO	64.3800000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
						OXY	8.8100000
315848	4A	6.3159600	6.3159600	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
47432	1	0.0090363	0.0090363	20.0		BPXA	29.4001535
						BPXO	70.5998465
47432	1A	0.0008737	0.0008737	12.5		OXY	100.0000000
47433	2	1.3448800	1.3448800	20.0		BPXA	29.4001535
						BPXO	70.5998465
47433	2A	0.1184839	0.1184839	12.5		OXY	100.0000000
47434	3	3.2386800	3.2386800	20.0		BPXA	29.4001535
						BPXO	70.5998465
47434	3A	0.2853277	0.2853277	12.5		OXY	100.0000000
47437	5	13.3041900	13.3041900	20.0		BPXA	29.4001535
						BPXO	70.5998465
47437	5A	1.1720991	1.1720991	12.5		OXY	100.0000000
47438	6	3.4210700	3.4210700	20.0		BPXA	29.4001535
						BPXO	70.5998465
47438	6A	0.3013963	0.3013963	12.5		OXY	100.0000000
E-13 TRACT OPERATION							
25516	4	5.2631600	5.2631600	12.5		BPXA	26.8100000
						BPXO	64.3800000
						OXY	8.8100000
47437	5	86.3905200	86.3905200	12.5		BPXA	29.4002000
						BPXO	70.5998000
47437	5A	8.3463200	8.3463200	12.5		OXY	100.0000000
NORTH TRADING BAY and NORTH TRADING BAY UNIT (Oil and Gas)							
17597		50.0000000	50.0000000	12.5		MARATHON	50.0000000
						UNION	50.0000000
18776		28.5700000	28.5700000	12.5		MARATHON	100.0000000
35431		21.4300000	21.4300000	12.5		MARATHON	100.0000000
NORTH COOK INLET (Gas)							
17589	2	-	44.7324000	12.5		PHILLIPS	100.0000000
17590	3	-	6.5430000	12.5		PHILLIPS	100.0000000
18740	7	-	8.1787000	12.5		PHILLIPS	100.0000000
18741	8	-	6.5429000	12.5		PHILLIPS	100.0000000
37831	11	-	34.0030000	12.5		PHILLIPS	100.0000000
NORTH FORELAND							
17589		100.0000000	100.0000000	12.5		ARCO	60.0000000
						PHILLIPS	40.0000000
PRETTY CREEK (Gas)							
58810	2	-	23.8984800	12.5		UNION	100.0000000
58813	4	-	20.8695700	12.5		UNION	100.0000000
58814	5	-	10.4347800	12.5		UNION	100.0000000
63047	10	-	6.0869600	16.7		UNION	100.0000000
63048	11	-	27.8260800	16.7		UNION	100.0000000
63049	12	-	10.4347800	16.7		UNION	100.0000000
Other			0.4493500			UNION	100.0000000
PRUDHOE BAY (Oil and Gas)							
NIAKUK PARTICIPATING AREA							
34625	4	5.0700000	5.0700000	12.5		BPX	100.0000000
34630	31	40.5700000	40.5700000	12.5		BPX	100.0000000
34634	33	5.4600000	5.4600000	12.5		BPX	100.0000000
34635	32	48.9000000	48.9000000	12.5		BPX	100.0000000
NIAKUK WELL NK 14 LEASE OPERATION							
34625	4	100.0000000	100.0000000	12.5		BPX	100.0000000
NIAKUK WELL NK27 TRACT OPERATION							
34629	30	100.0000000	100.0000000	12.5		ARCO	50.0000000
						EXXON	50.0000000
OIL RIM PARTICIPATING AREA							
25637	16	0.0046309	0.0046309	12.5		ARCO	50.0000000
						BP	50.0000000
28238	19	0.0163822	0.0163822	12.5		ARCO	50.0000000
						EXXON	50.0000000
28239	18	0.0614364	0.0614364	12.5		ARCO	50.0000000
						EXXON	50.0000000
28240	50	0.0913318	0.0913318	12.5		ARCO	50.0000000
						EXXON	50.0000000
28241	51	0.0486990	0.0486990	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28244	52	0.0000124	0.0000124	12.5		ARCO	50.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
28245	53	0.1486696	0.1486696	12.5		EXXON	50.0000000
						ARCO	50.0000000
28246	82	0.0007026	0.0007026	12.5		EXXON	50.0000000
						ARCO	50.0000000
28257	22	1.7767068	1.7767068	12.5		EXXON	50.0000000
						MOBIL	50.0000000
28258	21	0.4599204	0.4599204	12.5		PHILLIPS	50.0000000
						ARCO	50.0000000
28259	20	0.0076616	0.0076616	12.5		EXXON	50.0000000
						ARCO	50.0000000
28260	47	1.4815529	1.4815529	12.5		EXXON	50.0000000
28261	48	0.0888936	0.0888936	12.5		BP	100.0000000
						MOBIL	50.0000000
28262	54	0.2968897	0.2968897	12.5		PHILLIPS	50.0000000
28262	54A	0.0772452	0.0772452	12.5		CHEVRON	100.0000000
						CHEVRON	33.3333333
28263	55	0.1338160	0.1338160	12.5		MOBIL	33.3333334
						PHILLIPS	33.3333333
28263	55A	0.2071833	0.2071833	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28264	79	0.1174944	0.1174944	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
28265	84	0.0364292	0.0364292	12.5		PHILLIPS	33.3333333
						ARCO	50.0000000
28275	112	0.0133022	0.0133022	12.5		EXXON	50.0000000
						ARCO	50.0000000
28276	113	0.0000864	0.0000864	12.5		EXXON	50.0000000
						ARCO	50.0000000
28277	25	0.8421396	0.8421396	12.5		EXXON	50.0000000
28278	24	1.0400165	1.0400165	12.5		BP	100.0000000
28279	23	1.2989359	1.2989359	12.5		BP	100.0000000
28280	44	3.8981682	3.8981682	12.5		BP	100.0000000
28281	45	3.3705436	3.3705436	12.5		BP	100.0000000
28282	46	3.0429668	3.0429668	12.5		BP	100.0000000
28283	57	1.5634829	1.5634829	12.5		BP	100.0000000
28284	58	3.3026290	3.3026290	12.5		BP	100.0000000
28285	59	3.9964449	3.9964449	12.5		BP	100.0000000
28286	76	2.6691922	2.6691922	12.5		BP	100.0000000
28287	77	1.2578240	1.2578240	12.5		BP	100.0000000
28288	78	0.3601455	0.3601455	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28289	85	0.1312435	0.1312435	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28290	105	0.0024590	0.0024590	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28299	26	0.9307902	0.9307902	12.5		ARCO	50.0000000
						EXXON	50.0000000
28300	27	1.0365258	1.0365258	12.5		ARCO	50.0000000
						EXXON	50.0000000
28302	41	0.3106250	0.3106250	12.5		ARCO	50.0000000
						EXXON	50.0000000
28303	42	1.9447402	1.9447402	12.5		ARCO	50.0000000
						EXXON	50.0000000
28304	43	3.2449752	3.2449752	12.5		ARCO	50.0000000
						EXXON	50.0000000
28305	60	3.6765194	3.6765194	12.5		BP	100.0000000
28306	61	2.9343182	2.9343182	12.5		ARCO	50.0000000
						EXXON	50.0000000
28307	62	1.8596860	1.8596860	12.5		ARCO	50.0000000
						EXXON	50.0000000
28308	73	3.9394274	3.9394274	12.5		ARCO	50.0000000
						EXXON	50.0000000
28309	74	3.8650657	3.8650657	12.5		BP	100.0000000
28310	75	3.9334322	3.9334322	12.5		BP	100.0000000
28311	90	3.6619111	3.6619111	12.5		BP	100.0000000
28312	89	2.8963363	2.8963363	12.5		BP	100.0000000
28313	8B	1.5538656	1.5538656	12.5		ARCO	50.0000000
						EXXON	50.0000000
28314	102	0.4588814	0.4588814	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28315	101	1.2192336	1.2192336	12.5		BP	100.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
28316	07A	0.0565330	0.0565330	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
28316	107	0.0088125	0.0088125	12.5		CHEVRON	100.0000000
28320	38	0.3566616	0.3566616	12.5		BP	100.0000000
28321	63	1.1125780	1.1125780	12.5		ARCO	50.0000000
						EXXON	50.0000000
28322	64	1.0995790	1.0995790	12.5		ARCO	50.0000000
						EXXON	50.0000000
28323	65	0.7714806	0.7714806	12.5		ARCO	50.0000000
						EXXON	50.0000000
28324	70	2.0837850	2.0837850	12.5		ARCO	50.0000000
						EXXON	50.0000000
28325	71	2.7773702	2.7773702	12.5		ARCO	50.0000000
						EXXON	50.0000000
28326	72	3.1133992	3.1133992	12.5		ARCO	50.0000000
						EXXON	50.0000000
28327	93	2.7730980	2.7730980	12.5		ARCO	50.0000000
						EXXON	50.0000000
28328	92	4.0900128	4.0900128	12.5		ARCO	50.0000000
						EXXON	50.0000000
28329	91	4.1555298	4.1555298	12.5		ARCO	50.0000000
						EXXON	50.0000000
28330	100	1.4812197	1.4812197	12.5		BP	100.0000000
28331	99	1.5486835	1.5486835	12.5		BP	100.0000000
28332	98	1.6240684	1.6240684	12.5		ARCO	50.0000000
						EXXON	50.0000000
28333	110	0.0691187	0.0691187	12.5		BP	100.0000000
28334	O9A	0.1303563	0.1303563	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
28334	109	0.0179622	0.0179622	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28335	108	0.0667905	0.0667905	12.5		BP	100.0000000
28339	66	0.0001956	0.0001956	12.5		BP	100.0000000
28343	69	0.1342393	0.1342393	12.5		BP	100.0000000
28345	94	0.5812244	0.5812244	12.5		ARCO	50.0000000
						EXXON	50.0000000
28346	97	0.2982834	0.2982834	12.5		ARCO	50.0000000
						EXXON	50.0000000
28349	111	0.0092138	0.0092138	12.5		BP	100.0000000
34631	39	0.2490770	0.2490770	12.5		ARCO	50.0000000
						EXXON	50.0000000
34632	40	0.1146214	0.1146214	12.5		ARCO	50.0000000
						EXXON	50.0000000
47446	15	0.0099777	0.0099777	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47447	14	0.0049708	0.0049708	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47448	10	0.0010848	0.0010848	12.5		MOBIL	66.6666667
						PHILLIPS	33.3333333
47449	17	0.0064355	0.0064355	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47450	49	0.0468606	0.0468606	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47451	56	0.1902328	0.1902328	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47452	80	0.2232645	0.2232645	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47453	81	0.1144260	0.1144260	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47454	83	0.0200389	0.0200389	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47469	9	0.0307565	0.0307565	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
47471	86	0.3000685	0.3000685	12.5		BP	27.0000000
						L L & E	13.2500000
						SHELL	29.2500000
						TEXACO	30.5000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
47472	87	0.8139925	0.8139925	12.5		BP	50.0000000
						TEXACO	50.0000000
47475	103	0.1996175	0.1996175	12.5		BP	25.0000000
						MARATHON	25.0000000
						SHELL	25.0000000
						TEXACO	25.0000000
47476	104	0.0028061	0.0028061	12.5		ARCO	50.0000000
						EXXON	50.0000000
80595	106	0.0000019	0.0000019	12.5		ARCO	50.0000000
						EXXON	50.0000000
GAS CAP PARTICIPATING AREA							
25637	16	0.0046309	0.0003024	12.5		ARCO	50.0000000
						BP	50.0000000
28238	19	0.0163822	0.0061712	12.5		ARCO	50.0000000
						EXXON	50.0000000
28239	18	0.0614364	0.0913424	12.5		ARCO	50.0000000
						EXXON	50.0000000
28240	50	0.0913318	0.0496376	12.5		ARCO	50.0000000
						EXXON	50.0000000
28241	51	0.0486990	0.0399457	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28244	52	0.0000124	0.0000110	12.5		ARCO	50.0000000
						EXXON	50.0000000
28245	53	0.1486696	0.1805920	12.5		ARCO	50.0000000
						EXXON	50.0000000
28246	82	0.0007026	0.0003490	12.5		ARCO	50.0000000
						EXXON	50.0000000
28257	22	1.7767068	0.1101259	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28258	21	0.4599204	0.0000012	12.5		ARCO	50.0000000
						EXXON	50.0000000
28259	20	0.0076616	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28260	47	1.4815529	0.0777251	12.5		BP	100.0000000
28261	48	0.0888936	0.0005248	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28262	54	0.2968897	0.2995913	12.5		CHEVRON	100.0000000
28262	54A	0.0772452	0.1111367	12.5		CHEVRON	33.3333334
						MOBIL	33.3333333
						PHILLIPS	33.3333333
28263	55	0.1338160	0.0511793	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28263	55A	0.2071833	0.1539450	12.5		CHEVRON	33.3333334
						MOBIL	33.3333333
						PHILLIPS	33.3333333
28264	79	0.1174944	0.0120620	12.5		ARCO	50.0000000
						EXXON	50.0000000
28265	84	0.0364292	0.0003882	12.5		ARCO	50.0000000
						EXXON	50.0000000
28275	112	0.0133022	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28276	113	0.0000864	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28277	25	0.8421396	0.1111558	12.5		BP	100.0000000
28278	24	1.0400165	0.0331538	12.5		BP	100.0000000
28279	23	1.2989359	0.0190207	12.5		BP	100.0000000
28280	44	3.8981682	1.7631780	12.5		BP	100.0000000
28281	45	3.3705436	1.1061331	12.5		BP	100.0000000
28282	46	3.0429668	0.4341463	12.5		BP	100.0000000
28283	57	1.5634829	0.1013091	12.5		BP	100.0000000
28284	58	3.3026290	0.6687738	12.5		BP	100.0000000
28285	59	3.9964449	1.8633126	12.5		BP	100.0000000
28286	76	2.6691922	0.2432039	12.5		BP	100.0000000
28287	77	1.2578240	0.0132529	12.5		BP	100.0000000
28288	78	0.3601455	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28289	85	0.1312435	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28290	105	0.0024590	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28299	26	0.9307902	0.0668830	12.5		ARCO	50.0000000
						EXXON	50.0000000
28300	27	1.0365258	2.7462020	12.5		ARCO	50.0000000
						EXXON	50.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
28301	28	-	5.4070880	12.5		ARCO	50.0000000
						EXXON	50.0000000
28302	41	0.3106250	8.5730840	12.5		ARCO	50.0000000
						EXXON	50.0000000
28303	42	1.9447402	6.1308134	12.5		ARCO	50.0000000
						EXXON	50.0000000
28304	43	3.2449752	2.9898184	12.5		ARCO	50.0000000
						EXXON	50.0000000
28305	60	3.6765194	3.1854789	12.5		BP	100.0000000
28306	61	2.9343182	5.4649446	12.5		ARCO	50.0000000
						EXXON	50.0000000
28307	62	1.8596860	7.4776622	12.5		ARCO	50.0000000
						EXXON	50.0000000
28308	73	3.9394274	4.1071874	12.5		ARCO	50.0000000
						EXXON	50.0000000
28309	74	3.8650657	2.2068838	12.5		BP	100.0000000
28310	75	3.9334322	1.1675071	12.5		BP	100.0000000
28311	90	3.6619111	0.3709048	12.5		BP	100.0000000
28312	89	2.8963363	0.1007911	12.5		BP	100.0000000
28313	88	1.5538656	0.0066790	12.5		ARCO	50.0000000
						EXXON	50.0000000
28314	102	0.4588814	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28315	101	1.2192336	-	12.5		BP	100.0000000
28316	07A	0.0565330	-	12.5		CHEVRON	33.3333334
						MOBIL	33.3333333
						PHILLIPS	33.3333333
28316	107	0.0088125	-	12.5		CHEVRON	100.0000000
28320	38	0.3566616	0.3216998	12.5		BP	100.0000000
28321	63	1.1125780	7.2610510	12.5		ARCO	50.0000000
						EXXON	50.0000000
28322	64	1.0995790	4.2486128	12.5		ARCO	50.0000000
						EXXON	50.0000000
28323	65	0.7714806	0.4529448	12.5		ARCO	50.0000000
						EXXON	50.0000000
28324	70	2.0837850	0.3609044	12.5		ARCO	50.0000000
						EXXON	50.0000000
28325	71	2.7773702	3.3036918	12.5		ARCO	50.0000000
						EXXON	50.0000000
28326	72	3.1133992	5.0566434	12.5		ARCO	50.0000000
						EXXON	50.0000000
28327	93	2.7730980	0.0132526	12.5		ARCO	50.0000000
						EXXON	50.0000000
28328	92	4.0900128	0.7489948	12.5		ARCO	50.0000000
						EXXON	50.0000000
28329	91	4.1555298	0.7143628	12.5		ARCO	50.0000000
						EXXON	50.0000000
28330	100	1.4812197	-	12.5		BP	100.0000000
28331	99	1.5486835	-	12.5		BP	100.0000000
28332	98	1.6240684	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28333	110	0.0691187	-	12.5		BP	100.0000000
28334	O9A	0.1303563	-	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
28334	109	0.0179622	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
28335	108	0.0667905	-	12.5		BP	100.0000000
28339	66	0.0001956	-	12.5		BP	100.0000000
28343	69	0.1342393	-	12.5		BP	100.0000000
28345	94	0.5812244	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28346	97	0.2982834	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28349	111	0.0092138	-	12.5		BP	100.0000000
34628	29	-	4.9026960	12.5		ARCO	50.0000000
						EXXON	50.0000000
34629	30	-	2.3763262	12.5		ARCO	50.0000000
						EXXON	50.0000000
34630	31	-	0.0521132	12.5		BP	100.0000000
34631	39	0.2490770	4.4211250	12.5		ARCO	50.0000000
						EXXON	50.0000000
34632	40	0.1146214	7.9580580	12.5		ARCO	50.0000000
						EXXON	50.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
47446	15	0.0099777	0.0211926	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47447	14	0.0049708	0.0011970	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47448	10	0.0010848	-	12.5		MOBIL	66.6666667
						PHILLIPS	33.3333333
47449	17	0.0064355	0.0204696	12.5		CHEVRON	50.0000000
						MOBIL	50.0000000
47450	49	0.0468606	0.0193851	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47451	56	0.1902328	0.0042712	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47452	80	0.2232645	0.1575467	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47453	81	0.1144260	0.0384943	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47454	83	0.0200389	0.0013684	12.5		CHEVRON	33.3333333
						MOBIL	33.3333334
						PHILLIPS	33.3333333
47469	9	0.0307565	-	12.5		MOBIL	50.0000000
						PHILLIPS	50.0000000
47471	86	0.3000685	-	12.5		AMERADA	27.0000000
						L L & E	13.2500000
						SHELL	29.2500000
						TEXACO	30.5000000
47472	87	0.8139925	-	12.5		AMERADA	50.0000000
						TEXACO	50.0000000
47475	103	0.1996175	-	12.5		AMERADA	25.0000000
						MARATHON	25.0000000
						SHELL	25.0000000
						TEXACO	25.0000000
47476	104	0.0028061	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
80595	106	0.0000019	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
LISBURNE PARTICIPATING AREA							
28277	25	0.0170000	-	12.5		BP	100.0000000
28280	44	0.0380000	-	12.5		BP	100.0000000
28285	59	0.0300000	-	12.5		BP	100.0000000
28299	26	0.1870000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28300	27	1.7170000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28301	28	2.4440000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28302	41	5.4180000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28303	42	2.2490000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28304	43	0.5380000	-	12.5		ARCO	50.0000000
28305	60	0.1450000	-	12.5		BP	100.0000000
28306	61	0.9190000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28307	62	3.5270000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28308	73	0.2460000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28309	74	0.0890000	-	12.5		BP	100.0000000
28320	38	6.7190000	-	12.5		BP	100.0000000
28321	63	8.5540000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28322	64	10.0680000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28323	65	11.0800000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28324	70	4.3250000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28325	71	3.7180000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28326	72	1.9750000	-	12.5		ARCO	50.0000000

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
						EXXON	50.0000000
28327	93	0.0400000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28328	92	0.0260000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28329	91	0.0190000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28337	36	0.6590000	-	12.5		BP	100.0000000
28338	37	0.8960000	-	12.5		BP	100.0000000
28339	66	3.1550000	-	12.5		BP	100.0000000
28339	66A	1.0830000	-	12.5		BP	100.0000000
28340	67	0.0300000	-	12.5		BP	100.0000000
28340	67A	0.2000000	-	12.5		BP	100.0000000
28342	114	0.5690000	-	12.5		BP	100.0000000
28343	69	2.4130000	-	12.5		BP	100.0000000
28343	69A	1.1160000	-	12.5		BP	100.0000000
28344	95	0.0250000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
28345	94	0.1170000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
34628	29	3.3300000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
34629	30	3.5260000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
34630	31	1.3770000	-	12.5		BP	100.0000000
34631	39	8.6100000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
34632	40	7.3420000	-	12.5		ARCO	50.0000000
						EXXON	50.0000000
34634	33	0.6490000	-	12.5		BP	100.0000000
34635	32	0.8150000	-	12.5		BP	100.0000000
NORTH PRUDHOE BAY STATE PARTICIPATING AREA							
28297		100.0000000	100.0000000	5.0		ARCO	50.0000000
						EXXON	50.0000000
POINT McINTYRE PARTICIPATING AREA							
28297	8	21.4790000	21.4790000	5.0		ARCO	50.0000000
						EXXON	50.0000000
28297	8A	0.4210000	0.4210000	5.0		ARCO	50.0000000
						EXXON	50.0000000
28298	115	0.1000000	0.1000000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34622	116	7.6000000	7.6000000	12.5		EXXON	100.0000000
34624	7	28.8590000	28.8590000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34624	7A	2.3410000	2.3410000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34627	6	3.8460000	3.8460000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34627	6A	3.1540000	3.1540000	12.5		ARCO	50.0000000
						EXXON	50.0000000
365548	117	32.2000000	32.2000000	16.6		BP	100.0000000
WEST BEACH PARTICIPATING AREA							
28301	28	19.1460000	19.1460000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34624	7	12.7640000	12.7640000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34626	5	6.3820000	6.3820000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34627	6	24.4520000	24.4520000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34628	29	24.4920000	24.4920000	12.5		ARCO	50.0000000
						EXXON	50.0000000
34629	30	12.7640000	12.7640000	12.5		ARCO	50.0000000
						EXXON	50.0000000
STERLING (Gas)							
2497	134	-	3.6282900	12.5		MARATHON	100.0000000
320912	155	-	2.3611800	12.5		MARATHON	100.0000000
324599	152	-	6.4473700	12.5		MARATHON	100.0000000
OTHER		-	87.5631600			MARATHON	100.0000000
STUMP LAKE (Gas)							

Lease	Tract	Participating Area % Oil	Participating Area % Gas	Royalty %	NPSL %	Owner	Ownership %
17600	1	-	2.4424100	12.5		UNION	100.0000000
326059	17A	-	8.1967200	64.4		UNION	100.0000000
326060	17B	-	15.5737800	64.1		UNION	100.0000000
58789	11	-	11.4754100	12.5		UNION	100.0000000
58789	11A	-	9.8360700	12.5		UNION	100.0000000
58790	12	-	22.6442700	12.5		UNION	100.0000000
58791	13	-	18.8524600	12.5		UNION	100.0000000
58792	14	-	3.2786800	12.5		UNION	100.0000000
58794	15	-	4.0983600	12.5		UNION	100.0000000
58795	16	-	3.6018400	12.5		UNION	100.0000000
TRADING BAY (Oil and Gas)							
MONOPOD A-15							
18731		100.0000000	100.0000000	12.5		MARATHON	50.0000000
						UNION	50.0000000
MONOPOD A-6							
18731		100.0000000	100.0000000	12.5		MARATHON	50.0000000
						UNION	50.0000000
MONOPOD NON-POOL							
18731		100.0000000	100.0000000	12.5		MARATHON	50.0000000
WEST McARTHUR RIVER (Oil)							
359111		100.0000000	100.0000000			STEWART	100.0000000

Revised 4/28/97

APPENDIX C NORTH SLOPE CRUDE OIL COMPONENTS

NORTH SLOPE CRUDE OIL COMPONENTS

YIELD (VOLUME %), Average for July, August and September, 1997.

	Milne Point	Kuparuk	Lisburne	Prudhoe West	Prudhoe East	Endicott	GVEA [1] Return	PSVR [2] Return
Propane	0.20	0.16	0.37	0.47	0.47	0.77	0.43	0.30
IsoButane	0.20	0.12	0.40	0.87	0.97	0.47	0.67	0.60
Normal Butane	0.53	0.42	1.30	3.93	3.40	1.27	1.87	2.27
LSR	2.33	2.69	4.30	7.67	9.13	3.33	3.30	7.53
Naptha	9.70	11.22	12.73	18.20	20.20	10.67	5.30	12.67
Light°Distillate (350 - 450 °F)	8.17	8.51	7.77	8.80	9.07	6.00	2.10	1.47
Heavy Distillate (450 - 650 °F)	21.10	21.65	21.23	18.77	18.17	19.07	15.03	11.13
Gas Oil (650 - 1000 °F)	28.40	28.15	30.73	23.87	21.77	32.80	38.83	34.63
Fuel Oil (1000 - 1050 °F)	4.40	4.33	3.63	3.07	2.63	4.40	6.00	4.83
Resid (1050 °F and over)	24.97	22.74	17.53	15.37	14.20	21.23	26.47	24.57

[1] GoldenValley Electric Authority.
[2] Petrostar Valdez Refinery.
Revised 2/11/98

APPENDIX D OIL REFINERIES AND GAS PROCESSING PLANTS

OIL REFINERIES AND GAS PROCESSING PLANTS

Production Unit	Crude Processing Nameplate Capacity		Products	Product Market Area
REFINERIES				
Alyeska				
TAPS Pump Stations are all closed.				
Arco, Kuparuk				
Distillation	12,000	Bbl/d	Arctic Heating Fuel/Diesel #2	Kuparuk
Arco, Prudhoe Bay				
Distillation	15,000	Bbl/d	Arctic Heating Fuel/Diesel #2	Prudhoe Bay
			Jet A	
Mapco, North Pole 1977				
Two crude units	132,000	Bbl/d total	Gasoline	Alaska
			JP 4	Alaska
			Jet A	Alaska
			Diesel #1	Alaska
			Diesel #2	Alaska
			Diesel #4	Alaska
			Asphalt	Alaska
Tesoro, Nikiski 1969				
Crude	80,000	Bbl/d	Propane	Alaska
Vac unit	12,500	Bbl/d	Gasoline	Alaska
PowerFormer	12,000	Bbl/d	Gasoline, premium	Alaska
Hydrocracker	12,500	Bbl/d	Jet A	
PRIP	4,000	Bbl/d	Diesel #1	Alaska
LPG	2,800	Bbl/d	Diesel #2	Alaska
Hydrogen	13	MMcf/d	Fuel Oil #6	export
Sulfur	15	T/d	Asphalt	Alaska
			Sulfur	lower 48
Petrostar, Valdez 1992				
Crude	40,000	Bbl/d	JP 5	Alaska
			Jet A	Alaska
			Marine Diesel	Alaska
			Heating/Diesel #1	Alaska
			Heating/Diesel #2	Alaska
Petrostar, North Pole 1985				
Crude	14,000	Bbl/d	JP 8	Alaska
			Kerosene	Alaska
			Heating/Diesel #1	Alaska
			Heating/Diesel #2	Alaska
GAS PROCESSING PLANTS				
Phillips-Marathon LNG Plant, Nikiski 1969				
LNG	235,000	Mcf/d	LNG	Japan
Unocal Chemical Plant, Nikiski 1969				
Two ammonia units	1,300,000	T/yr	Anhydrous Ammonia (half of ammonia production is used to produce urea, the other half is exported as ammonia.)	Pacific Rim
Urea	1,200,000	T/yr	Urea prills and granules	Pacific Rim

Revised 3/7/98

OPERATING REFINERIES IN THE U.S.

THOUSANDS OF BARRELS PER CALENDAR DAY

	No. Plants	Charge Capacity								Production Capacity					
		Crude	Vac. Dist.	Therm. Ops.	Cat Crack	Cat Reform	Cat Hydro Crack	Cat Hydro Refin	Cat Hydro Treat	Alk.	Pol/ Dim	Lubes	Hydro. (MMcf)	Coke (t)	Asph.
Alabama	3	142	50	-	-	26	-	18	57	-	-	-	13	1	21
Alaska	**6**	**283**	**23**	**-**	**-**	**12**	**13**	**-**	**12**	**-**	**-**	**-**	**13**	**-**	**-**
Arco, Kuparuk		**12**	**-**	**15**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Arco, Prudhoe Bay		**15**	**-**	**12**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Mapco, North Pole		**130**	**6**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Petrostar, North Pole		**14**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Petrostar, Valdez		**40**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Tesoro, Kenai		**72**	**16**	**-**	**-**	**12**	**13**	**-**	**12**	**-**	**-**	**-**	**13**	**-**	**-**
Arkansas	3	63	24	-	17	11	-	-	51	-	-	-	3	-	9
California	22	1,938	1,084	10	613	408	377	298	1,289	142	9	25	1,063	20	58
Colorado	2	86	30	-	27	19	-	-	43	-	3	-	14	-	9
Delaware	1	140	86	-	63	46	17	-	123	8	5	-	40	2	-
Georgia	2	34	-	-	-	-	-	-	-	-	-	1	-	-	23
Hawaii	2	149	70	13	21	13	18	-	3	4	1	-	17	-	1
Illinois	6	928	368	5	327	254	58	-	577	88	-	5	90	7	50
Indiana	3	436	249	-	165	92	-	92	222	36	-	6	30	2	60
Kansas	3	283	124	-	81	61	9	-	225	23	-	-	6	2	-
Kentucky	2	226	89	4	96	43	-	39	173	12	1	8	-	-	29
Louisiana	19	2,441	1,114	24	908	472	189	146	1,180	186	24	63	276	16	48
Michigan	3	127	37	-	46	28	-	-	88	9	1	-	7	-	18
Minnesota	2	350	192	-	109	77	-	22	336	18	5	-	100	4	39
Mississippi	4	337	257	-	63	71	58	84	147	15	-	7	216	4	8
Montana	4	148	72	-	52	32	5	20	124	13	0	-	81	1	18
Nevada	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	6	675	271	-	294	79	-	140	158	30	8	12	22	1	100
New Mexico	3	98	19	-	32	33	-	27	39	11	2	-	-	-	6
North Dakota	1	58	-	-	25	12	-	-	17	4	1	-	-	-	-
Ohio	4	504	163	-	172	153	75	64	175	26	1	-	87	2	12
Oklahoma	5	408	163	-	110	92	5	25	217	27	2	8	71	1	12
Oregon	1	-	15	-	-	-	-	-	-	-	-	-	-	-	8
Pennsylvania	7	744	287	-	265	168	20	50	348	42	1	6	50	-	47
Tennessee	1	120	15	-	65	15	-	-	60	7	4	-	-	-	-
Texas	28	4,194	1,817	20	1,608	1,130	443	583	2,741	341	7	76	951	23	66
Utah	5	161	42	-	44	32	-	-	68	13	-	-	-	0	2
Virginia	1	59	33	-	27	11	-	-	29	-	4	-	-	1	-
Washington	7	592	267	-	118	130	50	20	238	27	2	-	81	4	17
West Virginia	1	11	5	-	-	3	4	-	4	-	-	4	1	-	-
Wisconsin	1	36	20	-	10	8	-	6	9	2	-	-	-	-	7
Wyoming	4	127	61	-	49	29	-	24	66	8	1	-	6	-	15

Source: Oil & Gas Journal, "1997 Worldwide Refining Survey," December 22, 1997, p. 45.
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APPENDIX E CONVERSION FACTORS

ABBREVIATIONS

acre	ac
barrel	bbl
British thermal unit	btu
calorie	cal
cubic foot	cf
thousand cubic feet	Mcf
million cubic feet	MMcf
billion cubic feet	Bcf
trillion cubic feet	Tcf
day	d
calendar day	cd
stream day	sd
foot	ft
gallon, US	gal US
gallon, UK	gal UK
hectar	ha
inch	in
kilogram	kg
kilolitre	kl
kilometer	km
litre	l
meter	m
mile	mi
nautical mile	naut mi
pound	lb
ton, long (UK)	t UK
ton, short (US)	t US
tonne (metric)	tn

LENGTH

		ft	mi	naut mi	m	km
1 ft	=	1	0.0001894	0.000164	0.3048	0.003048
1 mi	=	5,280	1	0.8684	1,609	1.60934
1 naut mi	=	6,076	1.1516	1	1,852	1.852
1 m	=	3.2808	0.000621	0.000539	1	1,000
1 km	=	3,281	0.621371	0.5396	0.001	1

AREA

		ft^2	m^2	ac	ha	km^2	mi^2
1 ft^2	=	1	0.092903	0.000023			
1 m^2	=	10.7639	1	0.000247	0.0001	1,000,000	
1 ac	=	43,560	4,047	1	0.404686	0.004047	0.0016
1 ha	=	107,636	10,000	2.47105	1	0.01	0.003861
1 km^2	=	10,763,649	1,000,000	247.105	100	1	0.386102
1 mi^2	=	27,878,400	2,589,990	640	258.999	2.58999	1

VOLUME

		ft^3	gal US	gal UK	bbl	m^3
1 ft^3	=	1	7.48052	6.22883	0.17811	0.028317
1 gal US	=	0.133681	1	0.832674	0.02381	0.00378541
1 gal UK	=	0.160544	1.20095	1	0.028594	0.00454609
1 bbl	=	5.6146	42	34.9726	1	0.158987
1 m^3	=	35.3147	264.172	219.969	6.28981	1

WEIGHT

		lb	t US	t UK	kg	tn
1 lb	=	1	0.0005	0.000367	0.453592	0.000453
1 t US	=	2000	1	0.892867	907.1848	0.907185
1 t UK	=	2240	1.12	1	1016.05	1.01605
1 kg	=	2.20462	0.001102	0.000984	1	0.001
1 tn	=	2204.62	1.10231	0.984207	1000	1

CRUDE OIL WEIGHT

Based on average Arabian Light, 33.5 API.

		gal US	gal UK	t UK	tn	bbl
1 gal US	=	1	0.833	0.00319	0.00325	0.0238
1 gal UK	=	1.201	1	0.00383	0.00391	0.0286
1 t UK	=	313	261	1	1.016	7.45
1 tn	=	308	256		1	7.31
1 bbl	=	42	35	0.134	0.136	1

VOLUME CONVERSION: LIQUIFIED NATURAL GAS TO NATURAL GAS

LNG @ -260 °F		Natural Gas ft^3
1 lb	=	21.082
1 gal	=	79.814
1 ft^3	=	597
1 bbl	=	3,352
1 m^3	=	21,085
1 tn	=	46,477

WEIGHT EQIVALENTS OF PETROLEUM AND PETROLEUM PRODUCTS

	Avg Gravity @60 °F	gal US/lb	lb/gal US	lb/bbl	bbl/T us	bbl/T uk	bbl/TN
crude oil, foreign	25.6	0.13333	7.500	315	6.349	7.111	6.998
crude oil, domestic	36.0	0.14217	7.034	295	6.77	7.582	7.463
gasoline and naptha	59.5	0.16215	6.167	259	7.721	8.648	8.511
kerosene	43.0	0.14812	6.751	284	7.053	7.9	7.775
fuel oil, distillate	31.3	0.13817	7.237	304	6.58	7.369	7.253
fuel oil, residual	18.0	0.12687	7.882	331	6.041	6.766	6.66
asphalt	5.6	0.11634	8.596	361	5.54	6.205	6.106
liquified petroleum gas	-	0.22104	4.524	190	10.526	11.789	11.603

APPROXIMATE HEAT CONTENTS OF FUELS AND PETROLEUM PRODUCTS

	Million BTU per Barrel	Thousand BTU per Gallon
asphalt	6.6	
aviation gasoline	5.0	120
butane	4.3	102
crude oil	5.8	138
ethane	3.1	74
fuel oil, distillate	5.8	138
fuel oil, residual	6.3	150
jet fuel, kerosene type	5.7	136
jet fuel, naptha type	5.4	129
kerosene	5.7	136
pentanes plus	4.6	110
propane	3.8	90

ACRONYMS

AOGCC	Alaska Oil and Gas Conservation Commission
API	American Petroleum Institute
DNR	Alaska Department of Natural Resources
DO&G	Division of Oil and Gas
DOR	Alaska Department of Revenue
ISER	Institute of Social and Economic Research
LNG	liquified natural gas
LPG	liquified petroleum gas
NGL	natural gas liquids
TAPS	Trans Alaska Pipeline System

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APPENDIX F DEFINITION OF "OIL" AND "GAS"

"Oil" and "Gas"

Crude oil and natural gas are fluids produced from naturally occurring petroleum deposits. Typical crude oil contains several hundred chemical compounds. The lightest of these are gases at normal temperatures and pressure, described as "natural gas." The light fractions of the crude oil stream include both hydrocarbon and non-hydrocarbon gases, such as water, carbon dioxide, hydrogen sulfide, helium, or nitrogen. The principal light hydrocarbons are methane (CH_4), ethane (C_2H_6), propane (C_3H_8), butane (C_4H_{10}), and pentane (C_5H_{12}). In these representations the letter C represents a carbon atom and the letter H represents a hydrogen atom. The gaseous component found most often and in largest volumes is, typically, methane. Heavier fractions of the crude stream are usually liquids at atmospheric pressure and temperature. If a given hydrocarbon fraction is gaseous at reservoir temperatures and pressures, but is recoverable by condensation (cooling and pressure reduction), absorption, or other means, it is classified by the American Gas Association (AGA) as a natural gas liquid (NGL). NGLs also include ethane if ethane is recovered from the gas stream as a liquid. A related term is liquefied petroleum gas (LPG), composed of hydrocarbons that liquefy under moderate pressure under normal temperatures. LPG usually refers to propane and butane. A second related term is condensate, which refers to heavier NGLs components, often referred to as natural gasoline. The lightest hydrocarbon fraction is methane, which is almost never recovered naturally as a liquid, and which makes up the bulk of pipeline gas. If a natural gas stream contains few hydrocarbons that are commercially recoverable as liquids, it is considered "dry gas" or "lean gas." The distinction between "wet" and "dry" is usually a legal one, which varies from state to state. "Crude oil" usually means the non-gaseous portion of the petroleum stream.

Natural gas may occur in reservoirs that are predominately gas bearing or in reservoirs in which the gas is in contact with, or dissolved in, petroleum liquids. Non-associated gas is natural gas from a reservoir where the gas is neither in contact with nor dissolved in crude oil. Associated gas occurs in contact with crude oil, but is not dissolved in it. A gas cap on a crude oil reservoir is a typical example of associated gas. Dissolved gas is gas dissolved in petroleum liquids and is produced along with them. Dissolved and associated gases are usually good sources of NGLs while non-associated gases are often "dry."

The distinction between natural gas and its NGLs components is important to a study of the supply and demand of royalty oil and gas because natural gas liquids have a multitude of uses when separated from the gas stream. For example, propane is produced in Alaska and sold in Alaska as bottled gas for residential, commercial, and limited transportation uses, while butane is used for blending in gasoline and military jet fuel and as a refinery fuel. Limited NGLs can be blended with crude oil and sold in that manner. Potential uses for NGLs also include the enriching ("spiking") of pipeline gas and crop drying fuel. Several years ago the Dow-Shell Petrochemical Group and Exxon studied the feasibility of utilizing the NGLs contained in Prudhoe Bay natural gas as the basis for an Alaska petrochemicals industry. Since the state has the option of considering NGLs separately from the gas stream, two definitions of natural gas consumption and reserves are possible. One of these would consider natural gas liquids as part of the gas stream. The second definition would treat the markets for LPG and ethane separately from those for gas. This requires a separate estimate of LPG consumption and gas liquid reserves. In this report, demand for LPG and ethane is estimated separately from that for gas; however, no separate estimate is made of gas liquid reserves.

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