HISTORICAL AND PROJECTED OIL AND GAS CONSUMPTION

JUNE 1991

Alaska Department of
NATURAL RESOURCES
DIVISION OF OIL & GAS

Cover Photo: Caribou on the North Slope. Courtesy of Alyeska Pipeline Service Co.

This publication was released by the Department of Natural Resources, Division of Oil and Gas. 1000 copies were produced at a cost of $1.88 per copy. The purpose of the publication is to inform the legislature and the public of the state's Historical and Projected Oil and Gas Consumption. This publication was printed in Anchorage.

STATE OF ALASKA

HISTORICAL AND PROJECTED OIL AND GAS CONSUMPTION

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June 1991

Prepared for the First Session
Seventeenth Alaska Legislature

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SECTION 1
RESERVES OF OIL AND NATURAL GAS

PROVEN RESERVES

Reserves are the amounts of oil and gas that can be recovered from a reservoir under existing economic and operating conditions. Estimates of reserve must anticipate a range of scenarios; low-range estimates assume combinations of low prices and sub-standard reservoir performance, mid-range estimates assume stable prices and average reservoir performance, high-range estimates assume rising prices and better-than-predicted reservoir performance.

Alaska's reserves are 7.6 billion barrels of oil and 31.3 trillion cubic feet of gas. North Slope fields hold nearly all of these reserves, 99% of the oil and 89% of the gas. Table 1 lists the reserves of each field as of January 1, 1991. The Division of Oil and Gas (DO&G) recalculated the North Slope reserve estimates this year, and the Alaska Oil and Gas Conservation Commission (AOGCC) compiled the Cook Inlet figures as of January 1, 1988. DO&G adjusted the AOGCC figures for 1989 and 1990 production.

ROYALTY RESERVES

The state's royalty share of reserves is 975 million barrels of oil and 3.8 trillion cubic feet of gas. Table 1 lists the royalty reserves by region, by stage of development, and field. The division calculated the royalty reserves for each field from the field reserves and royalty rates.

ESTIMATED REMAINING RESERVES AND ROYALTY SHARE

TABLE 1

	OIL (MILLIONS OF BARRELS)						GAS (BILLIONS OF CUBIC FEET)					
	RESERVES			ROYALTY SHARE			RESERVES			ROYALTY SHARE		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
NORTH SLOPE												
DEVELOPED												
East Barrow	—	—	—	—	—	—	7	7	7 [1]	—	—	—
Endicott	237	295	325 [2]	33	41	46	574	774	1,174 [2]	80	108	164
Kuparuk River Unit	935	1,170	1,285 [2]	117	146	161	370	495	645 [2]	46	62	81
Lisburne reservoir	85	105	115 [2]	11	13	14	782	882	982 [2]	98	110	123
Milne Point Area	75	105	125 [2]	14	19	23	—	—	—	—	—	—
Prudhoe Bay Unit	4,020	5,025	5,525 [2]	503	628	691	25,671	25,671	25,671 [2][3]	3,209	3,209	3,209
South Barrow	—	—	—	—	—	—	6	6	6 [1]	—	—	—
UNDEVELOPED												
Beaufort Sea	0	180	225 [2]	0	36	45	—	—	—	—	—	—
Pt. Thomson/Flaxma	0	0	300 [2]	0	0	38	0	0	5,000 [2]	0	0	625
West Sak	0	310	1,000 [2]	0	39	125	—	—	—	—	—	—
Niakuk	0	50	60 [2]	0	6	8	—	—	—	—	—	—
Point McIntyre	220	315	375 [2]	28	39	47	—	—	—	—	—	—
TOTAL	5,572	7,555	9,335	704	968	1,196	27,410	27,835	33,485	3,433	3,489	4,202
COOK INLET												
PROVEN AND DEVELOPED												
Beaver Creek		1			0			139			0	
Beluga River		—			—			651			49	
Cannery Loop		—			—			136			5	
Granite Point		11			1			11			1	
Ivan River, Lewis River,		—						—				
Pretty Creek, Stump Lake		—			—			496			62	
Kenai		—			—			534			11	
McArthur River		30			4			538			67	
Middle Ground Shoal		12			2			2			0	
North Cook Inlet		—			—			641			80	
Swanson River		8			0			152			0	
Trading Bay		4			<1			29			4	
PROVEN BUT UNDEVELOPED OR SHUT-IN								—				
Birch Hill		—			—			11			0	
Falls Creek		—			—			13			2	
Nicolai Creek		—			—			3			<1	
North Fork		—			—			12			<1	
Sterling		—			—			23			<1	
West Foreland		—			—			20			0	
West Fork		—			—			6			<1	
TOTAL		66			7			3,417			282	
STATE												
TOTAL	5,638	7,621	9,401	711	975	1,202	30,827	31,252	36,902	3,715	3,771	4,483

[1] As of 1/1/91. Alaska Oil and Gas Conservation Commission, "Estimate of Oil Reserves in Alaska" and "Estimate of Gas Reserves in Alaska". Estimates as of 1/1/89, adjusted for 1989 and 1990 production.
[2] As of 1/1/91. William Van Dyke, Division of Oil and Gas.
[3] As of 1/1/91, not adjusted for future fuel use. William Van Dyke, Division of Oil and Gas.
21:04/19/91

SECTION 2
PROJECTED PRODUCTION OF OIL

NORTH SLOPE

Table 2.1 and Fig. 2A presents projected production anticipated over the next 25 years for each North Slope field and the state's royalty share. North Slope production peaked in 1988 at 2.0 million barrels per day of combined oil and natural gas liquids (NGL) then declined to an average of 1.8 million barrels per day in 1990. Output will probably rise slightly in 1991 then decline to 1.5 million barrels per day in 1995, 997,000 barrels per day in 2000, and to 104,000 barrels per day in 2016. The state's royalty share will decline proportionally, to 186,000 barrels per day in 1995, to 128,000 barrels per day in 2000, and to 13,000 barrels per day in 2016. Between 1991 and 2016, North Slope fields will produce a cumulative 7.6 billion barrels of oil.

The projected production of each North Slope field's present owners is presented in Table 2.2.

COOK INLET

Cook Inlet oil reserves are near depletion, but they will continue to produce at least through the 1990's. In Table 2.1, DO&G has projected regional production for only five years because future production critically depends on economic factors. Swanson River and Beaver Creek will continue to produce oil and gas, however DO&G has not estimated their contributions because the state has no leases in those fields.

AVAILABLE ROYALTY OIL

Tables 2.1 and 2.2 and Fig. 2B show how much royalty oil the state has contracted to sell in-kind and how much will be available for sale for the next 25 years. The state holds six contracts to sell its in-kind royalty oil. The contract with Unocal expires this year, the contracts with Tesoro and Chevron expire in 1995, and the contract with PetroStar expires in 1996.

PRODUCTION FORECAST AND AVAILABLE ROYALTY OIL

THOUSANDS OF BARRELS PER DAY

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
PRODUCTION FORECAST [1]														
NORTH SLOPE														
Prudhoe Bay	1,400	1,248	1,096	987	988	889	799	739	683	632	584	526	474	426
Kuparuk	300	300	300	300	280	250	220	190	170	150	125	105	90	75
Lisburne	44	44	40	34	27	22	17	14	11	10	9	7	5	–
Endicott [2]	108	108	94	83	72	63	55	47	40	34	29	24	21	18
Milne Point [3]	22	19	17	16	16	17	18	19	20	20	18	16	14	13
West Sak	–	–	6	6	6	12	12	12	25	25	50	50	75	75
Point McIntyre	–	–	75	80	80	80	72	65	58	52	47	41	36	30
Beaufort Sea	–	–	–	–	–	–	–	–	–	60	54	49	44	39
Niakuk	–	–	–	–	–	10	20	20	17	14	12	10	9	7
TOTAL	1,874	1,719	1,628	1,506	1,469	1,343	1,213	1,106	1,024	997	928	828	768	683
COOK INLET [4]														
Granite Point	7.3	6.9	6.2	5.6	5.1									
McArthur River	19.5	18.5	16.7	15.0	13.5									
Trading Bay	2.4	2.3	2.1	1.8	1.6									
Middle Ground Shoal	7.5	7.1	6.4	5.8	5.2									
TOTAL	36.7	34.8	31.4	28.2	25.4									
STATE														
TOTAL	1,911	1,754	1,659	1,534	1,494	1,343	1,213	1,106	1,024	997	928	828	768	683
AVAILABLE ROYALTY OIL														
NORTH SLOPE														
Prudhoe Bay [5]	175	156	137	123	124	111	100	92	85	79	73	66	59	53
Kuparuk [5]	38	38	38	38	35	31	28	24	21	19	16	13	11	9
Lisburne [5]	6	6	5	4	3	3	2	2	1	1	1	1	1	–
Endicott [2] [6]	15	15	13	12	10	9	8	7	6	5	4	3	3	3
Milne Point [3] [7]	4	3	3	3	3	3	3	3	4	4	3	3	3	2
West Sak [5]	–	–	1	1	1	2	2	2	3	3	6	6	9	9
Point McIntyre [5]	–	–	9	10	10	10	9	8	7	7	6	5	5	4
Beaufort Sea [8]	–	–	–	–	–	–	–	–	–	10	9	8	7	6
Niakuk [5]	–	–	–	–	–	1	3	3	2	2	2	1	1	1
TOTAL	–	–	–	–	–	170	153	140	130	128	119	106	99	–
COOK INLET [4]														
Granite Point	0.9	0.9	0.8	0.7	0.6									
McArthur River	2.4	2.3	2.1	1.9	1.7									
Trading Bay	0.3	0.3	0.3	0.2	0.2									
Middle Ground Shoal	0.9	0.9	0.8	0.7	0.7									
TOTAL	4.6	4.4	3.9	3.5	3.2									
STATE														
TOTAL	242	222	210	194	189	170	153	140	130	128	119	106	99	88
IN-KIND ROYALTY OIL SALES														
Mapco [9]	35	35	35	35	35	35	35	35	35	35	35	35	35	
GVEA [10]	5	4	4	3										
Tesoro [11]	43	38	34	30										
Chevron [12]	17	15	13	12										
PetroStar [13]	8	8	8	8	7	6								
Unocal [14]	3.2													
TOTAL	110	100	93	88	42	41	35	35	35	35	35	35	35	
IN-VALUE ROYALTY OIL														
TOTAL	131	122	117	106	147	128	118	105	95	93	84	71	64	88

Note: numbers may not sum to totals due to rounding errors.
[1] Includes oil, condensate, and NGL.
[2] Includes Sag Delta North.
[3] Includes Schrader Bluff.
[4] Projection is not extended beyond 1995 because production is very sensitive to short term economics.
[5] 12.5% of production.
[6] 14.0% of production (weighted average).
[7] 18.0% of production (weighted average).

TABLE 2.1

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL (MBbl)
PRODUCTION FORECAST [1]													
NORTH SLOPE													
Prudhoe Bay	383	345	293	249	212	180	153	130	110	94	80	68	5,025,320
Kuparuk	65	55	45	35	30	25	20	20	15	15	10	10	1,168,000
Lisburne	–	–	–	–	–	–	–	–	–	–	–	–	103,660
Endicott [2]	16	–	–	–	–	–	–	–	–	–	–	–	296,380
Milne Point [3]	12	10	8	6	5	–	–	–	–	–	–	–	104,390
West Sak	75	67	61	55	50	42	35	30	26	22	18	16	310,615
Point McIntyre	26	22	19	16	14	12	10	8	7	6	5	–	314,265
Beaufort Sea	35	32	29	26	23	21	19	17	15	14	12	10	182,135
Niakuk	6	5	5	–	–	–	–	–	–	–	–	–	49,275
TOTAL	618	536	460	387	334	280	237	205	173	151	125	104	7,554,040
COOK INLET [4]													
Granite Point													11,352
McArthur River													30,368
Trading Bay													3,723
Middle Ground Shoal													11,680
TOTAL													57,123
STATE													
TOTAL	618	536	460	387	334	280	237	205	173	151	125	104	7,611,163
AVAILABLE ROYALTY OIL													
NORTH SLOPE													
Prudhoe Bay [5]	48	43	37	31	27	23	19	16	14	12	10	9	628,165
Kuparuk [5]	8	7	6	4	4	3	3	3	2	2	1	1	146,000
Lisburne [5]	–	–	–	–	–	–	–	–	–	–	–	–	12,958
Endicott [2] [6]	2	–	–	–	–	–	–	–	–	–	–	–	41,493
Milne Point [3] [7]	2	2	1	1	1	–	–	–	–	–	–	–	18,790
West Sak [5]	9	8	8	7	6	5	4	4	3	3	2	2	38,827
Point McIntyre [5]	3	3	2	2	2	2	1	1	1	1	1	–	39,283
Beaufort Sea [8]	6	5	5	4	4	3	3	3	2	2	2	2	29,142
Niakuk [5]	1	1	1	–	–	–	–	–	–	–	–	–	6,159
TOTAL	–	–	–	–	–	–	–	–	–	–	–	–	381,653
COOK INLET [4]													
Granite Point													1,419
McArthur River													3,796
Trading Bay													465
Middle Ground Shoal													1,460
TOTAL													7,140
STATE													
TOTAL	79	69	59	50	43	36	30	26	22	19	16	13	967,957
IN-KIND ROYALTY OIL SALES													
Mapco [9]													166,075
GVEA [10]													5,757
Tesoro [11]													52,955
Chevron [12]													20,722
PetroStar [13]													16,023
Unocal [14]													1,168
TOTAL													262,700
IN-VALUE ROYALTY OIL													
TOTAL	79	69	59	50	43	36	30	26	22	19	16	13	705,258

[8] Calculated as 16% of production. Royalty rate is 20% but state controlls only 80% of production.
[9] 35,000 BPD of Prudhoe royalty production.
[10] 2.667% of Prudhoe Bay royalty production. Contract expires June 30, 1996.
[11] Maximum 24.533% of Prudhoe Bay royalty production. Contract expires January 1995.
[12] Maximum 9.6% of Prudhoe Bay royalty production. Contract expires January 1, 1995.
[13] 20.3% of Kuparuk royalty production (Petrostar: 7.812%, Chevron: 12.500%). Contract expires September 30, 1996.
[14] 97% of west-side Cook Inlet royalty production (approximately 3,200 BPD). One-year contract expires April 30, 1991.
22;04/23/91

PRODUCTION FORECAST AND AVAILABLE ROYALTY OIL FOR PRODUCING NORTH SLOPE FIELDS

THOUSANDS OF BARRELS PER DAY

	Working Interest	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
PRODUCTION FORECAST FOR NORTH SLOPE [1]															
PRUDHOE BAY		1,400	1248	1096	987	988	889	799	739	683	632	584	526	474	426
Amerada	0.54%	8	7	6	5	5	5	4	4	4	3	3	3	3	2
Arco	21.78%	305	272	239	215	215	194	174	161	149	138	127	115	103	93
BP	50.68%	710	633	556	500	501	451	405	375	346	320	296	267	240	216
Chevron	0.67%	9	8	7	7	7	6	5	5	5	4	4	4	3	3
Exxon	21.78%	305	272	239	215	215	194	174	161	149	138	127	115	103	93
LL&E	0.04%	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Marathon	0.05%	1	1	1	–	–	–	–	–	–	–	–	–	–	–
Mobil	1.89%	26	24	21	19	19	17	15	14	13	12	11	10	9	8
Phillips	1.88%	26	23	21	19	19	17	15	14	13	12	11	10	9	8
Shell	0.14%	2	2	2	1	1	1	1	1	1	1	1	1	1	1
Texaco	0.55%	8	7	6	5	5	5	4	4	4	3	3	3	3	2
KUPARUK		300	300	300	300	280	250	220	190	170	150	125	105	90	75
Arco	56.30%	169	169	169	169	158	141	124	107	96	84	70	59	51	42
BP	38.76%	116	116	116	116	109	97	85	74	66	58	48	41	35	29
Chevron	0.11%	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Exxon	0.22%	1	1	1	1	1	1	–	–	–	–	–	–	–	–
Mobil	0.37%	1	1	1	1	1	1	1	1	1	1	–	–	–	–
Union	4.25%	13	13	13	13	12	11	9	8	7	6	5	4	4	3
LISBURNE		44	44	40	34	27	22	17	14	11	10	9	7	5	–
Arco	40.00%	18	18	16	14	11	9	7	6	4	4	4	3	2	–
BP	20.00%	9	9	8	7	5	4	3	3	2	2	2	1	1	–
Exxon	40.00%	18	18	16	14	11	9	7	6	4	4	4	3	2	–
ENDICOTT [2]		108	108	94	83	72	63	55	47	40	34	29	24	21	18
Amoco	10.49%	11	11	10	9	8	7	6	5	4	4	3	3	2	2
Arco	0.02%	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BP	56.78%	61	61	53	47	41	36	31	27	23	19	16	14	12	10
CIRI	0.65%	1	1	1	1	–	–	–	–	–	–	–	–	–	–
Doyon	0.13%	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Exxon	21.02%	23	23	20	17	15	13	12	10	8	7	6	5	4	4
NANA	0.39%	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Unocal	10.52%	11	11	10	9	8	7	6	5	4	4	3	3	2	2
MILNE POINT [3]		22	19	17	16	16	17	18	19	20	20	18	16	14	13
Chevron	17.37%	4	3	3	3	3	3	3	3	3	3	3	3	2	2
Conoco	72.15%	16	14	12	12	12	12	13	14	14	14	13	12	10	9
Oxy	10.48%	2	2	2	2	2	2	2	2	2	2	2	2	1	1
TOTAL		1,874	1,719	1,547	1,420	1,383	1,241	1,109	1,009	924	846	765	678	604	532
AVAILABLE ROYALTY OIL															
Prudhoe Bay [4]		175	156	137	123	124	111	100	92	85	79	73	66	59	53
Kuparuk [4]		38	38	38	38	35	31	28	24	21	19	16	13	11	9
Lisburne [4]		6	6	5	4	3	3	2	2	1	1	1	1	1	–
Endicott [2] [5]		15	15	13	12	10	9	8	7	6	5	4	3	3	3
Milne Point [3] [6]		4	3	3	3	3	3	3	3	4	4	3	3	3	2
TOTAL		237	218	196	180	175	157	140	128	117	107	97	86	77	67
IN-KIND ROYALTY OIL SALES															
Mapco [7]		35	35	35	35	35	35	35	35	35	35	35	35	35	35
GVEA [8]		5	4	4	3	3									
Tesoro [9]		43	38	34	30	30									
Chevron [10]		17	15	13	12	12									
Petrostar [11]		8	8	8	8	7	6								
TOTAL		107	100	93	88	88	41	35	35	35	35	35	35	35	35
IN-VALUE ROYALTY OIL															
TOTAL		130	118	103	92	87	116	105	93	82	72	62	51	42	32

Note: numbers may not sum to totals due to rounding errors.
[1] Oil, condensate, and NGL.
[2] Includes Sag Delta North.
[3] Includes Schrader Bluff.
[4] 12.5% of production.
[5] 14.0% of production (weighted average).
[6] 18.0% of production (weighted average).

TABLE 2.2

		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL (MBbl)
PRODUCTION FORECAST FOR NORTH SLOPE [1]														
PRUDHOE BAY		383	345	293	249	212	180	153	130	110	94	80	68	5,025,320
Amerada	0.54%	2	2	2	1	1	1	1	1	1	1	–	–	27,032
Arco	21.78%	83	75	64	54	46	39	33	28	24	20	17	15	1,094,513
BP	50.68%	194	175	149	126	107	91	78	66	56	48	41	34	2,547,075
Chevron	0.67%	3	2	2	2	1	1	1	1	1	1	1	–	33,759
Exxon	21.78%	83	75	64	54	46	39	33	28	24	20	17	15	1,094,397
LL&E	0.04%	–	–	–	–	–	–	–	–	–	–	–	–	1,998
Marathon	0.05%	–	–	–	–	–	–	–	–	–	–	–	–	2,508
Mobil	1.89%	7	7	6	5	4	3	3	2	2	2	2	1	95,058
Phillips	1.88%	7	6	6	5	4	3	3	2	2	2	2	1	94,501
Shell	0.14%	1	–	–	–	–	–	–	–	–	–	–	–	6,919
Texaco	0.55%	2	2	2	1	1	1	1	1	1	1	–	–	27,560
KUPARUK		65	55	45	35	30	25	20	20	15	15	10	10	1,168,000
Arco	56.30%	37	31	25	20	17	14	11	11	8	8	6	6	657,595
BP	38.76%	25	21	17	14	12	10	8	8	6	6	4	4	452,675
Chevron	0.11%	–	–	–	–	–	–	–	–	–	–	–	–	1,273
Exxon	0.22%	–	–	–	–	–	–	–	–	–	–	–	–	2,546
Mobil	0.37%	–	–	–	–	–	–	–	–	–	–	–	–	4,275
Union	4.25%	3	2	2	1	1	1	1	1	1	1	–	–	49,635
LISBURNE		–	–	–	–	–	–	–	–	–	–	–	–	103,660
Arco	40.00%	–	–	–	–	–	–	–	–	–	–	–	–	41,464
BP	20.00%	–	–	–	–	–	–	–	–	–	–	–	–	20,732
Exxon	40.00%	–	–	–	–	–	–	–	–	–	–	–	–	41,464
ENDICOTT [2]		16	–	–	–	–	–	–	–	–	–	–	–	296,380
Amoco	10.49%	2	–	–	–	–	–	–	–	–	–	–	–	31,102
Arco	0.02%	–	–	–	–	–	–	–	–	–	–	–	–	69
BP	56.78%	9	–	–	–	–	–	–	–	–	–	–	–	168,292
CIRI	0.65%	–	–	–	–	–	–	–	–	–	–	–	–	1,913
Doyon	0.13%	–	–	–	–	–	–	–	–	–	–	–	–	383
Exxon	21.02%	3	–	–	–	–	–	–	–	–	–	–	–	62,301
NANA	0.39%	–	–	–	–	–	–	–	–	–	–	–	–	1,148
Unocal	10.52%	2	–	–	–	–	–	–	–	–	–	–	–	31,171
MILNE POINT [3]		12	10	8	6	5	–	–	–	–	–	–	–	104,390
Chevron	17.37%	2	2	1	1	1	–	–	–	–	–	–	–	18,136
Conoco	72.15%	9	7	6	4	4	–	–	–	–	–	–	–	75,317
Oxy	10.48%	1	1	1	1	1	–	–	–	–	–	–	–	10,937
TOTAL		476	410	346	290	247	205	173	150	125	109	90	78	6,697,750
AVAILABLE ROYALTY OIL														
Prudhoe Bay [4]		48	43	37	31	27	23	19	16	14	12	10	9	628,165
Kuparuk [4]		8	7	6	4	4	3	3	3	2	2	1	1	146,000
Lisburne [4]		–	–	–	–	–	–	–	–	–	–	–	–	12,958
Endicott [2] [5]		2	–	–	–	–	–	–	–	–	–	–	–	41,493
Milne Point [3] [6]		2	2	1	1	1	–	–	–	–	–	–	–	18,790
TOTAL		60	52	44	37	31	26	22	19	16	14	11	10	847,406
IN-KIND ROYALTY OIL SALES														
Mapco [7]														178,850
GVEA [8]														6,959
Tesoro [9]														64,014
Chevron [10]														25,049
Petrostar [11]														16,023
TOTAL														290,895
IN-VALUE ROYALTY OIL														
TOTAL		60	52	44	37	31	26	22	19	16	14	11	10	556,511

[7] 35,000 BPD of Prudhoe royalty production.
[8] 2.776% of Prudhoe royalty production. Contract expires June 30, 1996.
[9] Maximum 24.533% of Prudhoe Bay royalty production. Contract expires January 1995.
[10] Maximum 9.6% of Prudhoe Bay royalty production. Contract expires January 1, 1995.
[11] 20.3% of Kuparuk royalty production (Petrostar: 7.81%, Chevron: 12.5%). Contract expires September 30, 1996.
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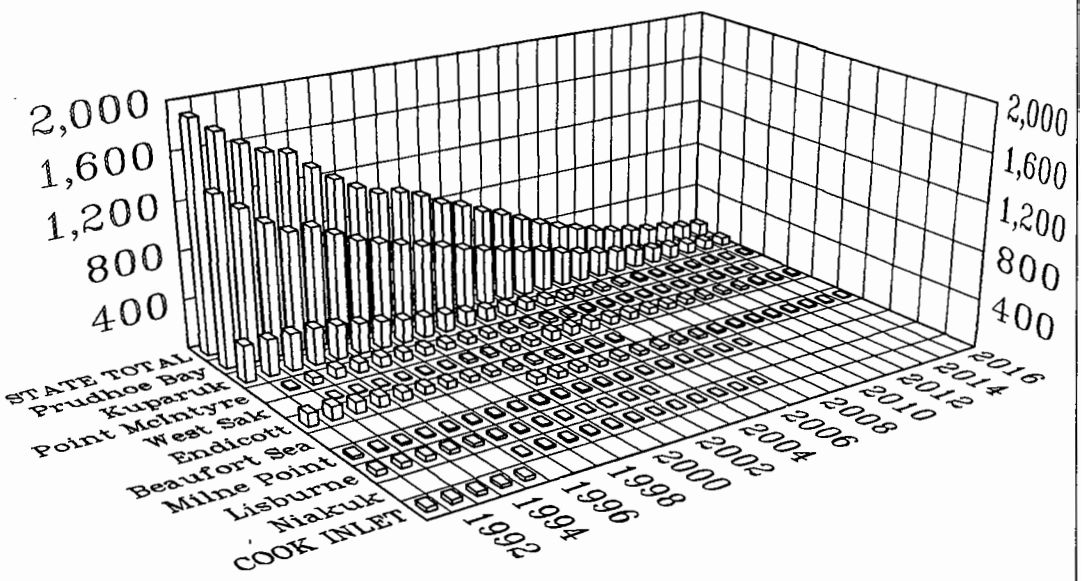
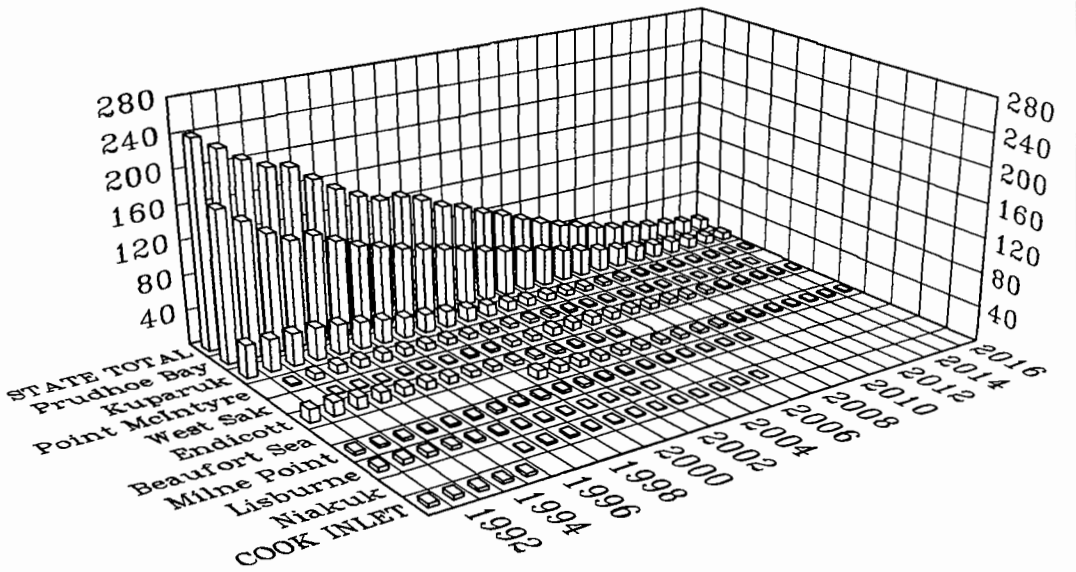


PROJECTED PRODUCTION OF OIL

THOUSANDS OF BARRELS PER DAY

Figure 2A



PROJECTED AVAILABLE ROYALTY OIL

THOUSANDS OF BARRELS PER DAY

Figure 2B

SECTION 3
HISTORICAL PRODUCTION OF OIL

All Alaskan oil is produced from two regions, Cook Inlet and North Slope. Cook Inlet began producing from Swanson River field in 1959 and North Slope began producing from Prudhoe Bay field in 1977 through the Trans Alaska Pipeline System (TAPS). By end of 1990 Cook Inlet fields had produced 1.1 billion barrels of combined oil and NGL and North Slope fields had produced 8.0 billion barrels. Table 3 and Figs. 3A and 3B list the annual production since 1970 of each field in the state. North Slope production peaked in 1988 at 743 million barrels per year then declined to 687 million barrels per year in 1989 and 654 million barrels per year in 1990.

CONDENSATE AND NATURAL GAS LIQUID (NGL) PRODUCTION

Prudhoe Bay condensate production is included in oil figures. North Slope oil and NGL production was undifferentiated until 1984 when 1.5 million cumulative barrels were reported. Subsequently, oil and NGL have been reported separately. Cook Inlet oil and NGL production has been differentiated from the beginning of the data set.

HISTORICAL OIL PRODUCTION

MILLIONS OF BARRELS PER YEAR

	Type *	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
NORTH SLOPE												
Endicott	oil	–	–	–	–	–	–	–	–	–	–	–
	NGL	–	–	–	–	–	–	–	–	–	–	–
	inj	–	–	–	–	–	–	–	–	–	–	–
Kuparuk	oil	–	–	–	–	–	–	–	–	–	–	–
	NGL	–	–	–	–	–	–	–	–	–	–	–
Lisburne	oil	–	–	–	–	–	–	–	–	–	–	–
	NGL	–	–	–	–	–	–	–	–	–	–	–
Milne Point	oil	–	–	–	–	–	–	–	–	–	–	–
Prudhoe Bay	oil [1]	1.193	1.157	0.922	0.944	2.170	2.870	4.604	115.258	397.679	468.412	555.394
	NGL	–	–	–	–	–	–	–	–	–	–	–
	inj	0.879	0.833	0.792	0.817	1.640	2.147	3.611	2.151	–	–	–
West Sak	oil	–	–	–	–	–	–	–	–	–	–	–
TOTAL	oil [1]	1.199	1.157	0.922	0.944	2.170	2.870	4.604	115.258	397.679	468.412	555.394
	NGL	–	–	–	–	–	–	–	–	–	–	–
	Liq	1.199	1.157	0.922	0.944	2.170	2.870	4.604	115.258	397.679	468.412	555.394
COOK INLET												
Beaver Creek	oil	–	–	–	0.416	0.375	0.322	0.302	0.276	0.223	0.211	0.214
Granite Point	oil	7.522	5.577	4.663	4.767	4.237	4.361	4.471	4.711	4.862	4.613	4.394
Katalla	oil	–	–	–	–	–	–	–	–	–	–	–
Kenai	NGL	0.002	0.001	0.002	0.001	–	0.001	0.001	–	0.001	–	–
McArthur River	oil	40.165	40.537	40.774	38.884	39.145	40.876	35.810	33.235	30.223	25.440	20.895
	NGL	0.426	0.593	0.570	0.661	0.654	0.644	0.653	0.733	0.730	0.541	0.409
Middle Ground Shoal	oil	12.719	11.304	9.720	10.239	9.001	8.670	8.864	7.616	6.382	5.423	4.854
Redoubt Shoal	oil	–	–	–	–	–	–	–	–	–	–	–
Swanson River	oil	12.408	11.466	8.896	10.064	9.765	8.754	7.591	5.981	4.870	4.344	3.728
	NGL	0.063	0.077	0.012	0.098	0.096	0.089	0.090	0.086	0.065	0.080	0.064
Trading Bay	oil	9.600	8.744	8.585	7.825	7.552	6.128	5.366	4.276	3.567	2.892	2.167
	NGL	0.039	0.039	0.025	0.051	0.043	0.031	0.026	0.044	0.019	0.014	0.009
TOTAL	oil	82.415	77.628	72.638	72.196	70.074	69.111	62.404	56.094	50.126	42.923	36.252
	NGL	0.530	0.710	0.608	0.812	0.793	0.765	0.770	0.863	0.815	0.635	0.481
	Liq	82.945	78.338	73.247	73.007	70.867	69.875	63.175	56.957	50.941	43.558	36.734
STATE												
TOTAL	oil [1]	83.614	78.785	73.561	73.139	72.244	71.980	67.009	171.352	447.805	511.335	591.652
	NGL	0.530	0.710	0.608	0.812	0.793	0.765	0.770	0.863	0.815	0.635	0.481
	Liq	84.144	79.495	74.169	73.951	73.037	72.745	67.779	172.215	448.620	511.970	592.133
TAPS THROUGHPUT AT PUMP STATION #1 [2]									112.315	397.149	467.939	554.934

* oil = crude oil, NGL = natural gas liquids, inj = injected, Liq = liquids (oil + NGL)
Source: Alaska Oil and Gas Conservation Commission (OGCC), "Alaska Production Summary by Field and Pool", monthly report.
[1] Includes condensates.
[2] 1977–81: Alaska Oil and Gas Conservation Commission, "Statistical Report."
1982–90: Alyeska Pipeline Service Co.
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TABLE 3

		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	Cum. Prod. (MMBbl)	% Prod.
NORTH SLOPE													
Endicott	oil	–	–	–	–	–	0.011	8.796	37.441	36.094	37.723	120.066	29%
	NGL	–	–	–	–	–	–	–	–	–	0.891	2.224	
	inj	–	–	–	–	–	0.007	0.014	–	–	–	0.021	
Kuparuk	oil	1.092	32.406	39.876	46.169	79.630	93.900	102.448	110.865	109.770	107.206	722.690	38%
	NGL	–	–	–	–	0.707	1.072	1.257	0.256	–	–	3.346	
Lisburne	oil	0.002	0.208	0.087	0.294	1.123	3.594	16.152	14.725	13.091	14.466	63.765	38%
	NGL	–	–	–	–	–	–	0.458	1.058	1.093	1.204	3.769	
Milne Point	oil	–	–	–	–	–	4.709	0.040	–	3.715	6.628	15.796	13%
Prudhoe Bay	oil [1]	555.170	558.892	560.798	561.952	568.534	561.538	572.370	559.415	505.940	470.140	7,025.541	58%
	NGL	–	–	–	0.317	0.056	0.230	14.598	19.274	16.928	16.094	69.024	
	inj	–	–	–	–	–	–	–	–	–	–	13.013	
West Sak	oil	–	–	0.003	–	–	–	–	–	–	–	0.755	0%
TOTAL	oil [1]	556.264	591.506	600.764	608.415	649.287	663.752	699.807	722.447	668.610	636.164	7,948.613	
	NGL	–	–	–	0.317	0.763	1.302	16.313	20.588	18.021	18.189	78.363	
	Liq	556.264	591.506	600.764	608.732	650.050	665.054	716.119	743.035	686.631	654.353	8,026.976	
COOK INLET													
Beaver Creek	oil	0.180	0.182	0.170	0.159	0.146	0.158	0.185	0.141	0.227	0.212	4.100	83%
Granite Point	oil	3.975	3.467	3.550	3.287	3.052	3.169	2.790	2.664	2.275	1.461	113.254	91%
Katalla	oil	–	–	–	–	–	–	–	–	–	–	0.154	n/d
Kenai	NGL	–	–	–	–	–	–	–	–	–	–	0.012	n/d
McArthur River	oil	18.022	15.806	13.564	11.707	7.454	7.942	7.375	7.143	6.955	4.265	540.053	95%
	NGL	0.484	0.449	0.332	0.317	0.194	0.228	0.197	0.162	–	–	8.979	
Middle Ground	oil	4.291	3.573	3.381	3.238	3.100	3.250	2.834	2.736	2.769	2.688	161.301	93%
Redoubt Shoal	oil	–	–	–	–	–	–	–	–	–	–	0.002	
Swanson River	oil	2.938	2.992	3.017	2.517	2.165	2.055	2.030	2.126	1.878	1.878	213.218	96%
	NGL	0.048	0.048	0.045	0.039	0.026	0.054	0.030	0.033	0.023	0.019	1.260	
Trading Bay	oil	1.666	1.384	1.081	1.077	1.029	1.046	0.935	0.886	1.264	0.643	91.858	96%
	NGL	0.005	0.002	0.004	0.005	0.004	0.002	0.001	–	–	–	0.360	
TOTAL	oil	31.072	27.405	24.763	21.986	16.946	17.619	16.149	15.696	15.368	11.146	1,123.938	
	NGL	0.538	0.499	0.381	0.361	0.223	0.284	0.227	0.195	0.023	0.019	10.610	
	Liq	31.610	27.904	25.144	22.346	17.169	17.904	16.376	15.892	15.391	11.166	1,134.549	
STATE													
TOTAL	oil [1]	587.336	618.910	625.527	630.401	666.233	681.372	715.955	738.143	683.980	647.310	9,072.553	
	NGL	0.538	0.499	0.381	0.678	0.986	1.586	16.540	20.783	18.044	18.208	88.973	
	Liq	587.874	619.409	625.908	631.079	667.219	682.958	732.495	758.926	702.024	665.519	9,161.526	
TAPS THROUGHPUT		556.067	591.142	600.859	608.836	649.887	665.435	716.662	743.302	688.062	654.551	8,007.140	

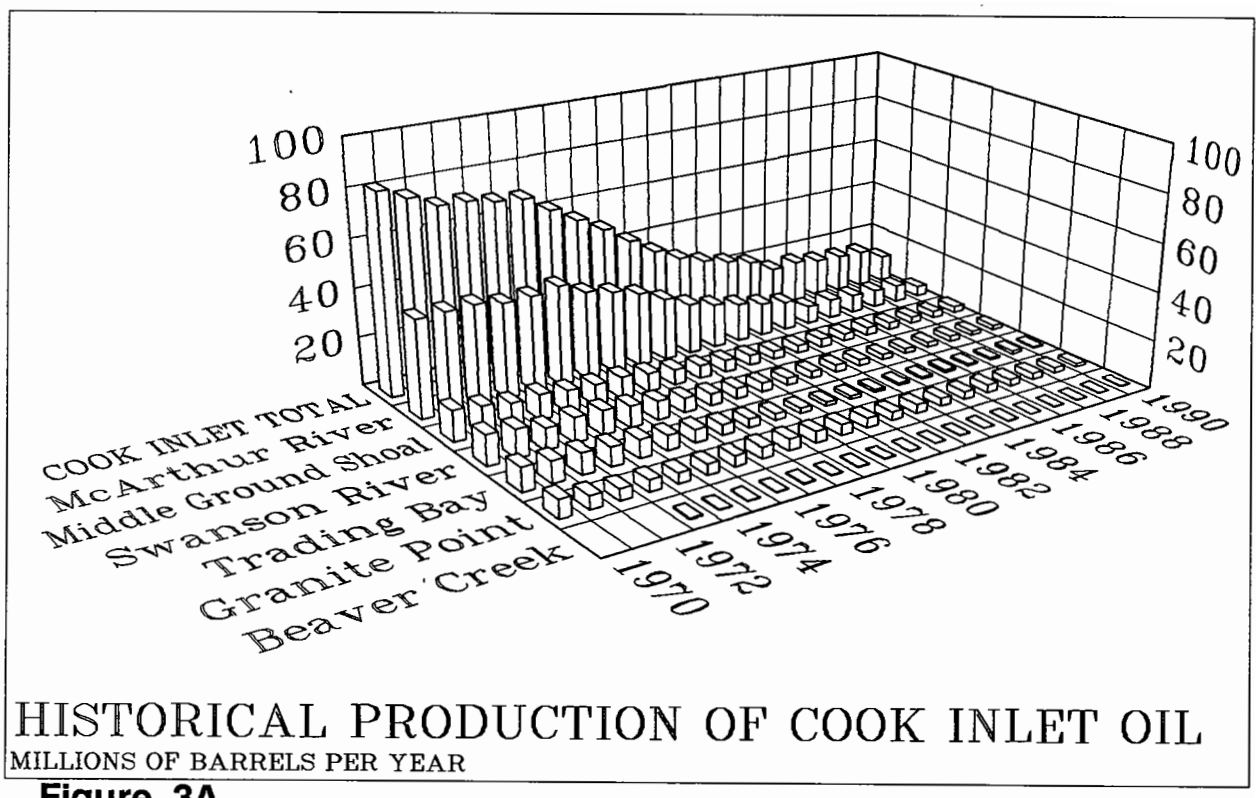


Figure 3A

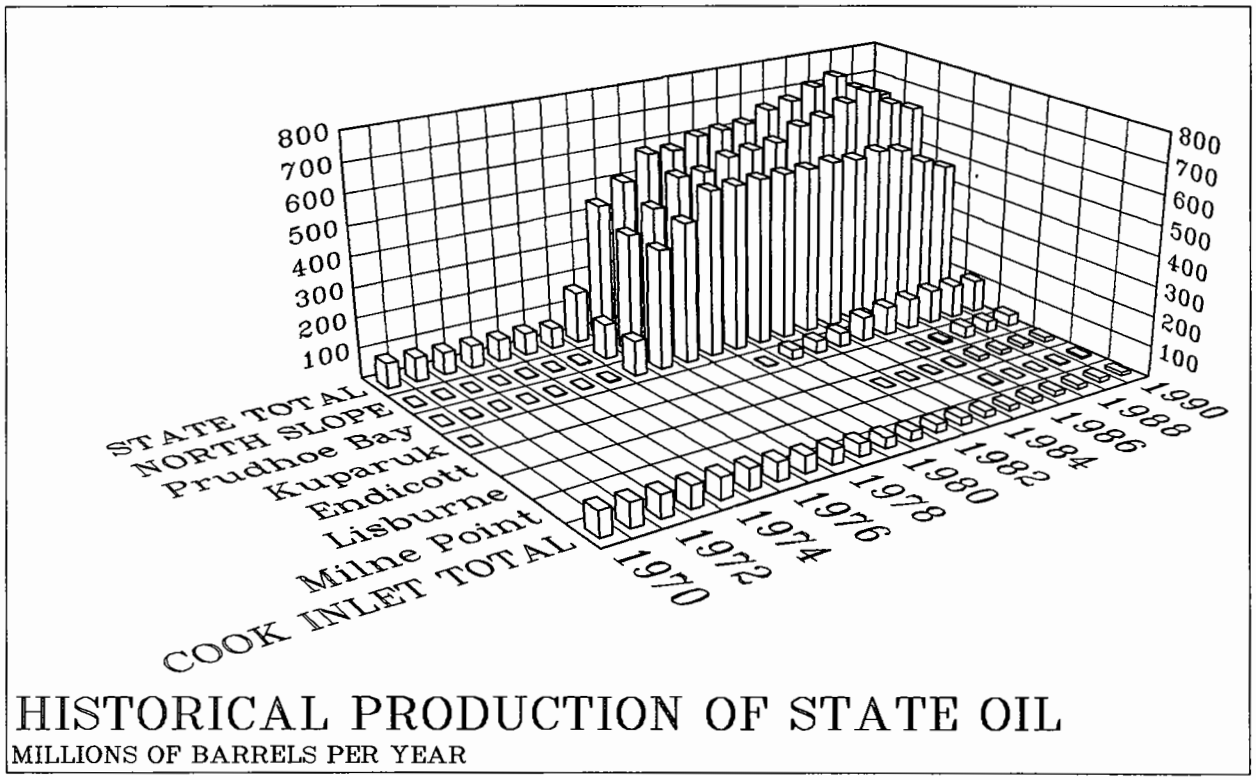


Figure 3B

SECTION 4
HISTORICAL PRODUCTION OF NATURAL GAS

Produced gas is gas which is extracted and consumed. Gas which is extracted then injected back into reservoirs is not "produced" since it is still available for consumption.

All Alaska gas is produced from Cook Inlet and North Slope fields. North Slope gas is produced from Prudhoe Bay area and from two small fields near Barrow. Cook Inlet gas production began in 1957 from Swanson River field, and North Slope production began in 1977 from Prudhoe Bay field. In 1990 Cook Inlet fields produced 206 billion cubic feet,and North Slope fields produced 210 billion cubic feet. Cumulatively, Cook Inlet has produced 3.9 trillion cubic feet and North Slope has produced 1.5 trillion cubic feet. Table 4 and Figs. 4A and 4B list how much gas was extracted, injected, and produced from each Alaskan field.

Production regimes of the two regions are very different because their markets are very different. Cook Inlet lies near Anchorage and Kenai markets, so nearly all extracted gas is consumed and relatively little is injected. North Slope gas, however, has only one market at present, as fuel for oil production facilities and related activities. Consequently, most of the extracted gas is injected.

HISTORICAL GAS PRODUCTION

BILLIONS OF CUBIC FEET PER YEAR

	Type *	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
NORTH SLOPE														
East Barrow	dry	–	–	–	–	–	–	–	–	–	–	–	0.037	0.717
Endicott	csg	–	–	–	–	–	–	–	–	–	–	–	–	–
	inj	–	–	–	–	–	–	–	–	–	–	–	–	–
Kuparuk	csg	0.002	–	–	–	–	–	–	–	–	–	–	0.615	22.989
	inj	–	–	–	–	–	–	–	–	–	–	–	–	17.822
Lisburne	csg	–	–	–	–	–	–	–	–	–	–	–	0.003	0.359
	inj	–	–	–	–	–	–	–	–	–	–	–	–	–
Milne Point	csg	–	–	–	–	–	–	–	–	–	–	–	–	–
	inj	–	–	–	–	–	–	–	–	–	–	–	–	–
Prudhoe Bay	csg	1.037	0.889	0.658	0.699	2.009	3.046	5.077	94.936	307.966	432.475	597.148	647.768	756.885
	inj	–	–	–	–	–	–	–	68.118	271.854	390.136	546.509	595.106	697.813
South Barrow	dry	0.619	0.627	0.675	0.707	0.765	0.799	0.832	0.879	0.893	0.913	1.027	1.009	0.532
West Sak	csg	–	–	–	–	–	–	–	–	–	–	–	–	–
TOTAL	dry	0.619	0.627	0.675	0.707	0.765	0.799	0.832	0.879	0.893	0.913	1.027	1.045	1.249
	csg	1.039	0.889	0.658	0.699	2.009	3.046	5.077	94.936	307.966	432.475	597.148	648.386	780.233
	GROSS	1.657	1.516	1.333	1.406	2.774	3.845	5.909	95.814	308.859	433.388	598.175	649.431	781.482
	inj	–	–	–	–	–	–	–	68.118	271.854	390.136	546.509	595.106	715.635
	NET	1.657	1.516	1.333	1.406	2.774	3.845	5.909	27.696	37.004	43.252	51.665	54.325	65.847
COOK INLET														
Albert Kaloa	dry	0.095	0.024	–	–	–	–	–	–	–	–	–	–	–
Beaver Creek	dry	–	–	–	0.054	0.020	0.218	0.166	0.113	0.237	0.088	0.090	0.137	0.317
	csg	–	–	–	0.153	0.130	0.104	0.095	0.090	0.092	0.094	0.091	0.080	0.082
	inj	–	–	–	–	0.019	–	0.091	0.100	0.144	0.079	0.029	0.020	0.037
Beluga River	dry	3.571	4.055	4.142	4.929	5.596	6.980	11.211	13.353	14.253	16.994	17.002	17.248	18.653
Birch Hill	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Cannery Loop	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Falls Creek	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Granite Point	csg	9.211	7.758	5.773	4.518	3.265	3.390	3.205	3.634	3.855	3.287	3.233	3.509	2.780
Ivan River	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Kenai	dry	80.612	72.184	76.007	71.345	68.511	77.175	79.467	81.886	97.290	97.029	98.846	105.800	115.913
Lewis River	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
McArthur River	csg	13.708	14.284	13.724	12.153	11.335	11.776	10.314	10.232	9.279	7.453	6.755	6.411	6.362
	dry	4.699	3.503	4.245	4.885	6.861	7.997	6.825	7.737	7.662	7.756	7.547	7.555	8.719
Middle Ground	csg	6.137	5.147	4.075	4.826	4.352	4.199	4.347	4.108	3.290	2.744	2.628	2.502	2.276
Shoal	dry	–	–	–	–	–	–	–	–	–	–	–	–	0.097
Moquawkie	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Nicolai Creek	dry	0.202	0.142	0.066	0.006	0.011	0.083	0.108	0.032	–	–	–	–	–
North Cook Inlet	dry	40.947	45.051	41.580	42.709	44.238	45.622	45.081	47.181	46.757	49.448	42.015	50.520	45.368
North Fork	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Pretty Creek	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Sterling	dry	0.265	0.267	0.172	0.027	0.032	0.035	0.035	0.029	0.024	0.025	0.026	0.023	0.024
Stump Lake	dry	–	–	–	–	–	–	–	–	–	–	–	–	–
Swanson River	csg	50.396	66.569	67.441	74.067	80.869	90.665	101.427	106.911	106.934	116.068	119.034	103.592	105.334
	dry	–	–	–	–	–	–	–	–	–	0.198	0.068	–	–
	inj	73.139	73.882	76.133	87.779	86.793	97.976	113.279	118.279	114.557	120.268	120.630	106.137	113.023
Trading Bay	csg	6.959	8.919	5.564	3.429	3.226	2.522	2.392	2.810	2.367	1.651	1.419	1.178	1.205
	dry	–	–	–	–	–	–	–	–	–	–	0.104	0.192	0.411
West Fork	dry	–	–	–	–	–	–	–	–	0.052	0.770	0.476	0.030	0.086
TOTAL	dry	130.474	125.226	126.212	123.955	125.269	138.109	142.893	150.332	166.275	172.308	166.174	181.506	189.588
	csg	86.411	102.677	96.577	99.146	103.176	112.656	121.779	127.786	125.817	131.297	133.160	117.272	118.038
	GROSS	216.885	227.903	222.789	223.101	228.445	250.765	264.672	278.117	292.092	303.605	299.334	298.778	307.626
	inj	73.139	73.882	76.133	87.779	86.812	97.976	113.370	118.380	114.701	120.347	120.659	106.157	113.060
	NET	143.746	154.021	146.656	135.322	141.633	152.790	151.302	159.737	177.391	183.258	178.674	192.621	194.566
STATE														
TOTAL	dry	131.093	125.852	126.887	124.661	126.034	138.908	143.725	151.210	167.168	173.221	167.201	182.551	190.837
	csg	87.449	103.566	97.235	99.846	105.185	115.702	126.856	222.721	433.783	563.771	730.308	765.657	898.270
	GROSS	218.542	229.419	224.122	224.507	231.219	254.610	270.581	373.931	600.951	736.993	897.509	948.208	1,089.108
	inj	73.139	73.882	76.133	87.779	86.812	97.976	113.370	186.498	386.556	510.482	667.169	701.263	828.695
	NET	145.403	155.537	147.989	136.728	144.407	156.635	157.211	187.434	214.395	226.511	230.340	246.946	260.413

* dry = dry gas, csg = casinghead gas, inj = injected.
Source: Alaska Oil and Gas Conservation Commission, "Alaska Production Summary by Field and Pool", monthly report.
[1] Ivan River, Lewis River, Pretty Creek and Stump Lake computed as a single reservoir.

TABLE 4

	Type *	1983	1984	1985	1986 [4]	1987	1988	1989	1990	Cum. Prod. (Bcf)	% Prod.
NORTH SLOPE											
East Barrow	dry	0.689	0.693	0.632	0.589	0.590	0.661	0.475	0.488	5.571	44%
Endicott	csg	–	–	–	0.196	8.237	34.834	41.433	43.906	128.607	3%
	inj	–	–	–	0.000	5.615	27.369	33.033	35.523	102.194	
Kuparuk	csg	44.391	57.508	104.465	114.889	124.744	119.883	107.823	116.579	813.742	27%
	inj	38.277	47.930	85.909	90.449	89.191	87.906	83.323	91.273	632.080	
Lisburne	csg	0.154	0.343	1.708	8.677	64.908	94.559	104.527	107.132	382.414	4%
	inj	–	–	–	–	56.741	87.815	102.248	101.542	348.346	
Milne Point	csg	–	–	–	1.644	0.011	–	0.978	2.718	5.605	[3]
	inj	–	–	–	0.197	–	–	0.320	1.401	1.918	
Prudhoe Bay	csg	818.963	846.674	936.613	1,011.415	1,228.527	1,404.992	1,412.853	1,481.462	11,951.251	4%
	inj	754.044	768.899	846.786	925.630	1,097.171	1,245.254	1,244.000	1,312.874	10,771.849	
South Barrow	dry	0.541	0.650	0.678	0.589	0.622	0.598	0.758	0.733	19.913	78%
West Sak	csg	0.005	–	–	–	–	–	–	–	0.326	0%
TOTAL	dry	1.231	1.343	1.310	1.178	1.212	1.260	1.232	1.220	25.484	
	csg	863.514	904.525	1,042.787	1,136.820	1,426.428	1,654.268	1,667.614	1,751.797	13,281.945	
	GROSS	864.744	905.868	1,044.097	1,179.123	1,427.640	1,655.528	1,668.847	1,753.018	13,307.429	
	inj	792.321	816.829	932.695	1,016.276	1,248.718	1,448.344	1,462.924	1,542.613	11,856.387	
	NET	72.423	89.040	111.402	121.723	178.922	207.184	205.923	210.405	1,451.042	
COOK INLET											
Albert Kaloa	dry	–	–	–	–	–	–	–	–	0.119	n/d
Beaver Creek	dry	8.252	9.234	10.833	17.694	15.475	14.307	12.257	12.416	101.899	43%
	csg	0.092	0.101	0.094	0.078	0.053	0.039	0.064	0.058	1.590	
	inj	0.031	–	–	–	–	–	–	–	0.551	
Beluga River	dry	18.084	19.833	22.571	25.357	23.985	25.586	30.126	39.512	348.401	35%
Birch Hill	dry	–	–	–	–	–	–	–	–	0.065	1%
Cannery Loop	dry	–	–	–	–	–	9.598	11.255	12.502	33.396	20%
Falls Creek	dry	–	–	–	–	–	–	–	–	0.019	0%
Granite Point	csg	2.578	2.340	2.147	2.415	2.431	2.540	2.251	1.428	98.511	90%
Ivan River	dry	–	–	–	–	–	–	–	0.676	0.676	2% [1]
Kenai	dry	113.326	111.772	116.644	82.714	90.487	76.555	65.706	38.393	2,007.677	70%
Lewis River	dry	–	0.696	1.644	1.338	0.345	0.045	0.095	1.485	5.647	2% [1]
McArthur River	csg	5.319	5.834	4.073	4.397	3.587	4.120	4.450	2.559	204.973	44%
	dry	7.931	9.242	6.603	9.163	9.891	12.603	26.683	48.897	221.727	
Middle Ground	csg	2.368	2.210	2.129	1.213	1.265	1.186	1.250	1.334	80.540	98%
Shoal	dry	0.239	0.514	0.493	0.386	0.302	0.411	0.715	1.246	4.554	
Moquawkie	dry	–	–	–	–	–	–	–	–	0.985	n/d
Nicolai Creek	dry	–	–	–	–	–	–	–	–	1.062	26%
North Cook Inlet	dry	47.877	46.981	45.819	43.838	42.889	44.989	45.287	45.014	955.587	60%
North Fork	dry	–	–	–	–	–	–	–	–	0.105	1%
Pretty Creek	dry	–	–	–	0.067	0.776	0.871	0.641	0.607	2.962	2% [1]
Sterling	dry	0.022	0.018	0.012	0.002	–	–	–	–	2.088	8%
Stump Lake	dry	–	–	–	–	–	–	–	0.528	0.528	2% [1]
Swanson River	csg	97.507	96.710	92.104	95.083	82.926	101.718	103.500	101.788	2,059.864	0% [2]
	dry	–	–	–	–	0.555	1.156	1.184	2.710	17.709	
	inj	95.353	93.687	89.025	93.602	85.688	99.199	107.101	106.133	2,328.633	
Trading Bay	csg	0.893	0.941	1.115	0.994	0.991	1.120	1.291	0.465	63.733	70%
	dry	0.631	0.626	0.417	0.385	0.443	0.191	0.141	0.003	3.543	
West Fork	dry	0.067	0.037	0.022	–	–	–	–	–	1.542	20%
TOTAL	dry	196.429	198.954	205.059	180.943	185.148	186.313	194.090	203.987	3,710.291	
	csg	108.757	108.136	101.661	104.181	91.253	110.722	112.806	107.631	2,509.211	
	GROSS	305.186	307.089	306.721	285.124	276.401	297.035	306.896	311.619	6,219.502	
	inj	95.384	93.687	89.025	93.602	85.688	99.199	107.101	106.133	2,329.184	
	NET	209.802	213.402	217.695	191.522	190.712	197.836	199.795	205.485	3,890.318	
STATE											
TOTAL	dry	197.660	200.297	206.370	182.121	186.360	187.573	195.323	205.208	3,735.775	
	csg	972.271	1,012.661	1,144.448	1,241.001	1,517.681	1,764.990	1,780.420	1,859.429	15,791.156	
	GROSS	1,169.931	1,212.957	1,350.818	1,464.247	1,704.041	1,952.563	1,975.743	2,064.636	19,526.931	
	inj	887.705	910.516	1,021.720	1,109.877	1,334.406	1,547.543	1,570.025	1,648.746	14,185.571	
	NET	282.226	302.442	329.098	313.245	369.634	405.020	405.718	415.890	5,341.360	

[2] To maintain oil production, more gas is injected into the field than is produced.
[3] Milne Point has no gas reserves because most of its gas will be used for production fuel.
[4] Production data for Prudhoe Bay may be revised.
32;06/03/91

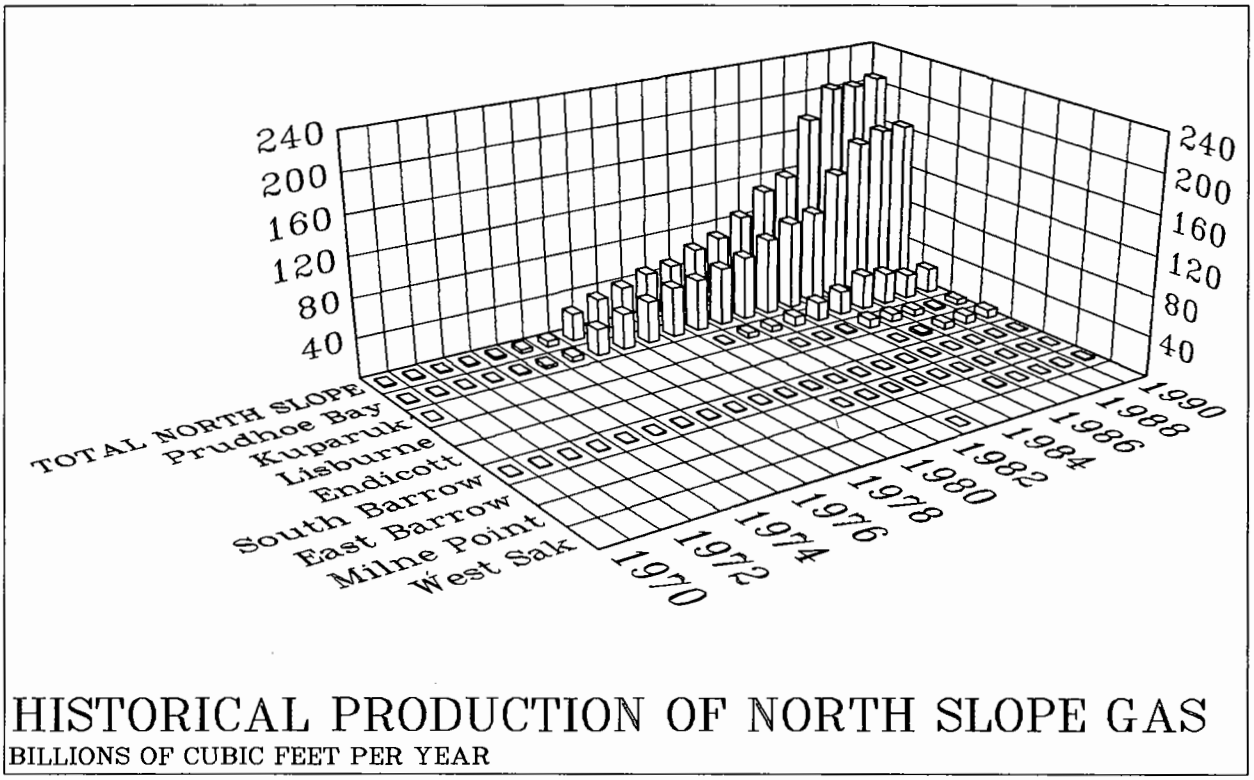


Figure 4A

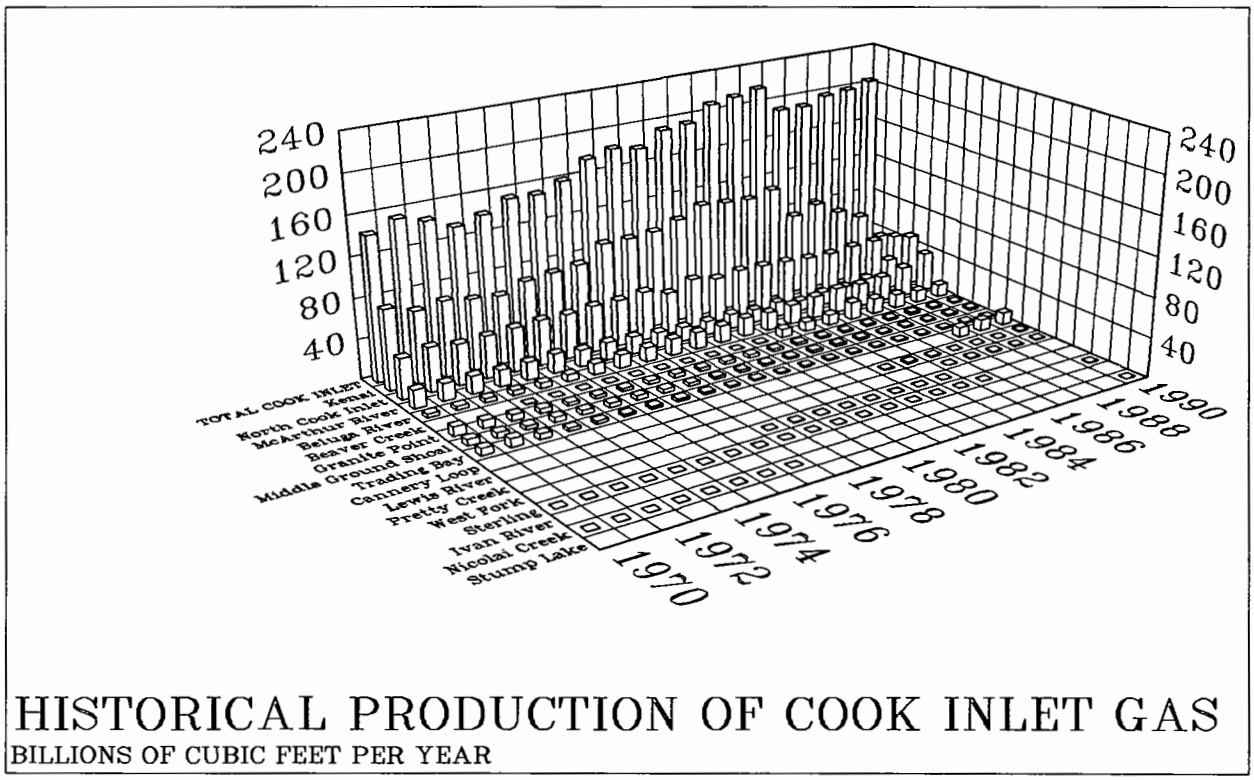


Figure 4B

SECTION 5
HISTORICAL CONSUMPTION OF OIL

Virtually all oil consumed in Alaska is in the form of refined fuels. The four in-state refineries supply some fuel and the balance is imported. We cannot calculate the volumes, or even the proportions, supplied by each of these sources because data is not publicly available. Department of Revenue (DOR), however, compiles data on volumes of fuel reported sold each year. DOR created its fuel sales categories for tax purposes, not to report Alaskan consumption patterns. The major example of this, the catagory "Other Diesel/Exported as Cargo" does not distinguish between volume of fuel sold in Alaska and volume consumed: most of it is residual oil from Kenai refineries which is exported from Alaska for further refining. In 1989, 2.1 billion gallons of fuel were sold in Alaska but 21% of this was exported residual oil. In 1990, 2.2 billion gallons were sold but 16% was exported.

Table 5 and Fig. 5 list DOR fuel sales data since 1977 and lists how much was exported. Data quality between 1977 and 1984 is unconfirmed, but DOR considers data from 1985 to 1990 to be good.

HISTORICAL OIL CONSUMPTION TABLE 5

MILLIONS OF GALLONS PER YEAR

	1977	1978	1979	1980	1981	1982	1983
FUEL SALES [1]							
Aviation Gas	16.770	15.830	16.925	16.912	18.754	16.596	15.244
Exempt	1.521	0.685	0.552	0.558	0.574	0.589	0.498
Taxable	15.249	15.145	16.373	16.354	18.180	16.007	14.746
Aviation Jet	330.744	363.607	415.164	416.184	400.177	432.366	517.575
Exempt	227.581	250.601	288.974	286.110	247.619	99.957	242.815
Taxable	103.163	113.006	126.190	130.074	152.558	332.409	274.760
Marine Gas	11.766	7.714	8.296	7.598	7.602	7.878	8.568
Exempt	5.707	0.554	0.292	0.025	0.085	0.032	0.052
Taxable	6.059	7.160	8.004	7.573	7.517	7.846	8.516
Marine Diesel	38.613	51.985	59.492	67.711	72.282	99.443	147.569
Exempt	6.396	10.116	6.325	5.370	5.153	30.443	75.395
Taxable	32.217	41.869	53.167	62.341	67.129	69.000	72.174
Other Gas	186.213	187.359	181.329	177.353	186.446	210.644	197.968
Exempt	5.094	8.290	7.527	8.162	9.084	12.809	10.887
Taxable	181.119	179.069	173.802	169.191	177.362	197.835	187.081
Other Diesel	165.752	184.876	269.377	302.647	326.440	411.125	420.279
Exempt	46.160	54.050	120.960	120.939	117.074	187.856	178.494
Taxable	119.592	130.826	148.417	181.708	209.366	223.269	241.785
TOTAL	749.858	811.371	950.583	988.405	1,011.701	1,178.052	1,307.203

SHIPMENTS: LIFTINGS AT VALDEZ [2]							
MILLIONS OF BARRELS PER YEAR							
	96.669	394.080	464.394	548.895	547.026	583.370	592.319

	1984	1985	1986	1987	1988	1989	1990
FUEL SALES [1]							
Aviation Gas	17.399	17.997	17.815	18.492	19.314	19.309	20.807
Exempt	0.574	0.515	0.858	0.384	0.743	0.816	1.019
Taxable	16.825	17.482	16.957	18.108	18.571	18.493	19.788
Aviation Jet	611.314	518.092	592.620	644.477	684.910	682.239	873.336
Exempt	311.820	223.635	280.654	318.349	333.703	311.805	423.583
Taxable	299.494	294.457	311.966	326.128	351.207	370.434	449.753
Marine Gas	8.955	14.664	10.464	11.510	10.554	10.202	10.477
Exempt	0.120	0.251	0.291	0.183	0.075	0.194	0.239
Taxable	8.835	14.413	10.173	11.327	10.479	10.008	10.238
Marine Diesel	124.416	98.675	105.218	171.769	159.027	176.361	198.301
Exempt	50.874	9.724	10.097	83.120	43.828	28.636	15.701
Taxable	73.542	88.951	95.121	88.649	115.199	147.725	182.600
Other Gas	223.178	235.081	234.482	221.259	222.162	215.462	244.488
Exempt	11.028	15.353	21.558	17.541	15.040	15.445	9.331
Taxable	212.150	219.728	212.924	203.718	207.122	200.017	235.157
Other Diesel	436.308	643.430	897.970	843.045	858.228	956.127	843.652
Exempt	190.891	369.279	559.413	583.305	576.131	674.692	570.569
Taxable	245.113	274.151	338.557	259.740	282.097	281.435	273.083
TOTAL	1,421.570	1,527.939	1,858.569	1,910.552	1,954.195	2,059.700	2,191.061
ADJUSTED TOTAL [3]	1,401.303	1,430.632	1,503.167	1,611.406	1,559.523	1,628.910	1,849.884

SHIPMENTS: LIFTINGS AT VALDEZ [2]							
MILLIONS OF BARRELS PER YEAR							
	596.588	643.512	603.028	700.878	736.047	672.461	636.199

[1] Alaska Department of Revenue, "Report of Motor Fuel Sold or Distributed in Alaska."
[2] 1977–81: Alaska Oil and Gas Conservation Commission, "Statistical Report."
1982–90: Alyeska Pipeline Service Co..
[3] Total fuel sales net of Exported as Cargo class which is predominantly residual fuel shipped from Alaska.
33;04/28/91

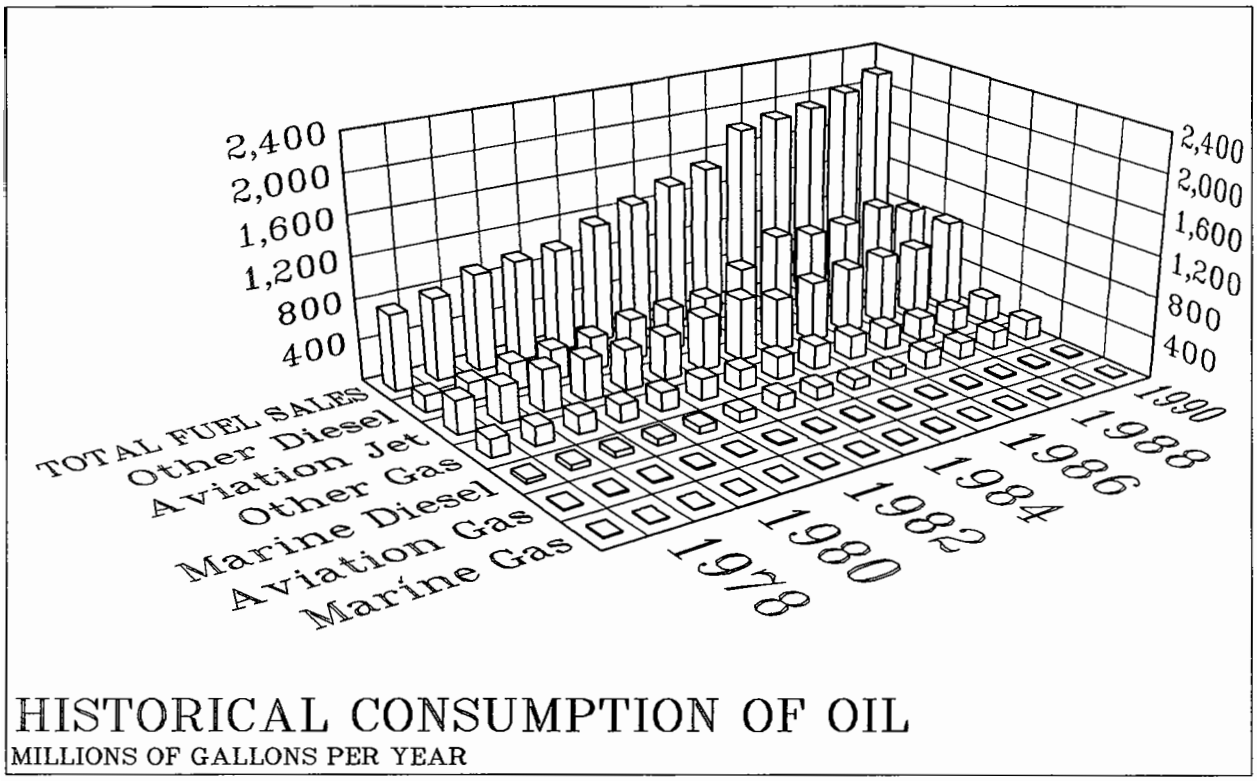

2,400
2,000
1,600
1,200
800
400
TOTAL FUEL SALES
Other Diesel
Aviation Jet
Other Gas
Marine Diesel
Aviation Gas
Marine Gas
1978
1980
1982
1984
1986
1988
1990
HISTORICAL CONSUMPTION OF OIL
MILLIONS OF GALLONS PER YEAR

Figure 5

SECTION 6
HISTORICAL CONSUMPTION OF NATURAL GAS

In 1990 Alaskans consumed 416 billion cubic feet of natural gas. Table 6 and Figs. 6A and 6B list the major end users of natural gas from 1971 to 1990.

Cook Inlet fields lie near Anchorage and Kenai and these markets consume nearly all the gas extracted from the fields. Of 206 billion cubic feet consumed in 1990, 30% went to LNG production, 26% to ammonia/urea production, 21% to power generation, 12% to utility gas, and 7% to field operations.

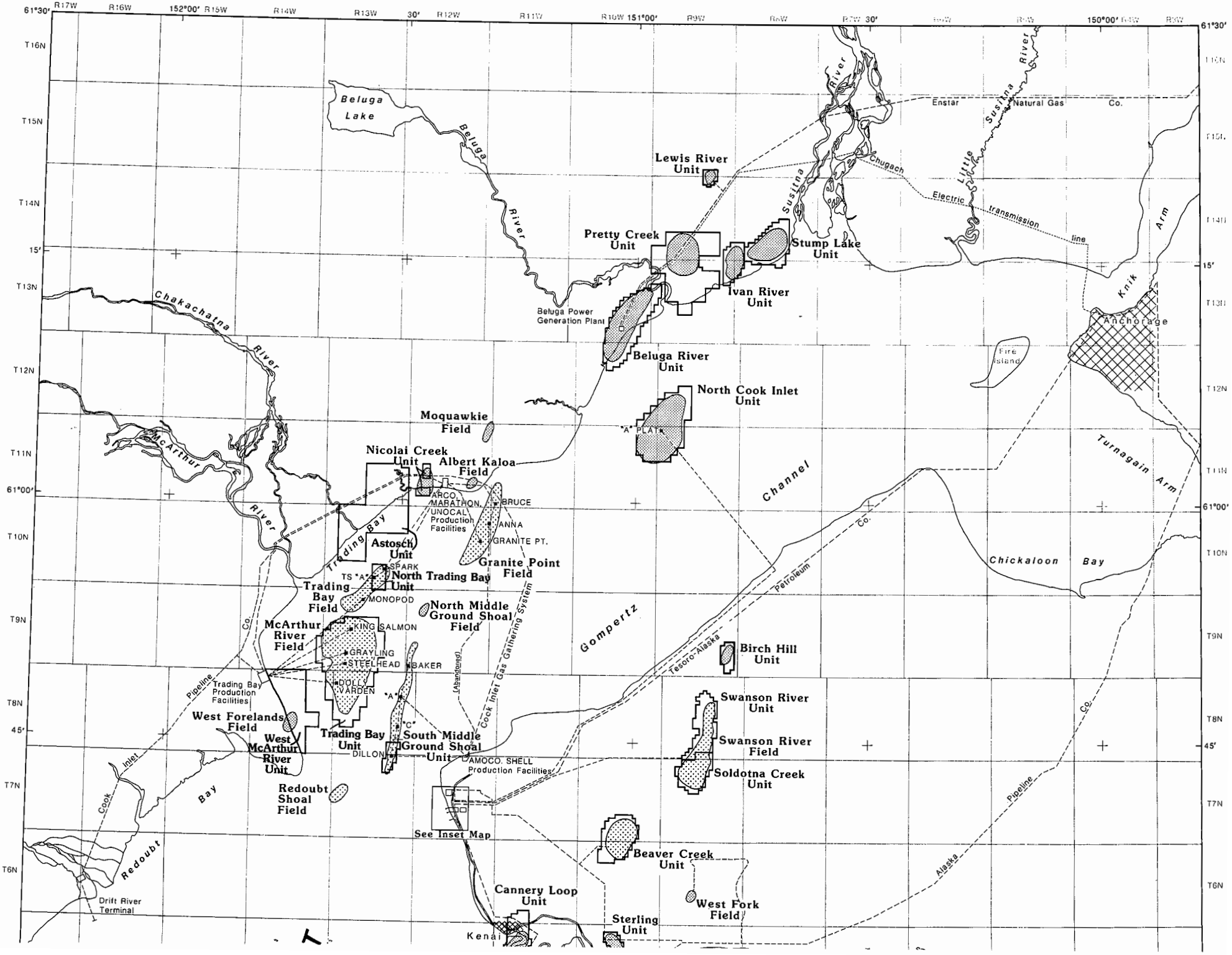
At present, the only market for North Slope gas is as fuel for oil production equipment and related activities. Consequently, 88% of the extracted gas is injected back into the fields to maintain reservoir pressure. Of 210 billion cubic feet consumed in 1990, 82% went to field operations, 7% to TAPS, and 7% to NGL. The volume of gas consumed on the North Slope to produce oil is as large as the combined Anchorage and Kenai markets.

HISTORICAL GAS CONSUMPTION

BILLIONS OF CUBIC FEET PER YEAR

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
NORTH SLOPE										
Field Operations [1]	–	–	–	2.65	2.808	3.856	24.444	29.231	33.763	39.697
Vented and Flared	–	–	–	1.08	1.061	1.254	10.882	2.313	1.840	1.801
Used on Leases	–	–	–	1.56	1.747	2.602	13.562	18.826	23.559	28.967
Shrinkage	–	–	–	–	–	–	–	–	–	–
Other	–	–	–	0.02	–	–	–	8.092	8.364	8.929
Sold [1]	–	–	–	0.14	1.037	2.054	3.347	7.802	9.512	12.007
Power generation [2]	–	–	–	–	–	–	–	0.219	0.235	0.235
Gas Utilities [2]	–	–	–	–	–	–	–	0.291	0.317	0.400
TAPS [3]	–	–	–	–	–	–	1.754	6.949	8.648	10.686
NGL [4]	–	–	–	–	–	–	–	–	–	–
Other [5]	–	–	–	–	(2.231)	0.269	1.394	0.616	0.579	0.941
TOTAL	–	–	–	2.786	3.845	5.910	27.791	37.033	43.275	51.704
COOK INLET										
Field Operations [1]	45.25	36.56	20.90	49.83	28.830	24.467	24.416	25.949	24.101	22.304
Vented and Flared	33.18	20.98	6.93	7.98	9.496	5.421	4.848	3.870	2.710	3.045
Used on Leases	10.96	14.86	12.42	39.85	16.215	15.822	16.404	16.228	14.564	14.608
Shrinkage	1.11	0.72	1.55	2.01	3.119	3.224	3.145	3.426	2.847	2.438
Other	–	–	–	–	–	–	0.019	2.425	3.980	2.213
Sold [1]	121.72	123.72	130.94	130.51	140.717	143.710	152.437	164.300	168.106	162.201
Power generation [6]	14.69	15.38	16.70	17.45	25.461	27.613	28.590	29.718	33.141	33.520
Public	8.14	8.91	10.63	11.76	19.619	22.189	23.590	24.592	28.155	28.757
Military	6.55	6.47	6.07	5.68	5.842	5.424	5.000	5.126	4.986	4.763
Gas Utilities [6]	10.24	13.10	14.76	15.13	12.092	12.551	12.683	13.454	14.045	15.521
Residential	5.44	6.03	6.52	6.72	5.548	5.916	6.010	6.536	6.911	7.773
Commercial	4.80	7.07	8.24	8.41	6.544	6.635	6.673	6.918	7.134	7.748
LNG [7]	63.24	59.87	60.99	61.87	64.777	63.509	66.912	60.874	64.111	54.844
Amonia-Urea [8]	19.49	20.58	20.64	22.10	23.888	24.257	28.620	48.879	51.657	54.699
Rental Gas [9]	–	13.400	12.590	10.410	12.477	11.588	6.703	10.523	6.958	5.190
Other [5]	14.058	1.389	5.260	3.553	2.022	4.192	8.929	0.852	(1.806)	(1.573)
TOTAL	166.97	160.28	151.84	180.34	169.547	168.177	176.853	190.249	192.207	184.505
STATE										
Field Operations [1]	45.25	36.56	20.90	52.48	31.639	28.322	48.859	55.180	57.865	62.001
Vented and Flared	33.18	20.98	6.93	9.05	10.557	6.674	15.729	6.183	4.551	4.846
Used on Leases	10.96	14.86	12.42	41.40	17.963	18.424	29.966	35.055	38.123	43.575
Shrinkage	1.11	0.72	1.55	2.01	3.119	3.224	3.145	3.426	2.847	2.438
Other	–	–	–	0.02	–	–	0.019	10.516	12.344	11.142
Sold [1]	121.72	123.72	130.94	130.65	141.754	145.763	155.785	172.101	177.616	174.208
Power generation [2][6]	14.69	15.38	16.70	17.45	25.461	27.613	28.590	29.937	33.376	33.755
Public	8.14	8.91	10.63	11.76	19.619	22.189	23.590	24.811	28.390	28.992
Military	6.55	6.47	6.07	5.68	5.842	5.424	5.000	5.126	4.986	4.763
Gas Utilities [2][6]	10.24	13.10	14.76	15.13	12.092	12.551	12.683	13.745	14.362	15.921
Residential	5.44	6.03	6.52	6.72	5.548	5.916	6.010	6.827	7.228	8.173
Commercial	4.80	7.07	8.24	8.41	6.544	6.635	6.673	6.918	7.134	7.748
TAPS [3]	–	–	–	–	–	–	1.754	6.949	8.648	10.686
NGL [4]	–	–	–	–	–	–	–	–	–	–
LNG [7]	63.24	59.87	60.99	61.87	64.777	63.509	66.912	60.874	64.111	54.844
Amonia-Urea [8]	19.49	20.58	20.64	22.10	23.888	24.257	28.620	48.879	51.657	54.699
Rental Gas [9]		13.40	12.59	10.41	12.477	11.588	6.703	10.523	6.958	5.190
Other [5]	14.06	0.83	3.32	0.89	(0.209)	4.460	10.324	1.467	(1.229)	(0.632)
TOTAL	166.97	160.28	151.84	183.13	173.393	174.085	204.644	227.281	235.481	236.209

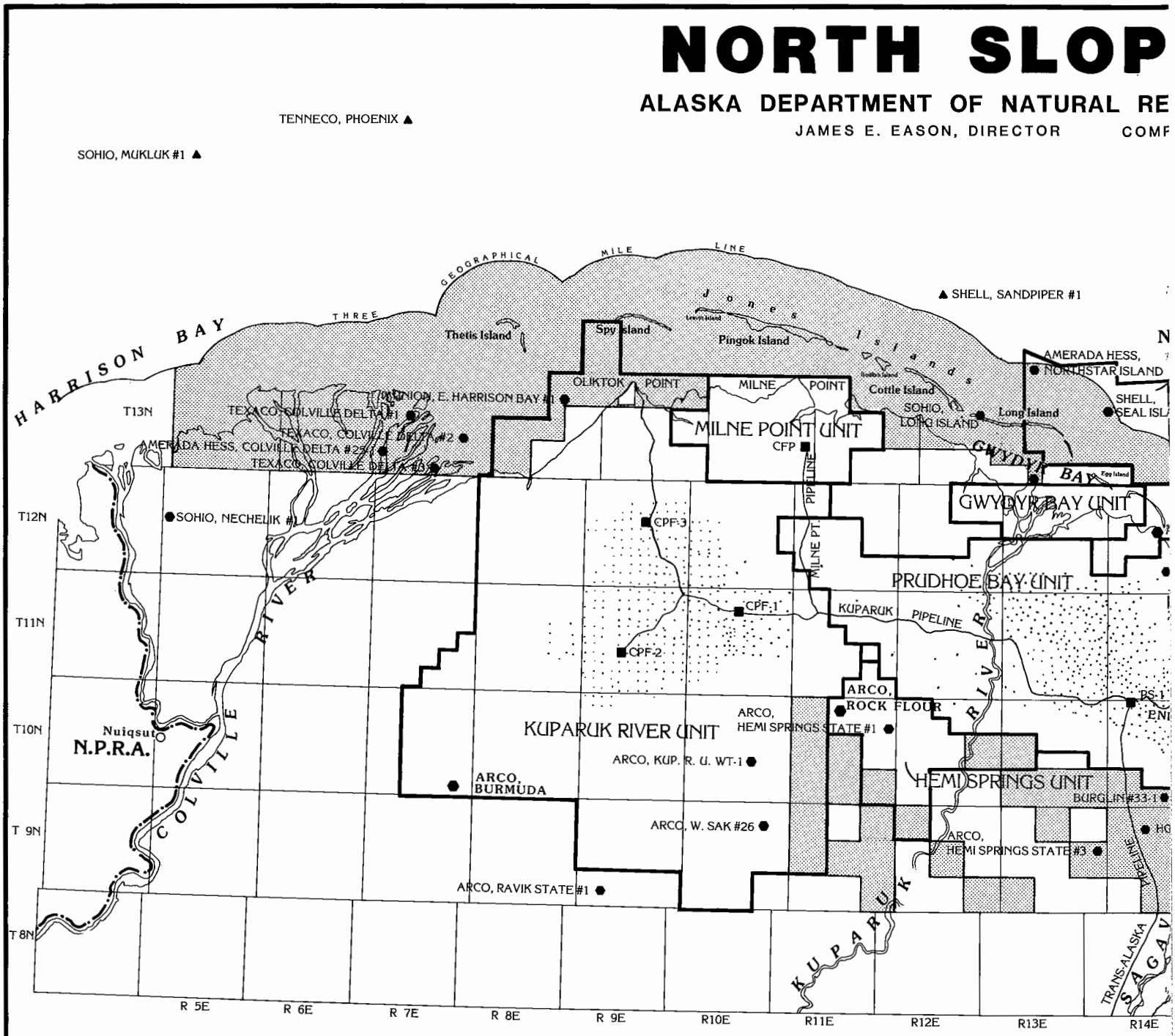
[1] Alaska Oil and Gas Conservation Commission, "Report of Gas Disposition," monthly reports.
[2] Barrow Utilities and Electric Cooperative Inc..
[3] Royalty reports from Arco to Division of Oil and Gas, sales from Prudhoe Bay and Kuparuk fields to TAPS.
[4] Alaska Oil and Gas Conservation Commission, "Alaska Production Summary by Field and Pool", monthly reports.
[5] Calculated difference between "Sold" and sum of listed "Sold" items.
[6] Sum of sales from Beluga gas field in: Alaska Oil and Gas Conservation Commission, "Report of Gas Disposition" and
1971–82: Annual reports from Alaska Pipeline Co., ENSTAR and Kenai Utility Service Co. to Alaska Public Utilities Commission.
1983–90: Enstar Natural Gas Co., personal communication.
[7] 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) production from Kenai and Beaver Creek gas fields in: Alaska Oil and Gas Conservation Commission, "Report of Gas Sales."
2) sales from North Cook Inlet gas field in: Alaska Oil and Gas Conservation Commission, "Kenai Gas Sales."
1980–88: Royalty reports from producers to Division of Oil and Gas.


Beluga Lake
Beluga River
Chakachatna River
McArthur River
Lewis River Unit
Pretty Creek Unit
Stump Lake Unit
Ivan River Unit
Beluga Power Generation Plant
Beluga River Unit
North Cook Inlet Unit
"A" PLATF.
Moquawkie Field
Nicolai Creek Unit
Albert Kaloa Field
ARCO, MARATHON, UNOCAL Production Facilities
BRUCE
ANNA
GRANITE PT.
Granite Point Field
Astosch Unit
SPARK
TS "A"
North Trading Bay Unit
Trading Bay Field
MONOPOD
North Middle Ground Shoal Field
McArthur River Field
KING SALMON
GRAYLING
STEELHEAD
BAKER
DOLLY VARDEN
"A"
"C"
DILLON
South Middle Ground Shoal Unit
Trading Bay Unit
West Forelands Field
West McArthur River Unit
Trading Bay Production Facilities
Pipeline Co.
Cook Inlet Gas Gathering System (Abandoned)
AMOCO, SHELL Production Facilities
Redoubt Shoal Field
See Inset Map
Drift River Terminal
Cook Inlet
Redoubt Bay
Gompertz Channel
Chickaloon Bay
Turnagain Arm
Knik Arm
Anchorage
Fire Island
Enstar Natural Gas Co.
Chugach Electric transmission line
Susitna River
Little Susitna River
Tesoro Alaska Petroleum Co.
Birch Hill Unit
Swanson River Unit
Swanson River Field
Soldotna Creek Unit
Beaver Creek Unit
West Fork Field
Sterling Unit
Cannery Loop Unit
Kenai
Alaska Pipeline Co.
61°30'
61°00'
152°00'
151°00'
150°00'
30'
15'
45'
R17W
R16W
R15W
R14W
R13W
R12W
R11W
R10W
R9W
R8W
R7W
R6W
R5W
R4W
R3W
T16N
T15N
T14N
T13N
T12N
T11N
T10N
T9N
T8N
T7N
T6N

NORTH SLOP

ALASKA DEPARTMENT OF NATURAL RE

JAMES E. EASON, DIRECTOR COMF

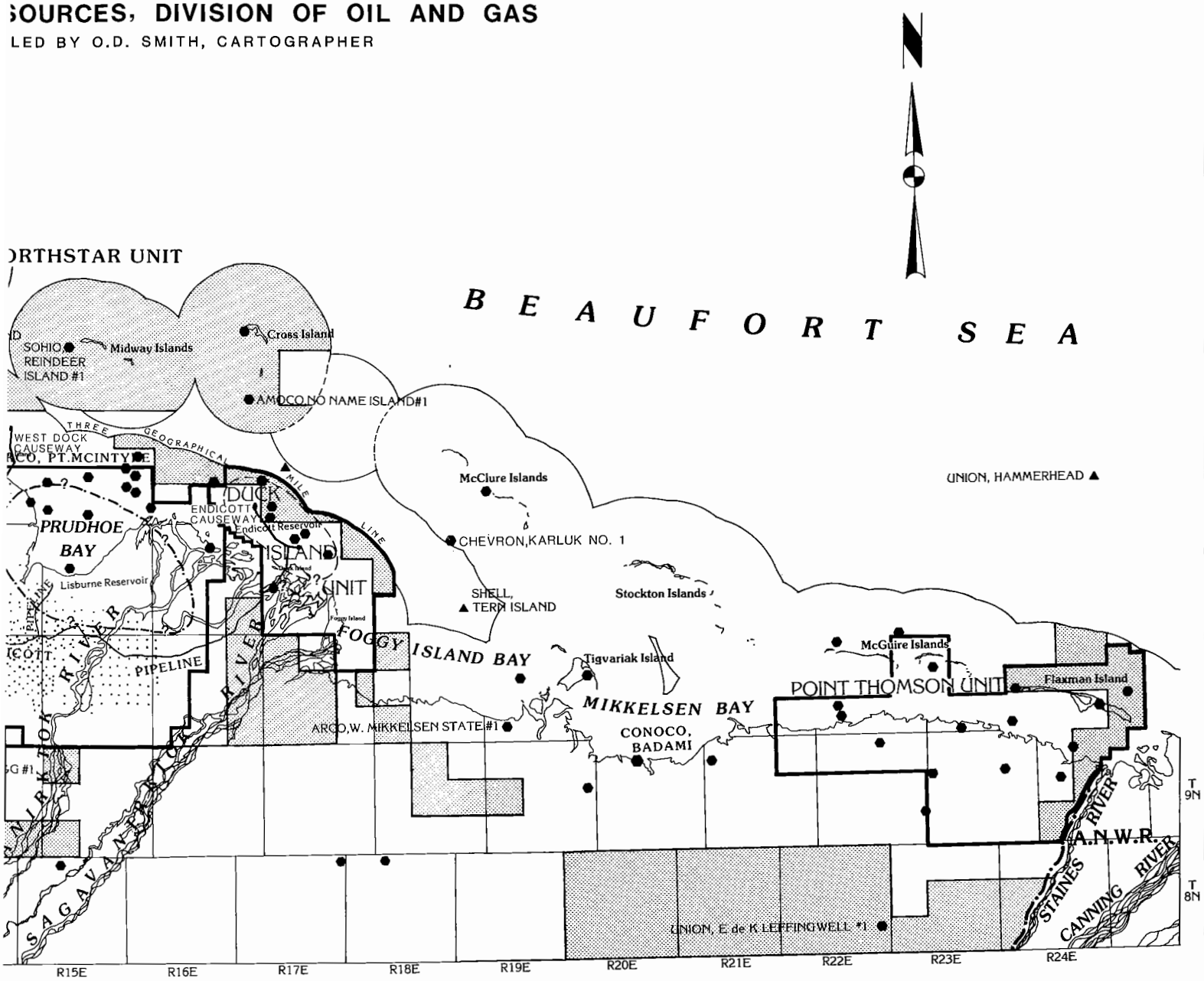


BASE MAP : Transposed From U.T.M. Projection By U.S.G.S.,

E UNIT MAP

SOURCES, DIVISION OF OIL AND GAS

LED BY O.D. SMITH, CARTOGRAPHER



IATION

Net Profit Share Leases	
Central Facilities Pad	CFP
Selected Federal Exploratory Wells	▲
Approximate limits of the Lisburne Reservoir	—·—?—·—·—·—?—·—·—
Oil and Gas Unit Boundaries	———

SCALE 1:500,000 One inch equals eight miles approx.

5 0 5 10 15 20 25 MILES

Original Scale 1:250,000, All Townships - Umiat Meridian.

APRIL 1991

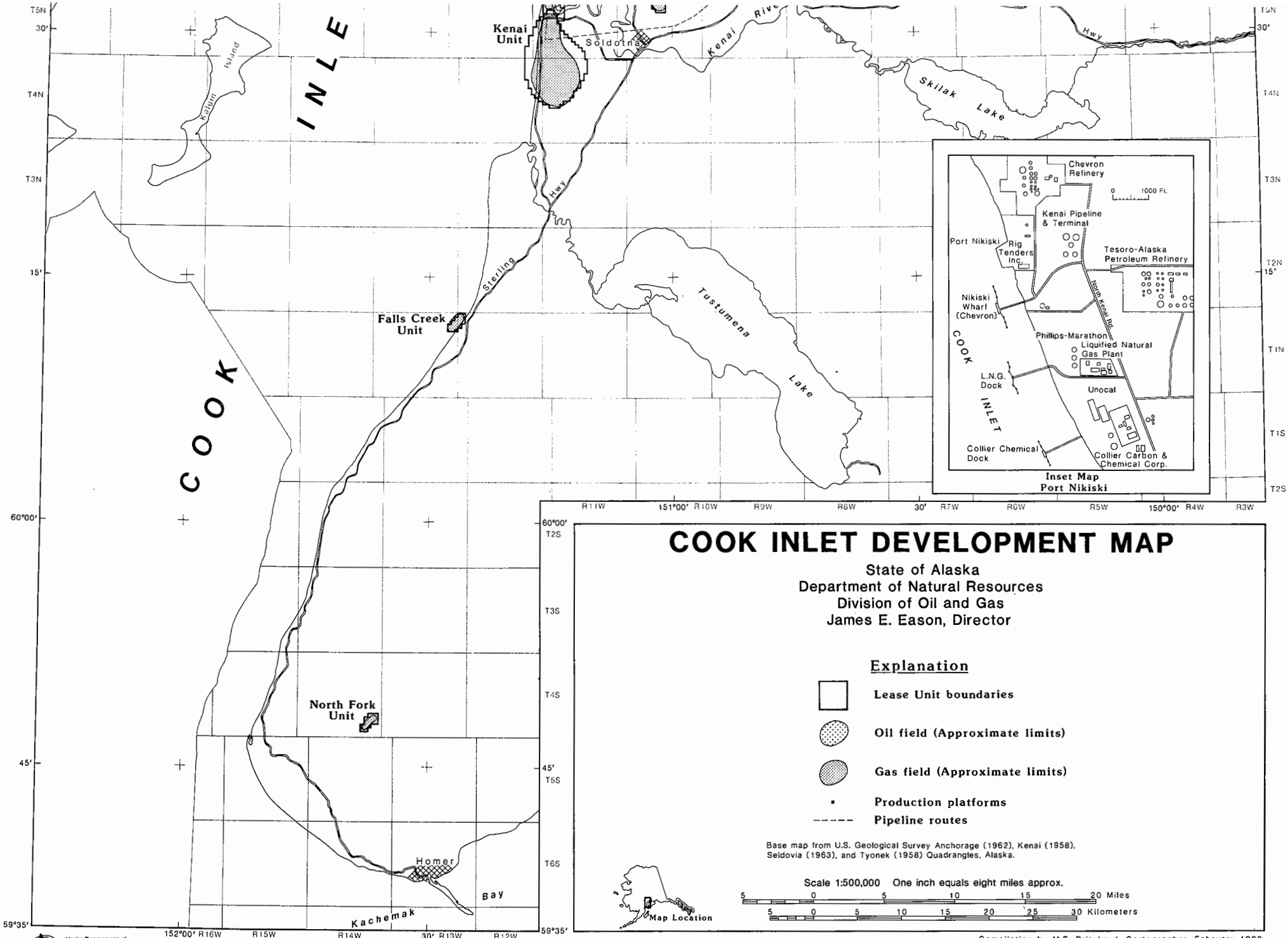

COOK INLET DEVELOPMENT MAP
State of Alaska
Department of Natural Resources
Division of Oil and Gas
James E. Eason, Director
Explanation
Lease Unit boundaries
Oil field (Approximate limits)
Gas field (Approximate limits)
Production platforms
Pipeline routes
Base map from U.S. Geological Survey Anchorage (1962), Kenai (1958), Seldovia (1963), and Tyonek (1958) Quadrangles, Alaska.
Scale 1:500,000 One inch equals eight miles approx.
Miles
Kilometers
Map Location
Kenai Unit
Soldotna
Kenai River
Skilak Lake
Tustumena Lake
Falls Creek Unit
North Fork Unit
Homer
Kachemak Bay
Kalgin Island
Sterling Hwy
COOK INLET
Chevron Refinery
Kenai Pipeline & Terminal
Port Nikiski
Rig Tenders Inc.
Tesoro-Alaska Petroleum Refinery
Nikiski Wharf (Chevron)
North Kenai Rd.
Phillips-Marathon Liquified Natural Gas Plant
L.N.G. Dock
Unocal
Collier Chemical Dock
Collier Carbon & Chemical Corp.
Inset Map Port Nikiski
Alaska Department of NATURAL RESOURCES
Compilation by M.E. Pritchard, Cartographer, February 1988.
Rev. March 1988. Rev. December 1988. Rev. December 1989
Rev. April 1991

TABLE 6

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
NORTH SLOPE										
Field Operations [1]	41.607	51.921	58.210	74.732	91.388	101.722	138.581	152.558	172.625	169.343
Vented and Flared	2.485	3.490	2.524	5.814	3.437	5.802	12.952	5.747	6.792	8.753
Used on Leases	29.642	37.864	44.837	53.884	70.683	71.338	109.127	132.245	136.576	137.981
Shrinkage	–	–	–	–	–	–	–	0.471	9.678	1.099
Other	9.480	10.567	10.849	15.034	17.268	24.582	16.502	14.095	19.579	21.510
Sold [1]	12.791	14.000	14.589	15.088	20.089	20.001	42.719	48.399	39.546	37.067
Power generation [2]	0.315	0.404	0.482	0.480	0.486	0.559	0.544	0.620	0.620	0.644
Gas Utilities [2]	0.435	0.539	0.407	0.508	0.453	0.486	0.493	0.519	0.484	0.495
TAPS [3]	11.106	11.952	13.277	12.856	14.381	15.166	16.624	17.855	16.147	14.543
NGL [4]	–	–	–	0.269	0.646	1.103	13.825	17.447	15.272	15.414
Other [5]	0.619	0.619	(0.079)	0.975	4.123	2.687	11.233	11.958	7.023	5.971
TOTAL	54.398	65.921	72.799	89.820	111.477	121.723	181.300	200.957	212.171	206.410
COOK INLET										
Field Operations [1]	20.559	20.957	19.380	22.468	18.637	18.408	18.529	19.951	19.353	15.570
Vented and Flared	3.175	3.494	2.560	3.260	2.893	3.095	2.746	3.230	2.940	2.214
Used on Leases	14.950	14.861	14.056	14.597	13.971	13.845	14.651	15.458	14.317	12.260
Shrinkage	2.434	2.602	2.726	2.657	1.773	1.468	1.130	1.263	2.096	1.064
Other	–	–	0.038	1.954	–	–	0.002	–	–	0.032
Sold [1]	178.082	185.913	192.578	192.752	199.311	174.563	177.660	177.471	185.767	194.877
Power generation [6]	33.632	35.818	36.169	36.520	40.851	44.208	40.698	42.100	44.936	53.402
Public	29.071	30.988	31.573	32.182	36.321	39.677	36.041	37.284	39.920	48.465
Military	4.561	4.830	4.596	4.338	4.530	4.531	4.657	4.816	5.016	4.937
Gas Utilities [6]	15.778	19.025	19.111	20.903	24.419	23.235	23.063	23.249	25.238	25.892
Residential	7.950	9.981	10.202	10.999	12.445	11.935	12.027	12.292	13.564	13.968
Commercial	7.828	9.044	8.909	9.904	11.974	11.300	11.036	10.957	11.674	11.924
LNG [7]	68.823	64.438	67.729	65.882	65.177	61.906	60.879	63.325	64.354	63.916
Amonia-Urea [8]	53.836	55.220	50.338	50.083	50.688	35.733	45.230	41.882	54.495	54.495
Rental Gas [9]	5.601	11.383	12.698	18.362	21.532	14.785	16.733	8.722	6.705	3.182
Other [5]	0.412	0.029	6.533	1.002	(3.356)	(5.304)	(8.943)	(1.807)	(12.105)	(21.114)
TOTAL	198.641	206.870	211.958	215.220	217.948	192.971	196.189	197.422	205.120	210.447
STATE										
Field Operations [1]	62.166	72.876	77.590	95.249	110.025	120.130	157.110	172.509	191.978	184.913
Vented and Flared	5.660	6.983	5.084	9.075	6.330	8.897	15.698	8.977	9.732	10.787
Used on Leases	44.592	52.724	58.893	68.481	84.654	85.183	123.778	147.703	150.893	150.241
Shrinkage	2.434	2.602	2.726	2.657	1.773	1.468	1.130	1.734	11.774	2.163
Other	9.480	10.567	10.887	15.036	17.268	24.582	16.504	14.095	19.579	21.542
Sold [1]	190.873	199.914	207.167	207.840	219.400	194.653	220.379	225.870	225.313	231.944
Power generation [2][6]	33.947	36.222	36.651	37.000	41.337	44.767	41.242	42.720	45.556	54.046
Public	29.386	31.392	32.055	32.662	36.807	40.236	36.585	37.904	40.540	49.109
Military	4.561	4.830	4.596	4.338	4.530	4.531	4.657	4.816	5.016	4.937
Gas Utilities [2][6]	16.213	19.564	19.518	20.911	24.872	23.721	23.556	23.768	25.722	26.387
Residential	8.385	10.520	10.609	11.507	12.898	12.421	12.520	12.811	14.048	14.463
Commercial	7.828	9.044	8.909	9.404	11.974	11.300	11.036	10.957	11.674	11.924
TAPS [3]	11.106	11.952	13.277	12.856	14.381	15.166	16.624	17.855	16.147	14.543
NGL [4]	–	–	–	0.269	0.646	1.103	13.825	17.447	15.272	15.414
LNG [7]	68.823	64.438	67.729	65.892	65.177	61.906	60.879	63.325	64.354	63.916
Amonia-Urea [8]	53.836	55.220	50.338	50.083	50.688	35.733	45.230	41.882	54.495	54.495
Rental Gas [9]	5.601	11.383	12.698	18.362	21.532	14.785	16.733	8.722	6.705	3.182
Other [5]	1.031	0.649	6.454	1.798	0.767	(2.617)	2.290	10.151	(2.938)	(0.039)
TOTAL	253.039	272.790	284.757	303.089	329.425	314.783	377.489	398.379	417.291	416.857

[8] 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 Co Conservation Commission.
2) sales from McArthur River gas field in: Alaska Oil and Gas Conservation Commission, "Monthly Report of Gas Disposition."
1980–88: Royalty reports from producers to Division of Oil and Gas.
1989–90: Unocal Corp., personal communication.
[9] Royalty reports from Unocal to Division of Oil and Gas, item: Swanson River Rental Gas.
34;05/03/91

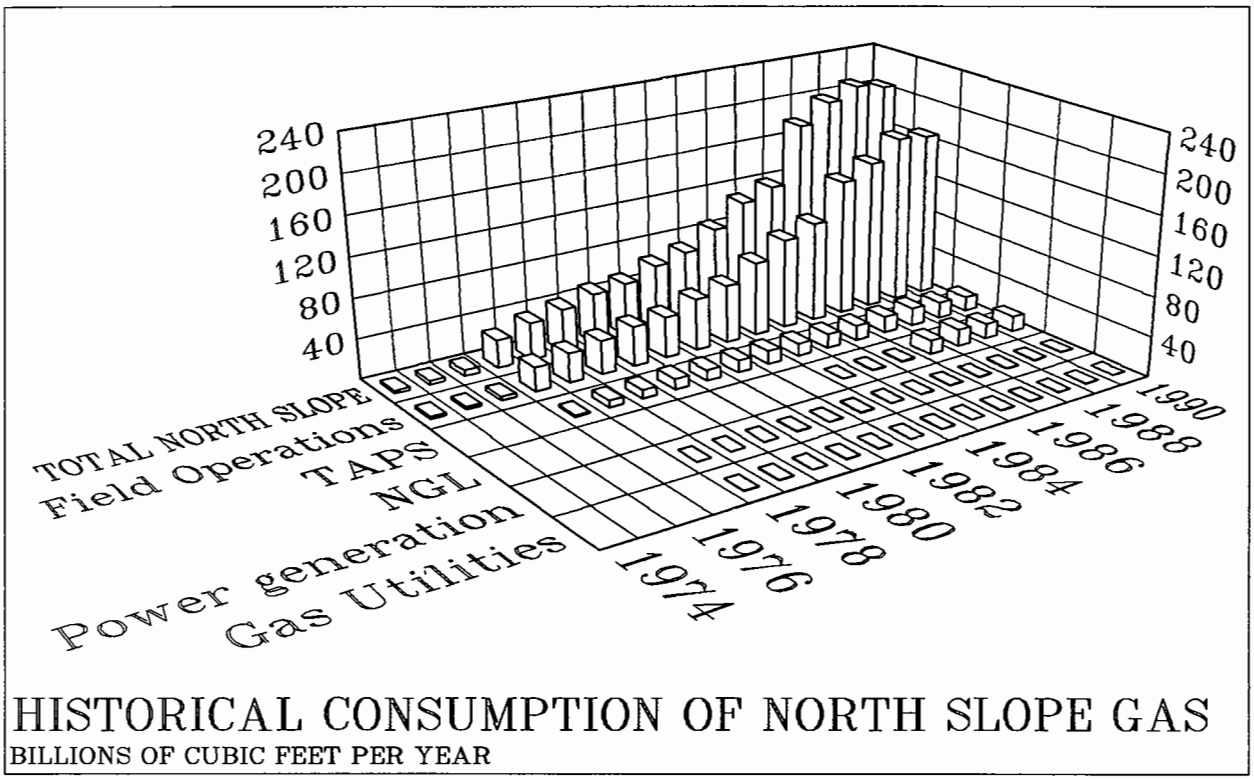


Figure 6A

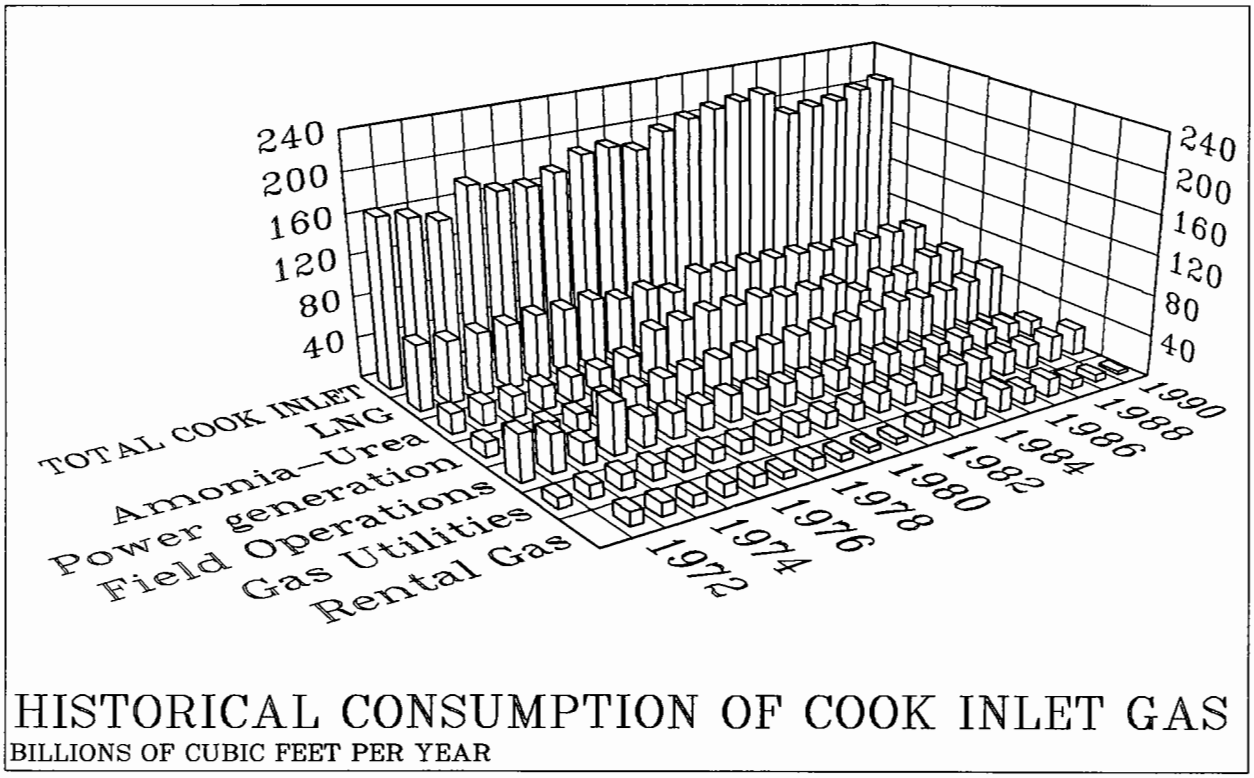


Figure 6B

SECTION 7
PROJECTED CONSUMPTION OF OIL AND NATURAL GAS

In the eleven years between 1991 and 2001 Alaska is forecast to consume 21 billion gallons of fuel and 4.6 trillion cubic feet of natural gas. Details of the projected consumption of oil and gas are tabulated in Tables 7.1 and 7. 2.

The base projections were compiled in December 1986 by the Institute of Social and Economic Research (ISER) and DO&G printed them, with accompanying assumptions and methodology, in the January 1987 edition of this report. ISER's projection covered the 15 year period from 1986 through 2001. In 1987, 1988, 1989, and 1990, however, actual fuel sales exceeded the projected consumption so in our report for each of those years we adjusted the projection upward to meet the actual sales. While this arithmetic adjustment of the projection is not technically appropriate, we are presenting it again along with the pertinent section of the origional projection. The figures for the eleven year period between 1991 and 2001 and the adjustment factors are shown in Tables 7.1 and 7.2.

PROJECTED DEMAND FOR OIL — TABLE 7.1

MILLIONS OF GALLONS PER YEAR

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
RAILBELT												
Vehicle Transportation	901	909	919	929	940	951	965	981	999	1,017	1,038	10,549
Jet Fuel	494	504	514	524	535	546	559	573	588	604	620	6,061
Civilian Domestic	270	278	286	295	303	312	323	334	346	359	373	3,479
Military and International	224	225	227	230	232	234	237	239	242	244	247	2,581
Gasoline	182	181	180	179	178	178	177	178	178	178	179	1,968
Aviation	15	15	15	15	15	15	15	15	15	15	15	165
Highway	162	160	160	159	158	157	157	157	157	157	158	1,742
Marine	6	6	6	6	6	6	6	6	6	6	6	66
Diesel	224	224	225	226	226	227	228	230	233	235	238	2,516
Highway	147	147	147	147	147	147	147	148	149	150	151	1,627
Marine	77	77	78	79	79	80	81	82	84	85	87	889
Space Heat	57	57	57	57	57	57	57	58	58	59	59	633
Utility Generation	10	10	10	10	10	10	10	10	10	10	10	110
Industry	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	967	975	985	996	1,006	1,018	1,032	1,049	1,067	1,086	1,107	11,288
NON-RAILBELT												
Vehicle Transportation	327	330	337	339	341	345	349	353	356	360	363	3,800
Jet Fuel	105	108	112	114	117	120	123	126	128	131	133	1,317
Civilian Domestic	60	62	65	67	69	71	74	76	78	81	83	786
Military and International	45	46	47	47	48	49	49	50	50	50	50	531
Gasoline	64	64	65	65	64	64	64	64	64	64	64	706
Aviation	3	3	3	3	3	3	3	3	3	3	3	33
Highway	57	57	58	57	57	57	57	57	57	56	56	626
Marine	4	4	4	4	4	4	4	4	4	4	4	44
Diesel	158	158	160	160	160	161	162	163	164	165	166	1,777
Highway	124	124	125	125	125	126	126	127	127	128	128	1,385
Marine	33	34	34	35	35	36	36	37	37	37	38	392
Space Heat	102	103	104	105	105	105	106	106	106	107	107	1,156
Utility Generation	30	31	32	33	34	35	36	37	38	38	39	383
Southeast	9	10	11	11	12	12	13	13	14	14	15	134
Rest of State	21	21	22	22	22	23	23	24	24	24	25	251
Industry	105	105	105	105	105	105	105	105	105	105	105	1,155
TOTAL	564	569	578	582	585	590	596	601	605	610	614	6,494
STATE												
Vehicle Transportation	1,227	1,239	1,255	1,269	1,281	1,296	1,313	1,334	1,354	1,377	1,400	14,345
Jet Fuel	599	611	626	639	652	666	682	699	716	734	753	7,377
Civilian Domestic	330	339	351	362	372	384	396	410	424	440	456	4,264
Military and International	269	272	274	277	280	283	286	288	291	294	297	3,111
Gasoline	247	245	245	244	243	242	241	242	242	242	243	2,676
Aviation	18	18	18	18	18	18	18	18	19	19	19	201
Highway	219	218	217	216	215	214	214	214	214	214	214	2,369
Marine	9	9	9	9	9	9	9	10	10	10	10	103
Diesel	382	382	385	386	386	388	390	393	396	400	404	4,292
Highway	272	271	272	272	272	272	273	274	276	277	279	3,010
Marine	110	111	112	113	114	116	117	119	121	123	125	1,281
Space Heat	159	159	161	161	162	162	163	164	164	165	166	1,786
Utility Generation	40	41	42	43	44	45	46	47	48	49	50	495
Industry	105	105	105	105	105	105	105	105	105	105	105	1,155
Pipeline Fuel	84	84	84	84	84	84	84	84	84	84	84	924
Electricity Generation	21	21	21	21	21	21	21	21	21	21	21	231
TOTAL [1]	1,531	1,544	1,564	1,578	1,591	1,608	1,627	1,650	1,671	1,696	1,720	17,780
ADJUSTED TOTAL [2]	1,862	1,875	1,895	1,909	1,922	1,939	1,958	1,981	2,002	2,027	2,051	21,421

[1] Projected demand calculated 12/86.
[2] Projected demand plus 331 million gallons to adjust projection to 1990 Adjusted Total in Table 5.
7;05/28/91

PROJECTED DEMAND FOR GAS

TABLE 7.2

BILLIONS OF CUBIC FEET PER YEAR

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	TOTAL
RAILBELT												
Space Heat	26	26	26	26	26	26	27	27	27	27	27	291
Utility Generation	40	35	35	36	36	36	37	37	38	39	39	408
Industry	87	87	87	87	87	87	87	87	87	87	87	957
Ammonia-Urea Production	50	50	50	50	50	50	50	50	50	50	50	550
Military Power Generation	4	4	4	4	4	4	4	4	4	4	4	44
Petroleum Production	32	32	32	32	32	32	32	32	32	32	32	352
TOTAL [1]	152	148	149	149	149	150	150	151	152	153	153	1,656
ADJUSTED TOTAL [2]	210	206	207	207	207	208	208	209	210	211	211	2,294
NON-RAILBELT												
Space Heat	0	0	0	0	1	1	1	1	1	1	1	5
Utility Generation	1	1	1	1	1	1	1	1	1	1	1	6
Industry: Petroleum Production	110	115	115	115	115	115	115	115	115	115	115	1,260
TOTAL [1]	111	116	116	116	116	116	116	116	116	116	116	1,271
ADJUSTED TOTAL [3]	206	211	211	211	211	211	211	211	211	211	211	2,316
STATE												
Space Heat	26	27	27	27	27	27	27	27	27	27	27	296
Utility Generation	40	36	36	36	37	37	37	38	39	39	40	415
Industry	197	202	202	202	202	202	202	202	202	202	202	2,217
Ammonia-Urea Production	50	50	50	50	50	50	50	50	50	50	50	550
Military Power Generation	4	4	4	4	4	4	4	4	4	4	4	44
Petroleum Production	143	148	148	148	148	148	148	148	148	148	148	1,623
TOTAL [1]	264	264	265	265	266	266	267	267	268	269	270	2,931
ADJUSTED TOTAL [4]	417	417	418	418	419	419	420	420	421	422	423	4,614

[1] Projected demand calculated 12/86.
[2] Projected demand plus 58 billion cubic feet to adjust projection to 1990 Cook Inlet/Total in Table 6.
[3] Projected demand plus 95 billion cubic feet to adjust projection to 1990 North Slope/Total in Table 6.
[4] Projected demand plus 153 billion cubic feet to adjust projection to 1990 State/Total in Table 6.
72;05/28/91

APPENDIX A
FIELD DATA

ALBERT KALOA (Gas)
Location Cook Inlet, west side; onshore
Operator CIRI
Production suspended
State of Alaska has no leases in this field

BEAVER CREEK (Oil and Gas)
Location Cook Inlet, east side; onshore
Operator Marathon
Production began 1973
State of Alaska has no leases in this field

BELUGA RIVER (Gas)
Location Cook Inlet, west side; onshore
Operator Arco
Production began 1968

BIRCH HILL (Gas)
Location Cook Inlet, east side; onshore
Operator Arco
Production shut in 1965
State of Alaska has no leases in this field

CANNERY LOOP (Gas)
Location Cook Inlet, east side; onshore
Operator Unocal
Production began 1988

EAST BARROW (Gas)
Location North Slope; onshore
Operator North Slope Borough
Production began 1981
State of Alaska has no leases in this field.

EAST UMIAT (Gas)
Location North Slope, onshore
Operator UMC Petroleum
Production shut in, no production

ENDICOTT (Oil and Gas)
Location North Slope; offshore
Operator BP
Production began 1987

FALLS CREEK (Gas)
Location Cook Inlet, east side; onshore
Operator Arco
Production shut-in 1961

GRANITE POINT (Oil and Gas)
Location Cook Inlet, west side; offshore
Operator Unocal
Production began 1967

GWYDYR BAY (Oil)
Location North Slope; onshore and offshore
Operator Arco
Production field delineation underway

HEMI SPRINGS (Oil)
Location North Slope; onshore
Operator Arco
Production field delineation underway

KATALLA (Oil)
Location Gulf of Alaska
Production abandoned 1933

KAVIK (Gas)
Location North Slope; onshore
Operator Arco
Production suspended

KEMIK (Gas)
Location North Slope; onshore
Operator BP
Production shut in 1972

KENAI (Gas)
Location Cook Inlet, east side; onshore
Operator Unocal
Production began 1961

KUPARUK (Oil and Gas)
Location North Slope; onshore
Operator Arco
Production began 1981

LEWIS RIVER (Gas)
Location Cook Inlet, west side; onshore
Operator Unocal
Production began 1984

LISBURNE (Oil and Gas)
Location North Slope; onshore
Operator Arco
Production began 1986

MCARTHUR RIVER (Oil and Gas)
Location Cook Inlet, west side; offshore
Operator Unocal
Production began 1967
Platforms Grayling, King Salmon, Dolly Varden, Steelhead

MIDDLE GROUND SHOAL (Oil and Gas)
Location Cook Inlet, east side; offshore
Operator A and C platfprms: Shell
Baker and Dillon platforms: Unocal
Production began 1967
Platforms A, Baker, C, Dillon,

MILNE POINT (Oil)
Location North Slope; onshore
Operator Conoco
Production began 1985, suspended 1/88 - 2/89

MOQUAWKIE (Gas)
Location Cook Inlet, west side; onshore
Operator CIRI
Production shut in 1979

NICOLAI CREEK (Gas)
Location Cook Inlet, west side; onshore and offshore
Operator Unocal
Production began 1968, now shut-in

NORTH COOK INLET (Gas)
Location Cook Inlet, mid channel; offshore
Operator Phillips
Production began 1970
Platform Phillips A

NORTH FORK (Gas)
Location Cook Inlet, east side; onshore
Operator Unocal
Production shut-in 1965

NORTH MIDDLE GROUND SHOAL (Gas)
Location Cook Inlet; offshore
Operator Shell and Unocal, one well each
Production abandoned

POINT THOMSON AND FLAXMAN ISLAND (Oil and Gas)
Location North Slope; onshore and offshore
Operator Exxon
Production shut-in

PRETTY CREEK (Gas)
Location Cook Inlet, west side; onshore
Operator Unocal
Production began 1986

PRUDHOE BAY (Oil and Gas)
Location North Slope; onshore
Operator Western Operating Area: BP
Eastern Operating Area: Arco
Production began 1977

REDOUBT SHOAL (Oil)
Location Cook Inlet, west side; offshore
Operator unleased
Production shut in 1968

SCHRADER BLUFF (Oil)
Location North Slope; onshore
Operator Conoco
Production began 1991

SIMPSON LAGOON (Oil)
Location North Slope near Barrow; onshore
Operator US Navy
Production shut in

SOUTH BARROW (Gas)
Location North Slope; onshore
Operator North Slope Borough
Production began 1950
State of Alaska has no leases in this field.

A;05/10/91

STERLING (Gas)
Location Cook Inlet, east side; onshore
Operator Unocal
Production began 1962, shut in 1986
State of Alaska has no leases in this field.

STUMP LAKE (Gas)
Location Cook Inlet, west side; onshore
Operator Unocal
Production began 1990

SWANSON RIVER (Oil and Gas)
Location Cook Inlet, east side; onshore
Operator Arco
Production began 1958
State of Alaska has no leases in this field

TRADING BAY (Oil and Gas)
Location Cook Inlet, west side; offshore
Operator Marathon: Spur and Spark, Unocal:
Production began 1967
Platforms A, Monopod, Spark

UGNU (Oil)
Location North Slope, onshore
Operator Standard
Production abandoned

UMIAT (Oil)
Location North Slope, onshore
Operator US Dpt. of Interior
Production shut in

WEST FORELANDS (Gas)
Location Cook Inlet, west side; onshore and offs
Operator Phillips
Production shut in 1962

WEST FORK (Gas)
Location Cook Inlet, east side; onshore
Operator CIRI
Production began 1978, shut in 1985
State of Alaska has no leases in this field

WEST SAK (Oil)
Location North Slope; onshore
Operator Arco
Production Pilot study, 1984 – 1986

APPENDIX B
LEASE DATA

This table lists only state oil and gas leases that were actually producing hydrocarbons as of March 15, 1991.

LEASE TRACT	PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
BELUGA									
17592	100.0000000	8.0024000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
17599	0.0000000	5.0210000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
17658	0.0000000	12.7251000	0.00000	L PART.	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
21126	0.0000000	0.7855000	0.00000	MARATHON	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
21127	0.0000000	9.4019000	0.00000	CHEVRON	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
21128	0.0000000	14.5560000	0.00000	PHILLIPS	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
21129	0.0000000	0.5803000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
58815 8	0.0000000	0.0162000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
58820 9	0.0000000	1.5889000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
58831 0	0.0000000	7.7629000	0.00000	ARCO	33.3333333	CHEVRON	33.3333333	SHELL	33.3333334
CANNERY LOOP									
BELUGA									
002397 A	0.0000000	5.4332000	0.00000	CIRI	6.2500000	MARATHON	50.0000000	UNION	43.7500000
324602 A	0.0000000	17.0829500	0.00000	CIRI	9.3750000	MARATHON	25.0000000	UNION	65.6250000
324604 B	0.0000000	0.1541300	0.00000	CALL	100.0000000				
359153	0.0000000	6.6635800	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
364395 C	0.0000000	1.9844900	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
365454	0.0000000	0.4591900	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
TYONEK DEEP									
002397 A	0.0000000	5.4125000	0.00000	CIRI	6.2500000	MARATHON	50.0000000	UNION	43.7500000
324602 A	0.0000000	29.2068900	0.00000	CIRI	9.3750000	MARATHON	25.0000000	UNION	65.6250000
359153 7	0.0000000	13.5137500	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
UPPER TYONEK									
002397 A	0.0000000	7.3449200	0.00000	CIRI	6.2500000	MARATHON	50.0000000	UNION	43.7500000
324602 A	0.0000000	29.8726200	0.00000	CIRI	9.3750000	MARATHON	25.0000000	UNION	65.6250000
359153 7	0.0000000	13.5705700	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
365454 2	0.0000000	1.3091500	0.00000	CIRI	33.3330000	MARATHON	33.3330000	UNION	33.3340000
ENDICOTT									
312828 5 [1]	25.8252000	25.8252000	20.00000	BP	95.5000000	CIRI	2.5000000	DOYON	0.5000000
				NANA	1.5000000				
312834 6 [2]	0.0703000	0.0703000	20.00000	ARCO	33.3400000	EXXON	33.3300000	UNION	33.3300000
34633 3	26.7609000	26.7609000	12.50000	BP	100.0000000				
34634 2	0.0675000	0.0675000	12.50000	BP	100.0000000				
34636 4	5.2911000	5.2911000	12.50000	BP	100.0000000				
47502 1	22.3357000	22.3357000	12.50000	AMOCO	25.0000000	EXXON	50.0000000	UNION	25.0000000
47503 2	19.6233000	19.6233000	12.50000	AMOCO	25.0000000	EXXON	50.0000000	UNION	25.0000000
47504 3	0.0036000	0.0036000	12.50000	EXXON	100.0000000				
47505 4	0.0140000	0.0140000	12.50000	EXXON	100.0000000				
47506 5	0.0084000	0.0084000	12.50000	AMOCO	50.0000000	UNION	50.0000000		
GRANITE POINT									
GRANITE POINT 1									
18761	100.0000000	100.0000000	12.50000	MOBIL	75.0000000	UNION	25.0000000		
GRANITE POINT 2									
17586	100.0000000	100.0000000	12.50000	AMOCO	62.5000000	CHEVRON	12.5000000	TEXACO	25.0000000
17587	100.0000000	100.0000000	12.50000	AMOCO	62.5000000	CHEVRON	12.5000000	TEXACO	25.0000000
18742	100.0000000	100.0000000	12.50000	AMOCO	62.5000000	CHEVRON	12.5000000	TEXACO	25.0000000
GRANITE POINT 2 GAS FIELD									
17586	0.0000000	2.1040000	0.00000	AMOCO	25.0000000	ARCO	12.5000000	CHEVRON	12.5000000
				GETTY	25.0000000	PHILLIPS	25.0000000		
17587	0.0000000	1.2430000	0.00000	AMOCO	25.0000000	ARCO	12.5000000	CHEVRON	12.5000000
				GETTY	25.0000000	PHILLIPS	25.0000000		
18742	0.0000000	96.6530000	0.00000	AMOCO	25.0000000	ARCO	12.5000000	CHEVRON	12.5000000
				GETTY	25.0000000	PHILLIPS	25.0000000		

LEASE TRACT		PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
IVAN RIVER										
17600	1	0.0000000	6.5064900	0.00000	ARCO	44.9690000	SHELL	4.0250000	UNION	51.0060000
302282	6	0.0000000	3.4922500	0.00000	ARCO	100.0000000				
302284	5	0.0000000	18.7468100	0.00000	UNION	100.0000000				
326058	7	0.0000000	10.4767400	0.00000	ARCO	26.8200500	UNION	73.1799500		
32930	2	0.0000000	25.8426100	0.00000	ARCO	29.3300000	UNION	70.6700000		
32930	A	0.0000000	7.9348200	0.00000	ARCO	29.3300000	UNION	70.6700000		
32930	B	0.0000000	13.1103200	0.00000	ARCO	29.3300000	UNION	70.6700000		
33637	3	0.0000000	8.4686900	0.00000	ARCO	12.5000000	UNION	87.5000000		
33727	4	0.0000000	5.4212700	0.00000	ARCO	50.0000000	UNION	50.0000000		
KENAI										
STERLING										
588	5	0.0000000	6.7607000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
593	6	0.0000000	7.4430000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
594	7	0.0000000	0.6717000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
2411	8	0.0000000	0.7608000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
308223	6	0.0000000	0.0083000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
324598	4	0.0000000	0.9065000	0.00000	MARATHON	50.0000000	UNION	50.0000000		
KUPARUK RIVER										
25512	2	1.6551400	1.6551400	12.50000	ARCO	50.0000000	BP	50.0000000		
25513	3	1.7152640	1.7152640	12.50000	ARCO	50.0000000	BP	50.0000000		
25519	4	1.3457100	1.3457100	12.50000	ARCO	50.0000000	BP	50.0000000		
25520	5	1.6672300	1.6672300	12.50000	ARCO	50.0000000	BP	50.0000000		
25521	6	1.5143720	1.5143720	12.50000	ARCO	50.0000000	BP	50.0000000		
25522	1	0.5234520	0.5234520	12.50000	ARCO	50.0000000	BP	50.0000000		
25523	7	1.4024420	1.4024420	12.50000	ARCO	50.0000000	BP	50.0000000		
25524	8	0.4135480	0.4135480	12.50000	ARCO	50.0000000	BP	50.0000000		
25531	1	1.2773760	1.2773760	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25547	4	1.3601070	1.3601070	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25548	9	0.8598570	0.8598570	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25568	5	0.4582890	0.4582890	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25569	4	1.4250720	1.4250720	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25570	0	2.1593850	2.1593850	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25571	9	0.9853950	0.9853950	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25585	9	0.1109790	0.1109790	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25586	8	1.0958670	1.0958670	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25587	7	1.4997570	1.4997570	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25588	6	1.3118010	1.3118010	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25589	5	0.9666180	0.9666180	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25590	4	0.3544680	0.3544680	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25603	0	0.0724380	0.0724380	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25604	9	0.3536130	0.3536130	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25605	8	0.3154080	0.3154080	12.50000	ARCO	33.3300000	BP	33.3400000	UNION	33.3300000
25627	6	0.1302260	0.1302260	12.50000	ARCO	50.0000000	BP	50.0000000		
25628	5	0.8958480	0.8958480	12.50000	ARCO	50.0000000	BP	50.0000000		
25629	4	1.7086340	1.7086340	12.50000	ARCO	50.0000000	BP	50.0000000		
25630	3	1.8849320	1.8849320	12.50000	ARCO	50.0000000	BP	50.0000000		
25631	2	1.4012720	1.4012720	12.50000	ARCO	50.0000000	BP	50.0000000		
25632	3	2.8707800	2.8707800	12.50000	ARCO	50.0000000	BP	50.0000000		
25633	2	2.3583440	2.3583440	12.50000	ARCO	50.0000000	BP	50.0000000		
25634	1	1.9633840	1.9633840	12.50000	ARCO	50.0000000	BP	50.0000000		
25635	0	1.7273580	1.7273580	12.50000	ARCO	50.0000000	BP	50.0000000		
25636	9	0.3740640	0.3740640	12.50000	ARCO	50.0000000	BP	50.0000000		
25637	8	0.0438520	0.0438520	12.50000	ARCO	50.0000000	BP	50.0000000		
25638	5	0.3165730	0.3165730	12.50000	ARCO	100.0000000				
25639	4	1.4173980	1.4173980	12.50000	ARCO	100.0000000				
25640	3	2.9779340	2.9779340	12.50000	ARCO	50.0000000	BP	50.0000000		
25641	2	3.5857240	3.5857240	12.50000	ARCO	50.0000000	BP	50.0000000		
25642	1	3.6870000	3.6870000	12.50000	ARCO	50.0000000	BP	50.0000000		
25643	0	2.4034580	2.4034580	12.50000	ARCO	50.0000000	BP	50.0000000		
25644	3	2.4954600	2.4954600	12.50000	ARCO	50.0000000	BP	50.0000000		
25645	2	3.9018940	3.9018940	12.50000	ARCO	50.0000000	BP	50.0000000		
25646	1	4.2658220	4.2658220	12.50000	ARCO	50.0000000	BP	50.0000000		
25647	0	3.5252980	3.5252980	12.50000	ARCO	100.0000000				

LEASE TRACT		PARTICIPATING AREA OIL %	GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
25648 9		1.8731170	1.8731170	12.50000	ARCO	100.0000000				
25649 8		1.2069380	1.2069380	12.50000	ARCO	100.0000000				
25650 6		1.4300340	1.4300340	12.50000	ARCO	100.0000000				
25651 5		3.0223280	3.0223280	12.50000	ARCO	100.0000000				
25652 4		2.6442780	2.6442780	12.50000	ARCO	50.0000000	BP	50.0000000		
25653 3		2.8414500	2.8414500	12.50000	ARCO	50.0000000	BP	50.0000000		
25654 2		2.2721880	2.2721880	12.50000	ARCO	50.0000000	BP	50.0000000		
25655 1		2.7833600	2.7833600	12.50000	ARCO	50.0000000	BP	50.0000000		
25656 6		1.8244560	1.8244560	12.50000	ARCO	50.0000000	BP	50.0000000		
25657 5		2.1913520	2.1913520	12.50000	ARCO	50.0000000	BP	50.0000000		
25658 4		1.8263800	1.8263800	12.50000	ARCO	50.0000000	BP	50.0000000		
25659 3		1.2902640	1.2902640	12.50000	ARCO	50.0000000	BP	50.0000000		
25660 2		1.0760830	1.0760830	12.50000	ARCO	100.0000000				
25661 1		0.6854630	0.6854630	12.50000	ARCO	100.0000000				
25664 0		0.0481210	0.0481210	12.50000	ARCO	100.0000000				
25665 9		0.1792340	0.1792340	12.50000	ARCO	50.0000000	BP	50.0000000		
25666 8		0.3953800	0.3953800	12.50000	ARCO	50.0000000	BP	50.0000000		
25667 7		1.1418280	1.1418280	12.50000	ARCO	50.0000000	BP	50.0000000		
25668 7		0.0049340	0.0049340	12.50000	ARCO	50.0000000	BP	50.0000000		
28242 7		0.4346000	0.4346000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28243 7		0.5124000	0.5124000	12.50000	ARCO	32.9672400	BP	17.0327600	MOBIL	50.0000000
355023 2	[3]	0.8266180	0.8266180	12.50000	ARCO	100.0000000				
355024 3	[3]	0.1087260	0.1087260	12.50000	ARCO	100.0000000				
355030 4	[3]	0.0021490	0.0021490	12.50000	ARCO	100.0000000				
355032 5	[3]	0.1329500	0.1329500	12.50000	ARCO	100.0000000				
355501 6		0.0039560	0.0039560	12.50000	ARCO	100.0000000				
47449 6		0.2172000	0.2172000	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
LEWIS RIVER										
PARTICIPATING AREA 1										
58798		0.0000000	16.6670000	0.00000	L PARTNER	100.0000000				
58801		0.0000000	61.1110000	0.00000	L PARTNER	100.0000000				
58802		0.0000000	22.2220000	0.00000	L PARTNER	100.0000000				
PARTICIPATING AREA 2										
58798		0.0000000	76.1905000	0.00000	L PARTNER	100.0000000				
58801		0.0000000	14.2857000	0.00000	L PARTNER	100.0000000				
58802		0.0000000	9.5238000	0.00000	L PARTNER	100.0000000				
LISBURNE										
28277 5		0.0170000	0.0000000	12.50000	BP	100.0000000				
28280 4		0.0380000	0.0000000	12.50000	BP	100.0000000				
28285 9		0.0300000	0.0000000	12.50000	BP	100.0000000				
28299 6		0.1870000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28300 7		1.7170000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28301 8		2.4440000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28302 1		5.4180000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28303 2		2.2490000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28304 3		0.5380000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28305 0		0.1450000	0.0000000	12.50000	BP	100.0000000				
28306 1		0.9190000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28307 2		3.5270000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28308 3		0.2460000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28309 4		0.0890000	0.0000000	12.50000	BP	100.0000000				
28320 8		6.7190000	0.0000000	12.50000	BP	100.0000000				
28321 3		8.5540000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28322 4		10.0680000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28323 5		11.0800000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28324 0		4.3250000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28325 1		3.7180000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28326 **		1.9750000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28327 3		0.0400000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28328 2		0.0260000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28329 1		0.0190000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28337 6		0.6590000	0.0000000	12.50000	BP	100.0000000				
28338 7		0.8960000	0.0000000	12.50000	BP	100.0000000				
28339 6		3.1550000	0.0000000	12.50000	BP	100.0000000				

LEASE TRACT	PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
28339 A	1.0830000	0.0000000	12.50000	BP	100.0000000				
28340 7	0.0300000	0.0000000	12.50000	BP	100.0000000				
28340 A	0.2000000	0.0000000	12.50000	BP	100.0000000				
28342 4	0.5690000	0.0000000	12.50000	BP	100.0000000				
28343 9	2.4130000	0.0000000	12.50000	BP	100.0000000				
28343 A	1.1160000	0.0000000	12.50000	BP	100.0000000				
28344 5	0.0250000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28345 4	0.1170000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34628 9	3.3300000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34629 0	3.5260000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34630 1	1.3770000	0.0000000	12.50000	BP	100.0000000				
34631 9	8.6100000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34632 0	7.3420000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34634 3	0.6490000	0.0000000	12.50000	BP	100.0000000				
34635 **	0.8150000	0.0000000	12.50000	BP	100.0000000				
MCARTHUR RIVER									
HEMLOCK									
17579	12.9480000	12.9480000	12.50000	ARCO	100.0000000				
17594	28.6480000	28.6480000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
17602	3.7000000	3.7000000	12.50000	ARCO	100.0000000				
18716	2.6730000	2.6730000	12.50000	ARCO	100.0000000				
18729	17.8330000	17.8330000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
18730	16.6480000	16.6480000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
18758	2.7750000	2.7750000	12.50000	ARCO	100.0000000				
18772	9.2490000	9.2490000	12.50000	ARCO	100.0000000				
18777	4.6010000	4.6010000	12.50000	ARCO	100.0000000				
21068	0.9250000	0.9250000	12.50000	ARCO	100.0000000				
MIDDLE KENAI									
17594	26.6700000	26.6700000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18729	34.8100000	34.8100000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18730	32.5900000	32.5900000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18772	5.9300000	5.9300000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
STEELHEAD									
17594 3	0.0000000	38.5542200	0.00000	MARATHON	50.0000000	UNION	50.0000000		
18729 0	0.0000000	27.7108400	0.00000	MARATHON	50.0000000	UNION	50.0000000		
18730 1	0.0000000	33.7349400	0.00000	MARATHON	50.0000000	UNION	50.0000000		
WEST FORELAND									
17594	30.2500000	30.2500000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18729	29.4100000	29.4100000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18730	33.6200000	33.6200000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
18772	6.7200000	6.7200000	12.50000	MARATHON	51.0000000	UNION	49.0000000		
MIDDLE GROUND SHOAL									
17595	100.0000000	100.0000000	12.50000	AMOCO	62.5000000	CHEVRON	12.5000000	TEXACO	25.0000000
18754	100.0000000	100.0000000	12.50000	SHELL	100.0000000				
18756	100.0000000	100.0000000	12.50000	SHELL	100.0000000				
MILNE POINT									
25509 0	8.8209200	0.0000000	12.50000	CHEVRON	100.0000000				
25516 4	2.7859000	0.0000000	12.50000	CHEVRON	100.0000000				
25518 9	4.2759500	0.0000000	12.50000	CHEVRON	100.0000000				
28231 8	4.2328300	0.0000000	12.50000	CONOCO	100.0000000				
315848 A	1.4907500	0.0000000	12.50000	CHEVRON	100.0000000				
47433 2	8.3527700	0.0000000	20.00000	CONOCO	86.0000000				
47434 3	28.4553300	0.0000000	20.00000	CONOCO	87.7500000	OXY	12.2500000		
47437 5	32.7923500	0.0000000	20.00000	CONOCO	86.0000000	OXY	14.0000000		
47438 6	8.7932000	0.0000000	20.00000	CONOCO	86.0000000	OXY	14.0000000		
NORTH TRADING BAY									
SPARK									
18776	28.5700000	28.5700000	12.50000	MARATHON	100.0000000				
35431	21.4300000	21.4300000	12.50000	MARATHON	100.0000000				
STATE 1									
17597	50.0000000	50.0000000	12.50000	MARATHON	50.0000000	UNION	50.0000000		

LEASE TRACT	PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
NORTH COOK INLET									
17589 2	0.0000000	44.7324000	0.00000	PHILLIPS	100.0000000				
17590 3	0.0000000	6.5430000	0.00000	PHILLIPS	100.0000000				
18740 7	0.0000000	8.1787000	0.00000	PHILLIPS	100.0000000				
18741 8	0.0000000	6.5429000	0.00000	PHILLIPS	100.0000000				
37831 1	0.0000000	34.0030000	0.00000	PHILLIPS	100.0000000				
PRETTY CREEK									
58810 2	0.0000000	23.8984800	0.00000	TEXACO	11.0000000	UNION	89.0000000		
58813 4	0.0000000	20.8695700	0.00000	TEXACO	11.0000000	UNION	89.0000000		
58814 5	0.0000000	10.4347800	0.00000	TEXACO	11.0000000	UNION	89.0000000		
63047 0	0.0000000	6.0869600	0.00000	TEXACO	11.0000000	UNION	89.0000000		
63048 1	0.0000000	27.8260800	0.00000	TEXACO	11.0000000	UNION	89.0000000		
63049 2	0.0000000	10.4347800	0.00000	TEXACO	11.0000000	UNION	89.0000000		
PRUDHOE BAY									
OIL RIM									
25637 6	0.0046309	0.0046309	12.50000	ARCO	50.0000000	BP	50.0000000		
28238 9	0.0163822	0.0163822	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28239 8	0.0614364	0.0614364	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28240 0	0.0913318	0.0913318	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28241 1	0.0486990	0.0486990	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28244 2	0.0000124	0.0000124	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28245 3	0.1486696	0.1486696	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28246 2	0.0007026	0.0007026	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28257 2	1.7767068	1.7767068	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28258 1	0.4599204	0.4599204	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28259 0	0.0076616	0.0076616	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28260 7	1.4815529	1.4815529	12.50000	BP	100.0000000				
28261 8	0.0888936	0.0888936	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28262 4	0.2968897	0.2968897	12.50000	CHEVRON	100.0000000				
28262 A	0.0772452	0.0772452	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28263 5	0.1338160	0.1338160	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28263 A	0.2071833	0.2071833	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28264 9	0.1174944	0.1174944	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28265 4	0.0364292	0.0364292	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28275 2	0.0133022	0.0133022	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28276 3	0.0000864	0.0000864	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28277 5	0.8421396	0.8421396	12.50000	BP	100.0000000				
28278 4	1.0400165	1.0400165	12.50000	BP	100.0000000				
28279 3	1.2989359	1.2989359	12.50000	BP	100.0000000				
28280 4	3.8981682	3.8981682	12.50000	BP	100.0000000				
28281 5	3.3705436	3.3705436	12.50000	BP	100.0000000				
28282 6	3.0429668	3.0429668	12.50000	BP	100.0000000				
28283 7	1.5634829	1.5634829	12.50000	BP	100.0000000				
28284 8	3.3026290	3.3026290	12.50000	BP	100.0000000				
28285 9	3.9964449	3.9964449	12.50000	BP	100.0000000				
28286 6	2.6691922	2.6691922	12.50000	BP	100.0000000				
28287 7	1.2578240	1.2578240	12.50000	BP	100.0000000				
28288 8	0.3601455	0.3601455	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28289 5	0.1312435	0.1312435	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28290 5	0.0024590	0.0024590	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28299 6	0.9307902	0.9307902	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28300 7	1.0365258	1.0365258	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28302 1	0.3106250	0.3106250	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28303 2	1.9447402	1.9447402	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28304 3	3.2449752	3.2449752	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28305 0	3.6765194	3.6765194	12.50000	BP	100.0000000				
28306 1	2.9343182	2.9343182	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28307 2	1.8596860	1.8596860	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28308 3	3.9394274	3.9394274	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28309 4	3.8650657	3.8650657	12.50000	BP	100.0000000				
28310 5	3.9334322	3.9334322	12.50000	BP	100.0000000				
28311 0	3.6619111	3.6619111	12.50000	BP	100.0000000				
28312 9	2.8963363	2.8963363	12.50000	BP	100.0000000				
28313 B	1.5538656	1.5538656	12.50000	ARCO	50.0000000	EXXON	50.0000000		

LEASE TRACT	PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
28314 2	0.4588814	0.4588814	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28315 1	1.2192336	1.2192336	12.50000	BP	100.0000000				
28316 A	0.0565330	0.0565330	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28316 7	0.0088125	0.0088125	12.50000	CHEVRON	100.0000000				
28320 8	0.3566616	0.3566616	12.50000	BP	100.0000000				
28321 3	1.1125780	1.1125780	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28322 4	1.0995790	1.0995790	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28323 5	0.7714806	0.7714806	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28324 0	2.0837850	2.0837850	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28325 1	2.7773702	2.7773702	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28326 2	3.1133992	3.1133992	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28327 3	2.7730980	2.7730980	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28328 2	4.0900128	4.0900128	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28329 1	4.1555298	4.1555298	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28330 0	1.4812197	1.4812197	12.50000	BP	100.0000000				
28331 9	1.5486835	1.5486835	12.50000	BP	100.0000000				
28332 8	1.6240684	1.6240684	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28333 0	0.0691187	0.0691187	12.50000	BP	100.0000000				
28334 A	0.1303563	0.1303563	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28334 9	0.0179622	0.0179622	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28335 8	0.0667905	0.0667905	12.50000	BP	100.0000000				
28339 6	0.0001956	0.0001956	12.50000	BP	100.0000000				
28343 9	0.1342393	0.1342393	12.50000	BP	100.0000000				
28345 4	0.5812244	0.5812244	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28346 7	0.2982834	0.2982834	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28349 1	0.0092138	0.0092138	12.50000	BP	100.0000000				
34631 9	0.2490770	0.2490770	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34632 0	0.1146214	0.1146214	12.50000	ARCO	50.0000000	EXXON	50.0000000		
47446 5	0.0099777	0.0099777	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47447 4	0.0049708	0.0049708	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47448 0	0.0010848	0.0010848	12.50000	MOBIL	66.6666667	PHILLIPS	33.3333333		
47449 7	0.0064355	0.0064355	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47450 9	0.0468606	0.0468606	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47451 6	0.1902328	0.1902328	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47452 0	0.2232645	0.2232645	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47453 1	0.1144260	0.1144260	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47454 3	0.0200389	0.0200389	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47469 9	0.0307565	0.0307565	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
47471 6	0.3000685	0.3000685	12.50000	AMERADA	27.0000000	L L & E	13.2500000	SHELL	29.2500000
				TEXACO	30.5000000				
47472 7	0.8139925	0.8139925	12.50000	AMERADA	50.0000000	TEXACO	50.0000000		
47475 3	0.1996175	0.1996175	12.50000	AMERADA	25.0000000	MARATHON	25.0000000	SHELL	25.0000000
				TEXACO	25.0000000				
47476 4	0.0028061	0.0028061	12.50000	ARCO	50.0000000	EXXON	50.0000000		
80595 6	0.0000019	0.0000019	12.50000	ARCO	50.0000000	EXXON	50.0000000		
GAS CAP									
25637 6	0.0003024	0.0003024	12.50000	ARCO	50.0000000	BP	50.0000000		
28238 9	0.0061712	0.0061712	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28239 8	0.0913424	0.0913424	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28240 0	0.0496376	0.0496376	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28241 1	0.0399457	0.0399457	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28244 2	0.0000110	0.0000110	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28245 3	0.1805920	0.1805920	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28246 2	0.0003490	0.0003490	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28257 2	0.1101259	0.1101259	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28258 1	0.0000012	0.0000012	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28259 0	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28260 7	0.0777251	0.0777251	12.50000	BP	100.0000000				
28261 8	0.0005248	0.0005248	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28262 4	0.2995913	0.2995913	12.50000	CHEVRON	100.0000000				
28262 A	0.1111367	0.1111367	12.50000	CHEVRON	33.3333334	MOBIL	33.3333333	PHILLIPS	33.3333333
28263 5	0.0511793	0.0511793	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28263 A	0.1539450	0.1539450	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28264 9	0.0120620	0.0120620	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28265 4	0.0003882	0.0003882	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28275 2	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28276 3	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		

LEASE TRACT		PARTICIPATING AREA OIL %	GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
28277	5	0.1111558	0.1111558	12.50000	BP	100.0000000				
28278	4	0.0331538	0.0331538	12.50000	BP	100.0000000				
28279	3	0.0190207	0.0190207	12.50000	BP	100.0000000				
28280	4	1.7631780	1.7631780	12.50000	BP	100.0000000				
28281	5	1.1061331	1.1061331	12.50000	BP	100.0000000				
28282	6	0.4341463	0.4341463	12.50000	BP	100.0000000				
28283	7	0.1013091	0.1013091	12.50000	BP	100.0000000				
28284	8	0.6687738	0.6687738	12.50000	BP	100.0000000				
28285	9	1.8633126	1.8633126	12.50000	BP	100.0000000				
28286	6	0.2432039	0.2432039	12.50000	BP	100.0000000				
28287	7	0.0132529	0.0132529	12.50000	BP	100.0000000				
28288	8	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28289	5	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28290	5	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28299	6	0.0668830	0.0668830	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28300	7	2.7462020	2.7462020	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28301	8	5.4070880	5.4070880	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28302	1	8.5730840	8.5730840	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28303	2	6.1308134	6.1308134	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28304	3	2.9898184	2.9898184	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28305	0	3.1854789	3.1854789	12.50000	BP	100.0000000				
28306	1	5.4649446	5.4649446	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28307	2	7.4776622	7.4776622	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28308	3	4.1071874	4.1071874	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28309	4	2.2068838	2.2068838	12.50000	BP	100.0000000				
28310	5	1.1675071	1.1675071	12.50000	BP	100.0000000				
28311	0	0.3709048	0.3709048	12.50000	BP	100.0000000				
28312	9	0.1007911	0.1007911	12.50000	BP	100.0000000				
28313	8	0.0066790	0.0066790	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28314	2	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28315	1	0.0000000	0.0000000	12.50000	BP	100.0000000				
28316	A	0.0000000	0.0000000	12.50000	CHEVRON	33.3333334	MOBIL	33.3333333	PHILLIPS	33.3333333
28316	7	0.0000000	0.0000000	12.50000	CHEVRON	100.0000000				
28320	8	0.3216998	0.3216998	12.50000	BP	100.0000000				
28321	3	7.2610510	7.2610510	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28322	4	4.2486128	4.2486128	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28323	5	0.4529448	0.4529448	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28324	0	0.3609044	0.3609044	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28325	1	3.3036918	3.3036918	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28326	2	5.0566434	5.0566434	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28327	3	0.0132526	0.0132526	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28328	2	0.7489948	0.7489948	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28329	1	0.7143628	0.7143628	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28330	0	0.0000000	0.0000000	12.50000	BP	100.0000000				
28331	9	0.0000000	0.0000000	12.50000	BP	100.0000000				
28332	8	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28333	0	0.0000000	0.0000000	12.50000	BP	100.0000000				
28334	A	0.0000000	0.0000000	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
28334	9	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
28335	8	0.0000000	0.0000000	12.50000	BP	100.0000000				
28339	6	0.0000000	0.0000000	12.50000	BP	100.0000000				
28343	9	0.0000000	0.0000000	12.50000	BP	100.0000000				
28345	4	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28346	7	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
28349	1	0.0000000	0.0000000	12.50000	BP	100.0000000				
34628	9	4.9026960	4.9026960	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34629	0	2.3763262	2.3763262	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34630	1	0.0521132	0.0521132	12.50000	BP	100.0000000				
34631	9	4.4211250	4.4211250	12.50000	ARCO	50.0000000	EXXON	50.0000000		
34632	0	7.9580580	7.9580580	12.50000	ARCO	50.0000000	EXXON	50.0000000		
47446	5	0.0211926	0.0211926	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47447	4	0.0011970	0.0011970	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47448	0	0.0000000	0.0000000	12.50000	MOBIL	66.6666667	PHILLIPS	33.3333333		
47449	7	0.0204696	0.0204696	12.50000	CHEVRON	50.0000000	MOBIL	50.0000000		
47450	9	0.0193851	0.0193851	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47451	6	0.0042712	0.0042712	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47452	0	0.1575467	0.1575467	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333

LEASE TRACT	PARTICIPATING AREA OIL %	PARTICIPATING AREA GAS %	ROYALTY %	OWNER	%	OWNER	%	OWNER	%
47453 1	0.0384943	0.0384943	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47454 3	0.0013684	0.0013684	12.50000	CHEVRON	33.3333333	MOBIL	33.3333334	PHILLIPS	33.3333333
47469 9	0.0000000	0.0000000	12.50000	MOBIL	50.0000000	PHILLIPS	50.0000000		
47471 6	0.0000000	0.0000000	12.50000	AMERADA	27.0000000	L L & E	13.2500000	SHELL	29.2500000
				TEXACO	30.5000000				
47472 7	0.0000000	0.0000000	12.50000	AMERADA	50.0000000	TEXACO	50.0000000		
47475 3	0.0000000	0.0000000	12.50000	AMERADA	25.0000000	MARATHON	25.0000000	SHELL	25.0000000
				TEXACO	25.0000000				
47476 4	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
80595 6	0.0000000	0.0000000	12.50000	ARCO	50.0000000	EXXON	50.0000000		
SOUTH MIDDLE GROUND SHOALS									
18744	6.8965520	6.8965520	12.50000	CHEVRON	12.5000000	TEXACO	25.0000000	UNION	62.5000000
18746	93.1034480	93.1034480	12.50000	CHEVRON	12.5000000	TEXACO	25.0000000	UNION	62.5000000
STUMP LAKE									
17600 1	0.0000000	2.4424100	0.00000	SHELL	40.0000000	UNION	60.0000000		
326059 A	0.0000000	8.1967200	0.00000	TGX	4.5226100	UNION	95.4773900		
326060 B	0.0000000	15.5737800	0.00000	TGX	4.5226100	UNION	95.4773900		
58789 1	0.0000000	11.4754100	0.00000	OXY	60.0000000	TGX	3.6000000	UNION	36.4000000
58789 A	0.0000000	9.8360700	0.00000	OXY	100.0000000				
58790 2	0.0000000	22.6442700	0.00000	TGX	3.6000000	UNION	96.4000000		
58791 3	0.0000000	18.8524600	0.00000	OXY	10.0000000	TGX	1.8000000	UNION	88.2000000
58792 4	0.0000000	3.2786800	0.00000	UNION	100.0000000				
58794 5	0.0000000	4.0983600	0.00000	UNION	100.0000000				
58795 6	0.0000000	3.6018400	0.00000	OXY	10.0000000	TGX	1.8000000	UNION	88.2000000
TRADING BAY									
MONOPOD A-15									
18731	100.0000000	100.0000000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
MONOPOD A-6									
18731	100.0000000	100.0000000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
MONOPOD NON-POOL									
18731	100.0000000	100.0000000	12.50000	MARATHON	50.0000000	UNION	50.0000000		
EXP1									
28297	100.0000000	0.0000000	12.50000	ARCO	100.0000000				
EXP3									
312828 5 [1]	75.0000000	0.0000000	20.00000	BP	95.5000000	CIRI	2.5000000	DOYON	0.5000000
				NANA	1.5000000				
34633 3	25.0000000	0.0000000	12.50000	BP	100.0000000				

[1] Net Profit Share Lease percentage: 79.5935000.
[2] Net Profit Share Lease percentage: 48.8703100.
[3] Net Profit Share Lease percentage: 30.0000000.

APPENDIX C
CRUDE OIL ANALYSES

NORTH SLOPE [1]	SADLEROCHIT	KUPARUK	ST SAK[2]
CRUDE			
Gravity, *API	26.4	23	22.4
Kin.Vis. @ 60 *F	42.42	cSt 79.98	95.92
Sulfur wt%	1.06	1.76	1.82
Nitrogen, ppm	2090	1980	—
Carbon residue wt%	4.4	7.37	7.62
H2S, lb/1,000 bbl	0.35	<5	—
Salt, lb/1,000 bbl	32.7	—	—
Ni/V, ppm	11/26	19/57	22/61
RVP, psi	3.55	2.6	2.7
Pour Pt, *F	0	-55	-50
Neut. no. (D974)	1.12	—	0.68
C4 AND LIGHTER			
Yield, vol%	1.17	—	0.63
C5 AND LIGHTER			
Yield, vol%	—	2.12	—
C5 - 150 *F			
Yield, vol%	2.2	1.6	1.9
Sulfur, wt%	<0.001	0.006	0.004
RON clear	71.5	—	—
MON clear	69.8	—	—
RON + 0.5g TEL/gal.	78.4	—	—
150 - 380 *F			
Yield, vol%	15.6	14.5	14.4
Sulfur, wt%	0.013	0.018	0.018
Paraffins, vol%	39.7	38.3	36.4
Napthenes, vol%	43.3	47	48.2
Aromatics, vol%	17.0	14.7	15.4
380 - 650 *F			
Yield, vol%	28.6	26.9	27.5
Gravity, API	33.1	—	31.6
Sulfur, wt%	0.414	0.66	0.700
Pour Pt, *F	-25	-25	-35
Cetane No.	45.8	45.4	42.1
N2, total, ppm	79	—	—
Vis. cSt @ 100 *F	—	3.083	3.34
Aromatics, vol%	33.6	30.0	31.4
650 - 840 *F			
Yield, vol%	16.4	18.9	16.6
Gravity, API	23.8	20.5	21.1
Sulfur, wt%	1.10	1.79	1.81
Aniline Pt, *C	74.7	104.3	—
Pour Pt, *F	70	50	60
Kin.Vis. @ 100 *F	—	34.2	43.99
Carbon Residue, %	0.012	wt% 0.01	—
Total Nitrogen, ppm	950	600	840
Basic Nitrogen	0.03	wt% 0.02	0.023
V/Ni, ppm	—	<1	—
650 + RESIDUAL			
Yield, vol%	52.4	56	55.6
Gravity, API	15	11.7	10.8
Sulfur, wt%	1.63	2.59	2.53
Carbon Residue, %	8.82	wt% 12.61	wt% 13.15
Total Nitrogen, ppm	3600	—	—
Pour Pt, *F	80	40	45
Kin.Vis. @ 210 *F	47.54	97.15	135.3
Kin.Vis. @ 275 *F	15.55	—	—
Pentane insoluble, wt	—	—	14.97

[1] Aalund, L.R., "Guide to Export Crudes for the '80s," Oil and Gas Journal, Dec.19,1983.

[2] Crude not in production, but pilot program is underway in Kuparuk area to determine feasibility. Assay sample obtained during drill stem test and may not be representative of the entire accumulation.

COOK INLET	DRIFT RIVER	NIKISKI
CRUDE		
Gravity, *API @ 60 *	35.3	34.6
Spec.Grav. @ 60 *F	0.8483	0.8519
Kin.Vis. @ 65 *F	6.94	7.34
@ 90 *F	6.77	7.17
@122 *F	3.39	3.55
Sulfur, wt%	0.09	0.10
Nitrogen wt%	0.13	0.14
Carbon wt%	86.83	87.09
Hydrogen wt%	12.81	12.80
Oxygen wt%	0.09	0.15
Sed. and water, vol%	0.05	0.1
Water, by dist., vol%	Nil	0.05
RVP, psi	7.5	7.85
Pour Pt, *F	0	-5
Flash Pt., PMCC, *F	<0	<0
BADGER DISTILATION		
C5 AND LIGHTER		
Yield, vol%	0.4	0.7
Composition		
Methane	0.02	Traces
Ethane	11.07	7.75
Propane	61.74	59.81
Iso-Butane	11.72	12.46
Normal Butane	13.00	16.83
Iso-Pentane	1.52	2.03
Normal Pentane	0.93	1.12
IBP - 120 *F		
Yield vol%	1.3	2.0
Gravity, API @ 60 *F	X	X
120 - 374 *F		
Yield vol%	31.4	29.5
Gravity, API @ 60 *F	59.3	57.2
374 - 440 *F		
Yield vol%	6.0	6.5
Gravity, API @ 60 *F	40.9	40.6
440 - 610 *F		
Yield vol%	17.6	15.7
Gravity, API @ 60 *F	35.3	35.5
610 + Resid		
Yield vol%	41.3	43.9
Gravity, API @ 60 *F	18.1	18.2
DISTILATION CURVE, VOL, %		
IBP	86	84
2%	131	120
4%	134	130
6%	140	145
8%	150	165
10%	163	195
12%	192	213
14%	211	219
16%	220	239
18%	240	254
20%	257	272
22%	273	292
24%	292	307
26%	309	324
28%	325	341
30%	340	361
32%	361	390
34%	395	420
36%	420	430
38%	430	440
40%	440	460
42%	455	475
44%	475	490
46%	495	510
48%	510	525
50%	525	540
52%	545	555
54%	601	X
56%	607	X

APPENDIX D
ALASKA REFINERIES AND PROCESSING PLANTS

Unit and Capacity			Product and Market Area	
OIL REFINERIES				
ARCO, Kuparuk				
Distillaton	12,000	Bbl/d	Arctic Heating Fuel/Diesel #2	Kuparuk
ARCO, Prudhoe Bay				
Distillaton	13,700	Bbl/d	Arctic Heating Fuel/Diesel #2	Prudhoe Bay
CHEVRON, Nikiski 1963				
Crude	18,000	Bbl/d	Gasoline, unfinished	lower 48
			JP 4	Alaska
			Jet A	Alaska
			Furnice Oil	Alaska
			Diesels	Alaska
			Fuel Oil	lower 48
			Asphalt	Alaska
MAPCO, North Pole 1977				
Two crude units	113,000	Bbl/d	Gasoline, leaded	Alaska
			Gasoline, unleaded	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
Hydrocracker	9,000	Bbl/d	Gasoline, leaded	Alaska
PowerFormer	12,000	Bbl/d	Gasoline, unleaded	Alaska
PRIP	4,000	Bbl/d	Gasoline, unleaded premium	Alaska
LPG	2,800	Bbl/d	JP 4	Alaska
Hydrogen	12,800	Mcf/d	Jet A	Alaska
Sulfur	15	T/d	Diesel #2	Alaska
			Fuel Oil #6	export
			Sulfur	lower 48
PETRO STAR, North Pole 1985				
Crude	7,000	Bbl/d	Kerosine	Alaska
GAS PROCESSING PLANTS				
PHILLIPS-MARATHON LNG PLANT, Nikiski 1969				
LNG	230,000	Mcf/d	LNG	Japan 440,000/Bbl/10 days
UNOCAL CHEMICAL PLANT, Nikiski 1969				
Ammonia	1,300,000	T/yr	Anhydrous Ammonia	half to produce urea, half exported
Urea	1,200,000	T/yr	Urea prills and granules	West Coast and exported

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SURVEY OF OPERATING REFINERIES IN THE U.S. [1]

	No. Plants	Crude Capacity b/cd	Crude Capacity b/sd	Vacuum Distil.	Thermal Ops.	Cat Cracking Fresh Feed	Cat Cracking Recycle	Cat Re-forming
		—	—	—	—	—	—	—
Alabama	4	165,750	171,800	49,000	12,000	—	—	31,000
Alaska	6	242,700	254,400	6,000	29,500	—	—	12,000
ARCO, Kuparuk		12,000	12,000	—	12,000	—	—	—
ARCO, Prudhoe Bay		17,500	17,500	—	17,500	—	—	—
Chevron, Kenai		22,000	22,500	—	—	—	—	—
Mapco, North Pole		112,000	115,000	6,000	—	—	—	—
Petro Star,North Pole		7,200	7,400	—	—	—	—	—
Tesoro, Kenai		72,000	80,000	—	—	—	—	12,000
Arizona	2	14,210	16,000	8,000	—	—	—	—
Arkansas	3	60,470	63,000	28,000	—	18,500	775	9,000
California	30	2,212,448	2,339,200	1,334,630	538,000	656,000	14,000	545,500
Colorado	3	91,200	101,000	41,100	4,200	27,500	1,000	22,900
Delaware	1	140,000	150,000	95,000	46,000	69,000	5,000	56,000
Georga	2	35,500	38,200	—	—	—	—	—
Hawaii	2	143,050	150,000	71,250	13,000	20,000	—	13,000
Illinois	7	973,500	1,031,000	403,000	124,400	378,000	10,000	303,800
Indiana	4	426,900	441,500	233,200	28,000	171,500	4,000	99,500
Kansas	8	351,225	370,960	128,650	52,000	129,500	3,500	93,800
Kentucky	2	218,900	226,300	92,000	57,600	100,000	—	53,000
Louisiana	19	2,330,141	2,436,000	901,400	444,700	787,500	11,300	499,900
Michigan	4	123,700	134,095	38,000	—	46,500	1,300	33,500
Minnesota	2	285,600	299,220	192,000	58,000	78,000	1,000	55,500
Mississippi	5	358,600	378,879	275,000	83,000	80,000	—	95,800
Montana	4	138,600	145,500	55,600	7,700	54,400	7,600	37,700
Nevada	1	4,500	4,700	2,500	—	—	—	—
New Jersey	6	494,250	520,947	251,200	31,000	256,000	25,000	78,500
New Mexico	4	77,300	84,107	13,900	—	33,800	5,500	19,800
New York	1	39,900	42,000	25,000	—	—	—	—
North Dakota	1	58,000	60,000	—	—	26,000	3,600	12,100
Ohio	4	454,150	478,000	153,000	33,000	174,000	1,000	162,600
Oklahoma	7	409,500	427,792	145,500	20,500	146,000	5,840	101,500
Oregon	1	—	—	16,000	—	—	—	—
Pennsylvania	7	731,300	771,000	317,500	—	250,000	8,600	195,070
Tennessee	1	60,000	62,000	12,000	—	30,000	—	10,000
Texas	31	3,882,550	4,109,900	1,741,500	331,800	1,635,800	125,550	1,140,400
Utah	6	154,500	160,400	48,100	8,500	55,400	9,100	31,100
Virginia	1	53,000	56,000	29,000	14,000	27,500	2,000	10,200
Washington	7	521,225	543,754	255,500	72,000	118,500	7,000	128,500
West Virginia	2	29,680	30,800	10,850	—	—	—	4,900
Wisconsin	1	32,000	34,000	20,500	—	11,000	1,000	8,000
Wyoming	5	164,600	171,500	72,600	8,000	64,000	10,500	36,950
TOTAL	194	15,478,949	16,303,954	7,066,480	2,016,900	5,444,400	264,165	3,901,520

[1] Thrash, Lou Ann, "Annual Refining Survey," Oil & Gas Journal, March 18, 1991, pp. 86, 88.
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	Charge Capacity (b/sd)			Production Capacity (b/sd)					
	Cat Hydro-cracking	Cat Hydro-refining	Cat Hydro-treating	Alky. Poly.	romatic somer-ization	Lubes	Asphalt	Hydrogen (MMcf/d)	Coke (t/d)
	—	—	—	—	—	—	—	—	—
Alabama	—	29,800	48,500	—	7,000	—	19,500	6.0	400
Alaska	9,000	—	12,000	—	6,500	—	8,000	12.8	—
ARCO	—	—	—	—	—	—	—	—	—
ARCO	—	—	—	—	—	—	—	—	—
Chevron	—	—	—	—	—	—	6,000	—	—
Mapco	—	—	—	—	2,500	—	2,000	—	—
Petro Star	—	—	—	—	—	—	—	—	—
Tesoro	9,000	—	12,000	—	4,000	—	—	12.8	—
Arizona	—	—	—	—	—	—	4,660	—	—
Arkansas	—	—	20,000	4,800	3,000	3,500	9,500	0.5	—
California	413,000	573,500	937,900	132,500	17,900	29,400	89,500	1,053.4	20,962
Colorado	5,000	—	35,700	3,800	—	—	5,000	6.0	200
Delaware	19,000	—	110,000	17,000	3,370	—	—	40.0	2,180
Georga	—	—	—	—	—	—	26,500	—	—
Hawaii	18,000	—	14,500	5,625	1,500	—	2,400	20.1	—
Illinois	66,500	35,000	575,300	96,000	33,400	4,600	44,100	66.8	6,300
Indiana	—	86,000	180,800	36,700	38,000	6,400	51,000	—	1,550
Kansas	3,190	44,000	172,000	39,100	41,000	—	7,000	—	1,960
Kentucky	—	40,400	142,300	13,000	17,600	8,500	30,000	—	—
Louisiana	172,000	277,000	1,001,100	211,900	129,800	37,600	53,500	167.1	16,025
Michigan	—	17,000	50,800	9,000	8,000	—	18,000	—	—
Minnesota	—	86,500	127,000	19,150	23,300	—	49,000	20.0	2,800
Mississippi	68,000	192,800	59,800	19,700	5,500	3,600	40,600	217.5	4,250
Montana	4,900	14,000	101,350	12,800	6,500	—	23,500	19.3	435
Nevada	—	—	—	—	—	—	—	—	—
New Jersey	—	65,000	244,200	36,000	36,300	8,500	73,000	11.0	1,100
New Mexico	500	—	30,300	6,400	4,000	—	3,200	—	—
New York	—	—	—	—	—	—	—	—	—
North Dakota	—	—	19,100	4,300	5,100	—	—	—	—
Ohio	87,200	23,000	170,500	29,400	63,900	—	19,000	72.0	1,475
Oklahoma	5,000	26,000	154,800	36,100	32,900	10,000	12,100	10.0	1,260
Oregon	51,000	—	—	—	—	—	11,500	—	—
Pennsylvania	—	42,000	424,000	47,500	20,250	17,350	47,000	49.5	—
Tennessee	282,000	—	31,000	5,500	4,000	—	3,500	—	—
Texas	—	827,500	2,283,850	323,400	310,375	88,800	49,900	623.0	11,754
Utah	—	7,100	34,100	14,500	8,400	—	1,700	—	350
Virginia	52,000	—	26,500	—	—	—	—	—	750
Washington	4,500	25,500	195,000	30,100	4,250	—	16,000	80.0	3,700
West Virginia	—	—	3,900	—	—	6,440	—	2.7	—
Wisconsin	—	5,800	9,000	1,300	2,000	—	13,500	—	—
Wyoming	—	29,000	54,750	10,500	2,500	—	16,550	—	—
TOTAL	1,260,790	2,446,900	7,270,050	1,166,075	836,345	224,690	748,710	2,477.7	77,451

ACKNOWLEDGEMENTS

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MADE IN ALASKA
Printed by Alaska Specialized Education
& Training Services Inc.