ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4896 HRES ELF HISTORY (SEE ALSO HB 164) - ELF MISC.

	1995	96	97	98	99	00	01	02	03	04
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	6.695195	19.00111	20.86728	20.98178	22.16065	21.11606	19.91526	19.10337
TOTAL OIL PROD REVENUES	0	0	7.157388	27.95896	29.52439	30.86915	32.61532	31.40593	29.28774	27.74125
Endicott Prod.(MMbbl/d)	0	0	0	.019	.063	.065	.067	.069	.07	.056
Endicott Price ($/bbl)	15.99	14.351	12.62	12.44	13.22	11.89	14.76	15.91	17.22	18.64
Wells	1	1	1	34.5	111.5	111.5	111.5	111.5	111.5	100.05
ELF	0	0	0	.2992298	.3132327	.3391158	.3662788	.3617316	.3692138	.3886971
Nominal Tax Rate	0	0	0	0	0	.1225	.1225	.1225	.1225	.1225
Effective Tax Rate	0	0	0	0	0	.0404392	.0424181	.0443121	.0452287	.0377419
Royalty Percentage	.1438	.1438	.1438	.1438	.1438	.1438	.1438	.1438	.1438	.1438
SEVERANCE TAX (ELF)	0	0	0	0	0	11.41001	13.10932	15.20232	17.03779	12.31192
SEVERANCE TAX (NO ELF)	0	0	0	0	0	34.56366	37.85867	42.02652	46.14614	39.96116
CONSERVATION TAX	0	0	0	.0074222	.0246104	.0253917	.0261739	.0269542	.0273449	.0210759
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	0	12.40583	43.71432	47.38789	51.90544	57.61978	63.26781	54.78003
TOTAL OIL PROD REVENUES	0	0	0	12.40583	43.71432	50.79798	65.01476	72.82202	80.30562	67.09995
Kuparuk Prod.(MMbbl/d)	0	0	.009	.017	.041	.061	.074	.075	.076	.078
Kuparuk Price ($/bbl)	16.84	15.281	13.47	13.29	14.07	14.74	15.61	16.76	18.07	19.49
Wells	1	1	79.5	79.5	104.25	116.9	116.9	116.9	116.9	116.9
ELF	0	0	0	0	.1101111	.2693556	.3734524	.3881931	.3871543	.4002726
Nominal Tax Rate	0	.1225	.1225	.1225	.1225	.1225	.15	.15	.15	.15
Effective Tax Rate	0	0	0	0	.0134886	.0329961	.0564239	.0570599	.0580731	.0600489
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (ELF)	0	0	0	0	2.485111	9.475243	20.66848	22.98657	25.47112	29.15187
SEVERANCE TAX (NO ELF)	0	0	4.742934	8.839158	22.56914	35.17745	55.33843	69.21076	65.79861	72.82884
CONSERVATION TAX	0	0	.0035939	.0067867	.0163688	.0243523	.0295422	.0269414	.0301486	.0211391
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	5.531119	10.30806	26.31969	41.02326	52.70326	57.35063	62.65771	69.36904
TOTAL OIL PROD REVENUES	0	0	5.531119	10.30806	26.80481	50.49851	73.37174	80.25719	88.12884	98.51118
West Sak Sands Prod.(MMbbl/d)	0	0	0	.022	.03	.044	.05	.055	.057	.062
West Sak Sands Price ($/bbl)	15.33	13.691	11.96	11.78	12.56	13.23	14.1	15.25	16.56	17.98
Wells	1	76	83.5	91	169.5	169.5	204	204	204	204
ELF	0	0	0	0	0	0	0	0	0	0
Nominal Tax Rate	0	0	0	0	.1225	.1225	.1225	.1225	.1225	.15
Effective Tax Rate	0	0	0	0	0	0	0	0	0	0
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (ELF)	0	0	0	0	0	0	0	0	0	0
SEVERANCE TAX (NO ELF)	0	0	0	0	14.74171	22.77454	27.58202	32.81478	36.92948	53.40397
CONSERVATION TAX	0	0	0	.0087820	.0119766	.0175656	.0199689	.0219578	.0227555	.0247516
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	0	11.02418	17.1915	26.55923	32.16563	38.26797	43.86635	50.86893
TOTAL OIL PROD REVENUES	0	0	0	11.02418	17.1915	26.55923	32.16563	38.26797	43.86635	50.86893
Unspecified Onshore Prod.(MMbbl/d)	0	0	0	0	0	.018	.032	.033	.034	.035
Unspecified Onshore Price ($/bbl)	15.19	13.551	11.82	11.64	12.42	13.09	13.96	15.11	16.42	17.84
Wells	1	1	1	1	33.3	45.15	42	17.5	13	27.75
ELF	0	0	0	0	0	.1175385	.4642382	.5276955	.5899642	.6593604
Nominal Tax Rate	0	0	0	0	0	0	.1225	.1225	.1225	.1225
Effective Tax Rate	0	0	0	0	0	0	.0568682	.0646427	.0722706	.0807716
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (ELF)	0	0	0	0	0	0	8.111455	10.29435	12.08598	16.10738
SEVERANCE TAX (NO ELF)	0	0	0	0	0	0	17.47722	19.50812	21.04183	24.42067
CONSERVATION TAX	0	0	0	0	0	.0051859	.012775	.0131742	.0135734	.0139727
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	0	0	0	10.75016	20.1816	22.74999	25.47153	28.48825
TOTAL OIL PROD REVENUES	0	0	0	0	0	10.75016	28.49505	31.04434	38.35742	44.59555
Seal Island Prod.(MMbbl/d)	0	0	0	0	0	0	0	0	0	0
Seal Island Price ($/bbl)	15.54	13.981	12.17	11.99	12.77	13.44	14.31	15.46	16.77	18.19
Wells	1	1	1	1	1	1	1	1	1	1
ELF	0	0	0	0	0	0	0	0	0	0
Nominal Tax Rate	0	0	0	0	0	0	0	0	0	0

[illegible] TAX (ELF)	0	0	0	0	0	0	0	0	0	0
[illegible] TAX (NO ELF)	0	0	0	0	0	0	0	0	0	0
CONSERVATION TAX	0	0	0	0	0	0	0	0	0	0
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	0	0	0	0	0	0	0	0
TOTAL OIL PROD REVENUES	0	0	0	0	0	0	0	0	0	0
NORTH SLOPE Prod. (MMbbl/d)	1.695	1.717	1.744	1.66	1.584	1.48	1.33	1.257	1.17	1.031
AVG. NORTH SLOPE PRICE ($/bbl)	17.02921	15.37548	13.63733	13.48789	14.13648	14.74674	15.57237	16.78898	17.88589	19.39853
AVG. NOMINAL TAX RATE	.1472986	.1467967	.1481377	.1460136	.1420815	.1450169	.1469192	.1465652	.1462158	.1475127
AVG. EFFECTIVE TAX RATE	.1435491	.1395869	.1370837	.1115651	.1036098	.0906285	.0934989	.0912185	.0892272	.0830136
AVG. ROYALTY PERCENTAGE	.125	.125	.1251728	.1257348	.1262922	.1264884	.1265956	.1267191	.1267817	.1266031
SEVERANCE TAX	1325.983	1180.488	1050.937	797.1311	746.6525	693.3815	623.8119	617.2818	605.4633	548.1976
CONSERVATION TAX	.6766758	.6854966	.6961886	.6621466	.6314206	.5898927	.5299927	.5898326	.4661775	.4100494
ROYALTIES	1265.895	1150.438	1030.594	960.9879	902.9965	961.0279	916.9057	932.5839	936.9896	870.8768
TOTAL OIL PROD REVENUES	2591.[illegible]9	2331.524	2082.228	1766.701	1730.190	1635.759	1541.248	1550.366	1542.839	1431.484
	14.35 [illegible]	13.95869	13.78837	11.15651	10.36898	9.[illegible]62954	9.149886	9.121849	8.922717	8.301358

FISCAL IMPACT OF ELF REPEAL ON SEVERANCE TAX INCOME
ALL NORTH SLOPE FIELDS

	FY85	86	87	88	89	90	91	92	93	94
SEVERANCE TAX (MILLIONS OF $)										
NO ELF	1350.097	1238.976	1125.782	1039.074	1023.758	1011.859	971.7988	983.0472	883.7861	941.9287
WITH ELF	1325.983	1180.488	1050.937	797.1311	746.6525	693.3815	623.8119	617.2818	605.4633	548.1976
REVENUES RESULTING FROM										
REPEAL OF ELF	32.99418	58.56776	74.76486	242.7425	277.0974	318.4698	347.9878	365.7653	378.2429	401.7311
CUMULATIVE TOTAL	32.99418	91.56186	166.3267	409.0693	686.1667	1004.636	1352.623	1718.388	2096.631	2498.362

PRUDHOE BAY ONLY

SEVERANCE TAX (MILLIONS OF $)										
NO ELF	1252.465	1124.336	982.6137	870.4757	816.1278	748.6458	664.0966	666.9126	661.5063	698.7982
WITH ELF	1252.465	1124.336	982.6137	714.2584	656.2593	588.2696	501.3609	498.1035	489.5263	432.5515
REVENUES RESULTING FROM										
REPEAL OF ELF	0	0	0	156.2253	159.8678	160.3754	163.5357	166.8089	172.0800	173.2367
CUMULATIVE TOTAL	0	0	0	156.2253	316.0931	476.4685	640.0042	806.8131	978.8930	1152.130

Figures calculated by OMB

10 MOST IMPORTANT POINTS

1. ELF was always meant to prolong oil production in Alaska by prolonging the life of individual fields.

2. Proposed ELF does a better job of prolonging production than original one because it looks at total field production not individual well production.

3. Have 10 years of experience now to base the proposed formula on.

4. Original ELF was designed for Cook Inlet. Now, we need to finetune it for NS fields.

5. The proposed ELF has the added benefit of giving the marginal fields a tax break in a time of low oil prices. This will enhance the economics of a marginal field, thus prolonging oil production in Alaska.

6. Encouraging marginal field production prolongs the life of oil production on the North Slope. This is consistent with the purpose of the original ELF.

7. Proposed ELF will reduce the ELF on Milne by 48%, on Endicott by 100% and on Lisburne by 54%.

8. Prudhoe and Kuparak are not marginal fields. Even if there was no ELF at all, they would still be highly profitable. The ELF is no longer needed to prolong the life of these fields, only the marginal ones.

9. If ELF is not changed, in FY88, Milne will have a higher effective severance tax (9%) than Kuparuk (7.5%) even though Milne is the marginal field. (Proposed ELF would give Milne a 4.65% effective rate and Kuparuk a 12.9% rate.)

10. Industry profitability: It made $6B in Ak. in FY85. It took $24B in profits out of Ak. in the last four years. Business Week quote: "Exxon has $7B in spare cash to spend through 1988."

Sam - Hope these help. Let me know if you need anything else. - Loraine

Conversation with Chuck

1. If someone questions why OMB's projection of production effects are different from Revenue's, Chuck can explain it with a very simple example. It will be kind of hard to do it over the phone but if someone wants to know, he will try to explain it.

2. The reason that the fiscal note shows $450K in FY87 revenue is that he probably put the wrong effective date in the model. It should be zero.

3. Rieger's question about the effect of HB 545 on enhanced recovery at Prudhoe is answered in the fiscal note -- see the production table. Basically, the effect is minimal. It is difficult to separate out EOR from regular production, but the model attempts to do that. Plus, since enhanced recovery is at the end of the production cycle and since it is the most expensive, it makes sense that the 22 million production decrease would be enhanced recovery production. Keep in mind that this is 22 million out of almost 10 billion expected recovery from Prudhoe, about 1.5 billion of which comes from enhanced recovery (according to Sohio's Tim Holt at the seminar Sharman and I went to last summer.)

4. The statement that the ELF is dependent on whether the field produces more or less than 80,436 barrels/day is dependent on the price assumption. A different price scenario would change that number. I think a related comment would be that **the lower the price goes, the higher number of barrels would have to be produced for the field to be economic.**

5. He is more than willing to discuss the fact that taxes are not nearly as important to the company's production decision as the price is. Of course the taxes have an impact, but it is not nearly as significant as price.

Conversation with Tom Chester

1. He will be here to answer questions if you need help -- especially if the companies are really ragging you, you can call on him to give the debate some perspective if you need.

2. He hopes that Chuck is as friendly a witness as you think, only because he feels that Chuck is not in favor of any changes in the tax code at present.

Conversation with Deb Vogt

1. Maynard is <u>not</u> working on a bill. She has checked with everyone, and informed Gillespie.

2. She is prepared to testify today on the new compromise idea about waiving legislative immunity, having the Ethics Cmttee. sanction legislators who spill the beans, etc. Revenue knows whats she's doing as does Gillespie. They support what she is doing.

TABLE 1
(millions of current dollars unless otherwise noted)

Decrease in Sev. tax receipts projected 1/86:

FY88	296.5
FY89	89.1
FY90	79.2
FY91	35.5
FY92	19.3

Total 5 yr. loss 519.6

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
FY	SEVERANCE TAXES	PROPERTY TAXES	OIL&GAS INC TAX	ROYALTIES	MINERAL RENTS	BONUS SALES	PETROLEUM REVENUES	NON-PETR NON-INTR REVENUES	INTEREST REVENUES	TO REVS INCL PERM FUND
81	1170.2	143.0	860.1	1501.6	7.9	14.1	3696.9	186.1	377.7	4260.7
82	1581.7	142.7	668.9	1553.2	26.4	10.3	3983.2	209.0	693.1	4885.3
83	1493.7	152.6	276.0	1447.4	54.2	73.1	3457.0	228.6	846.9	4532.5
84	1393.1	131.0	265.1	1409.0	21.9	16.7	3236.8	245.8	812.2	4294.8
85	1389.4	128.4	168.6	1390.3	23.7	23.6	3124.0	283.0	891.3	4298.3
86	1329.2	113.6	219.8	1350.3	23.6	12.3	3052.8	241.2	929.6	4223.7
87	1077.2	117.4	236.4	1125.9	24.2	0.0	2581.1	250.8	928.4	3760.3
88	780.7	121.2	237.9	979.1	24.2	0.0	2143.1	247.0	945.3	3335.4
89	691.6	124.3	236.1	909.0	24.2	0.0	1985.2	259.4	960.1	3204.7
90	612.4	128.8	232.2	845.8	24.2	0.0	1843.4	272.4	1014.8	3130.6
91	576.9	124.4	225.4	814.7	24.2	0.0	1765.6	286.0	1077.3	3129.0
92	557.6	118.9	219.3	792.9	24.2	0.0	1712.7	300.3	1145.6	3158.7
93	563.0	114.0	216.5	796.3	24.2	0.0	1714.0	317.7	1329.7	3361.4
94	549.5	100.2	212.8	782.5	24.2	0.0	1675.2	336.0	1422.5	3433.8
95	532.7	99.5	206.2	767.7	24.2	0.0	1630.3	355.5	1519.5	3505.3
96	496.4	101.8	198.1	738.2	24.2	0.0	1558.8	376.0	1619.0	3553.8
97	484.2	122.9	189.1	727.5	24.2	0.0	1548.0	397.7	1727.8	3673.4
98	458.4	137.5	178.6	699.8	24.2	0.0	1498.4	423.2	1957.8	3879.4
99	231.6	138.2	153.4	462.0	24.2	0.0	1009.3	450.2	2051.0	3510.5
0	132.0	128.6	128.3	253.0	24.2	0.0	666.1	479.0	2157.2	3302.4
1	49.7	117.4	113.6	129.3	24.2	0.0	434.1	509.7	2273.2	3217.0
2	53.6	102.8	98.2	143.1	24.2	0.0	421.9	542.3	2411.7	3376.0
3	56.1	75.1	81.9	152.8	24.2	0.0	390.0	577.0	2555.8	3522.8
4	58.3	41.2	67.4	162.9	24.2	0.0	354.0	613.9	2708.4	3676.3
5	61.3	27.9	56.8	174.0	24.2	0.0	342.3	653.1	2872.8	3868.2

(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
						-----REVENUES----		-ROYALTIES	SUBJ TO-	ROYALTY		
FY	TO REVS INCL PF	PUB SCH FUND	NPR-A FUND	RENEW RES FUNDS	PERM FUND CONTRI	GEN FUND UNRESTRD	TOTAL SUSTAIN	-PERM FUND 25 PCT	CONTRIB- 50 PCT	PF CONTRIB	-INTEREST GEN FUND	EARNINGS- PERM FUND
81	4260.7	7.5	0.0	74.3	385.1	3643.9	563.8	1501.6	0.0	358.3	227.8*	149.9
82	4885.3	8.0	0.0	0.0	400.5	4108.4	902.1	1553.2	0.0	388.3	324.7*	368.4
83	4532.5	9.4	0.0	0.0	421.0	3631.0	844.3	1447.4	0.0	361.8	375.8*	471.1
84	4294.8	9.0	0.0	0.0	366.2	3390.1	907.0	1409.0	0.0	354.6	282.7	529.5
85	4298.3	7.1	5.4	0.0	368.0	3260.0	939.7	1390.3	0.0	349.5	233.5	657.8
86	4223.7	7.1	5.5	0.0	356.9	3124.6	938.2	1330.4	20.0	342.6	200.0	729.6
87	3760.3	5.9	5.5	0.0	296.7	2718.8	916.5	1090.8	35.1	290.3	195.0	733.4
88	3335.4	5.2	5.5	0.0	272.0	2257.4	862.5	896.1	83.0	265.5	150.0	795.3
89	3204.7	4.8	5.5	0.0	266.5	2109.1	830.8	777.7	131.3	260.1	141.4	818.7
90	3130.6	4.5	5.5	0.0	256.3	1980.4	866.1	692.2	153.6	249.9	131.0	883.8
91	3129.0	4.4	5.5	0.0	251.4	1915.5	908.6	649.5	165.2	245.0	125.2	952.1
92	3158.7	4.3	5.5	0.0	250.0	1874.6	955.9	611.8	181.1	243.5	121.2	1024.4
93	3361.4	4.3	5.5	0.0	252.0	1903.7	1079.8	610.6	185.7	245.5	133.7	1195.9
94	3433.8	4.2	5.5	0.0	250.3	1881.8	1103.4	589.7	192.3	243.8	130.5	1292.0
95	3505.3	4.1	5.5	0.0	248.1	1854.9	1107.7	569.0	198.7	241.6	126.9	1392.7
96	3553.8	4.0	5.5	0.0	238.3	1808.2	1233.1	549.2	189.0	231.8	121.2	1497.8
97	3673.4	3.9	5.5	0.0	235.9	1820.7	1305.9	537.2	190.3	229.5	120.4	1607.3
98	3879.4	3.8	5.5	0.0	225.3	1812.5	1453.8	524.3	175.5	218.8	125.5	1832.3
99	3510.5	2.6	5.5	0.0	157.6	1378.1	1457.4	319.3	142.7	151.2	84.3	1966.7
0	3302.4	1.6	5.5	0.0	88.4	1106.0	1644.1	178.5	74.5	81.9	56.3	2100.9
1	3217.0	0.9	5.5	0.0	48.7	925.7	1790.1	89.5	39.8	42.3	37.1	2236.1
2	3376.0	1.0	5.5	0.0	54.4	939.1	1926.9	94.6	48.5	47.9	35.8	2376.0
3	3522.8	1.1	5.5	0.0	60.1	932.9	2059.2	91.2	61.5	53.6	32.6	2523.2
4	3676.3	1.1	5.5	0.0	64.4	926.1	2199.0	94.3	68.6	57.9	29.1	2679.3
5	3868.2	1.2	5.5	0.0	71.5	945.0	2350.1	87.8	86.3	65.1	27.8	2845.0

* General Fund interest revenues include the amounts transferred from the Permanent Fund earnings in these years. Interest earnings totals therefore double count the transfer which is detail in col. 18 of Table 3.

STATE OF ALASKA

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF REVENUE

OFFICE OF THE COMMISSIONER

POUCH S
JUNEAU, ALASKA 99811
PHONE: (907) 465-2300

January 24, 1986

The Honorable Sam Cotten
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Representative Cotten:

Per your request, I have examined the revenue impact of eliminating the ELF from North Slope severance tax calculations. Based on the December 85 mean case forecast, elimination of the ELF will yield approximately 244 million additional dollars from North Slope production in FY 1988 of which approximately 179 million comes from the Sadlerochit formation.

Similarly, using the December 85 mean case forecast, elimination of the ELF will yield approximately 258 million additional dollars from North Slope production in FY 1989 of which approximately 169 million comes from the Sadlerochit formation.

Sincerely,

Vincent D. Wright

Vincent D. Wright
Chief of Research

VDW:AZ:mkw
86-21

Governor's letter transmitting original ELF bill to the legislature

The Governor's transmittal letters appear following the bill to which it pertains; fiscal notes appear in House Supplement No. 31 to today's journal.

"March 8, 1977

HB 321

The Honorable Hugh Malone
Speaker of the House
Alaska State Legislature
Juneau, Alaska 99811

Dear Mr. Speaker:

Under the authority of art. XII, sec. 18 of the Alaska Constitution, and in accordance with AS 24.30.060(b) and the Uniform Rules of the Alaska State Legislature, I am transmitting a bill relating to the oil and gas properties production tax.

As a result of a recent study of Alaska's oil and gas tax structure, the Department of Revenue has recommended several changes in the state's production or "severance" tax. This bill incorporates those specific recommendations.

Currently the state's oil production tax is calculated according to "stair stepped" rates depending upon the level of production for the lease or property. As currently structured the tax may have an adverse impact upon a particular property as it reaches its economic limit. The "stair step" approach may not alleviate this adverse effect since the economic limit may vary substantially from one part of the state to another. This is because it may be more costly to produce and transport the oil in the more remote areas of the state. Accordingly, the bill contains an economic limit mechanism which automatically scales the tax rate down as the production nears its economic limit. This will insure that the tax will not unduly inhibit oil production as it reaches its economic limit.

One of the immediate dangers which face the state's revenue picture is the potential for artificially depressed pricing of the state's North Slope oil. This could result from federal pricing decisions or excessive tariff costs from the wellhead to the refinery. To insulate the state's petroleum revenues from these forces, the bill provides for a mechanism which would raise the cents-per-barrel floor to correspond to a mid-range market value for North Slope oil and tie that floor to an index which will let the floor keep pace with inflation.

2 examples describing original ELF's purpose. (Shows that proposed ELF conforms to purpose of original one.) -L

4

One of the Department of Revenue's recommendations -- the oil and gas surtax -- which was designed to offset revenue losses due to depressed pricing of North Slope oil and which was to be imposed only on holders of state-owned leaseholds was deleted on the advice of this department because of the substantial legal problems involved. HB 321

The bill places the tax on gas at a parity with the tax on oil. Currently gas is taxed at only 4 percent while oil is taxed from 5 to 8 percent. The bill would tax both oil and gas at 10 percent. In addition, the bill sets a cents-per-Mcf floor for the gas tax similar to the cents-per-barrel floor for oil. This new floor for gas corresponds to the highest market price in the state, and it too is tied to an index to keep pace with inflation.

Sincerely,

Jay S. Hammond
Governor "

HOUSE BILL NO. 322 by the Rules Committee by request of the Governor, entitled: HB 322

"An Act establishing an oil and gas corporate franchise tax; and providing for an affective date."

was introduced, read the first time and referred to the Committees on Resources and Finance.

"March 8, 1977

The Honorable Hugh Malone
Speaker of the House
Alaska State Legislature
Juneau, Alaska 99811

Dear Mr. Speaker:

Under the authority of art. III, sec. 18 of the Alaska Constitution, and in accordance with AS 24.50.060(b) and the Uniform Rules of the Alaska State Legislature, I am transmitting a bill establishing an oil and gas corporate franchise tax.

The Department of Revenue, in its oil and gas tax study, found two basic deficiencies with the corporate income tax as it relates to oil and gas corporations. This bill would correct those deficiencies.

Testimony of Commissioner Gallagher to Joint House & Sen. Resources Cmttee on original ELF bill

PROFITS FROM ITS PRODUCTION OPERATION TO OTHER PHASES OF ITS BUSINESS AND REDUCE ITS ROYALTY AND SEVERANCE TAX LIABILITIES. THESE POTENTIAL ACTIONS MUCH AS FEDERAL PRICING WOULD EFFECTIVELY REDUCE THE WELL HEAD PRICE BELOW WHAT WOULD OTHERWISE BE THE MARKET VALUE OF THE OIL. BY RAISING THE CENTS-PER-BARREL TAX FLOOR YOU PROTECT THE STATE AGAINST THESE POSSIBILITIES.

THE SECOND MAJOR GOAL OF OUR SEVERANCE TAX BILL AFTER ASSURING THAT OUR SEVERANCE TAX REVENUES ARE PROTECTED FROM THE VAGARIES OF FEDERAL PRICING ACTIONS AND CORPORATE MANIPULATION, IS TO PROVIDE TAX RELIEF FOR PRODUCTION WHICH IS APPROACHING, OR IS AT, ITS ECONOMIC LIMIT. AS MENTIONED IN OUR REPORT THE SEVERANCE TAX CAN ACT AS A DISINCENTIVE TO CONTINUED PRODUCTION AS PRODUCTION FROM A PROPERTY REACHES ITS ECONOMIC LIMIT. A PARTICULAR PROPERTY'S ECONOMIC LIMIT IS NOT SOLELY A FUNCTION OF THE VOLUME OF PRODUCTION BECAUSE THE COSTS OF PRODUCING OIL MAY VARY SUBSTANTIALLY IN DIFFERENT REGIONS OF THE STATE. FOR EXAMPLE, A WELL PRODUCING 1,000 BARRELS A DAY IN COOK INLET.

6015

MAY BE NOWHERE NEAR ITS ECONOMIC LIMIT BUT A WELL PRODUCING AT THE SAME RATE ON THE NORTH SLOPE OR IN INTERIOR ALASKA MAY ACTUALLY HAVE REACHED ITS ECONOMIC LIMIT BECAUSE OF THE HIGHER COSTS OF PRODUCTION AND TRANSPORTATION IN THOSE AREAS. ACCORDINGLY A STAIR STEP APPROACH BASED UPON PRODUCTION LEVELS MAY WORK WELL FOR ONE PART OF THE STATE BUT NOT ANOTHER.

THEREFORE HB 32L AND SB 238 PROVIDE A MECHANISM WHEREBY THE TAX RATE IS SCALED DOWN OR REDUCED AS A PARTICULAR PROPERTY REACHES ITS TRUE ECONOMIC LIMIT. THIS FEATURE ESSENTIALLY TAILORS THE TAX RATE SCHEDULE TO THE ECONOMICS OF EACH PRODUCING PROPERTY. INSTEAD OF STAIR-STEPS IT PROVIDES A CONTINUOUS SERIES TAX RATES FROM 10 PERCENT TO ZERO AND WHICH DECLINE AS PRODUCTION APPROACHES THE PRODUCTION LEVEL AT THE PROPERTY'S ECONOMIC LIMIT.

THERE WAS SOME SUGGESTION EARLIER IN THE WEEK BY MR. KILGORE, THAT THE ECONOMIC LIMIT FACTOR WAS DEFICIENT IN PRACTIVE SINCE IT SEEMED TO RESULT IN HIGHER EFFECTIVE TAX RATES FOR SOME

Response By ARCO Alaska, Inc.

To: Interim Report Of The House Finance
Subcommittee On Oil And Gas

The report to the Legislature from its oil and gas subcommittee is a thinly-veiled attempt to once again increase taxes on the oil industry.

It would appear the staff members who prepared the report are living in a vacuum, and are unaware of the impact of dramatically lower crude prices on the oil industry.

While we in the industry have spent this week worrying about how to pay for new capital investments on the North Slope -- investments which will have the positive effect of creating new state income and new jobs for Alaskans -- this legislative sub-committee is figuring out ways to further reduce our rapidly decreasing margin of profit.

The report argues for reinstating the separate accounting method of levying income tax on the oil industry.

The subcommittee's insistence on the merits of separate accounting ignores the state Department of Revenue's study, which shows that the state would receive more tax income now through this method, but less in the future. Under either the present method of taxing income (modified apportionment) or separate accounting, the state Department of Revenue estimates the tax income would be about the same in the long run. Those few legislators who are urging a change in the tax law simply want more money now at the expense of future generations of Alaskans.

- more -

The effect of raising income taxes now, however, would be devastating to new oil development in Alaska, and would threaten the orderly development of existing fields.

A tax increase would have made new development difficult even if oil prices had remained static. But as prices decline, the economics of marginal oil fields becomes even more difficult. Legislators whose assigned task is to study oil and gas should understand that impact.

We also take issue with the committee's charge that the state's share of oil income has declined since 1981. That simply is not true. The Department of Revenue's own figures show that the state's share of income from oil production has increased from 31 percent in 1981 to an expected 41 percent in 1986.

The subcommittee contends that the producers made a profit and that money therefore left the state. In ARCO's case, we have invested more in Alaska than our after-tax profits every year since development began on the North Slope. If we failed to make a profit, there would be no new investment. It's that simple.

After all, it's the producers who must bear the costs of developing an oil field, the wells that must be drilled, and the facilities that must be built and installed and operated. The state's royalties and severance taxes are levied without regard to whether or not the oil is sold at a profit. Now that oil has become a world commodity, Alaskan oil must compete in the world market. If prices continue to decline, the question becomes, "Can Alaskan oil compete?"

The subcommittee argues that House Bill 353 (separate accounting) will encourage exploration because it allows for writeoffs of unsuccessful wells. On the contrary. The bill will discourage exploration because the investor knows that if you are successful, you will be penalized. And no one invests millions of dollars in exploration unless they hope to be successful.

Regarding pre-payment of taxes in dispute, which the committee report suggests is another way to boost state income: The report acknowledges that the possibility that the taxpayer could prevail and the state would have to repay the money. That is precisely our argument: that taxes in dispute are not due and payable unless--and until--the dispute is resolved in favor of the state.

In the meantime the state's pocketbook is protected with regard to contested taxes because the state is entitled to interest at the rate of 12 percent a year, if the state wins the argument.

If the state requires prepayment of contested taxes by the oil industry, it should also require prepayment by all taxpayers who have a dispute with the state.

The subcommittee suggests that repealing the Economic Limit Factor (ELF) would be another way to bring the state additional income. Again, the legislators are choosing to ignore the reason the ELF was put in place and are looking for more revenue now. They are not taking into account the state's future best interests. The ELF was designed to encourage continued production when fields start to decline. That will happen to Prudhoe Bay just as it does to other fields. And the application of ELF will result in greater production from the field in the long run.

Other oil-producing states and nations are looking to ways to encourage the petroleum industry. In Texas, university economists are speaking out that oil bears a disportionate share of the tax burden. That fact could be ignored, said one economist, in the heady days when prices were going up. But it can no longer be ignored. And in Taxes, taxes on oil and gas production constitute only 20 percent of the total tax pie. In Alaska, petroleum royalties and taxes account for 90 percent of the state's total revenues.

Instead of spending six months figuring out how the state can extract more money from the oil industry, the oil and gas subcommittee would perform a better service to the state if it concentrated its efforts on ways to encourage more oil development in Alaska.

We find it ironic that, during a time when Alaska's oil industry is struggling to remain competitive in a world of rapidly declining oil prices, a few legislators would be proposing to increase costs through taxation. We believe the current law gives the state a fair share of the wealth produced. We know that any increase in taxes will result in decreased future production.

# # # # #

TESTIMONY OF

LARRY M. SMEDLEY

EXXON COMPANY, U.S.A.

HOUSE BILL 545

MY NAME IS LARRY SMEDLEY, I AM AREA MANAGER FOR EXXON COMPANY, U.S.A. IN ALASKA. SITTING WITH ME IS TED GHIZ, OUR ALASKA TAX ATTORNEY.

I WANT TO THANK YOU FOR GIVING US THIS OPPORTUNITY TO EXPLAIN WHY HOUSE BILL 545 WOULD BE BAD FOR THE STATE OF ALASKA.

MY REMARKS WILL FOCUS ON HOW THIS BILL WOULD JEOPARDIZE THE RECOVERY OF ADDITIONAL OIL FROM PRUDHOE BAY, WHICH IS THE MOST SIGNIFICANT OIL FIELD IN THE STATE.

WE ARE ALL AWARE OF THE UNCERTAINTY IN ALASKA ABOUT FUTURE STATE REVENUES. FALLING OIL PRICES ON A WORLD SCALE COUPLED WITH THE ANTICIPATED DECLINE OF PRUDHOE BAY PRODUCTION MAKE IT APPARENT THAT BOTH THE STATE AND OIL PRODUCERS FACE DECLINING REVENUES IN THE NEXT FEW YEARS.

HOWEVER, WHILE OUR TOTAL OIL INCOME WILL DECLINE, CURRENT TAX LAWS PROVIDE THE STATE AN INCREASING SHARE OF OIL REVENUES. THIS IS ILLUSTRATED ON THE CHART. THESE FIGURES WERE DEVELOPED BY THE ALASKA DEPARTMENT OF REVENUE. THEY SHOW THAT THE STATE'S SHARE OF NET PRODUCTION REVENUES HAS GROWN DRAMATICALLY.

(CHART UP)

IN 1982, WHEN ALASKA'S TAX LAWS WERE LAST CHANGED, THE 31% SHARE WAS THOUGHT BY STATE OFFICIALS TO BE "FAIR". THE STATE'S SHARE HAS SINCE GROWN TO 41% AND IS PROJECTED TO GROW TO 47% IN 1990 UNDER EXISTING TAX LAWS. HOUSE BILL 545 WOULD INCREASE SEVERANCE TAXES AND CAUSE THE STATE'S SHARE TO INCREASE TO EVEN HIGHER LEVELS.

(CHART DOWN) WE BELIEVE THAT THE STATE IS GETTING A VERY LARGE SHARE UNDER EXISTING LAW AND NO FORM OF INCREASED OIL TAXATION IS WARRANTED.

HOWEVER, HB 545 PROPOSES TO COLLECT ADDITIONAL SEVERANCE TAXES BY ALTERING THE ECONOMIC LIMIT FACTOR OR ELF. ACCORDING TO OMB, THE IDEA IS TO, QUOTE "INCREASE THE EFFECTIVE SEVERANCE TAX RATE ON LARGE, PRODUCTIVE FIELDS SUCH AS PRUDHOE BAY AND KUPARUK, AND REDUCE THE EFFECTIVE TAX RATE ON THE SMALL, MARGINAL FIELDS THAT MOST NEED THE ECONOMIC BENEFITS OF THE LOWER TAX BURDEN." UNQUOTE. THEIR ASSUMPTION IS THAT THE TAX INCREASE WON'T HURT MAJOR FIELDS LIKE PRUDHOE BAY. THIS ASSUMPTION IS NOT CORRECT.

IN FACT, MANY FUTURE PROJECTS TO INCREASE OIL RECOVERY AT PRUDHOE BAY ARE VERY MARGINAL INVESTMENTS JUST LIKE THE SMALLER FIELDS TO BE DEVELOPED ON THE NORTH SLOPE. HB 545 WOULD MAKE MARGINAL PROJECTS AT PRUDHOE BAY UNPROFITABLE. THE RESULT WOULD BE LESS TOTAL OIL RECOVERY FROM PRUDHOE BAY AND CONSEQUENTLY LESS ROYALTY AND TAXES FOR THE STATE OF ALASKA AND FEWER JOBS FOR ALASKANS.

LET'S LOOK AT THE PRUDHOE BAY SITUATION A LITTLE CLOSER TO BETTER UNDERSTAND WHAT IS AT RISK.

SINCE THE INITIAL DEVELOPMENT, WE HAVE EVALUATED AND JUSTIFIED SEVERAL PROJECTS TO INCREASE RECOVERY AT PRUDHOE BAY. THESE PROJECTS HAVE INCLUDED WELLS ON CLOSER SPACING, ENLARGEMENT OF FLUID HANDLING FACILITIES, ARTIFICIAL LIFT AND WATER INJECTION. THE COST PER BARREL FOR THESE PROJECTS TO INCREASE RECOVERY WAS TWICE THE COST OF THE INITIAL DEVELOPMENT.

THIS TREND TOWARD LESS PROFITABLE PROJECTS WILL CONTINUE. FUTURE PROJECTS WHICH ARE BEING PLANNED INCLUDE WELLS ON EVEN CLOSER SPACING AND IN THINNER OIL COLUMNS, ADDITIONAL ENHANCED OIL RECOVERY, DEVELOPMENT OF SMALLER RESERVOIRS, AND NEW IDEAS SUCH AS HORIZONTAL WELLS. THE COST PER BARREL RECOVERED FOR THESE PROJECTS WILL BE MORE THAN FIVE TIMES AS MUCH AS THE INITIAL DEVELOPMENT. IN THE FUTURE, OTHER MARGINAL PROJECTS WILL BE DEFINED AS RESEARCH CONTINUES.

JUST HOW MANY OF THESE MARGINAL PROJECTS WILL BE JUSTIFIED AT PRUDHOE BAY? HOW MUCH OF THE MORE THAN 10 BILLION BARRELS TO BE LEFT WITH CURRENT DEVELOPMENT CAN BE RECOVERED? PERHAPS A BILLION BARRELS OR MORE?

NO ONE KNOWS FOR SURE BECAUSE THE ECONOMICS ARE MARGINAL AND A NUMBER OF FACTORS WILL HAVE AN IMPACT ON THE LIMIT TO WHICH SUCH PROJECTS CAN BE JUSTIFIED.

BUT ONE THING IS FOR SURE, HOUSE BILL 545 WOULD PLACE FUTURE MARGINAL PROJECTS AT PRUDHOE BAY IN JEOPARDY.

(CHART UP)

THIS CHART SHOWS AN EXAMPLE OF THE IMPACT OF HOUSE BILL 545 ON A MARGINAL BARREL AT PRUDHOE BAY IN THE MID-1990'S. WE HAVE USED A WELLHEAD VALUE OF $20 PER BARREL AND A TOTAL PRUDHOE BAY PRODUCING RATE OF 500 kBOPD. THESE WERE TAKEN FROM THE ALASKA DEPARTMENT OF REVENUE PROJECTIONS. (THE AVERAGE WELL RATE WOULD BE ABOUT 500 BOPD.) FOR THIS EXAMPLE, WE HAVE SHOWN A MARGINAL BARREL INVESTMENT AND OPERATING COST OF $15 PER BARREL. ACTUAL COSTS WOULD, OF COURSE, VARY FOR DIFFERENT PROJECTS, BUT THIS COST IS WITHIN THE RANGE OF WHAT WE EXPECT TO FACE FOR FUTURE MARGINAL PROJECTS AT PRUDHOE BAY.

STATE ROYALTY, PROPERTY AND INCOME TAXES TOTAL $3.50 PER BARREL. UNDER CURRENT LAW, SEVERANCE TAX WOULD BE 70¢ PER BARREL, LEAVING A MARGINAL BARREL PROFIT OF ONLY $0.80 UNDER THE EXISTING LAW (BEFORE FEDERAL INCOME TAX).

NOW CONTRAST THAT WITH THE MARGINAL BARREL ECONOMICS THAT WOULD RESULT FROM HB 545. THE CRUDE VALUE AND COSTS ARE THE SAME. BUT HB 545 WOULD TRIPLE THE SEVERANCE TAX FROM 70¢ TO $2.10 PER BARREL. THE RESULT IS A LOSS OF 60¢ PER BARREL.

THIS EXAMPLE SHOWS THAT THE PROPOSED SEVERANCE TAX INCREASE SIGNIFICANTLY REDUCES THE INCENTIVE TO PRODUCE MARGINAL BARRELS. REGARDLESS OF THE PROFIT LEVEL REQUIRED TO BARELY JUSTIFY A MARGINAL INVESTMENT WITH THE CURRENT TAX LAW, TRIPLING OF THE SEVERANCE TAX WOULD MAKE THAT PROJECT UNECONOMIC.

(CHART DOWN)

LOSS OF MARGINAL PROJECTS AT PRUDHOE BAY WILL REDUCE THE RATE OF PRODUCTION AND ULTIMATE OIL RECOVERY, THEREBY REDUCING JOBS,

STATE ROYALTY AND TAX INCOME. THESE IMPACTS WERE NOT CONSIDERED IN THE OMB ANALYSIS OF HB 545.

WHEN THESE IMPACTS ARE CONSIDERED, IT IS CLEAR THAT HB 545 IS NOT IN THE BEST INTEREST OF THE STATE OF ALASKA.

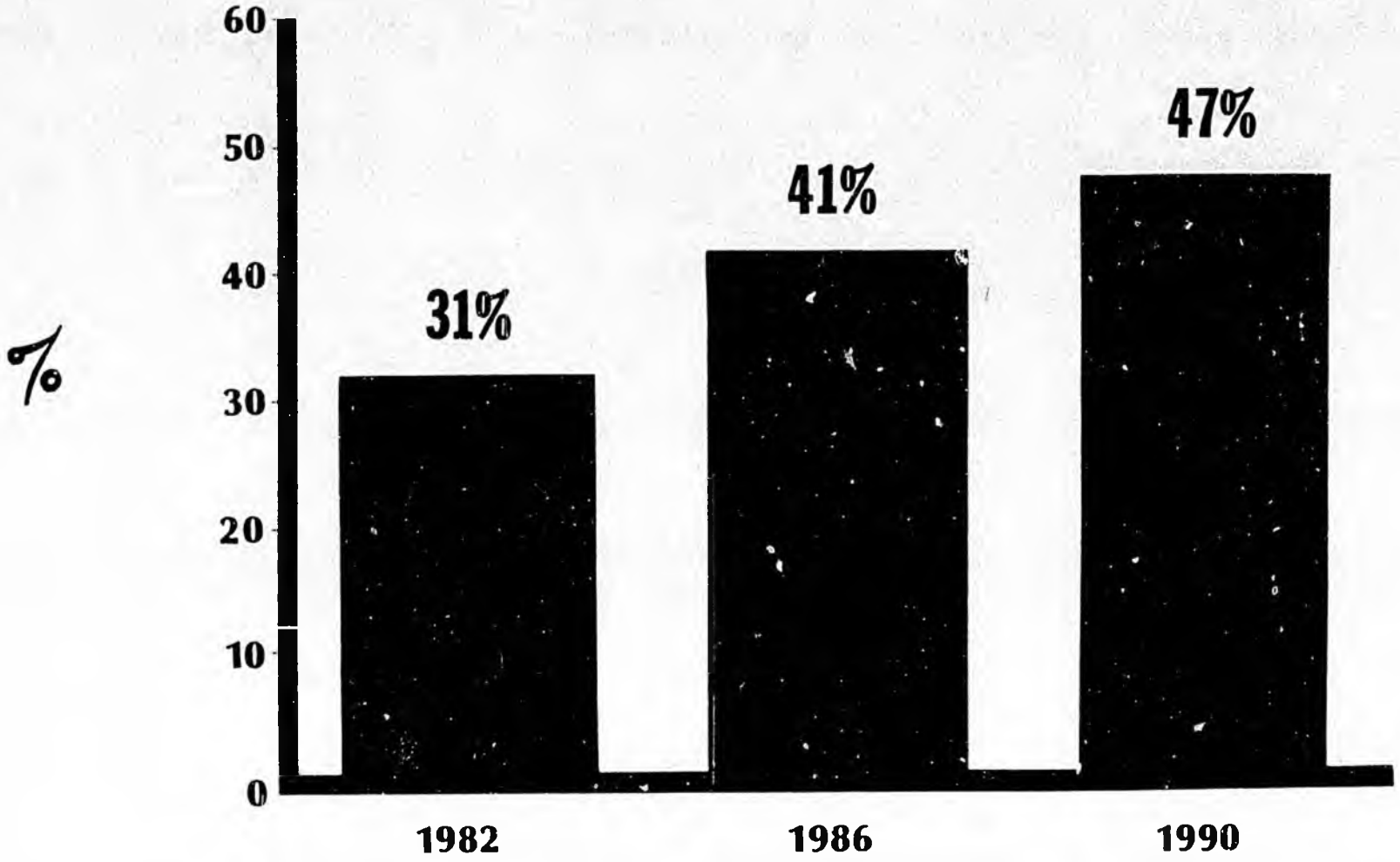
IN FACT, IT IS UNFORTUNATE THAT INCREASED TAXATION IS EVEN BEING DISCUSSED. SUCH PROPOSALS CREATE UNCERTAINTY. AND IN TODAY'S ENVIRONMENT, INVESTMENT DECISIONS ARE VERY DIFFICULT EVEN WITHOUT THIS ADDED UNCERTAINTY.

WE URGE THE HOUSE FINANCE COMMITTEE TO DROP CONSIDERATION OF HB 545 AND TO ENDORSE A POLICY OF STABLE TAXATION TO ENCOURAGE THE INVESTMENTS NECESSARY FOR DEVELOPMENT OF ADDITIONAL RESOURCES IN ALASKA. SUCH POLICY WILL BENEFIT ALL ALASKANS.

LMS/SJM/144
2/13/86

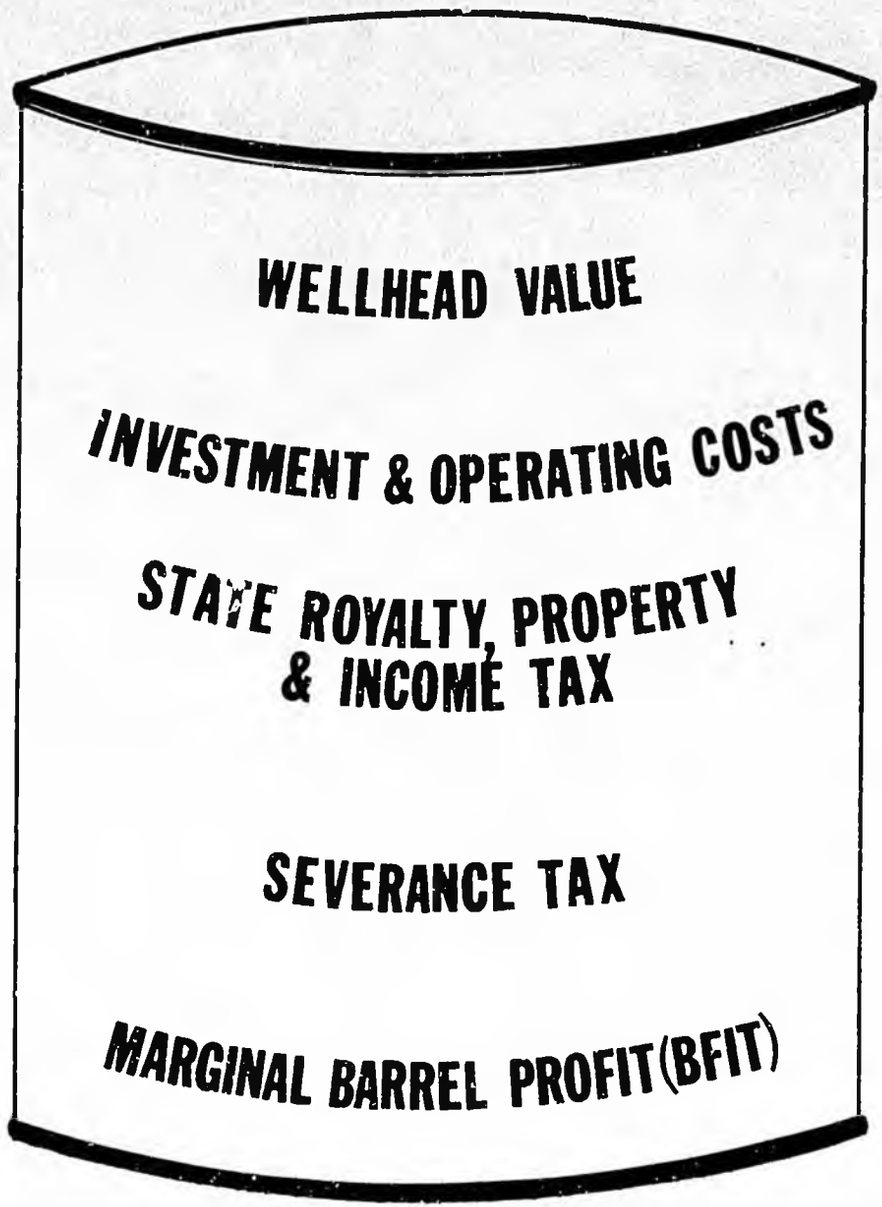
ALASKA SHARE OF OIL PRODUCTION

REVENUE UNDER EXISTING LAW



Source:Alaska Department of Revenue, October, 1985
Average Expected Case.

Prudhoe Bay
Marginal Barrel



CURRENT		PROPOSED
$20.00	WELLHEAD VALUE	$20.00
15.00	INVESTMENT & OPERATING COSTS	15.00
3.50	STATE ROYALTY, PROPERTY & INCOME TAX	3.50
.70	SEVERANCE TAX	2.10
+ $ .80	MARGINAL BARREL PROFIT(BFIT)	− $ .60

Statement of John Miller on behalf of BP Alaska Exploration Inc. before the House Finance Committee Hearing on HB 545. February 14, 1986

Good afternoon. My name is John Miller, Alaska Area Manager for BP Alaska Exploration Inc. With me are Robin Pinchbeck, Manager of Kuparuk Development, and Joel Niegelberg, Tax Manager, BP North America. BP Alaska Exploration Inc. (BPAE) welcomes this opportunity to address the House Finance Committee on the severance tax changes proposed in House Bill No. 545, and to put the record straight regarding some of the assertions which appear in the discussion paper prepared by the Office of Management and Budget in support of this bill. Despite the long history of BP involvement in Alaskan exploration and production, including our current involvement as 29% owners of the Kuparuk River Field, this is the first time that BPAE has given testimony in Alaska on oil production tax matters.

BPAE is in a business which undertakes high risks in the exploration for, and production of, oil and gas. The risks are undertaken in the expectation of reaping commensurate rewards in those ventures which are successful. The rewards must remunerate the many failures which are in the nature of the business of exploration and production. Since the formation of BP Alaska Exploration in 1978, we have invested one billion dollars in Kuparuk development alone. It is a misconception to suppose that Kuparuk is a highly profitable field, for under

BP's best estimate of future oil prices it will be well into the 1990's before we recoup our original Kuparuk investment, let alone start to generate cash to offset the additional half billion dollars invested so far in other Alaskan exploration.

Our Kuparuk investment was made recognizing both the technical and price risks which lay ahead. However, with price risk now manifest in an extreme form, it is not the time to introduce adverse fiscal changes. The fall in oil prices adversely affects State revenues. However, oil company revenues have been more seriously damaged. To take further profits from the oil industry at this time would only compound the problem and leave the companies with less cash for future exploration and development. Now is not the time to make decisions on oil taxation which will have far-reaching and almost certainly damaging effects on the Alaskan oil industry. This is particularly true in view of the extraordinary degree of uncertainty over oil prices; seldom can the picture have been less clear; seldom could it have been more difficult to make investment or tax decisions with any confidence. It would be far better to wait for the dust to settle before major decisions are made.

Another misconception concerns the value of Kuparuk's

productivity. A 1000 barrel per day production well-rate and a 250,000 barrel per day field rate are undoubtedly high by Lower 48 standards. However, in relation to capital and operating costs on the North Slope, and taking into consideration distance from markets, field rates have to be high to make economic sense of development; even the Kuparuk field is currently at the economic margin.

BPAE further challenges the assumption of the discussion paper that the proposed tax change can achieve its stated aim - to encourage further oilfield development on the North Slope. The most likely additional contributors to the State of Alaska's long term revenues are those reserves which have already been identified but which will prove difficult to extract. In particular, within the Kuparuk River Unit we see potential exploitation in the coming thirty years of some 3 billion barrels of as yet undeveloped reserves. These will come from enhanced recovery in the Kuparuk River Reservoir itself, and from development of the West Sak and Ugnu accumulations. These real opportunities require further massive capital investment. BPAE's contribution is likely to be more than two billion dollars in current money. Only companies like BPAE will consider undertaking the huge technical and price risks associated with such investments.

The individual investments are huge and they require innovative and expensive technology to achieve economic field rates. Our analysis shows that both Ugnu and West Sak developments, which require high production to offset corresponding high capital and operating costs, are likely to be discouraged by the proposals under discussion. We suggest it is in the State of Alaska's best interest to encourage development of these resources.

In summary, BPAE submits that Kuparuk is not a good candidate for additional taxation. After-the-fact tax changes create a climate of investment uncertainty not conducive to continued risk-taking. Additional taxation burdens in the present oil price environment will make the investment decisions on Kuparuk enhanced recovery, West Sak and Ugnu development, and future exploration even more difficult.

MR. CHAIRMAN, MEMBERS OF THE FINANCE COMMITTEE, I AM BRIAN DAVIES, VICE PRESIDENT, PRUDHOE BAY PROGRAMS FOR SOHIO ALASKA PETROLEUM COMPANY. MY RESPONSIBILITIES INCLUDE PLANNING AND EVALUATION OF RECOVERY PROJECTS THAT WILL INCREASE PRODUCTION FROM THE PRUDHOE BAY FIELD.

WITH ME IS BOB VAN HOOK, TAX COUNSEL FOR SOHIO ALASKA PETROLEUM COMPANY.

SOHIO APPRECIATES THE OPPORTUNITY TO TESTIFY BEFORE YOU ON HOUSE BILL 545. ADDITIONALLY, WE WILL SUBMIT WRITTEN COMMENTS ON H.B. 502 AND PROPOSALS FOR PREPAYMENT.

WE ARE OPPOSED TO THE REVISION TO THE ECONOMIC LIMITATION FACTOR (ELF) CONTAINED IN H.B. 545 FOR SEVERAL REASONS. FIRST, WE VIEW THE CHANGE AS A TAX INCREASE. THERE IS SUBSTANTIAL ADDITIONAL TAX COST VS. EXISTING LAW. OUR INVESTMENT DECISIONS UNDERSTANDABLY HAVE BEEN BASED ON EXISTING LAW.

SECOND, JUST LIKE THE STATE, WE ARE SUFFERING FROM DECLINING OIL PRICES. AS A RESULT, SOHIO HAS GONE THROUGH A PAINFUL BELT TIGHTENING IN THE LAST SEVEN MONTHS. IN THAT PERIOD, BUSINESSES HAVE BEEN SOLD, PERSONNEL HAVE BEEN SUBSTANTIALLY REDUCED, AND THE EXPLORATION BUDGET HAS BEEN SUBSTANTIALLY CUT FOR 1986. INCREASING TAXES WOULD FURTHER LIMIT SOHIO'S ABILITY TO EXPLORE FOR AND PRODUCE OIL IN ALASKA.

THIRD, A RESULT OF MODIFYING THE ELF IN A MANNER THAT TAXES LARGER FIELDS SUCH AS PRUDHOE AND KUPARUK MORE HEAVILY IS THAT THERE WILL BE AN EARLIER DECLINE AND LOWER ULTIMATE RECOVERY FROM THESE FIELDS.

ADDITIONALLY, THIS BILL'S STATED GOAL OF ENCOURAGING THE DEVELOPMENT OF MARGINAL FIELDS IS <u>NOT MET</u> WITH REGARD TO SMALLER FIELDS LIKE ENDICOTT. CONTRARY TO OMB'S ANALYSIS, OUR OWN REVIEW SHOWS NO SIGNIFICANT REDUCTION IN SEVERANCE TAXES FOR THE ENDICOTT FIELD UNDER THIS PROPOSAL.

THE PROPOSAL FOR INCREASING TAXES ON LARGER, MATURE FIELDS, SUCH AS PRUDHOE BAY AND KUPARUK, FAILS TO RECOGNIZE THAT WITHIN SUCH FIELDS OPPORTUNITIES ARE AVAILABLE TO INCREASE THE OVERALL RECOVERY. THESE OPPORTUNITIES ARE GENERALLY MARGINALLY ECONOMIC AND THEY REQUIRE GREATER EXPENDITURES FOR EACH INCREMENTAL BARREL. THE ULTIMATE DEVELOPMENT OF EVERY FIELD IS GOVERNED BY THESE DECISIONS.

FOR EXAMPLE, ENHANCED OIL RECOVERY PROJECTS DESIGNED TO RECOVER BARRELS OF OIL THAT WOULD BE LEFT IN THE GROUND BY TRADITIONAL METHODS ARE VERY EXPENSIVE. INCREASING THE EFFECTIVE SEVERANCE TAX RATE ON A FIELD WILL DISCOURAGE THE ONGOING RESEARCH THAT THE COMPANIES ARE CONDUCTING RELEVANT TO DEVELOPING NEW ENHANCED OIL RECOVERY METHODS. IT IS NOT PRUDENT TO DISCOURAGE SUCH EFFORTS INASMUCH AS THE STATE WILL BE A MAJOR BENEFICIARY OF SUCH ENHANCED RECOVERY PROJECTS.

ON A LESS TECHNICAL BASIS, MORE WELLS IN THESE LARGER FIELDS WILL RESULT IN MAINTAINING MAXIMUM PRODUCTION <u>LONGER</u> AND WILL INCREASE THE ULTIMATE RECOVERY OF OIL. AGAIN, BOTH THE RISK TAKERS AND THE STATE GAIN FROM THESE ACTIONS.

THE PROPOSED LEGISLATION DISCOURAGES THE DRILLING OF ADDITIONAL WELLS FOR TWO REASONS. FIRST, ALL PRODUCTION WILL BE TAXED AT A HIGHER ABSOLUTE RATE. SECOND, THE INCENTIVE TO DRILL NEW WELLS WHICH IS CONTAINED IN EXISTING STATUTES IS SUBSTANTIALLY DECREASED.

THE DECISION TO DRILL ADDITIONAL WELLS INVOLVES A NUMBER OF FACTORS - ASSUMPTIONS ON THE PRICE OF OIL, TAX STABILITY, RESERVOIR PERFORMANCE AND GEOLOGICAL PREDICTIONS AS WELL AS COST ESTIMATES. THE RESULTS ARE TESTED AGAINST ALTERNATIVE USES OF FUNDS. BECAUSE THE DECISION IS BASED ON A COMPOSITE OF FACTORS, IT IS IMPOSSIBLE TO ASSESS THE <u>EXACT EXTENT</u> OF REDUCED FIELD DEVELOPMENT RESULTING FROM IMPLEMENTATION OF THIS PROPOSAL. I CAN SAY THAT THIS CHANGE <u>WILL</u> CURTAIL FIELD DEVELOPMENT.

EVEN WHERE A PARTICULAR OIL AND GAS FIELD HAS A LONG LIFE SUCH AS PRUDHOE BAY, INDIVIDUAL WELLS IN A FIELD BECOME MARGINAL OR REACH THEIR ECONOMIC LIMIT BEFORE THE LIFE OF OTHER WELLS IN THE FIELD. INCREASING THE ELF BASED ON PRODUCTION LEVELS FROM THE TOTAL FIELD WILL RESULT IN PREMATURE SHUT-IN OF SUCH WELLS AND WILL DISCOURAGE THE EXTENSIVE WELL WORKOVER ACTIVITIES THAT WILL BE REQUIRED TO MAXIMIZE RECOVERY FROM THE FIELD.

WE FEEL THAT THE PROPOSAL BEFORE YOU TO CHANGE THE SEVERANCE TAX ECONOMIC LIMIT FACTOR IS NOT IN THE INTEREST OF THE STATE. BEFORE ANY DECISION IS MADE, HOWEVER, THE SHORT AND LONG TERM IMPACTS FROM SUCH CHANGE SHOULD BE THOROUGHLY STUDIED TO MAKE SURE THAT THE POTENTIAL IMPACTS ON FUTURE INVESTMENT DECISIONS IN THE STATE ARE FULLY UNDERSTOOD. WE FEEL THAT A THOROUGH STUDY OF LONG-RANGE TAX POLICY SHOULD BE CONDUCTED BEFORE MAKING ANY MAJOR CHANGES TO THE EXISTING TAX STRUCTURE. SUCH APPROACH SHOULD ASSIST IN IDENTIFYING FOR THE STATE THE TAX STRUCTURE WHICH MAXIMIZES THE STATE'S REVENUES IN SUCH A WAY AS TO CONTINUE FOSTERING ECONOMIC GROWTH IN THE STATE.

IN SUMMARY, WE ARE OPPOSED TO H.B. 545 FOR THESE REASONS.

1. H.B. 545 IS A TAX INCREASE AT A TIME WHEN THE OIL INDUSTRY IS BEING NEGATIVELY IMPACTED BY LOW PRICES.

2. IN CONTRAST WITH THE EXISTING ELF, H.B. 545 DISCOURAGES THE FULL DEVELOPMENT OF LARGE FIELDS BY REDUCING OR ELIMINATING THE MARGINAL ECONOMICS OF ENHANCED OIL RECOVERY; BY INCREASING THE COST OF NEW WELLS; AND BY REDUCING INCENTIVES TO MAINTAIN EXISTING PRODUCTION THROUGH WELL WORKOVERS.

3. AS OUR ANALYSIS OF THE IMPACT ON ENDICOTT SHOWS, H.B. 545 FAILS IN ITS STATED PURPOSE OF GIVING SEVERANCE TAX RELIEF TO ALL MARGINAL FIELDS.

PRUDHOE BAY CONTAINS 13 BILLION BARRELS OF OIL WHICH WILL <u>NOT BE</u> RECOVERED UNDER CURRENT DEVELOPMENT PLANS. SIMILARLY, KUPARUK CONTAINS 3.5 BILLION BARRELS THAT WILL BE LEFT. THESE BARRELS REPRESENT LARGE RESOURCES, PART OF WHICH ARE MARGINAL. H.B. 545 IS A DISINCENTIVE TO ATTEMPT RECOVERY OF ANY OF THOSE ADDITIONAL BARRELS.

THANK YOU FOR YOUR ATTENTION.

STATE OF ALASKA
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907-465-3800

M E M O R A N D U M February 10, 1986

SUBJECT: Prepayment of disputed taxes
(Work Order 14-1715)

TO: Representative Sam Cotten

FROM: Theresa L. Bannister TB
Legislative Counsel

This memo accompanies the draft of your bill relating to payment of oil and gas properties production tax and including a provision requiring payment of the entire amount of taxes due within 30 days even if the tax is appealed.

Article 1, section 7 of the Alaska constitution requires an opportunity for a hearing before a person is deprived of property except in certain situations not relevant here. Etheredge v. Bradley, 502 P.2d 146, 151 (Alaska 1972). It is unclear what type of hearing is necessary to satisfy Etheredge. It is possible the informal conference under AS 43.05.240 that begins the appellate procedure would satisfy Etheredge. The Etheredge case did not deal with taxes and was based in large part on a U.S. Supreme Court case that has been greatly limited by subsequent U.S. Supreme Court decisions. See Fuentes v. Shevin, 407 U.S. 67, 32 L.Ed.2d 556, 92 S.Ct. 1983 (1972), Mitchell v. W.T. Grant Co., 416 U.S. 600, 40 L.Ed.2d 406, 94 S.Ct. 1895 (1974), and New Motor Vehicle Board v. Orrin W. Fox Co., 434 U.S. 1345, 54 L.Ed. 439, 98 S.Ct. 359 (1977). However, the holding in Etheredge has been cited with approval in subsequent Alaska Supreme Court cases, so the Etheredge hearing requirement appears to still be in effect. See Graham v. State, 633 P.2d 211, 216 (1981).

TLB:mkr
M3:005

Enclosure

14-1715
Bannister
2/10/86

IN THE HOUSE BY COTTEN

HOUSE BILL NO.

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to the payment of oil and gas properties production taxes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 43.55 is amended by adding new sections to read:

Sec. 43.55.033. INTERIM PAYMENT OF ADDITIONAL TAX DUE. (a) Within 60 days of the end of each six-month period beginning January 1, 1987, the department shall determine and publish an interim value for oil from each oil-producing field or area in the state for each month of the preceding six-month period for the market where the oil is sold.

(b) If a producer reports a monthly price under AS 43.55.030 that is less than the interim value of the oil determined under (a) of this section for the month covered by the producer's report, the producer shall pay to the department the additional tax estimated to be due for the difference between the tax due or paid on the reported price and the tax due on the interim value within 30 days following the publication of the interim value by the department.

(c) The department may defer taking action on a claim by a producer for a refund of the additional tax paid under (b) of this section until the department makes a final determination of the tax due from the producer under this chapter for the period covered by the claim.

(d) The additional tax due under (b) of this section is

delinquent and accrues interest under AS 43.55.060 from the day the tax was originally due under AS 43.55.020 to the day the additional tax is paid.

(e) The additional tax that a producer owes under (b) of this section becomes delinquent if not paid by the 31st day following the department's publication of the interim value for the month for which the estimated tax is owed.

(f) The department shall allow and pay interest under AS 43.05.-280 on that part of the payment of additional tax made by a producer under (b) of this section that exceeds the tax finally determined by the department to be due for the period for which the producer paid the additional tax.

Sec. 43.55.037. PAYMENT UNDER PROTEST. A producer shall pay a tax due to the department under this chapter within 30 days after the date the tax was due even if the producer pursues the remedies provided under AS 43.05.240.

* Sec. 3. This Act takes effect immediately in accordance with AS 01.-10.070(c).

STATE OF ALASKA

DEPARTMENT OF LAW

OFFICE OF THE ATTORNEY GENERAL

BILL SHEFFIELD, GOVERNOR

REPLY TO:

☒ *1031 W 4th AVENUE*
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ANCHORAGE, ALASKA 99501
PHONE: (907) 276-3550

☐ *1st NATIONAL CENTER*
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☐ *POUCH K - STATE CAPITOL*
JUNEAU, ALASKA 99811
PHONE: (907) 465-3600

February 25, 1986

Louann Cutler
Special Assistant to Representative Adams
Pouch V
Juneau, Alaska 99811

Dear Louann,

Enclosed and telexed to you please find the prepayment bill and the bill to amend Court Rule 603. I am sending you the hard copies by DHL today.

Please call me with any questions you may have.

Very truly yours,

HAROLD M. BROWN
ATTORNEY GENERAL

By: Karen L. Loeffler
Karen L. Loeffler
Assistant Attorney General

03-C5LH

BY THE FINANCE COMMITTEE

IN THE HOUSE

HOUSE BILL NO.

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act amending Rule 603 of the Rules of Appellate Procedure of the State of Alaska; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. Appellate Rule 603(a) is amended to read:

a) Civil Appeals.

(1) Automatic Stay. Stays of execution or enforcement of district court judgments shall be as set forth in District Court Civil Rule 24(a).

(2) Stay Upon Appeal - Supersedeas Bond. When an appeal is taken, the appellant may obtain a stay of proceedings to enforce the judgment by filing a supersedeas bond with the district court, or with the superior court in administrative appeals, not later than 30 days after the date shown in the clerk's certificate of distribution on the judgment or the date of mailing or delivery of the administrative order appealed from. The bond shall be conditioned for the satisfaction in full of any judgment (including interest and costs) which may be given against the appellant by the superior court, or for satisfaction in full of the judgment (including interest and costs) of the district court if the appeal is dismissed. The bond shall comply with the provisions of Civil Rule 80.

(3) Appeals of Disputed Oil and Gas Taxes. Notwithstanding subdivision 2 of this rule, the appellant may not obtain a stay of

proceedings by filing a supersedeas bond with the superior court in appeals of disputed oil and gas taxes under AS 43.05.240(e).

4 [3] Proceedings on Stay. When an appeal is taken, the district court judge or magistrate shall enter a written order indicating whether or not the proceedings to enforce a judgment have been stayed. If the proceedings are stayed, and process has been issued to enforce the judgment, the judge or magistate must recall the same by written notice to the officer holding the process. Thereupon the process must be returned to the magistrate, and all property seized or levied upon by virtue of such process must be released if it has not been sold, and in cases of civil arrest, the person arrested must be released from custody. This subdivision of this rule shall not be construed as making any stay retroactive or as invalidating any proceedings or levies prior to the time the stay becomes effective.

* Sec. 2. This Act takes effect upon the effective date of an Act relating to the payment of oil and gas income and properties production taxes; and providing for an effective date.

BY THE FINANCE COMMITTEE

IN THE HOUSE

HOUSE BILL NO.

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to the payment of oil and gas income and properties production taxes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 43.05.240 is amended by adding a new subsection to read:

(e) A taxpayer aggrieved by the action of the department in fixing the amount of a tax under AS 43.20.072, former AS 43.21 (Repealed effective January 1, 1982; sec. 19, ch. 116, SLA 1981), or AS 43.55, who wishes to request a formal hearing after the informal conference, shall pay the taxes, penalties, and interest declared to be due in the decision resulting from the informal conference. A taxpayer who has elected to request a formal hearing in place of the informal conference under the procedures set out in (b)(1) of this section shall pay the taxes, penalties, and interest declared to be due in the notice of assessment required to be given the taxpayer by the department. The taxes, penalties, and interest due shall be paid within the time limits for requesting a formal hearing set out in (b) of this section.

* Sec. 2. AS 43.05 is amended by adding a new section to read:

Sec. 43.05.242. INTERIM DEPOSIT OF AMOUNTS PAID UNDER PROTEST. (a) There is created in the Department of Revenue the interim depository of disputed oil and gas taxes trust account.

(b) The department shall deposit amounts paid by a taxpayer under AS 43.05.240(e) into the interim depository of disputed oil and gas taxes trust account and shall retain those amounts in that account until final resolution of the taxpayer's appeal, by settlement or otherwise, at which time the amounts determined to be due the state must be deposited in the general fund and the amounts determined to be due the taxpayer must be paid to the taxpayer out of the interim depository of disputed oil and gas taxes trust account.

* Sec. 3. AS 43.20.270(a) is amended to read:

(a) The department may collect taxes, with interest, penalties, and other additional amounts permitted by law, by distraint and sale, in the manner provided by this section, of the property of a person liable to pay the taxes, interest, penalties, or other additional amounts who neglects or refuses to pay them within 10 days from the mailing of notice and demand for payment of them, and who has not appealed from the assessment of the taxes, interest, penalties, and other additional amounts under AS 43.05.240. <u>The department's authority to collect taxes, with interest, penalties, and other additional amounts permitted by law, in the manner provided in this section, applies to a taxpayer who neglects or refuses to pay the amounts due under AS 43.05.240(e).</u>

* Sec. 4. This Act applies to all appeals under AS 43.20.072, former AS 43.21, and AS 43.55 currently pending before the department as of the effective date of the Act.

* Sec. 5. This Act takes effect immediately in accordance with AS 01.10.070(c).

April 18, 1986

POTENTIAL "ELF" PROBLEM

Alaska's petroleum severance tax is a major source of the state's revenues, an estimated $770.5 million of the $2077.6 million projected for FY 87. North Slope producers currently pay the full 15 percent nominal severance tax rate, with a downward adjustment scheduled to begin in 1987 on the Prudhoe Bay field.

The formula for the adjustment of the nominal severance tax rate is called the economic limit factor, fondly known as the ELF. Under the ELF, actual severance tax paid equals [ELF X statutory tax rate]. The severance tax features an 80¢/barrel minimum tax, supposedly an insulating barrier from low oil prices. But, the 80¢/barrel minimum tax is also subject to the ELF under AS 43.55.011(a). The ELF is not operative until its calculated value is .7 or less, or until a field begins its eleventh year of production.

The ELF formula is:

$$ELF = (1 - PEL/TP)^{[(460 \times WD)/PEL]}$$

This unwieldy formula can be simplied to the following:

$$\text{Current ELF} = (1 - 300/\text{well production})^{1.533}$$

(See Attachment A for further explanation of terms and detail).

The controlling factor of the ELF formula is the PEL. Put simply, PEL is the amount of production needed to cover direct operating costs. Under current statute, that amount is specified to be 300 barrels per day. But, as wellhead values decrease, PEL increases since it takes more barrels to cover actual operating costs. The producers can request a change in the official PEL, based on one month's market prices and four consecutive months' of operating costs. Given the predictions that prices will stay low, on average, for the next 18 months, then operating costs will be proportionately larger as a percentage of the total production than in the past. As the PEL increases, the value of ELF decreases, eventually becoming zero. A zero ELF means, of course, zero severance taxes.

Low wellhead prices make it conceivable that producers will request the necessary administrative hearing(s) to increase the PEL which will, in turn, decrease the ELF, which will, in turn, decrease the amount of severance tax received by the State. The Dept. of Revenue calculates that at today's prices the PEL is greater than 300 barrels/day at three North Slope fields - Kuparuk, Milne Point and Lisburne.

The ELF for Prudhoe Bay production becomes sensitive to price after wellhead prices go below $2/barrel, or $11/barrel on the West Coast and $13.50 on the Gulf. The Prudhoe Bay wellhead value becomes zero at a West Coast market price of $6.50 and a Gulf Coast price of $9.00. Thus, it may be to the producers' economic advantage to ask for a new Prudhoe Bay PEL/ELF calculation if the price falls to $11 West Coast and $13.50 Gulf. Prudhoe Bay will provide between 83.7 and 86 percent of the expected FY87 production.

The ELFs for the Kuparuk, Milne Point and Lisburne fields are considerably more sensitive to probable oil prices than is Prudhoe Bay. The ELF for Kuparuk becomes sensitive to prices when the wellhead price falls below $3/bbl. The Kuparuk ELF reaches .7 at approximately $12.50 West Coast and $15.00 Gulf, and drops to zero at $8.10 West Coast and $10.60 Gulf. Kuparuk will provide between 11.8 and 12 percent of the expected FY87 production.

The ELF for Milne Point becomes sensitive to prices when the wellhead falls below $5.00/bbl. The Milne Point ELF reaches .7 at approximately $13.70 West Coast and $16.20 Gulf, and drops to zero at $10.30 West Coast and $12.80 Gulf. Milne Point will provide between 1.6 and 2 percent of the expected FY87 production.

Production at Lisburne is still scheduled to begin in December 1986 or early 1987. The Lisburne ELF also becomes sensitive to prices when the wellhead drops below $5.00/bbl. The Lisburne ELF reaches .7 at approximately $10.60 West Coast and $13.10 Gulf, and drops to zero at $7.20 West Coast and $9.50 Gulf. If Lisburne goes on line on schedule, it will provide about 2.7 percent of the expected FY87 production.

To trigger the re-evaluation of the value of the PEL/ELF, the producers must request an administrative hearing, either by February 15 of the affected year or within the first six months after commencement of a field's production. Once set, the ELF cannot be changed during that calendar year [AS 43.55.013(d)].

For Prudhoe Bay, the ELF kicks in automatically under current statute on June 17, 1977, although a change could take place as early as the beginning of 1987. A changed PEL/ELF could be established for Kuparuk, effective January 1, 1987, while different PEL/ELFs for both Milne Point and Lisburne fields could be established retroactive to the beginning of production as both fields are or will be in their respective first six months of production. Once the PEL/ELF is changed, its new valuation is set for the calendar year. Whether a change takes place depends on market prices and the producers' willingness to request the necessary administrative hearing this fall. Under the provisions of AS 43, the hearing would be confidential and action would proceed without any notification to the legislature.

Also, the statute does not provide the Dept. of Revenue with discretionary powers. The direct operating costs are tightly and narrowly defined in statute [AS 43.55.013(e)]. Thus, the request would be evaluated on mathematics -- does it now take more than 300 barrels per day to pay direct operating costs? At this time it appears that the actual PEL is more than 300 barrels/day in the Kuparuk, Milne Point, and Lisburne fields.

At risk is some portion of about $38.5 million in FY 87 severance taxes from Milne Point, Lisburne, and Kuparuk production. The Dept. of Revenue and OMB expect the loss of at least $12 to 14 million. The $38.5 million equals about 5% of total severance taxes expected, or about 2% of total state revenues. Also at risk is some portion of about $28.2 million in FY 88 severance taxes, or about 2% of total state revenues.

These calculations are based on the March 1986 revenue projections, including TAPS. For FY87, Milne Point and Lisburne are each expected to bring in $7.7 million, while Kuparuk would bring in $23.1 million for the period January 1, 1987 through June 30, 1987. For FY88, Milne Point, Lisburne, and Kuparuk should generate $56.4 million in severance taxes. Half this amount, or $28.2 million would be at risk because the new ELFs would remain in effect through the calendar year 1987.

A simple statutory change can provide a fundamental protection for the State's severance tax income so that it is never calculated on less than the 80¢/bbl floor set out in AS 43.55.011(c).

The necessary language would be as follows:

* Section 1. AS 43.55.011(a) is amended to read:

Sec. 43.55.011. OIL PRODUCTION TAX. (a) There is levied upon the producer of oil a tax for all oil produced from each lease or property in the state, less any oil the ownership or right to which is exempt from taxation. The tax is equal to either the percentage-of-value amount calculated under (b) of this section, multiplied by the economic limit factor determined for the oil production of the lease or property under AS 43.55.013, or the cents-per-barrel amount calculated under (c) of this section, whichever is greater[, MULTIPLIED BY THE ECONOMIC LIMIT FACTOR DETERMINED FOR THE OIL PRODUCTION OF THE LEASE OR PROPERTY UNDER AS 43.55.013]. If the amounts calculated under (b) and (c) of this section are equal, the amount calculated under (c) [(b)] shall be treated as if it were the greater for purposes of this section.

* Section 2. Section 1 of this Act takes effect immediately in accordance with AS 01.10.070(c).

This language does not attempt to solve another identified issue - inflation-proofing the cents-per-barrel floor. The 80c/bbl floor was originally established in 1977, and has not been revised since that time, despite the considerable effects of inflation during the past nine years. In today's dollars, the 80¢ of 1977 would be about $1.25.

There also exist potential problems with royalty revenue. At zero wellhead value, the State receives no royalty revenue except from those sales contracts which specify a premium over "in value" price. Those contracts affect only about 25% of the royalty share, providing 30¢ to 35¢/barrel premium. (The following royalty contracts currently provide premiums above the "in value" price: Tesoro- second contract, 13.876% of Prudhoe Bay royalty production; Chevron, 9.6% of Prudhoe Bay royalty production; GVEA, 2.667% of Prudhoe Bay royalty production; and Petrostar, 19.198% of Kuparuk royalty production).

Unfortunately, the economic interests of the producers and the State are not the same because of the TAPS tariff, shipping costs, and the producers' federal taxes. It is apparently in the producers' economic interests to maintain the flow of Prudhoe Bay oil until the market price drops to approximately $3 on the West Coast and $5.50 on the Gulf. Thus, the State could conceivably find itself in the situation where its royalty oil has little or no value in terms of state revenues yet the oil is pumped daily into TAPS. In fact, there is even the remote possibility of a 70¢/bbl cleaning and dehydration charge on all royalty barrels being levied against the State by the producers even when the wellhead value is zero.

The possible actions necessary to protect the State's royalty revenue seem to be administrative in nature, and would involve cooperative negotiations with the producers. <u>In contrast, the severance tax floor can be fixed only through legislative action.</u>

NORTH SLOPE PRODUCTION AND THE ELF

FIELD	PRUDHOE BAY	KUPARUK	MILNE POINT	LISBURNE
Wellhead price at which field becomes sensitive to ELF	$2.00 or less/bbl	$3.61 or less/bbl PEL > 300 at 3.61 WH	$5.00 or less/bbl PEL > 300 at $4.85 WH	$5.00 or less/bbl PEL> 300 at $4.90 WH
Sales price/value at which ELF reaches .7 West Coast Gulf	Now above .7 7.15 WC 9.65 Gulf	Now below .7 Approx 12.50 WC 15.00 Gulf	Now below .7 Approx 13.70 WC 16.20 Gulf	Now below .7 Approx 10.60 WC 13.10 Gulf
Sales price/value at which ELF reaches 0 West Coast Gulf	 6.50 WC 9.00 Gulf	> $1.20 Wellhead 8.10 WC 10.60 Gulf	> $1.50 Wellhead 10.30 WC 12.80 Gulf	> $1.50 Wellhead 7.20 WC 9.50 Gulf
Time period for confidential hearing request	By Feb. 15, 1987	By Feb. 15, 1987	(1) Within first 6 months of production (by May 15,1986) or (2) By Feb. 15, 1987	(1) Within first 6 months of production(Scheduled to begin Dec. 1986 or Jan 1987), or (2) Feb 15,1987, whichever is latest
Time period when new ELF would apply	1987	1987	(1) Retroactive to beginning of production or (2) 1987, depending on timing of request	(1) Retroactive to beginning of production or (2) 1987
Basis for calculation of current direct operating costs (PEL)	300 bbls/day	300 bbls/day	300 bbls/day	300 bbls/day
Percentage of North Slope production: w/o Lisburne with Lisburne	 86% 83.7%	 12% 11.8%	 2% 1.6%	 N/A 2.7%
Percentage of expected severance tax for FY 87 (based on March forecast) and dollar value	92% $708.9 million	6% $46.2 million	1% $7.7 million	1% $7.7 million
Percentage of expected severance tax for FY 88 (based on March forecast) and dollar value	89.4% $476.5 million	7.1% $37.8 million	1.3% $6.9 million	2.2% $11.7 million

ELF-

OIL & GAS

MISC.

STATE OF ALASKA
Department of Natural Resources
Division of Oil and Gas Conservation

Alaska Oil and Gas Conservation Committee
3001 Porcupine Drive
Anchorage, Alaska 99501

Re: The request of Atlantic Richfield Company and BP Alaska Inc. to present testimony to determine new pool rules and amend existing rules for the Prudhoe Oil Pool.

Conservation Order No. 145
Prudhoe Bay Field
Prudhoe Oil Pool

June 1, 1977

IT APPEARING THAT:

1. The referenced companies applied by letter received March 30, 1977, for a hearing to adopt new or amend existing pool rules.

2. Notice of public hearing was published in the Anchorage Daily News on April 2, 1977.

3. A public hearing was held in the Ramada Inn, Anchorage, Alaska on May 5 and 6, 1977.

4. The hearing record was continued until the close of business on May 16, 1977. Additional data was received.

FINDINGS:

1. Rules pertaining to the Prudhoe Oil Pool have been included in Conservation Order Nos. 98-B, 130, and 137.

2. Administrative approvals 98-B.3, 98-B.6, 98-B.7, and 98-B.8 written pursuant to Conservation Order No. 98-B, Rule 8 are currently in effect.

3. Waivers pertaining to blowout prevention practices written pursuant to Conservation Order No. 137, Rule 2 are currently in effect.

4. The applicants propose to raise and lower the vertical pool limits of the Prudhoe Oil Pool to include the "Put River Sandstone" and Ivishak Shale respectively.

5. No drill stem tests or production tests have been conducted in the "Put River Sandstone" or the Ivishak Shale.

6. No analysis of fluid from the "Put River Sandstone" or the Ivishak Shale are presently available to the Committee.

7. The areal extent of the Prudhoe Oil Pool as defined on March 12, 1971, in Conservation Order No. 98-B, is considerably larger than the area now proven to be productive by the drilling of additional wells since that time.

8. Most producing wells in the Prudhoe Oil Pool are deviated holes to minimize the number of drilling pads.

9. The applicants propose to eliminate reference to acreage spacing requirements but request that at least 2000 feet be maintained between the pay opened in the well bore in all wells in the Prudhoe Oil Pool.

10. The applicants propose that a distance of 1000 feet be maintained between the pay opened in any well and the boundary of the Prudhoe Oil Pool.

11. Data from the early production performance is needed for the proper regulation and operation of the reservoir.

12. Performance must be accurately observed and quickly analyzed for a timely assessment of reservoir behavior.

13. Performance during the first two years will be used to design the water flooding projects and will be vital in formulating and implementing future operating plans.

14. A reservoir surveillance program can provide for monitoring both reservoir and production data.

15. Monthly production tests will monitor changes in well productivity, gas-oil and oil-water ratios, and provide basic data for reservoir performance studies.

16. The reservoir is complex with many discontinuous interbedded shales.

17. The reservoir is underlain by a heavy oil or tar zone of varying thickness.

18. Some areas of the reservoir contain many faults.

19. The reservoir pressure data will provide information on well flow efficiency, reservoir permeability, reservoir discontinuities, and the need for a pressure maintenance program.

20. The use of specialized transient pressure testing techniques such as pulse testing, vertical permeability tests, and interference tests may prove useful.

21. Specific wells may be selected which are located outside the main area of the Sadlerochit oil column to monitor the pressure in the gas cap, the aquifer, the Eileen area, and the Sag River gas cap.

22. The applicants have agreed to a common datum plane of 8800 feet subsea for all pressure surveys.

23. Changes in the gas-oil fluid contact movement in the reservoir with response to production would provide information on shale continuity, effective vertical permeability, displacement efficiency of oil by gas and define areas of poor natural recovery.

24. Preliminary studies indicate that early run open hole or cased hole neutron logs may provide a suitable base log for monitoring the movement of the gas-oil contact by comparison with a later cased hole neutron log run in the same well.

25. Open hole neutron logs have already been run on the majority of wells.

26. Cased hole neutron logs have already been run in a number of wells and will continue to be run in selected wells until this technique is confirmed.

27. Monitoring the movement of the oil-water contact should help to determine the extent of water influx from the aquifer, identify areas of peripheral water influx and allow determination of the water displacement efficiency.

28. Monitoring the oil-water contact should provide information to help define locations where water injection would be beneficial.

29. A program is now in progress to evaluate the capability of monitoring the oil-water contact with one of three different methods, such as the Thermal Decay Tools (T.D.T.) or the Neutron Lifetime Log (N.L.L.), the Carbon-Oxygen Log and the Gamma Ray Log.

30. The capability of these methods to monitor the changing oil-water contact has not been demonstrated as yet.

31. The contribution of each of the various perforated intervals in each producing well may be determined through downhole spinner flow meter surveys.

32. A reliable assessment of the rate of the production from the various lithologic subdivisions within the reservoir will assist in the determination of the effectiveness of the well completions to drain the reservoir.

33. Numerous computer reservoir simulation model studies of the Sadlerochit Formation have been made by the State and the working interest owners. In these studies the offtake rates of oil and gas and the injection rates of gas and water have been varied.

34. The Trans-Alaska Pipeline will have an initial capacity of 1.2 million barrels per day and should be ready to accept oil near mid 1977.

35. The applicants have submitted a Plan of Operations which includes proposed average annual offtake rates of 1.5 million barrels per day for oil plus condensate production and 2.7 billion cubic feet per day for gas.

36. Production facilities to support an average oil offtake of 1.2 million barrels per day will be installed by the last quarter of 1977. Additions are planned during 1978 and 1979 to support an average oil offtake rate of 1.5 million barrels per day plus condensate production, when pipeline capacity is available.

37. Gas sales in large volumes from the Prudhoe Bay Field will not be possible until a gas conditioning plant and a large gas sales pipeline are constructed.

38. The completion of a large gas sales pipeline and plant to condition gas is estimated at approximately five years from start of oil production.

39. Until a large gas sales pipeline is available, all produced gas, except that used as fuel in the field and small local gas sales, will be reinjected into the gas cap.

40. Gas will be used to supply the operating requirements of the Prudhoe Bay Field, the first four pump stations of the Trans-Alaska Pipeline and other minor local fuel needs.

41. To meet pipeline sale quality it will be necessary to remove carbon dioxide from the gas.

42. Water production will be minimal initially and will be disposed of by injection into sands of Cretaceous age.

43. When water production becomes significant, the applicants plan to file a secondary recovery application for the injection of this water into the Prudhoe Oil Pool.

44. Injection of produced water into the Prudhoe Oil Pool could begin within two years after start of oil production.

45. The applicants will proceed with design and implementation studies concurrently with injectivity tests and reservoir data gathering to shorten the implementation time for a source water injection system.

46. The Sadlerochit Formation aquifer exhibits the best reservoir qualities near the Prudhoe Bay Field area and progressively deteriorates away from the field.

CONCLUSIONS:

1. To avoid confusion it would be desirable to consolidate the outstanding Pool rules effecting the Prudhoe Oil Pool into one order. Conservation Orders Nos. 98-B, 130, and Rule 2 of Conservation Order No. 137 should be canceled and the relevant portions included in Conservation Order No. 145.

2. Administrative Approvals 98-B.3, 98-B.6, 98-B.7, and 98-B.8 should remain in effect and will be applicable until stable production from the field is attained or until the time period stipulated expires.

3. Waivers pertaining to blowout preventers written pursuant to Conservation Order No. 137, Rule 2 should remain in effect.

4. There are insufficient data to justify raising or lowering the vertical limits of the Prudhoe Oil Pool, as proposed by the applicants, to correspond with the vertical limits of the Prudhoe Bay (Permo-Triassic) Reservoir as described in the Prudhoe Bay Unit Agreement.

5. The areal extent of the Prudhoe Oil Pool should be identical to the initial participating area of the Prudhoe Bay Unit which is described as the Prudhoe Bay (Permo-Triassic) Reservoir in the Unit Agreement.

6. A rule eliminating acreage spacing in the Prudhoe Oil Pool should facilitate present and future additional recovery operations and enable the unit operators to develop the productive capacity to meet the planned throughput of the Trans-Alaska Pipeline.

7. A distance of 2000 feet between the pay opened in the well bore in all wells in the Prudhoe Oil Pool should maintain an adequate drainage area, not unnecessarily restrict bottomhole target locations and protect correlative rights and prevent waste.

8. A distance of 1000 feet between the pay opened in any well and the boundary of the Prudhoe Oil Pool will protect correlative rights.

9. To gather the data necessary for proper regulation and operation of the reservoir, a rigorous surveillance program of reservoir performance should be accurately observed and assessed especially during the first two years of operation. The surveillance program should also provide guidelines for a long term key well surveillance program.

10. A surveillance program should include monitoring the reservoir pressures, gas-oil and oil-water contact movements, production tests, gas-oil and water-oil ratios, and productivity profiles of individual wells.

11. A gas-oil contact movement monitoring program, based on a comparison of open hole neutron base logs to be later compared with neutron logs run in the same wells should be attempted.

12. The data obtained during the first two years could lead to a key well program of periodic surveys that may adequately monitor the gas-oil contact movements.

13. Monitoring the movement of the oil-water contact is desirable to evaluate the water influx in the reservoir and the applicability of water injection systems. Three methods are potentially applicable as means of monitoring the movement of the oil-water contact. These methods are the Thermal Decay Tools or the Neutron Lifetime Log, the Carbon-Oxygen Log and the Gamma Ray Log. The program to evaluate the relative capability of these

logs should be continued and should any method be demonstrated capable of adequately monitoring the changing water saturations in the reservoir, a key well program should be set up.

14. Downhole spinner flow meter surveys to determine well productivity profiles should help determine the effectiveness of completions and provide information on reservoir drainage.

    To provide the necessary productivity profile data a base line survey should be run on each well with later follow up surveys on each well.

15. The injection of produced water into the sands of Cretaceous age will not contaminate fresh water sources or endanger other natural resources.

16. Studies of the aquifer have indicated that it probably will not offer much pressure support.

17. Reservoir studies have shown that both produced water injection and source water injection into the Prudhoe Oil Pool should increase oil recovery.

18. Reservoir studies have shown that large scale source water injection will probably be necessary to maximize oil recovery.

19. The planned reinjection of gas into the Sadlerochit gas cap prior to large gas sales will help to maintain reservoir pressure and will not adversely affect ultimate recovery.

20. The Plan of Operations proposed by the applicants which include average annual offtake rates of 1.5 million barrels per day for oil plus condensate production and 2.7 billion cubic feet per day for gas are consistent with sound conservation practices based on currently available data.

21. After field and local fuel requirements and the removal of carbon dioxide and liquids from the produced gas, it is estimated that a gas production rate of 2.7 billion standard cubic feet per day will yield 2.0 billion standard cubic feet per day of pipeline quality gas.

22. Production history will be needed to locate water injection wells and to refine reservoir model studies.

23. The offtake rates approved by the Committee at this time must be established without the benefit of production history. Therefore, these offtake rates may be changed as production data and additional reservoir data are obtained and analyzed.

NOW, THEREFORE, IT IS ORDERED THAT the rules hereinafter set forth apply to the following described area referred to in this order as the affected area:

UMIAT MERIDIAN			
T. 10N.,	R. 12E.,	Sections	1, 2, 3, 4, 10, 11, 12
T. 10N.,	R. 13E.,		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 24
T. 10N.,	R. 14E.,		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 36
T. 10N.,	R. 15E.,		all
T. 10N.,	R. 16E.,		5, 6, 7, 8, 17, 18, 19, 20, 29, 30, 31
T. 11N.,	R. 11E.,		1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 24, 25
T. 11N.,	R. 12E.,		all
T. 11N.,	R. 13E.,		all
T. 11N.,	R. 14E.,		all
T. 11N.,	R. 15E.,		all
T. 11N.,	R. 16E.,		30, 31, 32
T. 12N.,	R. 11E.,		15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36
T. 12N.,	R. 12E.,		23, 24, 25, 26, 27, 28, 33, 34, 35, 36
T. 12N.,	R. 13E.,		19, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T. 12N.,	R. 14E.,		25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36
T. 12N.,	R. 15E.,		27, 28, 29, 30, 31, 32, 33, 34

Rule 1 Pool Definition

The Prudhoe Oil Pool is defined as the accumulations of oil that are common to and which correlate with the accumulations found in the Atlantic Richfield - Humble Prudhoe Bay State No. 1 well between the depths of 8,110 and 8,680 feet.

Rule 2 Well Spacing

In the affected area, no pay shall be opened in a well closer than 2000 feet to any pay opened in another well in the Prudhoe Oil Pool or be nearer than 1000 feet to the boundary of the affected area.

Rule 3 Casing and Cementing Requirements

(a) Casing and cementing programs shall provide adequate protection of all fresh waters and productive formations and protection from any pressure that may be encountered, including external freezeback within the permafrost.

(b) For proper anchorage and to prevent an uncontrolled flow, a conductor casing shall be set at least 75 feet below the surface and sufficient cement shall be used to fill the annulus behind the pipe to the surface.

(c) For proper anchorage, to prevent uncontrolled flow and to protect the well from the effects of permafrost thaw, a string of surface casing shall be set at least 500 feet below the base of the permafrost section but not below 2,700 feet unless a greater depth is approved by the Committee upon showing that no potentially productive pay exists above the proposed casing setting depth, and sufficient cement shall be used to fill the annulus behind the pipe to the surface.

The surface casing shall have minimum post-yield strain properties of 0.9% in tension and 1.26. in compression.

(d) If the surface casing does not meet the strain requirements in (c) above, the integrity of the well shall be protected from the effects of permafrost thaw by running an inner string of casing also set at least 500 feet below the base of the permafrost section and properly cemented except that the two casing strings shall not be bonded together within the permafrost section. This inner string of casing shall not be utilized as production casing.

(e) Other means for maintaining the integrity of the well from the effects of permafrost thaw may be approved by the Committee upon application.

(f) Production casing shall be landed through the completion zone and cement shall cover and extend to at least 500 feet above each hydrocarbon-bearing formation which is potentially productive. In the alternative, the casing string may be set and adequately cemented at

at an intermediate point and a liner landed through the completion zone. If such a liner is run, the casing and liner shall overlap by at least 100 feet and the annular space behind the liner shall be filled with cement to at least 100 feet above the casing shoe, or the top of the liner shall be squeezed with sufficient cement to provide at least 100 feet of cement between the liner and casing. Cement must cover and extend at least 500 feet above each hydrocarbon-bearing formation which is potentially productive.

(g) Casing and liner, after being cemented, shall be satisfactorily tested to not less than 50% of minimum internal yield pressure or 1,500 pounds per square inch, whichever is less.

(h) No well shall be produced through the annulus between the tubing and the casing unless a cement sheath extends from the top of the pay to the shoe of the next shallower casing string.

Rule 4 Blowout Prevention Equipment and Practice

(a) The use of blowout prevention equipment shall be in accordance with good established practice and all equipment shall be in good operating condition at all times.

All blowout prevention equipment shall be adequately protected to ensure reliable operation under the existing weather conditions. All blowout prevention equipment shall be checked for satisfactory operation during each trip.

(b) Before drilling below the conductor string, each well shall have installed at least one remotely controlled annular type blowout preventer and flow diverter system. The annular preventer installed on the conductor casing shall be utilized to permit the diversion of hydrocarbons and other fluids. This low pressure, high capacity diverter system shall be installed to provide at least the equivalent of a 6-inch line with at least two lines venting in different directions to insure downwind diversion and shall be designed to avoid freeze-up. These lines shall be equipped with full-opening butterfly type valves or other valves approved by the Committee. A schematic diagram, list of equipment, and operational procedure for the diverter system shall be submitted with the application Permit to Drill or Deepen (Form 10-401) for approval. The above requirements may be waived for subsequent wells drilled from a multiple drill site.

(c) Before drilling below the surface casing all wells shall have three remotely controlled blowout preventers, including one equipped with pipe rams, one with blind rams and one annular type. The blowout preventers and associated equipment shall have 3000 psi working pressure and 6000 psi test pressure.

(d) Before drilling into the Prudhoe Oil Pool, the blowout preventers and associated equipment required in (c) above shall have 5000 psi working pressure rating and 10,000 psi test pressure rating.

(e) The associated equipment shall include a drilling spool with minimum three-inch side outlets (if not on the blowout preventer body), a minimum three-inch choke manifold, or equivalent, and a fill-up line. The drilling string will contain full-opening valves above and immediately below the kelly during all circulating operations with the kelly. Two emergency valves with rotary subs for all connections in use will be conveniently located on the drilling floor. One valve will be an inside blowout preventer of the spring-loaded type. The second valve will be of the manually-operated ball type, or any other type which will perform the same function.

(f) All ram-type blowout preventers, kelly valves, emergency valves and choke manifolds shall be tested to required working pressure when installed or changed and at least once each week therafter. Annular preventers shall be tested to 50% recommended working pressure when installed and once each week thereafter. Test results shall be recorded on written daily records kept at the well.

Rule 5 Automatic Shut-in Equipment

Upon completion, each well shall be equipped with a suitable safety valve installed below the base of the permafrost which will automatically shut in the well if an uncontrolled flow occurs.

Rule 6 Pressure Surveys

(a) Prior to initial sustained well production, a static bottomhole pressure survey shall be taken on each well.

(b) Between 90 and 100 days after commencement of sustained pool production, the applicants shall perform an initial key well bottomhole transient pressure survey on one specific well on each producing pad or drill site. Another survey of the same type shall be conducted each 90 days thereafter.

(c) Within the first six months following the initial sustained well production, the applicants shall conduct a transient pressure survey on each well.

(d) A semi-annual transient pressure survey shall be conducted on one well in each governmental section from which oil is being produced. This is in addition to the pressure surveys conducted in (b) and (c) above.

(e) A long-term key well pressure survey will be formulated and implemented in approximately two years from the start of production based upon evaluation of data submitted under (a), (b), (c), and (d) above.

(f) Data from the above mentioned surveys shall be filed with the Committee by the fifteenth day of the month following the month in which each survey is taken. Form No. 10-412, Reservoir Pressure Report, shall be utilized for all surveys with attachments for complete additional data. Data submitted shall include but is not limited to rate, pressure, time, depths, temperature, and other well conditions necessary for

complete analysis for each survey being conducted. The pool pressure datum plane shall be 8800 feet subsea. Bottomhole transient pressures obtained by a 24 hour buildup or multiple flow rate test will be acceptable.

(g) Results and data from any special reservoir pressure monitoring techniques, tests or surveys shall also be submitted as prescribed in (f) above.

(h) By administrative order the Committee shall specify additional pressure surveys if the survey program designated in this rule is found to be inadequate.

Rule 7 Gas-Oil Ratio Tests

Between 90 and 120 days after substantial production starts and each six months thereafter a gas-oil ratio test shall be taken on each producing well. The test shall be of at least 12 hours duration and shall be made at the producing rate at which the operator ordinarily produces the well. The test results shall be reported on gas-oil ratio test form P-9 within fifteen days after completion of the survey. The Committee shall be notified at least five days prior to each test.

Rule 8 Gas Venting or Flaring

The venting or flaring of gas is prohibited except as may be authorized by the Committee in cases of emergency or operational necessity.

Rule 9 Gas-Oil Contact Monitoring

Open hole and cased hole neutron logs shall be run in selected wells to confirm gas-oil contact movement unless this technique is proved unworkable or an alternative approach is recommended and accepted by the Committee.

The wells selected for this neutron log survey together with a summary of the survey analyses shall be submitted to the Committee by January 1, 1978, and each six months thereafter. The Committee may also specify additional wells to be surveyed should they decide the survey program being followed is inadequate.

The cased hole neutron logs run shall be filed with the Committee by the fifteenth day of the month following the month in which the logs were run.

Other methods of monitoring the gas-oil contact movement may be approved if they show to be more effective.

A long term key well gas-oil contact movement monitoring program may be formulated and implemented in approximately two years from start of production if workable technique is found.

Rule 10 Oil-Water Contact Monitoring

(a) A report on the evaluation program to determine the oil-water contact monitoring capability of the Thermal Decay Tools or the Neutron Lifetime Log, the Carbon-Oxygen Log and the Gamma Ray Log shall be submitted to the Committee by January 1, 1978.

(b) If the capability of monitoring the change in oil-water contact movement can be demonstrated by one or more of these methods, a key well program shall be set up by the applicants subject to the approval of the Committee.

Rule 11 Productivity Profiles

(a) A spinner flow meter survey shall be run in each well during the first six months the well is on production.

(b) A follow up survey shall be performed on a rotating basis so that a new production profile is obtained on each well periodically. Nonscheduled surveys shall be run in wells which experience an abrupt change in water cut, gas-oil ratio, or productivity.

(c) The complete spinner survey data and results shall be recorded and filed with the Committee by the 15th day of the month following the month in which each survey is taken.

(d) By administrative order the Committee shall specify additional surveys should they determine the surveys submitted under (a), (b) and (c) above are inadequate.

Rule 12 Changing the Affected Area

By administrative approval the Committee may adjust the description of the affected area to conform to future changes in the initial participating area.

Rule 13 Orders Cancelled

Conservation Orders Nos. 98-B, 130, and Rule 2 of Conservation Order No. 137 are hereby cancelled. Portions of Conservation Orders Nos. 98-B and 137 are made part of this order and the hearing records of these orders are also made part of the hearing record of this order.

Rule 14 Approvals Redesignated

Administrative Approvals made pursuant to CO 98-B, Rule 8 and the waivers made pursuant to Conservation Order No. 137, Rule 2 remain in effect and will now be authorized by this order.

Rule 15 Pool Off-Take Rates

The maximum annual average oil offtake rate is 1.5 million barrels per day plus condensate production. The maximum annual average gas offtake rate is 2.7 billion standard cubic feet per day, which contemplates an annual average gas pipeline delivery sales rate of 2.0 billion standard cubic feet per day of pipeline quality gas when treating and transportation facilities are available. Daily offtake rates in excess of these amounts are permitted only as required to sustain these annual average rates. The annual average offtake rates as specified shall not be exceeded without the prior written approval of the Committee.

Annual average offtake rates mean the daily average rate calculated by dividing the total volume produced in a calendar year by the number of days in the year. However, in the first calendar year that large gas offtake rates are initiated, following the completion of a large gas sales pipeline, the annual average offtake rate for gas shall be determined by dividing the total volume of gas produced in that calendar year by the number of days remaining in the year following initial delivery to the large gas sales pipeline.

DONE at Anchorage, Alaska, and dated June 1, 1977.

ALASKA OIL AND GAS CONSERVATION COMMISSION

Thomas R. Marshall, Jr., Executive Secretary
Alaska Oil and Gas Conservation Committee

Concurrence:

Hoyle H. Hamilton, Chairman
Alaska Oil and Gas Conservation Committee

Lonnie C. Smith, Member
Alaska Oil and Gas Conservation Committee

STATE OF ALASKA
ALASKA OIL AND GAS CONSERVATION COMMISSION
3001 Porcupine Drive
Anchorage, Alaska 99501-3192

Re: Request by ARCO ALASKA, INC.) et al to present testimony) to revoke Conservation Order) No. 83-C and adopt new rules) for the Lisburne Oil Pool) in the Prudhoe Bay Field.)

Conservation Order No. 207

Prudhoe Bay Field
Lisburne Oil Pool

January 10, 1985

IT APPEARING THAT:

1. ARCO Alaska, Inc., on behalf of itself and Exxon Corporation, requested the Alaska Oil and Gas Conservation Commission to hold a public hearing in order to receive testimony for the revocation of Conservation Order No. 83-C and establishment of new pool rules for the development and depletion of the Lisburne Oil Pool in the Prudhoe Bay Field.

2. Notice of the public hearing was published in the Anchorage Times on October 26, 1984.

3. A public hearing was held at the Municipality of Anchorage Assembly Room, 3500 East Tudor Road, Anchorage, Alaska on November 29, 1984.

4. Members of the staff of ARCO Alaska, Inc. presented testimony on behalf of itself, Exxon Corporation and Sohio Alaska Petroleum Company. Exxon Corporation presented a statement in full support of the testimony. The hearing record remained open until 4:30 pm, December 10, 1984. Timely comments were submitted by Sohio Alaska Petroleum Company and Mr. Kelley Everette.

FINDINGS:

1. The Lisburne Group underlies the Sadlerochit Group and consists primarily of shallow marine limestone and dolomite with lesser amounts of shale, silt, sand, and chert.

2. Shaly or silty beds are fairly continuous over a broad area and are useful for correlation.

3. The Lisburne Group is characterized by abundant natural and predominately vertical fractures which allows for fluid movement through the carbonates as well as the thin silty and shaly beds.

4. The Lisburne Group of carbonate sediments was penetrated in it entirety by ARCO Prudhoe Bay State Well #1. The top of the Lisburne Group was encountered at a measured depth of 8,790 feet and the base at 10,440 feet measured depth.

5. The Lisburne Group has been partially or fully penetrated by numerous wells. Oil and gas has been encountered within the Lisburne Group as low as 10,050 feet subsea within the area described by Conservation Order No. 83-C.

6. Evidence indicates that an oil reservoir with an associated gas cap exists and that an oil pool should be defined. The hydrocarbon accumulation may appropriately be defined as the Lisburne Oil Pool.

7. The Lisburne Reservoir is an anticlinal structure that is bounded on the north by the Prudhoe Bay-Niakuk fault complex, by truncation and/or the Mikkelson Bay fault to the east and by dip of 135 feet per mile to the south and west.

8. Evidence is sufficient to establish a definitive gas-oil contact at 8,600 feet subsea. Data are anomalous and insufficient to definitively establish an area-wide planar oil-water contact for the Lisburne Oil Pool.

9. The affected area described in Conservation Order No. 83-C. appears to be adequate in the eastern portion of the Lisburne Oil Pool but should be expanded westward to reflect the current structural interpretation.

10. A spacing unit of one producing well per governmental quarter section appears adequate to drain the reservoir.

11. Conductor casing set and cemented a minimum of 75 feet below surface should provide adequate anchorage for a diverter system.

12. The effects of permafrost thaw-subsidence and freeze back loadings can be mitigated by setting and cementing surface casing of sufficient strength at least 500 feet below the base of the permafrost but no deeper than 5000 feet true vertical depth.

13. Several casing types and grades that are approved for use as surface casing in the Prudhoe Oil Pool and the Kuparuk River Oil Pool are appropriate for this pool.

14. Perforation of cemented casing or liners, slotted liners, screen wrapped liners, gravel packs and open hole completions appear to be equally effective completion techniques.

15. Significant concentrations of hydrogen sulfide gas were encountered in a production test of the ARCO Pingut State Well No. 1 and smaller amounts of hydrogen sulfide gas have been reported from other wells.

16. Installation of automatic surface shut-in valves is appropriate to prevent an uncontrolled flow of oil or gas.

17. Installation of automatic down hole shut-in valves in the tubing below the premafrost is appropriate to prevent an uncontrolled flow of oil or gas.

18. The flaring of a limited amount of gas will be necessary for the safety purposes and for operational necessities.

19. To aid in the evaluation of the effectiveness of the reservoir depletion, the reservoir pressure and the gas-oil ratio of wells should be monitored on a regular and continuous basis.

20. Current studies indicate that a daily oil rate of 160,000 barrels will not be detrimental to ultimate hydrocarbon recovery. However, pool withdrawal rates in excess of 160,000 barrels of oil per day may affect ultimate recovery.

21. Conservation Order No. 83-C is out-of-date and should be replaced.

22. Evidence is insufficient to determine the prudency of state of the art methods for enhancement of recovery from the Lisburne Oil Pool. Pilot field projects are necessary to develop data for determination of the applicability of methods for recovery enhancement.

23. Evidence indicates that the injection of produced gas into the gas cap will retard the rate of decline in reservoir pressure.

24. The average initial reservoir pressure for the Lisburne Oil Pool is 4,490 pounds per square inch at an 8,900 foot subsea datum. Reservoir temperature approximates 183° Fahrenheit at the datum.

25. The Lisburne Oil Pool contains in excess of 3 billion barrels of Original Oil In Place (OOIP). Primary depletion may recover no more than 7 percent of the OOIP.

26. It appears that most if not all of the Lisburne Oil Pool lies within the current boundary of the Prudhoe Bay Unit. However, it is possible that the pool limits may extend beyond the Prudhoe Bay Unit boundary.

27. Terms of the Prudhoe Bay Unit Agreement provide for the expansion of the Prudhoe Bay Unit boundary and for the establishment and expansion of an initial participating area for the Lisburne Oil Pool.

28. Management of the Lisburne Oil Pool under terms of the Prudhoe Bay Unit Agreement will effectively protect correlative rights, prevent waste and insure the maximum hydrocarbon recovery.

NOW, THEREFORE, IT IS ORDERED THAT the rules hereinafter set forth apply to the following described area and is referred to in the order as the affected area:

UMIAT MERIDIAN

T10N, R13E	Sections 1, 2, 3, 10, 11, and 12.
T10N, R14E	Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22. 23, 24, 25, 26, 35, and 36.
T10N, R15E	All.
T10N, R16E	All.
T10N, R17E	Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, and 34.
T11N, R13E	Sections 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36.
T11N, R14E	All.
T11N, R15E	All.
T11N, R16E	All.
T11N, R17E	Sections 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 ,31, 32, 33, 34, 35, and 36.
T12N, R13E	Sections 35 and 36.
T12N, R14E	Sections 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 31, 32, 33, 34, 35, and 36.
T12N, R15E	Sections 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36.
T12N, R16E	Sections 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36.

Rule 1. FIELD AND POOL NAME.

The field is the Prudhoe Bay Field and the pool is the Lisburne Oil Pool.

Rule 2. POOL DEFINITION.

The Lisburne Oil Pool is defined as the accumulations of oil and gas which occur in stratigraphic sections which correlate with the stratigraphic section found in the Atlantic Richfield-Humble Prudhoe Bay State No. 1 well between the depths of 8,790 feet measured depth and 10,440 feet measured depth.

Rule 3. WELL SPACING.

The spacing unit shall be one producing well per governmental quarter section. No pay may be opened in a well closer than 1,000 feet to the pay opened in another well or opened in a well which is closer than 500 feet to the boundary of the affected area.

Rule 4. CASING AND CEMENTING.

a) A conductor casing shall be set at least 75 feet below the surface and sufficient cement shall be used to fill the annulus behind the pipe to the surface. Rigid high density polyurethane foam may be used as an alternate to cement, upon approval by the Commission. The Commission may also administratively approve other sealing materials which are supported by sound engineering principles and performance data.

b) Surface casing to provide proper anchorage for equipment to prevent uncontrolled flow, to withstand anticipated internal pressure and to protect the well from the effects of permafrost thaw-subsidence or freeze back loadings shall be set at least 500 feet, measured depth, below the base of the permafrost but not below 5000 feet true vertical depth. Sufficient cement shall be used to fill the annulus behind the casing to the surface.

c) Surface casing types and grades approved for use through the permafrost interval include:

1) 13-3/8 inch, 72 pounds/foot, L-80 Buttress;
2) 13-3/8 inch, 72 pounds/foot, N-80 Buttress;
3) 13-3/8 inch, 68 pounds/foot, MN-80 Buttress.

Rule 7. AUTOMATIC SHUT-IN EQUIPMENT.

a) Any well which is capable of unassisted flow of hydrocarbons must be equipped with

1) a fail-safe automatic surface safety valve (SSV) capable of preventing an uncontrolled flow; and

2) a fail-safe automatic surface controlled subsurface safety valve (SSSV). This valve must be in the tubing string and located below permafrost. The valve must be capable of preventing an uncontrolled flow. For operational necessity the Commission may administratively waive the surface controlled requirement.

b) A representative of the Commission will witness performance tests at times prescribed by the Commission to confirm that the SSV, SSSV, and all associated equipment are in proper working condition.

c) When requested by the operator, a representative of the Commission will witness "no-flow tests" to verify that a well is no longer capable of unassisted flow. Upon approval by the Commission, the operator will no longer be required to maintain the SSSV's in that well until any subsequent workover or stimulation of the well makes it again capable of unassisted flow. The Commission may require additional "no-flow tests" following subsequent well work.

Rule 8. GAS VENTING OR FLARING.

a) The venting or flaring of gas is prohibited except for operational necessities and for safety volumes set out in this rule;

b) A daily average volume of 1,000 MCF per day is approved for the safety flare at the Lisburne Production Center;

c) Volumes of gas to provide safety flares for additional facilities may be approved by administrative order upon proper application;

d) The volumes of gas for safety flares may be decreased or increased by administrative order; and

e) Gas flaring may be approved by administrative order during commissioning of new equipment, purging, and start-ups after major repairs or interruptions.

Rule 9. GAS-OIL RATIO TESTS.

a) Between 90 and 120 days after regular production commences and each six months thereafter a gas-oil ratio test will be taken on each well for as long as it produces oil;

b) The gas-oil ratio tests will be for a minimum of four hours and shall be taken at the normal producing rate of the well; and

c) The results of the gas-oil ratio tests will be reported on Form 10-409, Gas-Oil Ratio Test and will be submitted in January and July of each year.

Rule 10. PRESSURE SURVEYS.

a) A static bottomhole pressure survey shall be taken prior to production or injection on each well drilled to the pool and results reported on Form 10-412, Reservoir Pressure Report;

b) The pressure datum for the Lisburne Oil Pool is 8,900 feet subsea. The Commission may administratively amend this datum or create an additional datum when more information on the reservoir is available.

c) Prior to July 10, 1987 the operator shall submit to the Commission a program to adequately monitor the reservoir pressure during depletion. Before the above date, any transient pressure surveys taken shall be timely submitted on Form 10-412 to the Commission.

Rule 11. UNITIZATION.

To ensure the protection of correlative rights and to prevent waste, the Lisburne Oil Pool shall be administered in accordance with the Prudhoe Bay Unit Agreement.

Rule 12. PILOT PROJECTS.

Upon application, the Commission may administratively approve field pilot projects, well production and injection tests and other field operations necessary for the purpose of developing a prudent enhanced recovery method and reservoir depletion program.

Rule 13. POOL OFFTAKE RATE.

No more than 160,000 barrels of oil per day may be produced from the Lisburne Oil Pool. However when evidence can be presented to the Commission showing that a higher offtake rate will not affect ultimate recovery, the Commission may increase the daily offtake rate by administrative order.

Rule 14. CONSERVATION ORDER NO. 83-C.

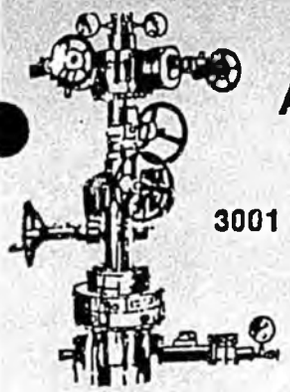
Conservation Order No. 83-C is hereby cancelled.

DONE at Anchorage, Alaska and dated January 10, 1985.

C. V. Chatterton, Chairman
Alaska Oil and Gas Conservation Commission

Harry W. Kugler, Commissioner
Alaska Oil and Gas Conservation Commission

Lonnie C. Smith, Commissioner
Alaska Oil and Gas Conservation Commission



STATE OF ALASKA

ALASKA OIL AND GAS CONSERVATION COMMISSION

3001 PORCUPINE DR. ANCHORAGE, ALASKA 99501

STEVE COWPER, GOVERNOR

BULLETIN

William W. Barnwell; Commissioner

C.V. Chatterton; Commissioner
Chairman of Commission

Lonnie C. Smith; Commissioner

AUGUST, 1987

ADMINISTRATIVE APPROVAL NO. 114.4

Administrative Approval No. 114.4 was issued July 14, 1987 to Unocal Corporation approving establishment of a safety flare on the Steelhead Platform, McArthur River Field, Trading Bay Unit. For each calendar month, the average daily volume of gas permitted to maintain a safety flare or flares for development of the Middle Kenai Gas Pool, Tyonek G-Zone Oil Pool, and West Foreland Oil Pool shall be 1000 MGFG/D.

ADMINISTRATIVE APPROVAL NO. 207.8

Administrative Approval No. 207.8 was issued July 23, 1987 to ARCO Alaska, Inc. granting approval to flare an additional 200 MMCFG at the Lisburne production and gas injection facilities during the forthcoming shutdown of Lisburne production, Prudhoe Bay Field. The planned shutdown is scheduled to commence August 6, 1987 and extend as long as necessary to allow corrections to be made to problems identified during startup and during the past seven months of operations. The Commission finds that the shutdown is an operational necessity and that additional flare volume is necessary.

AQUIFER EXEMPTION ORDER NO. 2

Aquifer Exemption Order No. 2 was issued July 8, 1987 to Conoco, Inc., and orders that portions of aquifers on the North Slope lying within and ¼ mile peripheral to the Milne Point Unit area are exempted for Class II injection activities. It was found that the portions of freshwater aquifers occurring beneath the Milne Point Unit area do not currently serve as sources for drinking water and are at a depth and location that make recovery of water for drinking purposes economically impractical.

NEW STAFF MEMBER

The Commission welcomes the recent placement of Patricia "Pat" Oldenburg as Administrative Assistant on the Commission staff. She comes to us from the Department of Natural Resources for whom she had worked since 1982, most recently with the Division of Forestry. Pat began her duties with the Commission on July 9.

ALASKA DRILLING STATISTICS FOR JULY, 1987

* DRILLING PERMITS APPROVED *

API NUMBER	PERMIT NUMBER	PERMIT APPROVED	OPERATOR NAME	SURFACE LOCATION	BOTTOM HOLE OBJECTIVE	WELL NAME AND NUMBER	CLASSIFICATION	GEOLOGIC AREA	FIELD AND POOL
50-029-21737-00	87-0064	07/02/87	ARCO ALASKA INC	835FT FNL AND 1549FT FEL, SEC 25, T13N, R008E, UM.	1685FT FNL AND 2140FT FEL, SEC 26, T13N, R008E, UM.	KUPARUK RIV UNIT 3M-19	DEVELOPMENT	ARCTIC SLOPE	KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-029-21738-00	87-0065	07/01/87	ARCO ALASKA INC	812FT FNL AND 1539FT FEL, SEC 25, T13N, R008E, UM.	1318FT FSL AND 587FT FWL, SEC 23, T13N, R008E, UM.	KUPARUK RIV UNIT 3M-20	DEVELOPMENT	ARCTIC SLOPE	KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-029-21739-00	87-0066	07/07/87	ARCO ALASKA INC	1320FT FNL AND 1750FT FEL, SEC 25, T13N, R008E, UM.	1050FT FNL AND 2738FT FEL, SEC 35, T13N, R008E, UM.	KUPARUK RIV UNIT 3M-21	DEVELOPMENT	ARCTIC SLOPE	KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-029-21740-00	87-0067	07/07/87	ARCO ALASKA INC	1343FT FNL AND 1759FT FEL, SEC 25, T13N, R008E, UM.	1883FT FNL AND 734FT FEL, SEC 35, T13N, R008E, UM.	KUPARUK RIV UNIT 3M-22	DEVELOPMENT	ARCTIC SLOPE	KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-029-21741-00	87-0068	07/07/87	STANDARD ALASKA PRODUCTION CO	800FT FNL AND 1881FT FEL, SEC 09, T11N, R013E, UM.	4800FT FNL AND 3900FT FEL, SEC 03, T11N, R013E, UM.	PRUDHOE BAY UNIT J-25	DEVELOPMENT	ARCTIC SLOPE	PRUDHOE BAY, PRUDHOE OIL POOL
50-029-21742-00	87-0069	07/07/87	ARCO ALASKA INC	1463FT FSL AND 166FT FEL, SEC 02, T11N, R015E, UM.	1364FT FNL AND 1984FT FEL, SEC 10, T11N, R015E, UM.	PRUDHOE BAY UNIT L5-5	DEVELOPMENT	ARCTIC SLOPE	PRUDHOE BAY, PRUDHOE OIL POOL
50-133-20390-00	87-0070	07/31/87	ALASKAN CRUDE CORP	300FT FSL AND 300FT FEL, SEC 31, T02N, R012W, SM.	2640FT FSL AND 2640FT FEL, SEC 31, T02N, R012W, SM.	BURGLIN 31-1	EXPLORATORY	COOK INLET BASIN	
50-023-20020-00	87-0071	07/27/87	NORTH SLOPE BOROUGH	1602FT FSL AND 379FT FEL, SEC 15, T22N, R018W, UM.	1602FT FSL AND 379FT FEL, SEC 15, T22N, R018W, UM.	S BARROW NSB-1	DEVELOPMENT	ARCTIC SLOPE	SOUTH BARROW, UNDEFINED GAS POOL
50-023-20021-00	87-0072	07/27/87	NORTH SLOPE BOROUGH	1137FT FNL AND 1041FT FWL, SEC 23, T22N, R018W, UM.	1137FT FNL AND 1041FT FWL, SEC 23, T22N, R018W, UM.	S BARROW NSB-2	DEVELOPMENT	ARCTIC SLOPE	SOUTH BARROW, UNDEFINED GAS POOL
50-023-20022-00	87-0073	07/27/87	NORTH SLOPE BOROUGH	1853FT FSL AND 701FT FWL, SEC 18, T21N, R017W, UM.	1853FT FSL AND 701FT FWL, SEC 18, T21N, R017W, UM.	S BARROW NSB-3	EXPLORATORY	ARCTIC SLOPE	
50-023-20023-00	87-0074	07/27/87	NORTH SLOPE BOROUGH	2641FT FSL AND 2181FT FEL, SEC 05, T21N, R017W, UM.	2641FT FSL AND 2181FT FEL, SEC 05, T21N, R017W, UM.	S BARROW NSB-4	EXPLORATORY	ARCTIC SLOPE	

ALASKA DRILLING STATISTICS FOR JULY, 1987

* DRILLING PERMITS APPROVED *

API NUMBER PERMIT NUMBER PERMIT APPROVED	OPERATOR NAME SURFACE LOCATION BOTTOM HOLE OBJECTIVE	WELL NAME AND NUMBER	CLASSIFICATION GEOLOGIC AREA FIELD AND POOL
50-023-20024-00 87-0075 07/27/87	NORTH SLOPE BOROUGH 2042FT FNL AND 222FT FWL, SEC 14, T22N, R018W, UM. 2042FT FNL AND 222FT FWL, SEC 14, T22N, R018W, UM.	S BARROW NSB-7	DEVELOPMENT ARCTIC SLOPE SOUTH BARROW, UNDEFINED GAS POOL
50-103-20076-00 87-0076 07/31/87	ARCO ALASKA INC 1472FT FNL AND 281FT FWL, SEC 12, T12N, R008E, UM. 1199FT FSL AND 1141FT FEL, SEC 12, T12N, R008E, UM.	KUPARUK RIV UNIT 3H-4	DEVELOPMENT ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-103-20077-00 87-0077 07/31/87	ARCO ALASKA INC 1446FT FNL AND 281FT FWL, SEC 12, T12N, R008E, UM. 1182FT FSL AND 1408FT FEL, SEC 11, T12N, R008E, UM.	KUPARUK RIV UNIT 3H-5	DEVELOPMENT ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-103-20078-00 87-0078 07/31/87	ARCO ALASKA INC 1422FT FNL AND 281FT FWL, SEC 12, T12N, R008E, UM. 1315FT FNL AND 1114FT FWL, SEC 11, T12N, R008E, UM.	KUPARUK RIV UNIT 3H-6	DEVELOPMENT ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-103-20079-00 87-0079 07/31/87	ARCO ALASKA INC 1397FT FNL AND 281FT FWL, SEC 12, T12N, R008E, UM. 1202FT FSL AND 1124FT FWL, SEC 11, T12N, R008E, UM.	KUPARUK RIV UNIT 3H-7	DEVELOPMENT ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-103-20080-00 87-0080 07/31/87	ARCO ALASKA INC 1371FT FNL AND 281FT FWL, SEC 12, T12N, R008E, UM. 864FT FNL AND 1878FT FEL, SEC 11, T12N, R008E, UM.	KUPARUK RIV UNIT 3H-8	DEVELOPMENT ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL
50-029-21743-00 87-0081 07/31/87	STANDARD ALASKA PRODUCTION CO 1962FT FNL AND 2049FT FEL, SEC 36, T12N, R016E, UM. 3072FT FNL AND 4075FT FEL, SEC 30, T12N, R017E, UM.	DUCK IS UNIT MPI 1-9/J18	DEVELOPMENT ARCTIC SLOPE ENDICOTT, ENDICOTT OIL POOL
50-029-21744-00 87-0082 07/31/87	ARCO ALASKA INC 952FT FNL AND 497FT FWL, SEC 34, T11N, R014E, UM. 2685FT FSL AND 61FT FEL, SEC 28, T11N, R014E, UM.	PRUDHOE BAY UNIT DS7-27	DEVELOPMENT ARCTIC SLOPE PRUDHOE BAY, PRUDHOE OIL POOL

ALASKA DRILLING STATISTICS FOR JULY, 1987

* RELEASABLE INFORMATION ON RECENTLY COMPLETED WELLS *

API NUMBER PERMIT NUMBER COMPLETION DATE	OPERATOR NAME SURFACE LOCATION BOTTOM HOLE LOCATION	WELL NAME AND NUMBER	CLASSIFICATION AND STATUS GEOLOGIC AREA FIELD AND POOL	TOTAL DEPTH T.V. DEPTH
50-029-21375-00 85-0123 07/05/85	STANDARD ALASKA PRODUCTION CO 4256FT FNL AND 4739FT FEL, SEC 08, T11N, R013E, UM. 3083FT FNL AND 255FT FWL, SEC 17, T11N, R013E, UM.	PRUDHOE BAY UNIT N-11A	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, PRUDHOE OIL POOL	10,720FT 9,194FT
50-733-20383-00 85-0235 02/24/86	SHELL WESTERN E&P INC 1627FT FSL AND 435FT FEL, SEC 11, T08N, R013W, SM. 1440FT FSL AND 897FT FEL, SEC 11, T08N, R013W, SM.	MGS A-33-11	DEVELOPMENT, 1-OIL COOK INLET BASIN MIDDLE GROUND SHOAL, A OIL POOL	9,930FT 9,629FT
50-733-20179-02 86-0025 04/05/86	SHELL WESTERN E&P INC 1678FT FSL AND 368FT FEL, SEC 11, T08N, R013W, SM. 2720FT FSL AND 178FT FEL, SEC 11, T08N, R013W, UM.	MGS A-41A-11	DEVELOPMENT, 2-GAS COOK INLET BASIN MIDDLE GROUND SHOAL, A OIL POOL MIDDLE GROUND SHOAL, B C AND D OIL POOL	7,765FT 7,760FT
50-029-21635-00 86-0145 01/04/87	ARCO ALASKA INC 1986FT FNL AND 219FT FEL, SEC 33, T11N, R014E, UM. 154FT FSL AND 2316FT FWL, SEC 33, T11N, R014E, UM.	PRUDHOE BAY UNIT DS7-23	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, PRUDHOE OIL POOL	10,580FT 9,196FT
50-029-21679-00 86-0191 03/28/87	ARCO ALASKA INC 1428FT FSL AND 8FT FWL, SEC 01, T11N, R015E, UM. 762FT FSL AND 1260FT FWL, SEC 12, T11N, R015E, UM.	PRUDHOE BAY UNIT L5-4	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, LISBURNE OIL POOL	11,672FT 9,236FT
50-029-21604-00 86-0105 05/14/87	ARCO ALASKA INC 1017FT FNL AND 1511FT FWL, SEC 08, T10N, R015E, UM. 93FT FSL AND 2513FT FEL, SEC 05, T10N, R015E, UM.	PRUDHOE BAY UNIT DS1-29	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, PRUDHOE OIL POOL	9,610FT 9,256FT
50-029-21683-00 86-0195 05/22/87	ARCO ALASKA INC 2229FT FNL AND 2255FT FEL, SEC 17, T13N, R009E, UM. 1486FT FNL AND 3515FT FEL, SEC 18, T13N, R009E, UM.	KUPARUK RIV UNIT 3Q-6	DEVELOPMENT, 1-OIL ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL	9,747FT 6,563FT
50-029-21682-00 86-0194 05/22/87	ARCO ALASKA INC 2235FT FNL AND 2231FT FEL, SEC 17, T13N, R009E, UM. 1856FT FNL AND 593FT FEL, SEC 19, T13N, R009E, UM.	KUPARUK RIV UNIT 3Q-7	DEVELOPMENT, 1-OIL ARCTIC SLOPE KUPARUK RIVER, KUPARUK RIVER OIL POOL	9,293FT 6,630FT
50-029-21657-00 86-0167 05/26/87	ARCO ALASKA INC 694FT FNL AND 810FT FWL, SEC 22, T11N, R015E, UM. 1198FT FSL AND 1287FT FWL, SEC 14, T11N, R015E, UM.	PRUDHOE BAY UNIT L3-18	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, LISBURNE OIL POOL	11,798FT 9,409FT
50-029-21700-00 87-0019 06/02/87	ARCO ALASKA INC 1788FT FSL AND 19FT FWL, SEC 01, T11N, R015E, UM. 1079FT FSL AND 1212FT FWL, SEC 01, T11N, R015E, UM.	PRUDHOE BAY UNIT L5-16	DEVELOPMENT, 1-OIL ARCTIC SLOPE PRUDHOE BAY, LISBURNE OIL POOL	9,575FT 9,312FT

ALASKA DRILLING STATISTICS FOR JULY, 1987

* RELEASABLE INFORMATION ON RECENTLY COMPLETED WELLS *

API NUMBER / PERMIT NUMBER / COMPLETION DATE	OPERATOR NAME / SURFACE LOCATION / BOTTOM HOLE LOCATION	WELL NAME AND NUMBER	CLASSIFICATION AND STATUS / GEOLOGIC AREA / FIELD AND POOL	TOTAL DEPTH / T.V. DEPTH
50-029-21520-00	ARCO ALASKA INC	PRUDHOE BAY UNIT DS4-26	DEVELOPMENT, 1-OIL	10,866FT
85-0314	91FT FSL AND 429FT FWL, SEC 26, T11N, R015E, UM.		ARCTIC SLOPE	8,879FT
06/08/87	1494FT FNL AND 1356FT FEL, SEC 26, T11N, R015E, UM.		PRUDHOE BAY, PRUDHOE OIL POOL	

OUTSTANDING DRILLING PERMITS FOR ALASKA AS OF 08/05/87

OPERATOR NAME	WELL NAME AND NUMBER		API NUMBER	PERMIT	APPROVED
COOK INLET BASIN					
ALASKAN CRUDE CORP	BURGLIN	31-1	50-133-20390-00	87-0070	07/31/87
AMOCO PRODUCTION CO	GRANITE PT ST 18742	13RD	50-133-20055-01	87-0044	04/28/87
AMOCO PRODUCTION CO	GRANITE POINT 18742	32RD	50-733-20298-01	87-0063	06/29/87
FAR NORTH OIL & GAS INC	MCCOY PROSPECT	1	50-133-10002-01	85-0208	10/04/85
UNION OIL CO OF CALIFORNIA	KENAI TYONEK UNIT	42X-6	50-133-20379-00	85-0180	10/14/85
UNION OIL CO OF CALIFORNIA	KENAI BELUGA UNIT	12X-8	50-133-20386-00	85-0298	12/20/85
UNION OIL CO OF CALIFORNIA	CANNERY LOOP UNIT	4	50-133-20387-00	87-0034	04/28/87
UNION OIL CO OF CALIFORNIA	TRADING BAY UNIT	G-36DPN	50-733-20216-00	87-0049	05/28/87
UNION OIL CO OF CALIFORNIA	TRADING BAY ST	A-26DPN	50-733-20230-00	85-0258	11/25/85
UNION OIL CO OF CALIFORNIA	TRADING BY UNIT	M-1	50-733-20388-00	87-0046	05/12/87
UNION OIL CO OF CALIFORNIA	TRADING BAY UNIT	M-2	50-733-20389-00	87-0061	06/26/87
ARCTIC SLOPE					
ALASKAN CRUDE CORP	ACC	F-2	50-029-21315-00	85-0053	04/10/85
ALASKAN CRUDE CORP	ACC	F-3	50-029-21316-00	85-0054	04/10/85
AMERADA HESS CORP	COLVILLE DELTA 32	1	50-103-20055-00	85-0279	11/29/85
ARCO ALASKA INC	W BEACH ST	1-A	50-029-20138-01	86-0056	03/06/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS11-25	50-029-20488-01	87-0011	02/04/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L2-11	50-029-21477-00	85-0267	10/31/85
ARCO ALASKA INC	PRUDHOE BAY UNIT	L2-25	50-029-21525-00	86-0006	01/06/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS16-22	50-029-21531-00	86-0019	01/13/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS4-19	50-029-21533-00	86-0021	01/15/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3I-6	50-029-21548-00	86-0038	02/06/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS16-31	50-029-21551-00	86-0041	02/10/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3I-10	50-029-21563-00	86-0058	03/10/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3I-11	50-029-21564-00	86-0059	03/10/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS1-27	50-029-21591-00	86-0088	05/02/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS18-12	50-029-21615-00	86-0120	06/19/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS11-26	50-029-21628-00	86-0134	07/07/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3K-14	50-029-21631-00	86-0137	07/15/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS11-27	50-029-21638-00	86-0148	07/28/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	LGI-16	50-029-21643-00	86-0153	08/15/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-1	50-029-21660-00	87-0012	02/10/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L3-24	50-029-21670-00	86-0182	11/19/86
ARCO ALASKA INC	PRUDHOE BAY UNIT	L3-30	50-029-21673-00	86-0185	12/04/86
ARCO ALASKA INC	KUPARUK RIV UNIT	3Q-1	50-029-21687-00	87-0003	01/21/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3Q-3	50-029-21689-00	87-0005	01/21/87

OUTSTANDING DRILLING PERMITS FOR ALASKA AS OF 08/05/87

OPERATOR NAME	WELL NAME AND NUMBER		API NUMBER	PERMIT	APPROVED
ARCO ALASKA INC	KUPARUK RIV UNIT	3Q-4	50-029-21690-00	87-0006	01/21/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS11-28	50-029-21691-00	87-0007	01/28/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-12	50-029-21694-00	87-0010	01/28/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-2	50-029-21695-00	87-0013	02/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-3	50-029-21696-00	87-0014	02/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-4	50-029-21697-00	87-0015	02/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-5	50-029-21706-00	87-0025	03/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-6	50-029-21707-00	87-0026	03/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-7	50-029-21708-00	87-0027	03/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-8	50-029-21709-00	87-0028	03/10/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-9	50-029-21710-00	87-0029	03/10/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-8	50-029-21711-00	87-0030	03/16/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-10	50-029-21715-00	87-0035	03/31/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-28	50-029-21717-00	87-0037	04/03/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-11	50-029-21718-00	87-0038	04/13/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-12	50-029-21719-00	87-0050	05/22/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-13	50-029-21720-00	87-0040	04/13/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-29	50-029-21724-00	87-0045	04/30/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-14	50-029-21726-00	87-0051	05/28/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-15	50-029-21727-00	87-0052	06/03/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-16	50-029-21728-00	87-0053	06/03/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-17	50-029-21729-00	87-0054	06/03/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-18	50-029-21730-00	87-0055	06/03/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-21	50-029-21732-00	87-0057	05/29/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-19	50-029-21737-00	87-0064	07/02/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-20	50-029-21738-00	87-0065	07/01/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-21	50-029-21739-00	87-0066	07/07/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3M-22	50-029-21740-00	87-0067	07/07/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	L5-5	50-029-21742-00	87-0069	07/07/87
ARCO ALASKA INC	PRUDHOE BAY UNIT	DS7-27	50-029-21744-00	87-0082	07/31/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3H-4	50-103-20076-00	87-0076	07/31/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3H-5	50-103-20077-00	87-0077	07/31/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3H-6	50-103-20078-00	87-0078	07/31/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3H-7	50-103-20079-00	87-0079	07/31/87
ARCO ALASKA INC	KUPARUK RIV UNIT	3H-8	50-103-20080-00	87-0080	07/31/87
NORTH SLOPE BOROUGH	S BARROW	NSB-1	50-023-20020-00	87-0071	07/27/87
NORTH SLOPE BOROUGH	S BARROW	NSB-2	50-023-20021-00	87-0072	07/27/87
NORTH SLOPE BOROUGH	S BARROW	NSB-3	50-023-20022-00	87-0073	07/27/87
NORTH SLOPE BOROUGH	S BARROW	NSB-4	50-023-20023-00	87-0074	07/27/87
NORTH SLOPE BOROUGH	S BARROW	NSB-7	50-023-20024-00	87-0075	07/27/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	B-3B	50-029-20306-01	87-0048	06/17/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	U-12	50-029-21409-00	85-0182	08/05/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	S-12A	50-029-21419-00	85-0193	08/13/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	H-25	50-029-21478-00	85-0268	10/31/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	H-26	50-029-21487-00	85-0277	11/25/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	B-28	50-029-21510-00	85-0303	12/13/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	H-24	50-029-21512-00	85-0305	12/20/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	D-25	50-029-21522-00	85-0320	12/27/85
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	B-29	50-029-21523-00	86-0014	01/06/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	C-31	50-029-21552-00	86-0042	02/07/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	D-28	50-029-21556-00	86-0050	02/25/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	Y-22	50-029-21558-00	86-0052	02/28/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT	M-28	50-029-21578-00	86-0074	04/11/86

AUGUST 1987

OUTSTANDING DRILLING PERMITS FOR ALASKA AS OF 08/05/87

OPERATOR NAME	WELL NAME AND NUMBER	API NUMBER	PERMIT	APPROVED
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-27/M33	50-029-21586-00	86-0083	05/02/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT Y-23	50-029-21590-00	86-0087	05/02/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT Y-24	50-029-21608-00	86-0113	06/10/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT S-19	50-029-21611-00	86-0116	06/13/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT G-30	50-029-21613-00	86-0118	06/17/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT G-31	50-029-21616-00	86-0121	06/19/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-47/Q21	50-029-21625-00	86-0131	07/03/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT F-29	50-029-21627-00	86-0133	07/03/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-19	50-029-21629-00	86-0135	07/10/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT G-32	50-029-21636-00	86-0146	07/25/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT S-20	50-029-21637-00	86-0147	07/28/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 2-14/O16	50-029-21639-00	86-0149	08/04/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 4-20/M35	50-029-21640-01	86-0173	10/10/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-23/N32	50-029-21645-00	86-0155	08/15/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT F-31	50-029-21647-00	86-0157	08/28/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 2-62/Q17	50-029-21648-00	86-0158	09/03/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT F-28	50-029-21649-00	86-0159	09/02/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 2-34/P14	50-029-21662-00	86-0172	10/09/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-33/K37	50-029-21668-00	86-0180	10/31/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-29/M25	50-029-21669-00	86-0181	11/07/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-35/O25	50-029-21672-00	86-0184	12/04/86
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-1/N29	50-029-21678-00	86-0190	12/11/86
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-24	50-029-21686-00	87-0002	01/14/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 4-8/P27	50-029-21692-00	87-0008	01/26/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-27/P20	50-029-21693-00	87-0009	01/28/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-22	50-029-21698-00	87-0017	02/12/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-35/L36	50-029-21701-00	87-0020	02/27/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-21	50-029-21705-00	87-0024	03/09/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-23	50-029-21712-00	87-0031	03/25/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-41/O23	50-029-21713-00	87-0032	03/26/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-21/L34	50-029-21714-00	87-0033	03/27/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-20	50-029-21716-00	87-0036	04/03/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-28	50-029-21721-00	87-0041	05/06/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-25/N22	50-029-21722-00	87-0042	04/24/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 4-6/Q32	50-029-21723-00	87-0043	04/24/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT N-23	50-029-21725-00	87-0047	05/22/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 4-42/P38	50-029-21731-00	87-0056	05/28/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-27	50-029-21733-00	87-0058	06/03/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-26	50-029-21734-00	87-0059	06/11/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT SDI 3-49/J40	50-029-21735-00	87-0060	06/17/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT K-9	50-029-21736-00	87-0062	06/26/87
STANDARD ALASKA PRODUCTION CO	PRUDHOE BAY UNIT J-25	50-029-21741-00	87-0068	07/07/87
STANDARD ALASKA PRODUCTION CO	DUCK IS UNIT MPI 1-9/J18	50-029-21743-00	87-0081	07/31/87

ALASKA PRODUCTION SUMMARY BY ACTIVE POOLS FOR JUNE, 1987

OIL FIELDS	CRUDE OIL (BBL)	WATER (BBL)	GAS (MCF)	PROD. WELLS	CUM CRUDE OIL (BBL)	CUM WATER (BBL)	CUM GAS (MCF)
BEAVER CREEK FIELD							
UNDEFINED POOL	12,304	19	3,384	2	3,408,098	18,030	1,398,612
FIELD TOTAL	12,304	19	3,384	2	3,408,098	18,030	1,398,612
ENDICOTT FIELD							
ENDICOTT POOL	4,522	2,132	57,680	3	26,866	2,132	627,887
FIELD TOTAL	4,522	2,132	57,680	3	26,866	2,132	627,887
GRANITE POINT FIELD							
MIDDLE KENAI POOL	235,395	88,785	210,775	28	105,513,719	7,057,867	91,140,107
FIELD TOTAL	235,395	88,785	210,775	28	105,516,483	7,057,867	91,141,697
KUPARUK RIVER FIELD							
KUPARUK RIVER POOL	8,707,775	2,468,156	9,325,038	311	345,001,063	29,249,902	411,153,143
FIELD TOTAL	8,707,775	2,468,156	9,325,033	311	345,004,428	76,877,131	411,158,123
MCARTHUR RIVER FIELD							
HEMLOCK POOL	488,547	1,879,846	289,177	58	463,579,363	208,954,168	169,357,394
MIDDLE KENAI G POOL	84,637	45,337	35,674	11	35,542,793	3,919,127	17,700,051
WEST FORELAND POOL	30,231	41,805	10,340	4	18,959,696	4,752,980	5,400,475
FIELD TOTAL	603,415	1,966,988	335,191	73	518,081,852	217,626,275	192,457,920
MIDDLE GROUND SHOAL FIELD							
A POOL	1,675	684	7,821	1	1,971,271	1,107,558	4,317,946
B C AND D POOL	11,837	23,602	11,574	4	10,329,813	3,480,365	7,161,571
E F AND G POOL	213,362	305,753	95,521	36	139,492,035	65,845,328	64,648,301
FIELD TOTAL	226,874	330,039	114,916	41	151,793,119	70,433,251	76,127,818
PRUDHOE BAY FIELD							
LISBURNE POOL	1,468,754	129,830	5,696,228	36	13,176,643	808,525	39,192,629
PRUDHOE POOL	46,382,709*	17,413,797	102,638,372	640	5,203,485,385**	399,682,839	7,004,160,364
FIELD TOTAL	47,851,463	17,543,627	108,334,600	676	5,216,662,028	401,603,710	7,043,352,993
SWANSON RIVER FIELD							
HEMLOCK POOL	179,042	147,632	7,578,836	30	206,157,816	66,344,819	1,710,788,143
FIELD TOTAL	179,042	147,632	7,578,836	30	206,209,055	66,348,989	1,711,112,031
TRADING BAY FIELD							
HEMLOCK POOL	14,521	9,620	15,789	6	10,583,602	2,725,514	10,383,084
UNDEFINED POOL	720	189	550	1	557,078	97,141	283,318
MIDDLE KENAI B POOL	11,578	4,822	11,933	6	1,995,693	180,873	2,125,127
MIDDLE KENAI C POOL	12,138	20,548	21,470	5	18,454,214	16,645,052	11,284,564
MIDDLE KENAI D POOL	10,016	16,988	10,183	6	26,682,777	13,126,059	21,724,168
MIDDLE KENAI E POOL	5,767	9,589	5,953	4	7,453,319	2,773,836	6,337,082
G-NE/HEMLOCK-NE POOL	21,341	135,619	8,268	7	22,867,516	23,915,708	6,416,102
W FORELAND POOL	689		121	1	25,093	9,611	18,460
M.KENAI UNALLOCATED ZONE			13	1			1,090,783
FIELD TOTAL	76,770	197,375	74,4[illegible]	37	88,619,292	59,473,794	60,362,688
TOTAL ACTIVE FIELDS	57,897,560	22,744,753	126,034,82[illegible]	201	6,635,321,221	899,441,179	9,587,739,769
DAILY AVERAGE	1,929,918	758,158	4,201,16[illegible]	INACTIVE	5,608,178	6,611,768	1,908,411
				ALL FIELDS	6,640,929,399	906,052,947	9,589,648,180

*INCLUDES 1,886,697 BBLS OF CONDENSATE
**INCLUDES 96,223,081 BBLS OF CONDENSATE

ALASKA PRODUCTION SUMMARY BY ACTIVE POOLS FOR JUNE, 1987

NGL PRODUCTION	NGL (BBL)	CUM NGL (BBL)
KUPARUK RIVER		
KUPARUK RIVER	106,683	2,440,785
FIELD TOTAL	106,683	2,440,785
MCARTHUR RIVER		
HEMLOCK	9,054	7,796,230
MIDDLE KENAI G	8,111	736,649
WEST FORELAND	806	197,330
FIELD TOTAL	17,971	8,730,209
PRUDHOE BAY		
LISBURNE	54,979	54,979
PRUDHOE	1,482,557	7,372,421
FIELD TOTAL	1,537,536	7,427,400
SWANSON RIVER		
HEMLOCK	2,787	1,168,902
FIELD TOTAL	2,787	1,168,902
TRADING BAY		
HEMLOCK	7	51,628
M.KENAI UNALLOCATED	21	307,454
FIELD TOTAL	28	359,082
TOTAL ACTIVE FIELDS	1,665,005	20,126,378
DAILY AVERAGE	55,500	
INACTIVE		0
ALL FIELDS		20,126,378

ALASKA PRODUCTION SUMMARY BY ACTIVE POOLS FOR JUNE, 1987

GAS FIELDS	CONDEN. (BBL)	WATER (BBL)	GAS (MCF)	PROD. WELLS	CUM CONDEN. (BBL)	CUM WATER (BBL)	CUM GAS (MCF)
BEAVER CREEK FIELD							
UNDEFINED POOL		22,357	1,510,399	4		223,651	56,536,882
FIELD TOTAL		22,357	1,510,399	4		223,651	56,536,882
BELUGA RIVER FIELD							
UNDEFINED POOL			1,577,774	13		810	241,348,429
FIELD TOTAL			1,577,774	13		810	241,348,429
EAST BARROW FIELD							
UNDEFINED POOL		10	22,952	4		672	3,653,375
FIELD TOTAL		10	22,952	4		672	3,653,375
KENAI FIELD							
STERLING 3 POOL		33	1,236,942	9		109,896	254,313,339
STERLING 4 POOL		391	1,337,666	12		84,654	357,860,178
STERLING 5.1 POOL		330	1,291,226	11		136,227	420,327,591
STERLING 6 POOL		205	1,603,963	11		41,842	387,170,650
UNDEFINED POOL		1,434	715,519	7		60,686	115,045,193
TYONEK POOL		361	414,706	4	11,877	30,812	206,955,557
FIELD TOTAL		2,754	6,600,022	54	11,877	476,817	1,785,704,713
MCARTHUR RIVER FIELD							
MIDDLE KENAI POOL			446,861	3			89,053,140
UNDEFINED POOL			374,185	2			39,244,490
FIELD TOTAL			821,046	5			128,297,630
MIDDLE GROUND SHOAL FIELD							
B C AND D POOL			9,870	1			68,657
UNDEFINED POOL			25,210	1			1,971,817
FIELD TOTAL			35,080	2			2,040,474
NORTH COOK INLET FIELD							
TERTIARY POOL		1,599	3,402,754	12		86,614	796,975,793
FIELD TOTAL		1,599	3,402,754	12		86,614	796,975,793
PRETTY CREEK FIELD							
UNDEFINED POOL			84,976	1		82	439,921
FIELD TOTAL			84,976	1		82	439,921
SOUTH BARROW FIELD							
UNDEFINED POOL		14	50,774	5		247	17,549,168
FIELD TOTAL		14	50,774	5		247	17,549,168
TRADING BAY FIELD							
UNDEFINED POOL			33,733	1			3,004,326
FIELD TOTAL			33,733	1			3,004,326
TOTAL ACTIVE FIELDS		26,734	14,139,510	101	11,877	788,893	3,035,550,141
DAILY AVERAGE		891	471,317	INACTIVE	0	45	21,801,170
				ALL FIELDS	11,877	788,938	3,057,351,311

ALASKA ENHANCED RECOVERY AND DISPOSAL PROJECTS FOR JUNE, 1987

ENHANCED RECOVERY	OIL (BBL)	WATER (BBL)	GAS (MCF)	INJ. WELLS	CUM OIL (BBL)	CUM WATER (BBL)	CUM GAS (MCF)
ENDICOTT FIELD							
ENDICOTT POOL	1,707			2	16,456	1	
FIELD TOTAL	1,707*			2	16,456*	1	
GRANITE POINT FIELD							
MIDDLE KENAI POOL		386,834		10		127,319,468	
FIELD TOTAL		386,834		10		127,319,468	
KUPARUK RIVER FIELD							
KUPARUK RIVER POOL		17,322,373	6,248,170	189		293,235,887	328,378,899
FIELD TOTAL		17,322,373	6,248,170	189		293,235,887	328,378,899
MCARTHUR RIVER FIELD							
HEMLOCK POOL		2,674,374		17		842,430,646	
MIDDLE KENAI G POOL		176,822		3		30,516,918	
FIELD TOTAL		2,851,196		20		872,947,564	
MIDDLE GROUND SHOAL FIELD							
B C AND D POOL		55,975		2		25,794,491	
E F AND G POOL		410,093		14		223,967,916	
FIELD TOTAL		466,068		16		255,558,346	
PRUDHOE BAY FIELD							
LISBURNE POOL		28,857	5,696,228	3		58,633	23,336,638
PRUDHOE POOL		43,337,951	91,767,604	135	13,012,875	1,269,022,749	6,382,506,230
FIELD TOTAL		43,366,808	97,463,832	138	13,012,875*	1,269,081,382	6,405,842,868
SWANSON RIVER FIELD							
HEMLOCK POOL			7,957,530	7		8,337,995	1,972,857,254
FIELD TOTAL			7,957,530	7		8,337,995	1,972,857,254
TOTAL ACTIVE FIELDS	1,707	64,393,279	111,669,532	382	13,029,331	2,826,480,643	8,707,079,021
DAILY AVERAGE	56	2,146,442	3,722,317	INACTIVE	0	127,512,325	743,988
				ALL FIELDS	13,029,331	2,953,992,968	8,707,823,009

DISPOSAL PROJECTS	FLUIDS (BBL)	DISP. WELLS	CUM FLUIDS (BBL)
BEAVER CREEK FIELD			
UNDEFINED ZONE	2,567	1	2,567
FIELD TOTAL	2,567	1	2,567
ENDICOTT FIELD			
UNDEFINED ZONE	25,066	1	136,113
FIELD TOTAL	25,066	1	136,113
KENAI FIELD			
UNDEFINED ZONE	4,365	1	197,624
STERLING 4 POOL	27,737	1	27,737
FIELD TOTAL	32,102	2	225,361
KUPARUK RIVER FIELD			
KUPARUK RIVER POOL	41,421	2	151,553
FIELD TOTAL	41,421	2	2,285,775
PRUDHOE BAY FIELD			
UNDEFINED ZONE	1,751,221	8	113,419,677
FIELD TOTAL	1,751,221	8	113,419,677
TOTAL ACTIVE FIELDS	1,852,377	14	116,069,493
DAILY AVERAGE	61,745	INACTIVE	0
		ALL FIELDS	116,069,493

*FLUIDS RETURNED TO RESERVOIR, NOT ENHANCED RECOVERY