

LEG. FINANCE - BILLS 1985 - 1986 2439

Overview of oil & gas tax Policy, Oil & gas taxes 2439

BILL SHEFFIELD, GOVERNOR

OFFICE OF THE GOVERNOR

OFFICE OF MANAGEMENT AND BUDGET
DIVISION OF STRATEGIC PLANNING

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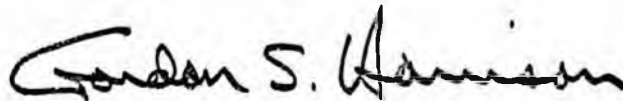
February 3, 1986

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

Dear Representative Cotten:

Please find enclosed our analysis of your proposed changes to the Economic Limit Factor.

Sincerely,



Gordon S. Harrison
Associate Director

GSH/TC/dmc

Enclosure

cc: Jim Ayers, Director
Legislative Relations
Office of the Governor

February 2, 1986

THE PETROLEUM SEVERANCE TAX IN ALASKA:
MODIFICATION OF THE ECONOMIC LIMIT FACTOR

Prepared by: Thomas Chester
Office of Management and Budget

Severance Tax

Alaska's petroleum severance tax is set by law at 15 percent¹ of the gross value of production, but this percentage is adjusted downward on the basis of the average productivity of the wells in a field. Only fields with extremely productive wells would pay the full 15 percent.

The Prudhoe Bay field now pays the full nominal severance tax rate of 15 percent, but only because of a special statutory provision that will expire in 1987 (FY '88²). At that time, the severance tax on Prudhoe Bay will begin to be adjusted downward in relationship to the declining average productivity of the wells in the field.

The formula for the downward adjustment of the nominal severance tax rate is called the economic limit factor (ELF). It is intended to encourage the maximum total production of an oil field by progressively lowering its effective severance tax as the field goes into decline.

ELF

Each field has its own ELF, which is computed monthly as a function of average daily output per well. Figure 1 shows this relationship. Fields with higher daily output have a higher ELF, and thus pay more tax. Figure 1 also indicates

the forecasted FY 88 average daily production of three North Slope fields and their associated ELF's.

ECONOMIC LIMIT FACTOR

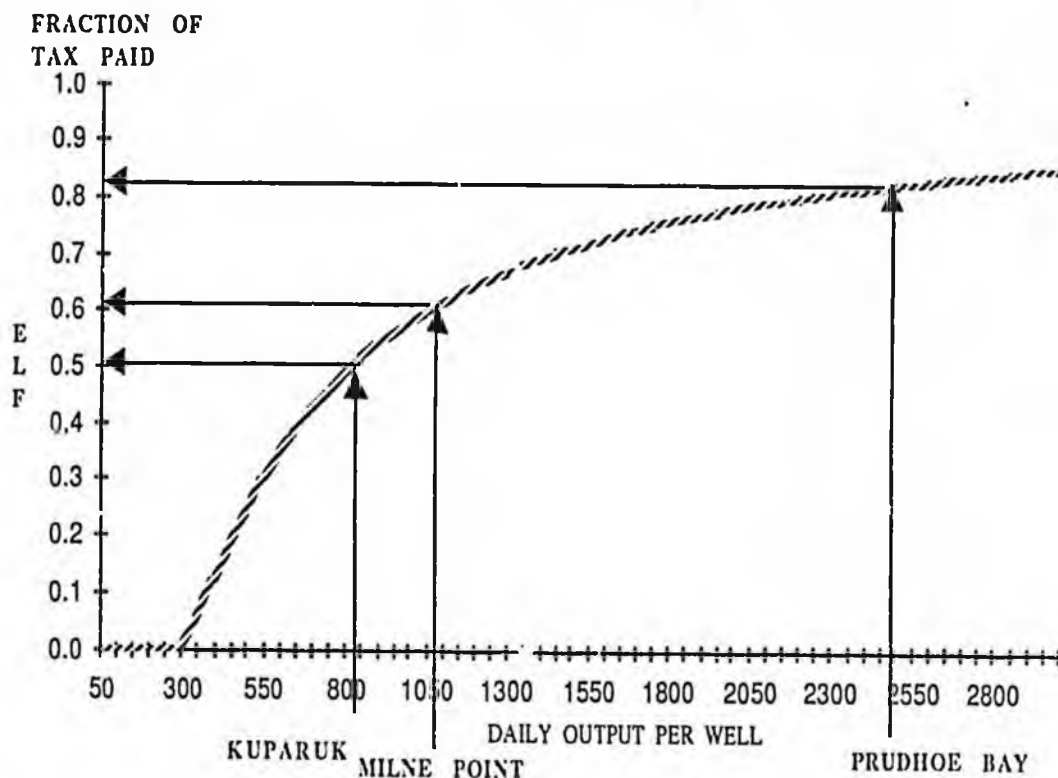


Figure 1

The actual severance tax rate paid (the effective severance tax rate) is equal to the ELF (which is always between 0 and 100 percent) multiplied by the statutory tax rate (usually 15%). This produces the effective severance tax rates shown in Table 1 below.

Table 1
 Effective Severance Tax Rates
 North Slope Fields - FY 88, under current ELF

Field	ELF	X	Nominal Rate	=	Effective Rate
Prudhoe Bay	.82		15%		12.3%
Kuparuk	.52		15%		7.5%
Milne Point	.60		15%		9.0%

Modification of the ELF formula

The existing ELF formula is based on average daily well productivity and does not take account of the average daily production of the entire field. That is why the Prudhoe Bay and Kuparuk fields begin to enjoy the severance tax reduction even though they are among the most productive fields in the western hemisphere. Also, because the existing ELF formula fails to account for average daily field production, the Milne Point field will have a comparatively high ELF even though it is a very small and economically marginal field on the north slope.

A modification of the ELF formula that incorporates overall field production characteristics could 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.

At the request of Rep. Cotten, OMB has evaluated the effects of one such modification.³ Table 2 shows the change in the effective tax rate for several oil fields. Table 3 shows the revenue implications of those changes.

Modification of the ELF formula to include total field productivity would improve the chances of a small, marginal field being brought into commercial production. These fields may have good well productivity characteristics but high costs because of the inability to spread fixed costs over a large number of producing wells (as in the case of Prudhoe Bay and Kuparuk).

Table 2
COMPARISON OF ELF'S
FY 89

	Existing ELF	Modified ELF	% change
Prudhoe Bay	.80	.99	+23%
Kuparuk	.50	.86	+72%
Milne	.60	.31	-48%
Endicott	.31	.0	-100%
Lisburne	.11	.05	-54%
West Sak	.0	.0	no change
Cook Inlet	.03	.0	100%

Table 3
Revenue Impact
from ELF, FY 87 - 94
Millions of \$

Year	Revenue Loss From Current ELF	Revenue Gain From Proposed ELF
87	70	68
88	234	183
89	263	185
90	243	180
91	241	172
92	324	169
93	332	166
94	340	155

FOOTNOTES

¹For any lease or property coming into commercial oil production after June 30, 1981, the severance tax rate is 12.25% during the first 5 years of production and 15% after that. (AS 43.55.011)

²This special statutory provision applies to all fields.

³

EXISTING ELF

$$ELF = (1 - PEL/TP) (460 * WD / PEL)$$

POSSIBLE ALTERNATIVE

$$ELF = (1 - PEL/TP) (37,000,000 / (PEL * TP / Days))$$

Where:

- PEL is production at the economic limit and in statute is set at 300 barrels per day per well
- TP is total production for the field
- WD is well days
- 460 and 37,000,000 are constants

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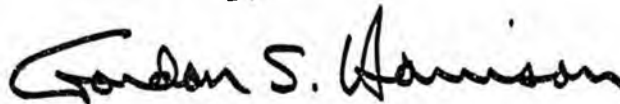
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ECONOMIC LIMIT FACTOR

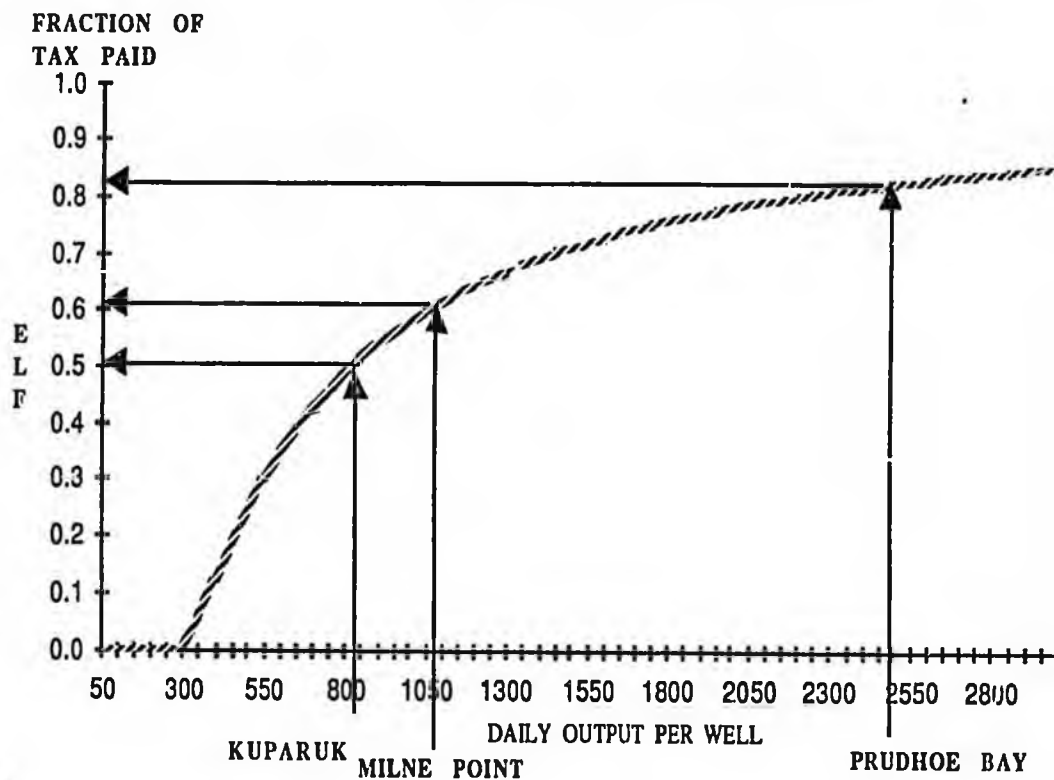


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- 460 and 37,000,000 are constants

MEMORANDUM

Division of Strategic Planning

TO: Representative Sam Cotten
FROM: Thomas P. Chester
RE: Computation of the Economic Limit Factor

DATE: January 15, 1986

In response to your request the following provides the information needed to compute the Economic Limit Factor (current and as you propose), a numerical example, and a chart which displays the effect of field size on the value of the proposed Economic Limit Factor (ELF).

The current and proposed Economic Limit Factor formulas are:

$$\text{Current ELF} = (1 - \text{PEL}/\text{TP})((460 * \text{WD})/\text{PEL})$$
$$\text{Proposed ELF} = (1 - \text{PEL}/\text{TP})((37,000,000 * \text{WD})/(\text{PEL} * \text{TP}/\text{Days}))$$

The following definitions are used in computing ELF values:

PEL (Production at the Economic Limit) =
(300 barrels per day)*

(average number of operating wells during the month)*
(number of days of production for the month). For example:

$$300 \text{ barrels} * 541 \text{ wells} * 30 \text{ days} = 4,869,000 \text{ barrels per month at the Economic Limit}$$

TP (Total Production for the field) =

(average number of operating wells during the month)*
(number of days of production for the month)*
(average daily production per well). For example:

$$541 \text{ wells} * 30 \text{ days} * 2477 \text{ barrels per well} = 40,201,710 \text{ barrels of production per month}$$

WD (Well Days) =

(average number of operating wells during the month)*
(number of days of production for the month). For example:

$$541 \text{ wells} * 30 \text{ days} = 16,230 \text{ well days}$$

TP/Days =

(average number of operating wells during the month)*
(average daily production per well). For example:

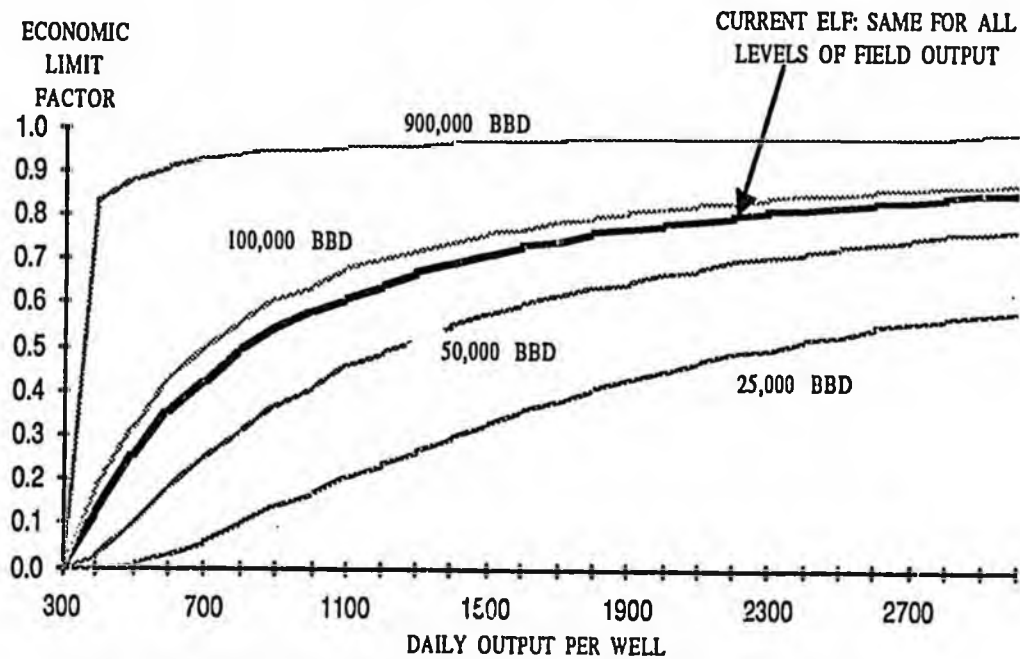
$$541 \text{ wells} * 2477 \text{ barrels per well} = 1,340,057 \text{ barrels of production per day}$$

Table 1.
 Hypothetical ELF
 Under Current and Proposed Law Using
 Values Given In Examples Above

Current ELF $(1 - 4,869,000/40,201,710)(460*16,230/4,869,000) = .82$
Proposed ELF $(1 - 4,869,000/40,201,710)(37,000,000*16,230/(4,869,000*1,340,057)) = .99$

chart 1

THE ECONOMIC LIMIT FACTOR (ELF):
 CURRENT AND PROPOSED FOR VARIOUS LEVELS OF
 WELL OUTPUT AND FIELD PRODUCTION



NOTE: BBD FIGURES REPRESENT DAILY FIELD PRODUCTION IN BARRELS PER DAY

When the formulas are written out incorporating the definitions given above they become unwieldy. For the curious they are:

$$\begin{aligned} \text{Current ELF (Economic Limit Factor)}^1 &= (1 - \text{PEL}/\text{TP})((460 \cdot \text{WD})/\text{PEL}) \\ &= (1 - \{(300 \text{ barrels per day}) \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month})\} / \\ &\quad \{(\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month}) \cdot (\text{average daily production per well})\}) (460 \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month}) / \{(300 \text{ barrels per day}) \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month})\}) \end{aligned}$$

$$\begin{aligned} \text{Proposed ELF}^2 &= (1 - \text{PEL}/\text{TP})((37,000,000 \cdot \text{WD})/(\text{PEL} \cdot \text{TP}/\text{Days})) \\ &= (1 - \{(300 \text{ barrels per day}) \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month})\} / \\ &\quad \{(\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month}) \cdot (\text{average daily production per well})\}) (37,000,000 \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month})) / ((300 \text{ barrels per day}) \cdot (\text{average number of operating wells during the month}) \cdot (\text{number of days of production for the month}) \cdot (\text{average number of operating wells during the month}) \cdot (\text{average daily production per well})) \end{aligned}$$

¹The formula for the existing ELF can be simplified through cancellation of like terms in the numerator and denominators of the various formula terms. Consider: $\text{PEL}/\text{TP} = (300 \cdot \text{days} \cdot \text{wells})/(\text{days} \cdot \text{wells} \cdot \text{well_prod}) = 300/\text{well_prod}$ and $(460 \cdot \text{wells} \cdot \text{days})/(300 \cdot \text{wells} \cdot \text{days}) = 460/300 = 1.533$. Making these substitutions into the ELF formula gives:

$$\text{ELF} = (1 - 300/\text{well_prod})1.533$$

²The formula for the proposed ELF can be simplified through cancellation of like terms in the numerator and denominators of the various terms. Consider: $\text{PEL}/\text{TP} = (300 \cdot \text{days} \cdot \text{wells})/(\text{days} \cdot \text{wells} \cdot \text{well_prod}) = 300/\text{well_prod}$ and $(37,000,000 \cdot \text{wells} \cdot \text{days})/(300 \cdot \text{wells} \cdot \text{wells} \cdot \text{well_prod}) = 37,000,000/(300 \cdot \text{wells} \cdot \text{well_prod}) = 37,000,000/(300 \cdot \text{total field production})$.

Making these substitutions into the proposed ELF formula gives:

$$\text{ELF} = (1 - 300/\text{well_prod})123,333/\text{TP}/\text{Days}$$

from Cotton Report

III.

THE SEVERANCE TAX AND THE
ECONOMIC LIMIT FACTOR

I. Introduction

It is generally known that oil producers in Alaska are assessed severance tax rates of 12.25 or 15 percent. However, it may not be so well known that the actual tax rates they pay are much lower than this because of the economic limit factor or ELF. (A severance tax or production tax is a flat tax based solely on the amount produced; in contrast, an income tax is based on profits.)

The ELF is a statutory reduction to the severance tax. It was adopted in 1977¹ to promote production on oil and gas fields with low output and presumably little profit. As the cost of producing the oil gets closer to its value -- the economic limit -- the ELF reduces the tax that is owed. When a field reaches the economic limit the ELF reduces the severance tax to 0. The ELF is applied to both oil and gas, but this discussion deals only with oil.

In practical terms, the ELF dramatically reduces the state's base severance tax rates of 12.25% or 15% on all fields. Prudhoe Bay is a temporary exception to this

¹In anticipation of North Slope production, the Department of Revenue recommended the ELF in its exhaustive 1977 study: "Alaska's Oil and Gas Tax Structure: A Study with Recommendations for Improvement." Previously a "stair-step" approach to severance taxes was used, keyed to Cook Inlet production, with graduated rates to 8 percent. The ELF improved upon the stair steps, retaining the idea that the tax should be reduced as production declined. The ELF also was able to adjust tax rates for both high-volume North Slope fields and the lower-volume Cook Inlet fields.

because of a provision that suspends the ELF for 10 years on high volume fields. However, in FY 88 the 10-year limit expires and Prudhoe will also enjoy tax concessions of the ELF -- and the state will lose \$156 million, according to OMB calculations (see Attachment A). Another example is Kuparuk. In FY 86 the ELF reduced Kuparuk's effective severance tax rate to 6%, and the state lost \$58 million.

An unforeseen consequence of the ELF is that it will greatly reduce the severance tax rates on most of the fields that have yet to begin producing. For example, in FY 90 the effective severance tax rate for Lisburne will be 3% and for Endicott it will be 4%. These cases show that the ELF is actually providing these marginal fields with a substantial incentive -- reducing costs at field start-up.

The ELF's original goal was to extend the life of fields, and thus extend revenues to the state. However, one study shows that the ELF only prolongs a field's life for one or two years, thus its direct benefit to the state is limited. Nonetheless, the ELF does appear to provide an incentive to developers of marginal fields because it reduces the severance tax rate. If the ELF were eliminated, for example, it is likely that some of the marginal fields would not be feasible to develop.²

²In a study entitled "Alaska North Slope Oil Production and Revenue Projections" published Feb. 1985 by the Institute of Social and Economic Research, author and UAA economist Matthew Berman concluded that the Endicott and Milne Point fields might not be feasible to develop without the ELF.

It's also apparent that fields with substantial output and correspondingly high profit rates, such as Prudhoe and Kuparuk, do not require the production incentive that the ELF provides.

II. How the ELF Works

The ELF is a formula that is multiplied by the nominal rate of 12.25% or 15% to obtain the effective rate actually applied to a field. The ELF will never be more than 1. If the ELF is 1, then 100% of the severance tax is owed. An ELF of .8 means 80% of the tax is owed; 80% of 15% equals an effective tax rate of 12%.

Since 1981 the severance tax rate has been 15%, with an exception for new fields; fields that start producing after June 30, 1981 pay a reduced rate of 12.25% for the first five years. The law also requires that the ELF be calculated at 1 during the first 10 years of a field's production any time the ELF goes above .7. (Currently this provision only affects Prudhoe.) For fields with an ELF at or below .7, the actual ELF used. After 10 years the actual ELF is used in all cases.

For example, the ELF for Prudhoe Bay in FY 85 was .864. Since this is more than .7 and within the first 10 years of production, the 1 figure is used. Thus the full 15% severance tax was owed.

In FY 88, however, the 10-year limit will no longer be in effect for Prudhoe (production began in FY 78) and the actual ELF of .82 will be used. This means the amount of severance tax owed will be 82% of 15%, or an effective rate

of 12.5%. The amount to be paid to the state will be \$714 million, \$156 million less than if the full 15% severance tax were paid.

III. Modifying the ELF

It is apparent that the ELF accomplishes its goals but not without some drawbacks. One drawback is providing an unnecessary tax reduction for Prudhoe and Kuparuk. Another issue is whether it goes far enough in reducing the severance tax rate on marginal fields. (A problem with a severance tax as opposed to an income tax is that it is not sensitive to profits or costs, thus a fair tax rate for a large field may be a burden for a small field.)

An additional problem with the current ELF formula is that it is based on daily output per well; total field production is not taken into account. This penalizes a marginal field like Milne Point (30,000 bbls/day) which has high output per well but few wells (about 22). Under the current ELF formula Milne is subject to a severance tax rate almost as high as the tax applied to Kuparuk (240,000 bbls/day), which is clearly not a marginal field. For example, in FY 88, Milne Point will be paying a 7.35% severance tax compared to Kuparuk's rate of 7.6%.

Instead of basing the ELF on individual wells, total field production could be included in the ELF formula to compensate for this inequity, keeping the severance tax low on the smaller fields that would benefit most from a tax break.

The ELF could be modified to accomplish these goals:

-- Dramatically reduce the effective severance tax rates for all marginal fields, including Cook Inlet.

-- Prevent a premature reduction to the severance tax rates for Prudhoe and Kuparuk. These highly profitable fields are years away from being marginal. When they do start approaching the economic limit, the ELF formula will provide them with a tax break.

-- More equitably set the tax rate for each field.

This formula modification would bring Prudhoe's ELF to .99 (now it is at .83); raise Kuparuk's to .8 and drop Milne Point's to .3. These ELFs translate into effective severance tax rates of about 14.85%, 12% and 4.5%.

Here are the current ELFs compared with ELFs under the revised formula.

	Current ELF	Modified ELF	% change
Prudhoe Bay	.80	.99	+23
Kuparuk	.50	.86	+72
Milne Point	.60	.31	-48
Endicott	.31	.0	-100
Lisburne	.11	.05	-54
West Sak	.0	.0	no change
Cook Inlet	.03	.0	-100

The formula change would result in the following positive state severance tax collections*:

FY	millions	
87	\$ 32	* These numbers, based on June 1985 revenue projections, assume the actual ELF is used in all cases and assume a 15% severance tax rate across the board. (If the 12.25% for the first 5 years were retained, there would be little change in these amounts.)
88	179	
89	192	
90	184	
91	175	
92	173	
93	170	
94	158	

IV. What Legislation Would Require

1) Simplify the law so the actual ELF is always applied. Current law requires that an ELF of 1 be used if the actual ELF goes above .7 any time during the first 10 years of a field's production. (AS 43.55.013)

2) Change the ELF formula. (AS 43.55.013) This modification only alters the exponent part of the formula. It uses a different number as a constant and takes into account average daily production from the whole field.

Current ELF formula:

$$ELF = \left(1 - \frac{PEL}{TP} \right) \exp \left(\frac{460 \times WD}{PEL} \right)$$

Revised ELF formula:

$$ELF = \left(1 - \frac{PEL}{TP} \right) \exp \left(\frac{37,000,000 \times WD}{PEL \times TP / \text{Days}} \right)$$

PEL = monthly production rate at the economic limit
(300 barrels x number of well days a month)
TP = total production (number of barrels) during the month
WD = well days in the month
exp = the expression following this is an exponent
Days = The number of days in the month for which the tax is to be paid

The numbers 460 and 37,000,000 are constants or scaling factors.

V. Conclusion

Enacting these changes to the severance tax would not only maintain our current level of severance tax revenue. More importantly, the revised ELF would provide a new

ALASKA NORTH SLOPE OIL AND GAS REVENUES

Alaska North Slope Oil Revenue

	Fiscal Years									
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
June 1985 Pet. Rev. Assumptions										
World Oil Price	26.37	24.31	22.41	22.206	22.711	23.464	24.362	25.565	26.934	28.379
Average Rate of Inflation	4.03	3.92	4.01	4.76	4.76	4.76	4.76	4.76	5.104	5.104
ANS/World Qual. & Marketing Adjust	3.253	2.532	2.663	2.639	2.386	2.447	2.475	2.520	2.507	2.612
TransAlaska Pipeline Tariff	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007
ANS Netback Price P801 (\$/bbl)	17.11	15.471	13.74	13.56	14.34	15.01	15.00	17.03	18.34	19.76
Prudhoe Bay Prod. (MMbbl/d)	1.520	1.517	1.500	1.34	1.100	1.07	.074	.015	.753	.641
Prudhoe Bay Price (\$/bbl)	17.11	15.471	13.74	13.56	14.34	15.01	15.00	17.03	18.34	19.76
Wells	460.25	509.6	527.1	540.6	524.05	545.15	489.9	466.45	447.65	420.65
R.R.	.0640307	.0496946	.0437062	.0205200	.0041141	.7030653	.7540433	.7491265	.7399201	.7145022
Nominal Tax Rate	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Ineffective Tax Rate	.15	.15	.15	.1230793	.1206171	.1175190	.1131065	.1123690	.1109092	.1071753
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (R.F.)	1252.465	1124.336	992.6137	714.2504	656.2593	580.2696	501.3609	490.1035	409.5263	433.5515
SEVERANCE TAX (NO R.F.)	1252.465	1124.336	992.6137	870.4757	816.1270	740.6450	664.8966	664.9124	561.5063	606.7002
CONSERVATION TAX	.6100063	.6056140	.6020219	.5349531	.4742719	.4111953	.3489172	.3253633	.3006117	.2550792
Gathering & Cleaning Charge	.7	.72021	.7567550	.7071017	.0245670	.0630172	.9049149	.9400090	.9931351	1.044619
ROYALTIES	1144.023	1020.395	893.2797	700.9031	737.5797	664.7022	597.1494	597.9900	595.9624	547.3410
TOTAL OIL PROD REVENUES	2396.400	2144.731	1805.093	1495.153	1360.829	1245.052	1090.510	1096.102	1085.409	980.8945
Kuparuk River Prod. (MMbbl/d)	.167	.2	.219	.239	.239	.239	.21	.187	.162	.143
Kuparuk River Price (\$/bbl)	16.29	14.651	12.92	12.74	13.52	14.19	15.06	16.21	17.52	18.94
Wells	154.5	240.5	284	285.25	285.25	285.25	276.5	276.5	254	254
R.R.	.69	.4091336	.4697705	.5067938	.5067938	.5067938	.4627634	.4070192	.3771622	.3112742
Nominal Tax Rate	.1275	.1275	.1363	.15	.15	.15	.15	.15	.15	.15
Ineffective Tax Rate	.004525	.0599164	.0640297	.0760191	.0760191	.0760191	.0694145	.0610529	.0566043	.0466911
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (R.F.)	73.43040	56.07173	57.06143	73.92490	70.45092	82.33865	70.11249	59.10602	51.30973	40.30790
SEVERANCE TAX (NO R.F.)	106.4326	114.6395	123.1696	145.0670	154.7985	162.4697	151.5083	145.2160	135.9694	129.7502
CONSERVATION TAX	.0666695	.0790430	.0074209	.0754133	.0754133	.0754133	.0038359	.0743539	.0646734	.0570003
Gathering & Cleaning Charge	.4	.4005	.4010006	.4015019	.4020030	.4025063	.4030094	.4035132	.4040175	.4045226
ROYALTIES	121.0719	130.0350	125.0003	134.5436	143.0436	150.3440	140.4323	134.0590	126.5005	120.9324
TOTAL OIL PROD REVENUES	194.5103	106.1075	102.9497	200.4605	221.4945	232.6027	210.5440	193.4650	177.0102	161.3203
Milne Point Prod. (MMbbl/d)	0	0	.008	.023	.023	.023	.023	.023	.010	.016
Milne Point Price (\$/bbl)	17.40	15.041	14.11	13.93	14.71	15.30	16.25	17.4	18.71	20.13
Wells	1	1	21.15	21.15	21.15	21.15	21.15	19.6	17.1	15.6
R.R.	0	0	.0092001	.6096111	.6096111	.6096111	.6096111	.6150020	.5970649	.5002759
Nominal Tax Rate	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Ineffective Tax Rate	0	0	.0133920	.0914417	.0914417	.0914417	.0914417	.0951053	.0096797	.0002414
Royalty Percentage	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625
SEVERANCE TAX (R.F.)	0	0	.4621040	0.955726	9.457195	9.007944	10.44720	11.66907	9.232479	0.607079
SEVERANCE TAX (NO R.F.)	0	0	5.175901	14.69000	15.51349	16.22000	17.13761	18.35042	15.44242	14.76037

F-10-1994

incentive for future oil exploration and production in
Alaska by lowering the severance tax on marginal fields.

SEVERANCE TAX (ELF)	0	0	0	0	0	0	0	0	0	0	0
SEVERANCE TAX (NO ELF)	0	0	0	0	0	0	0	0	0	0	0
CONSERVATION TAX	0	0	0	0	0	0	0	0	0	0	0
Gathering & Cleaning Charge	0	0	0	0	0	0	0	0	0	0	0
ROYALTIES	0	0	0	0	0	0	0	0	0	0	0
TOTAL OIL PROD REVENUES	0	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 (\$/cbl)	17.02921	15.37540	13.63733	13.40789	14.13640	14.74674	15.57237	16.70490	18.00509	19.39853
AVG. NOMINAL TAX RATE	.1472906	.1467967	.1401377	.1460136	.1428015	.1450169	.1467192	.1465657	.1462150	.1475127
AVG. EFFECTIVE TAX RATE	.1435491	.1395069	.1370937	.1115651	.1036090	.0986205	.0934909	.0912105	.0892272	.0830136
AVG. ROYALTY PERCENTAGE	.125	.125	.1251720	.1257348	.1262922	.1264004	.1265956	.1267101	.1267017	.1266031
SEVERANCE TAX	1325.903	1100.408	1050.937	797.1311	746.6525	693.3015	623.0119	617.2010	605.4633	540.1976
CONSERVATION TAX	.6788750	.6054506	.6961006	.6621466	.6314206	.5090927	.5299927	.5000326	.4661775	.4100404
ROYALTIES	1245.095	1150.430	1030.594	960.9079	902.9065	961.0279	916.9057	932.5029	936.9096	090.0760
TOTAL OIL PROD REVENUES	2591.675	2331.524	2082.220	1766.701	1730.190	1655.799	1541.240	1550.366	1542.039	1431.404
	14.35491	13.95069	13.70037	11.15651	10.36090	9.862054	9.149086	9.121049	0.922717	0.301360

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

	85	86	87	88	89	90	91	92	93	94
SEVERANCE TAX (MILLIONS OF \$)										
NO ELF	1350.097	1230.976	1125.702	1039.074	1023.750	1011.050	971.7900	903.0472	903.7061	941.9207
WITH ELF	1325.903	1100.400	1050.937	797.1311	746.6525	693.3015	623.0119	617.2010	605.4633	540.1976
REVENUES RESULTING FROM REPEAL OF ELF	32.99410	50.56776	74.76406	242.7425	277.0974	310.4690	347.9070	365.7653	370.2420	401.7331
CUMULATIVE TOTAL	32.99410	91.56106	166.3267	409.0693	606.1667	1004.636	1352.623	1710.300	2096.631	2490.362

PRUDHOE BAY ONLY

SEVERANCE TAX (MILLIONS OF \$)										
NO ELF	1252.465	1124.336	992.6137	870.4757	816.1270	740.6450	664.0966	664.9124	661.5063	606.7002
WITH ELF	1252.465	1124.336	992.6137	714.2504	656.2593	509.2696	501.3609	490.1035	409.5263	433.5515
REVENUES RESULTING FROM REPEAL OF ELF	0	0	0	156.2253	159.8670	160.3754	163.5357	166.0009	172.0600	173.2367
CUMULATIVE TOTAL	0	0	0	156.2253	316.0931	476.4685	640.0042	806.0131	970.0730	1152.110

Figures calculated
by OMB

14-1511
Bradley
01/16/86

1 IN THE HOUSE

2 HOUSE BILL NO.

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FOURTEENTH LEGISLATURE - SECOND SESSION

5 A BILL

6 For an Act entitled: "An Act relating to the oil production tax."

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

8 * Section 1. AS 43.55.013(b) is amended to read:

9 (b) [(1)] The economic limit factor for oil production of a lease
10 or property shall be computed according to the following formula:

11
$$\frac{(1-[PEL/TP]) \exp ([37,000,000 \times WD]/[PEL \times TP/Days])}{[(1-[PEL/TP]) \exp ([460 \times WD]/PEL)]}$$

12

13 where: PEL = the monthly production rate at the economic limit;

14 TP = the total production during the month for

15 which the tax is to be paid;

16 WD = the total number of well days in the

17 month for which the tax is to be paid; [AND]

18 Davs = the number of days in the month for which

19 the tax is to be paid; and

20 where "exp" indicates that the expression following it is an exponent.

21 [(2) IF, FOR ANY MONTH DURING THE FIRST 10 YEARS FOLLOWING
22 THE COMMENCEMENT OF COMMERCIAL OIL PRODUCTION OF A LEASE OR PROPERTY,
23 THE ECONOMIC LIMIT FACTOR FOR OIL PRODUCTION OF THAT LEASE OR PROPERTY
24 COMPUTED UNDER (1) OF THIS SUBSECTION IS 0.7 OR LESS, THEN THAT FACTOR
25 SHALL BE APPLIED.

26 (3) IF, FOR ANY MONTH DURING THE FIRST 10 YEARS FOLLOWING
27 THE COMMENCEMENT OF COMMERCIAL OIL PRODUCTION OF A LEASE OR PROPERTY,
28 THE ECONOMIC LIMIT FACTOR FOR OIL PRODUCTION OF THAT LEASE OR PROPERTY
29 COMPUTED UNDER (1) OF THIS SUBSECTION IS GREATER THAN 0.7, THEN THE

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ECONOMIC LIMIT FACTOR IS ONE.

(4) THE ECONOMIC LIMIT FACTOR FOR OIL PRODUCTION OF A LEASE OR PROPERTY AFTER THE FIRST 10 YEARS FOLLOWING THE COMMENCEMENT OF COMMERCIAL OIL PRODUCTION SHALL BE COMPUTED AND APPLIED UNDER (1) OF THIS SUBSECTION.]

**INTERIM REPORT OF THE
HOUSE FINANCE SUBCOMMITTEE ON OIL AND GAS**

Prepared by

**Louann Cutler, Staff
Representative Al Adams**

and

**Sharman Piper, Staff
Representative Sam Cotten**

at the direction of

**Rep. Sam Cotten, Chairman
House Finance Subcommittee on Oil and Gas**

January 17, 1986

REPRESENTATIVE
SAM COTTEN
DISTRICT 15



PO BOX 296. EAGLE RIVER, AK 99577
POUCH V. JUNEAU, AK 99811

ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES

MEMORANDUM

FROM: Representative Sam Cotten *Sam Cotten*
Chairman, House Finance Subcommittee on Oil and Gas

TO: Members of the Alaska State Legislature

RE: Interim Report of the House Finance Subcommittee
on Oil and Gas

DATE: January 17, 1986

One of the most important aspects of Alaska public policy is our treatment of the oil and gas industry. Formulating oil and gas policy is difficult because of the huge amounts of money involved and because the state and the industry have different points of view. The industry is naturally interested in maximizing its profits. State government is concerned with adequately providing for the health, education and welfare of all Alaskans as well as developing its natural resources in a manner consistent with the public interest. Even though the state and the industry are united in our desire to promote oil and gas development, multi-million dollar disputes over fair tax policy and proper valuation of North Slope oil divide us.

Currently facing us is whether to reinstate separate accounting, proposed in House Bill 353, introduced last session by the House Finance Committee. The oil corporations have widely advertised their opposition to the bill throughout the state. Ironically, while they resist the tax changes embodied in HB 353, they have not paid taxes due the state from past tax years, choosing instead to dispute these taxes through established channels. Recent figures from the Department of Revenue (DOR) show the oil companies are hundreds of millions of dollars behind in tax payments to the state, under former and existing tax laws.

During the interim I examined these tax issues and other areas of dispute in order to suggest improvements to state policy, increase our understanding of the issues involved,

and improve our relationship with this vital Alaskan industry.

We depend on an unstable entity -- world oil prices -- for the bulk of our state revenues and this makes it difficult to plan. But even with this uncertainty, Alaska can implement smart business practices. For example, we can't let the oil and gas industry write its own tax laws. On the other hand, we need a policy that encourages exploration and development. We also have to be realistic and realize that state tax incentives alone cannot overcome the current world-wide slump in oil prices.

We need to spend less on government operations and broaden our economic base. Our policies should focus on the decline in Prudhoe production, which will start occurring in the next few years, and the inability of subsequent oil fields to come close to equalling Prudhoe's output. In other words, our present generous level of oil revenues is short-lived. Our goals should be to maximize our benefits now from this non-renewable resource and to encourage additional exploration and production so that we can prepare for a future without as many oil dollars.

It is my hope that this report will help provide a framework for our continuing relationship with the oil industry. Some of the issues discussed here include recommendations for legislation, others are offered as background information.

The topics discussed in the report are as follows: 1) prepayment of disputed taxes; 2) an examination of the issues having to do with separate accounting (HB 353); 3) a discussion of the severance tax and the economic limit factor; 4) an overview of the major oil litigation.

I. Prepayment of Disputed Taxes

One of the most disturbing developments to surface during the interim was the discovery that the oil companies are \$908 million behind in tax payments to the state as of January 6, 1986. Confidentiality statutes prevent disclosing the names of the corporations and exactly how much each owes, but the large sums and statutes involved make it obvious that the major North Slope producers -- Arco, Exxon, Sohio -- are some of the taxpayers whose accounts are at issue. Furthermore, current law offers little incentive for them to pay in a timely manner.

Properly written statutes could have the companies prepay assessed amounts at a set point in the appeals process -- late enough to protect the taxpayers from auditing errors yet early enough to ensure that the taxes are collected in a timely manner.

Additionally, the Legislative Budget and Audit Committee has requested an opinion from the attorney

general's office on the constitutionality of revealing the names of taxpayers whose accounts are past due.

II. The Issues Pertaining to Separate Accounting -- HB 353

HB 353 would reinstate separate accounting as the method used to calculate the oil industry's tax liability. It would also reduce the severance tax from 15% to 12.25%, a substantial incentive to smaller fields. Industry protests about the bill obscure the fact that it is a fairer tax because it lowers the income tax on less profitable ventures, like marginal fields, and puts the tax burden on the most profitable developments, such as Prudhoe Bay and Kuparuk.

HB 353 would ensure that the state receives its fair share of Alaskan oil wealth. On Jan. 13, 1986 the U.S. Supreme Court agreed with the Alaska Supreme Court that separate accounting is constitutional. Furthermore, the state supreme court said that separate accounting is the prevailing method used throughout the United States for reporting income from oil production because it conforms more to an oil company's financial accounting procedures and "more accurately reflects income than formula apportionment".

Under pressure from important US trading partners, President Reagan has asked Congress to force states to abandon worldwide combination formula apportionment.

Whether or not we decide this session to return the former tax law to the books, it's important to understand the basic issues involved and let our decisions on tax policy be guided by facts, not by high-priced media campaigns aimed at our emotions.

III. The Severance Tax and the Economic Limit Factor

This is an issue that needs to be addressed this session because state revenues from severance taxes will be severely reduced beginning in FY 88 if the ELF law isn't changed. The ELF is a statutory reduction to the severance tax, created to extend production on marginal fields, but it is not working as well as it could. Two problems with present law are: 1) it doesn't give marginal fields enough of a tax break; and 2) it will provide Prudhoe with a premature tax reduction decades before it can be considered marginal. A simple change in the ELF law could solve both these problems.

IV. Major Oil Litigation with the Oil and Gas Industry

The amounts at issue in the state's oil and gas litigation are at least \$15 to 20 billion dollars and the state has spent millions of dollars so far to pursue these cases. Major litigation with the oil industry highlights the many points during the production and marketing process that provide profit-making opportunities for the industry and revenue opportunities for the state.

This chapter of the report highlights two major cases that affect the value of the oil and revenues to the state. The cases are the Amerada Hess royalty case and the TAPS tariff case. While the issues involved are in litigation and therefore out of the legislature's immediate realm of influence, I believe knowing more about the nature of the disputes adds to our overall understanding of the subject. Fair prices for the oil and fair charges for transportation costs are the key areas in which the state and oil companies disagree.

The issues summarized above constitute this interim report. It is my hope that the information will be of use to you as we begin the 1986 session. The report does not attempt to address all the facets of the state's complex relationship with the oil and gas industry, but it does touch on some of the important points. I believe staying abreast of the industry and its goals will enhance the quality of state government, because without this knowledge it will be difficult to maintain our positions as the real policymakers of Alaska.

INTERIM REPORT OF THE HOUSE FINANCE SUBCOMMITTEE
ON OIL AND GAS

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I.

PREPAYMENT OF DISPUTED TAXES

I. The Problem

As of January 6, 1986, the oil companies owed the state \$908 million in disputed taxes. Due to the ARCO settlement of \$243 million on January 13, 1986, this total will be adjusted (new figures from DOR are expected next week). Since \$243 million is the amount of the settlement, it may not be the exact amount of taxes previously in dispute between ARCO and the state. The phrase "disputed taxes" refers to audited tax amounts contested by the companies, plus interest and penalties. Unfortunately, existing state law does not encourage speedy resolution of these cases and some of the disputes go back as far as 15 years.

The total reported by DOR to be disputed on Jan. 6, 1986 was \$908,293,008.61. The total amount varies from month to month due to such causes as interest charges and settlement of some of the disputes. For a schedule of all tax accounts receivable, see Attachment A. Here is a breakdown of what is owed:

-- Approximately \$524 million of the total is owed under the former separate accounting oil and gas corporate income tax for the years 1979 to 1981. (AS 43.21)

-- Approximately \$322 million is owed under the severance tax for the years 1976 to 1982. (AS 43.55)

-- The balance of about \$62 million is owed under the income tax statute for all corporate taxpayers.¹ (AS 43.20) While the \$62 million includes contested taxes for all corporate taxpayers, it is estimated that almost all of this amount is owed by the oil and gas corporations.

The main reason the taxes have not been paid is because the oil companies disagree with the state over the amount of their tax liability. They are contesting the tax assessments through established administrative channels in the Department of Revenue. At issue is the methodology for calculating certain revenues and expenses in order to determine the amount of tax owed to the state.

A second reason the taxes have not been paid is that many of the issues involved in the tax disputes are the subjects of major oil and gas litigation between the companies and the state.

A third reason the taxes have not been paid is that the companies appear to have little incentive to do so. Although interest rates on disputed tax liability (12% per AS 43.05.225) may currently be higher than commercial interest rates, it is clearly in the taxpayers' interest to

¹Before 1979 oil and gas companies paid income taxes under AS 43.20, like all other corporate taxpayers. Between 1979 and 1981 they paid income taxes under the separate accounting statute, AS 43.21, and also paid income tax for their non-oil and gas activities under AS 43.20. From 1982 to now, the companies again pay all their income tax under AS 43.20.

prolong the tax disputes and avoid payment for as long as possible. They may also hope for a settlement with the state in which they ultimately pay a smaller amount than originally assessed.

II. The Disputed Issues

The major severance tax issues are similar to those involved in the State v. Amerada Hess, et. al case, though resolution of the tax issues may well be different than the case itself. (The last chapter in this report discusses this case in more detail.) The amount of our royalty share is in question in this lawsuit because of a dispute over the wellhead value of the oil. The wellhead value is determined by the destination price of the oil minus the transportation costs -- primarily pipeline tariffs and tanker charges. The tanker charges and destination price are at issue in the Amerada Hess case and about 95 percent of the total disputed taxes owed under the severance tax law involve these issues.

The remaining severance tax disputes primarily involve: 1) what production expenses can be deducted; 2) the computation of pipeline income; 3) what income and expenses are non-oil related and should be taxed under the income tax statutes; and 4) proper pipeline tariffs for non-TAPS pipelines, such as the Kuparuk pipeline and the Panama Canal pipeline.

Roughly half of the separate accounting disputes involve all the issues involved in the severance tax

disputes. The other half of the separate accounting disputes involves these major issues: 1) how to compute production expenses; 2) how to compute pipeline income; 3) income and expenses that should be apportioned to AS 43.20; 4) appropriate pipeline tariff charges; 5) how much should be spent for the eventual closing down of the pipeline; and 6) how much value should be placed on recoverable reserves.

The separate accounting tax disputes are also similar to those in Arco, et. al. v. State, the lawsuit over the state's former separate accounting law (described in the second chapter of this report). Now that separate accounting has been upheld at every level of court review -- most recently by the US Supreme Court this past Monday when it dismissed the oil companies' appeal -- the Department of Revenue expects these tax disputes to progress further.

III. Existing Process for Resolving Tax Disputes

After an oil and gas corporation submits a tax return it is audited by the Department of Revenue. Generally speaking, the audit shows that the taxpayer owes more than the taxpayer's return says. The taxpayer is then assessed the audited amount. Again, generally speaking, the taxpayer contests the audit and the arduous process of resolving the dispute begins.

The first stage of the resolution process is referred to as the informal conference stage and almost 90 percent of currently disputed taxes are in this stage. This is when

DOR and the taxpayer try to resolve factual issues and agree on the amount of tax owed, a process that can take several years. If the dispute is resolved, the taxpayer pays the additional amount and the case is closed. (In some rare instances, the informal conference is skipped and the dispute is taken up immediately at the formal hearing level.)

If it is not resolved, the case moves along to the formal hearing stage. A DOR hearing examiner essentially acts in the capacity of a judge and decides the case. This stage can also take years. The Commissioner can either adopt or reject the decision, although all decisions ever issued have all been adopted.

After adoption of the decision, the taxpayer is required to pay the tax if no appeal is filed in the superior court. If the taxpayer pursues the dispute by appealing to court, then the court will require that a bond be posted in order to continue contesting DOR's decision.

IV. Inadequacy of the current resolution process

Because of our current dispute resolution process, it may take years before the taxpayers will settle or be required to pay the audited tax amounts. Some of the disputes concern taxes that were owed as far back as 1970 although in certain instances, audits may not have been performed until years after a return is filed because the assessment period has been waived.

The taxpayer then has no incentive to resolve the matter since he is not required to pay the audited tax until all the administrative and judicial channels to overturn the audit have been exhausted. By allowing the taxpayer to keep the disputed amounts for so long, current laws appear to encourage the taxpayer to prolong the dispute. Thus the taxpayer will have the disputed funds to invest and earn interest on, or to use for other purposes.

V. A Solution: Prepayment of Assessed Tax Amounts

In order for the state to collect taxes in a more reasonable time frame, the oil companies should be required to prepay the audited amount at some point in the dispute resolution process.

Prepayment could be required after the informal conference stage. At this point the taxpayer and the state have been negotiating and fine-tuning the tax liability for some time. Errors and omissions by the taxpayer and auditor are likely to have been corrected.

Alternatively, prepayment could be required after the formal hearing. The dispute has been reviewed by the entire DOR hierarchy and the Commissioner has adopted a decision. If prepayment is not required until after the formal hearing, specific time frames could be provided in law for each stage of the resolution process. Once the taxpayer has been assessed the audited amount, both the informal conference and formal hearing stages would have to be

completed within a certain number of years established in statute. This would guard against continued prolonging of disputes since prepayment would not be required until the end point of the department's internal review.

It makes fiscal sense to put some or all of the prepayments in escrow until the dispute is finally resolved. The escrow account could be viewed as a form of state savings, since it could still be several years until a particular dispute is finally resolved. In the meantime, the escrowed amounts could earn be invested and earn additional income. This would allow the state to save for the future and also provide protection in the event that the disputed tax liability would be resolved in the taxpayer's favor.

The prepayment requirement should also be applied to amounts owed for prior tax years. Applying the prepayment requirement to past years is essential in order to bring about faster resolution of the current tax disputes, since these disputes involve tax liabilities for earlier years.

Prepayment has precedents at both the state and federal levels. It is currently required by the IRS if the taxpayer decides to appeal to the federal district court or court of claims rather than to tax court. In fact, DOR currently has a prepayment regulation on the books that requires payment of estimated severance taxes but it only applies to the returns for the years after 1984 (14 AAC 55.165). (It also only addresses the issue of oil valuation, not

transportation assessments.) The regulation requires prepayment of an average amount owed by all taxpayers; it does not relate to actual assessed tax liability. This regulation only applies to the severance tax and does not capture back taxes owed under the two corporate income taxes.

A form of prepayment was also a provision of the state's former separate accounting law (in effect for the years 1979-1981). Since the language was vague on whether audited amounts were covered, DOR never enforced the statutory prepayment requirement for the assessed amounts. In enacting this prepayment provision, it is likely that the legislature did not foresee the need for extensive audits and the resultant lengthy dispute resolution process. However, the former prepayment provision can certainly be thought of as a precedent for the kind of prepayment advocated here, especially since the language was never contested by the taxpayers.

The Department of Law has informally advised that there are no legal problems with prepayment. A comprehensive and formal opinion, prepared by both the attorney general's office and the Department of Revenue, is expected early next week.

VI. Conclusion

The legislature should provide by statute for prepayment of audited tax amounts at a set point in the resolution process. This will insure the state receives its

share of oil revenues in a more timely manner and also protect the taxpayers from any initial auditing errors.

Such a prepayment requirement should not be viewed as an additional burden to the oil companies since the revenue that could be raised does not come from implementing new taxes; rather, it is revenue the state should have already received.

ALASKA DEPARTMENT OF REVENUE
APPEALED TAX ASSESSMENTS BY APPEAL LEVEL
 January 6, 1986

TAX TYPE	STATUTE	VALUE			
		OF ACCOUNTS	CONFERENCE	FORMAL	COURT
OIL & GAS CORP INC	AS 43.21	\$524,163,035.65	\$438,358,422.69	\$85,804,673.96	\$.00
OIL & GAS PRODUCTION	AS 43.55	321,697,462.15	300,848,926.97	20,849,535.18	.00
CORPORATE INCOME	AS 43.20	62,432,449.81	47,639,282.76	13,773,985.93	1,019,181.12
INDIVIDUAL INCOME	AS 43.20	2,844,081.31	2,828,965.29	15,116.02	.00
BUSINESS LIC GR RCPT	AS 43.70	2,686,323.31	1,777,731.64	524,380.37	384,211.30
FISHERIES	AS 43.75	1,925,335.87	1,150,173.69	775,162.18	.00
MOTOR FUEL	AS 43.40	1,525,206.60	970,498.59	554,708.01	.00
MINING	AS 43.65	828,697.24	828,697.24	.00	.00
OIL & GAS PROPERTY	AS 43.56	385,779.18	9,321.98	.00	376,457.20
FIDUCIARY INCOME	AS 43.20	183,636.52	183,636.52	.00	.00
SALMON ENHANCEMENT	AS 43.76	42,535.97	29,618.97	12,917.00	.00
ESTATE	AS 43.31	30,840.49	30,840.49	.00	.00
SEAFOOD MARKETING	AS 16.51	8,119.55	8,119.55	.00	.00
INDIVIDUAL WITHHOLD	AS 43.20	7,610.85	7,610.85	.00	.00
TOBACCO (CIGARETTE)	AS 43.50	4,487.22	4,487.22	.00	.00
WMSL CANNED SALMON	AS 43.80	2,250.00	2,250.00	.00	.00
LIQUOR EXCISE	AS 43.60	485.13	485.13	.00	.00
COIN OPERATED DEVICE	AS 43.35	.00	.00	.00	.00
TOTAL TAX ACCOUNTS RECEIVABLE		<u>\$918,768,397.85</u>	<u>\$794,679,069.58</u>	<u>\$122,309,478.65</u>	<u>\$1,779,849.62</u>
PERCENT OF TOTAL VALUE		100.00%	86.49%	13.31%	0.20%

TAX TYPE	STATUTE	NUMBER			
		OF ACCOUNTS	CONFERENCE	FORMAL	COURT
OIL & GAS PRODUCTION	AS 43.55	496	413	83	0
CORPORATE INCOME	AS 43.20	405	314	82	9
INDIVIDUAL INCOME	AS 43.20	253	243	10	0
MOTOR FUEL	AS 43.40	153	92	61	0
FISHERIES	AS 43.75	54	41	13	0
BUSINESS LIC GR RCPT	AS 43.70	42	32	8	2
OIL & GAS CORP INC	AS 43.21	36	21	15	0
SALMON ENHANCEMENT	AS 43.76	20	18	2	0
MINING	AS 43.65	8	8	0	0
SEAFOOD MARKETING	AS 16.51	7	7	0	0
FIDUCIARY INCOME	AS 43.20	7	7	0	0
INDIVIDUAL WITHHOLD	AS 43.20	5	5	0	0
OIL & GAS PROPERTY	AS 43.56	5	4	0	1
WMSL CANNED SALMON	AS 43.80	3	3	0	0
TOBACCO (CIGARETTE)	AS 43.50	2	2	0	0
ESTATE	AS 43.31	2	2	0	0
LIQUOR EXCISE	AS 43.60	1	1	0	0
COIN OPERATED DEVICE	AS 43.35	0	0	0	0
TOTAL TAX ACCOUNTS		<u>1,499</u>	<u>1,213</u>	<u>274</u>	<u>12</u>
PERCENT OF TOTAL ACCOUNTS		100.00%	80.92%	18.28%	0.80%

II.

OVERVIEW OF ISSUES
PERTAINING TO HB 353

I. What does HB 353 do?

- A. HB 353 would reinstate separate accounting as the method that the oil industry must use to compute income earned in Alaska to determine its income tax liability to the state.
- B. HB 353 returns the nominal severance tax rate from 15% to its pre-1981 level of 12.25%. The nominal rate was raised in 1981 at the same time that separate accounting was repealed in order to compensate for the loss in tax revenue anticipated at the time due to implementation of modified apportionment.

II. Summary

- A. HB 353 will insure that the state receives its fair share of Alaskan oil wealth. The industry's share has increased since the 1981 tax changes while the state's share has decreased. The changeover has cost the state approximately \$850 million from FY82 through FY86 and an additional \$1.4 billion can be raised from FY87 through FY2005 if the state returns to its pre-1981 tax structure.
- B. The Alaska Supreme Court has found that separate accounting is constitutional in every respect. The court even declared that it is a better measure of oil industry income in Alaska than formula apportionment. The US Supreme Court essentially concurred in this decision on January 13, 1986, when it refused to review the industry's appeal of the state court's ruling.
- C. Separate accounting is a fairer tax because it will lower the income tax on less profitable investments like marginal field exploration and development and raise the income tax on highly profitable fields like Prudhoe Bay (i.e., conventional recovery in the Sadlerochit reservoir). The industry can afford a higher income tax on Prudhoe because it made as much in FY 85 as it made in FY 82 (about \$6 billion in real terms) even with the downward price spiral. Additionally, the income tax increase on Prudhoe would be coupled with a 22% severance tax decrease under HB 353.
- D. Future tax policy should be directed by the overwhelming importance of Prudhoe Bay to our revenue stability. Even with marginal field development, Prudhoe is still expected to provide almost 80% of production through 2010. Almost two thirds of recoverable reserves in Alaska are found in Prudhoe.

III. Background

- A. After four years of comprehensive study, the 1978 legislature changed the method of accounting that oil companies must use to compute their corporate income tax liability from formula apportionment to separate accounting.

It was determined that separate accounting would more accurately reflect how much of an oil company's income is earned in Alaska.

B. The constitutionality of separate accounting was quickly challenged by the major oil companies in Arco v. State. The 1981 legislature was faced with the threat of having to refund about \$9 billion in 1985 when resolution of the litigation was expected. In response to this threat, the legislature repealed separate accounting and enacted modified apportionment in its place. In 1983, an Anchorage superior court judge ruled that separate accounting is constitutional. This decision was unanimously upheld by the Alaska Supreme Court in August, 1985. It was again upheld this past Monday, January 13, 1986, when the US Supreme Court refused to review the industry's appeal of the state supreme court's ruling, thus ending the lawsuit.

C. Definitions:

1. Formula apportionment: If a firm operates in several states and one of the states wishes to tax its income, a method must be chosen to determine how much income was actually earned in the taxing state. The formula apportionment method looks at the firm's worldwide income and, by use of a formula, attributes part of it to the taxing state. The standard formula uses three indicators of business presence in the state: payroll, property and sales.
2. Modified apportionment: This is a modified version of formula apportionment. It is different because of the substitution of the extraction factor for the payroll factor since the former is a better indicator of oil industry presence in Alaska. The extraction factor helps to determine income from oil production by measuring the amount of a company's in-state production activity. Since in Alaska production is far more prevalent than marketing and refining, modified apportionment more accurately determines oil company income and profitability in Alaska than does the standard formula apportionment method.
3. Separate accounting: This method does not use a formula to carve out a portion of worldwide income and attribute it to Alaska. Instead, it takes the wellhead value of oil (gross income) in Alaska and deducts from it all the costs of production to arrive at net income. This amount is then taxed at the same corporate income tax rate that all other non-oil businesses pay. Because it is considered by many to be the most accurate way to measure the value of oil production activity it comes closest to measuring income earned only in Alaska, and therefore, the income of oil companies directly attributable to business activities in Alaska.

IV. What important issues are involved in deciding whether to enact HB 353?

- A. Is separate accounting a better, fairer way to tax the oil

industry in Alaska?

B. Will HB 353 discourage further exploration and development of new oil fields in Alaska?

C. Will HB 353 destabilize Alaska's business climate?

D. How will a return to separate accounting affect our tax revenues?

E. How will a reduction in the severance tax affect our tax revenues?

F. How will the inevitable decline in Prudhoe Bay production affect Alaska's revenue picture?

G. Should the legislature consider any other changes to our oil & gas tax structure?

H. What is the current status of Arco v. State?

I. Was there a conspiracy in 1981?

J. How healthy is the oil industry at present?

K. How does taxation of the oil industry in Alaska compare to taxation of the industry in other states and at the federal level?

These questions are answered in the following sections.

V. Is separate accounting a better and fairer tax accounting method for Alaska?

A. This issue poses two major questions: (1) Which method -- separate accounting or formula apportionment type of accounting -- best measures the amount of income earned within the taxing state? A fair tax will only apply to income earned in that particular state. (2) What is Alaska's "fair share" of the oil wealth provided by our oil resources?

B. Question #1 was answered by the legislature in 1978, again by Alaska courts in both 1983 and 1985, and again by the US Supreme Court last Monday. In August, '85, the Alaska Supreme Court stated that separate accounting is the prevailing method throughout the United States for reporting income from oil production because it conforms more to an oil company's financial accounting procedures and "more accurately reflects income than formula apportionment. ...[T]he Alaska legislature turned to separate accounting for oil producing businesses only after it determined that the use of formula apportionment to compute Alaska's share of oil production income would

seriously underestimate the production income that was rightly subject to taxation by this state (emphasis added)." The Court noted further that the case of Sohio is the best illustration of the superiority of separate accounting as a means of allocating income earned in a particular jurisdiction. During the period 1978-80, Sohio maintained that only 10% of its payroll, 12% of its sales and 50% of its property were in Alaska. Yet its 1980 annual report states that over 90% of its total oil production derived from reserves in Alaska. Additionally, documents submitted to the Court (and not disputed by the companies) indicate that Sohio's earnings had elevated it from 17th to 7th industrywide. So, the Court concluded, "... the traditional formula apportionment method would inadequately reflect the phenomenal value of the companies' oil reserves in Alaska."

C. Separate accounting is also superior to modified apportionment because it taxes conventional recovery at Prudhoe Bay more heavily than less profitable ventures, such as new technology applications at Prudhoe, and exploration and development in marginal fields. These less profitable ventures will actually experience an income tax reduction under separate accounting, just as Prudhoe will experience a tax increase. Prudhoe can afford to pay more taxes and still be highly profitable. A 1984 Institute of Social & Economic Research (ISER) study found that Prudhoe had made the companies about \$9 billion in net profits and that its 1982 profit rate hovered around 25%. But some of the riskier investments that industry is making in Alaska that are expected to yield a less-than-average profit could use an additional tax break. This would be a much more equitable approach than modified apportionment which taxes all industry activities at approximately the same rate regardless of risk and expected profit.

D. With regard to question #2, Alaska's fair share should be thought of principally in philosophical terms rather than only in terms of numbers. The following comments were made in a joint statement from the Governor and the legislative leadership in March, 1981: "[A]ny significant decreases in State oil and gas revenues appear both unwarranted and unsupported by the majority of Alaskans. The State's current level of taxation ... provides that both the oil companies and the federal government will receive greater shares of Alaska's wealth than will Alaskans. Accordingly, any greater percentage granted the former at the expense of the latter would be inequitable ... All agree that any changes [to the tax code] that would give large sums of money to the oil industry at the expense of the people of Alaska are unacceptable." These statements express the philosophy behind Alaska's oil and gas tax code and provide a framework for determining if Alaska receives its fair share of the oil wealth. They continue to be relevant in 1986.

E. With this philosophy firmly in mind, consider a "shares" analysis prepared by economist Eban Goodstein in mid 1985. He found that in FY82, shares of oil wealth in Alaska were divided as follows: industry - 41%, federal government - 30%, and state government - 29%. By FY85, the shares had shifted such that industry received 50%, the federal government received 22% and the state received 27%.

F. Alaska is not receiving its fair share as defined by the Governor and the legislature in 1981 because its share has declined while the oil industry's share has increased. Goodstein's analysis further suggests that the change from separate accounting to modified apportionment was one of the reasons why Alaska's share diminished and the industry's share increased. His study concludes that if separate accounting had not been repealed, the FY82 shares would have been 42% industry, 30% federal government and 28% state government while the FY85 shares would have been 47% industry, 21% federal government and 33% state government. A shares analysis prepared by the House Research Agency in December, 1985, compares closely with the Goodstein analysis for the years FY82 through FY85.

VI. Will HB 353 discourage exploration and development?

A. The major determinants of a company's decision to explore and develop a particular oil field are availability of the oil, the price of oil, and the cost of production in that particular field. These factors determine the rate of return which in turn determines whether or not a field will be explored or developed. Since a state's tax rate is only one aspect of the cost of production, and the cost of production is only one factor in the rate of return equation, it follows that the tax rate can only play a small role in the company's final decision to explore or develop. Although taxation may have a psychological affect on a company's decision, it will rarely be the principal factor in the decision making process. The overall rate of return is the ultimate decision maker and the rate of taxation plays only a small part in determining that rate of return. As the ISER report states: "[F]our factors are typically more important than state tax rates in shaping the pattern of resource development." These factors are described as geologic good fortune, ownership of the mineral rights, cost environment and world energy prices.

B. Unlike formula or modified formula apportionment, separate accounting only taxes a company on profits made in Alaska. In fact, a company will only pay a tax on profitable fields in Alaska so that if it has production activity at Prudhoe Bay and exploratory activities elsewhere, it will only pay taxes on the Prudhoe production activity because it does not yet derive any income from its exploratory work. Moreover, separate accounting would allow the company to deduct its

exploratory expenses from its Prudhoe tax liability. Apportionment, on the other hand, taxes a portion of a company's worldwide income so the company will pay taxes in Alaska even if all its profits were made elsewhere and even if its Alaskan activities operate at a loss. Separate accounting, then, is a better incentive for exploration and development since a company will not pay taxes until the field it is exploring or developing starts to produce and generates a profit. In a letter to the House Finance Committee, ISER economics professor Matthew Berman explained this effect as follows: "[S]eparate accounting...has virtually no adverse effect on development of marginal fields. A firm ...will make the investment only if it expects such development to be profitable after subtracting all taxes. Under... separate accounting... the proposed investment...will generate a tax liability...only if the investment is profitable anyway." Berman continues, "Corporate income taxes assessed under the modified apportionment system... may have some adverse effects [because] any investment, profitable or not, will generate an Alaska income tax liability." Berman reaches the same conclusion for exploration of marginal fields. A mid 1985 issue of Pacific OCS News, a trade journal, made a similar observation about Conoco's development of Milne Point: "The start up of this field begins a new era of marginal, N. Slope projects ... If the state returns to the pre-1982 'separate accounting' tax methods, it could offer a significant incentive to this type of small development, because it would be taxed on its own profitability and not on the companies' national profit base."

C. Exploration and development takes place in many jurisdictions that require separate accounting. Foreign nations, the US Government, Oklahoma, Louisiana and Mississippi all utilize separate accounting and all have experienced exploration and development activity.

D. Although the industry indicated to the legislature last session that a return to separate accounting would hamper their exploration and development activities in Alaska, their annual reports appear to lead their shareholders to a much different conclusion. Take, for example, the annual reports of ARCO from 1978 to 1981, the years that separate accounting was on the books. In 1978, ARCO's earnings were up 15%; in 1979, they were up 45%; in 1980, they were up 42%; and in 1981, they were up slightly again. "As it was in 1978", ARCO informed its shareholders, "the North Slope of Alaska was a prime source of the Company's earnings improvement in 1979." Clearly, separate accounting did not interfere with its earnings nor its exploration and development plans. These plans were in fact expanded dramatically during the separate accounting years. The 1979 annual report states: "For its part, Atlantic Richfield has dramatically intensified its search for new domestic reserves of oil and gas." Exploration and development occurred within Alaska during

these years. For example, Kuparuk development was started in 1979 and completed in 1981, "three months ahead of schedule", according to the 1981 ARCO annual report. Surprisingly, the first year that ARCO complains about its tax burden to its shareholders is 1982 -- a full year after Alaska repealed its separate accounting statute.

E. According to economist Goodstein, the oil companies made so much money in Alaska between 1982 and 1985 that \$24 billion in profits went outside. According to ARCO Alaska president Harold Heinze's remarks to the Committee last spring, the industry has invested about \$6 billion in Alaska during this period. Perhaps more of the \$24 billion that went outside would also have been invested in Alaska if separate accounting had been on the books to encourage marginal exploration and development without paying taxes.

F. HB 353 should also encourage exploration and development because it reduces the amount of severance tax that a company would pay. As Vince Wright with the Department of Revenue pointed out to the House Finance Committee in May, 1985, "On the severance tax side ... what you have done is lowered the rate from 15% to 12.25% so in fact ... this might be more of an inducement to expand exploration." For fields that have a 15% rate now, HB 353 would result in a 22.4% reduction in severance taxes.

VII. Will HB 353 create an unstable business climate for the oil industry in Alaska?

A. Since HB 353 will encourage exploration and development, it should make Alaska's business climate even more attractive to the industry.

B. Since 1955, the state's oil tax structure has been through eleven major changes. HB 353 must be viewed in this historical context. A state's tax code should be dynamic and flexible as well as a reflection of a state's changeable economic picture and public policy goals.

C. HB 353 does not create any new taxes. It merely reinstates taxes that were on the books before 1981. Moreover, separate accounting was repealed in 1981 largely because of the threat posed by the lawsuit. The US Supreme Court has laid that issue to rest and HB 353 merely returns our system to its pre-1981 state. The House floor debate on the 1981 amendments indicates that a bill like HB 353 was in fact anticipated. Consider the comments of the majority leader in the House at the time the amendments were enacted: "[B]y that time... we should have an answer to that lawsuit. And with that answer, we should be able to develop possibly a more consistent taxing policy at that time." Apparently it was expected that the legislature would reconsider its oil and gas tax structure

once the constitutional status of separate accounting was determined.

D. It is perhaps more appropriate to view the legislature's 1981 action as the one that created an unstable business climate. This is especially true in light of the fact that the 1981 revisions did create an entirely new method of accounting for income tax liability. Modified apportionment is not used by any other state that relies heavily on oil production activity. And, whereas separate accounting was adopted only after four years of careful, comprehensive study of all tax possibilities, modified apportionment was adopted with little analysis and hardly any debate.

E. Another way to look at stability is from the state's point of view. A stable revenue stream to provide necessary public services is just as important to Alaskans as maintaining a stable business climate. This is especially true in light of the fact that government dollars in large part determine the health of Alaska's economy. The 1981 amendments destabilized our revenue stream because they reduced our share of the oil money. HB 353 returns us to the old system, returns us to our pre-1981 share of the wealth, and, therefore, stabilizes our revenue stream.

VIII. How will a return to separate accounting affect our tax revenues?

A. The Department of Revenue's 10/31/85 fiscal analysis of HB 353 shows that, according to the mean revenue projections, the bill would increase our tax revenues by about \$1.4 billion between FY87 and FY2005. (A new fiscal analysis from DOR is expected in early 1986 that will analyze the impact of the TAPS settlement on the tax structure proposed in HB 353.) Beginning in FY2000, the DOR fiscal note predicts that the state would make less from separate accounting and the lowering of the severance tax than if the higher severance tax and modified apportionment were in effect. This is because of Prudhoe's decline in relation to profits companies will make elsewhere in the world.

B. It is disturbing to note that the Department's analysis shows that the 1981 tax changes have cost the state approximately \$850 million in tax revenues from FY82 through the end of the current fiscal year.

IX. How will the proposed severance tax affect our tax revenues?

A. Because HB 353 lowers the nominal severance tax rate from 15% to 12.25%, severance tax revenues are reduced. However, because of the separate accounting impact, overall tax revenues are increased (see previous section). The DOR fiscal note shows that if the nominal rate was not reduced in HB 353,

the state would gain an additional \$1.5 billion between FY87 and FY2005 or a total additional gain of approximately \$2.9 billion from reimposition of separate accounting and leaving the nominal severance tax rate at 15%.

B. It is important to understand another impact of reducing the nominal severance tax. The actual severance tax paid by the taxpayer depends on the economic limit factor (ELF). When applied to the nominal rate, the ELF reduces the effective rate and therefore the actual amount of severance tax that is paid to the state. Beginning in FY88 when Prudhoe production starts to decline, the ELF will cause our severance tax receipts to decline dramatically because it will lower our severance tax revenues from Prudhoe considerably. According to DOR's June 1985 revenue forecast, FY88 severance tax receipts will be \$230 million less than FY87 receipts. Since HB 353 drops the nominal rate, that change in combination with the ELF will increase the \$230 million drop by another \$143 million, according to calculations made from OMB data.

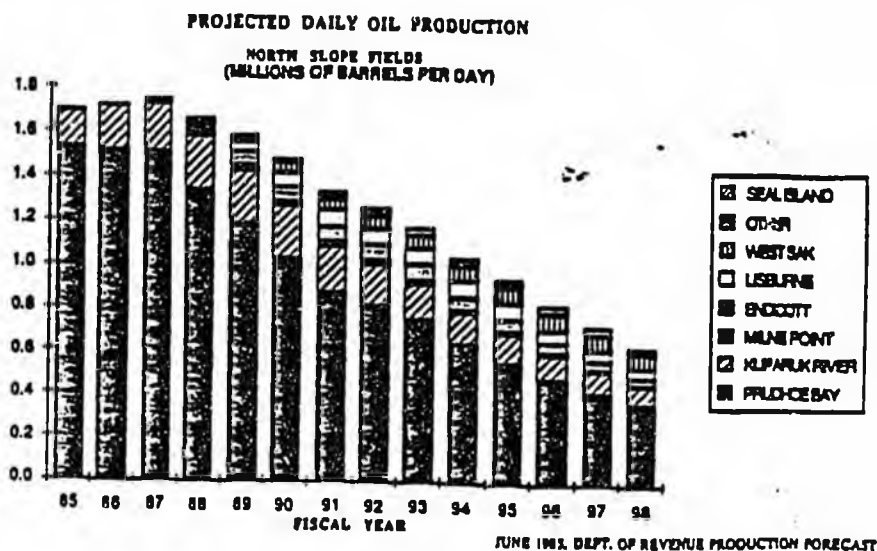
C. An OMB analysis indicates that repeal of the ELF could bring the state an additional \$2.4 billion in revenues from FY87 to FY94.

D. The ELF was developed because it was thought that the burden of the severance tax would tend to close a field down before all the oil was taken out of it. The ELF is designed to prolong the life of a field -- and therefore stretch oil revenues out further over time -- by lowering the tax burden when the field is not producing very much oil. But in its 1984 report, ISER concluded that the ELF does not do a very good job of stretching out our revenues; in fact it only adds an additional year or two to the revenue stream. However, the report does conclude that the ELF is valuable as an incentive to explore and develop marginal fields. This is because marginal fields generally have lower production rates per well, so that the ELF significantly lowers their actual severance tax burden. These conclusions suggest that further consideration of the ELF's impact on revenues and production is warranted and that it should be looked at on an individual field basis since it may encourage production where there otherwise might not be any, such as in a marginal field, but may not have its intended effect on a very profitable field, such as Prudhoe Bay. (Another chapter of this report deals specifically with this problem and proposes one solution to it.)

X. How does the decline of Prudhoe Bay affect our revenues?

A. Prudhoe Bay production to date far outweighs production from any other field in Alaska. The ISER study shows that of the 3.6 billion barrels of oil produced in Alaska from 1959 to 1983, about 3.2 billion of those barrels -- or 90.3% came out of Prudhoe even though the field did not start production

until 1977. ISER also forecast production in the future and found a similar pattern. Using ISER's base case assumptions (real wellhead price of \$17.50 per barrel, declining TAPS tariff, and no change in the federal or state tax structure), of the 8.9 billion barrels likely to be produced between 1983 and 2010, about 6.9 billion -- or 79.4% -- will come from Prudhoe. These figures show that the Prudhoe Bay field is extremely important to Alaska's revenue stability. One draws the same conclusion from the following chart, which depicts production for FY85 through FY98.



B. As Prudhoe declines then, so do our revenues. What is perhaps less apparent is that analysis of future oil production shows that even if all the currently known marginal fields are developed, their combined production cannot make up for the decline of Prudhoe. Lease, tax, and other revenue from development of these fields will not come close to providing Alaska with the wealth it now receives from Prudhoe Bay. As Kay Brown, Director of the Division of Oil & Gas stated to the Permanent Fund trustees, "[B]ased on current knowledge, it is unlikely that new oil and gas discoveries from state lands alone will be sufficient to offset the decline in the main Prudhoe Reservoir. Most of the remaining best prospects appear to be in federal waters and perhaps in the Arctic National Wildlife Refuge." The Division of Oil &

Gas estimates that about 62% of recoverable state reserves in Alaska are in the Sadlerochit (Prudhoe Bay) reservoir.

C. The importance of Prudhoe to our revenue stability should be a driving force in determining the future of Alaska's oil and gas tax structure. It is certainly a valid public policy goal to tax the tremendous profits of Prudhoe Bay. Policy makers should not forget that revenue from production in new fields is not going to make up for the loss of Prudhoe Bay revenues. The \$24 billion in profits that the companies took out of Alaska in the last four years is gone forever; it would be a mistake to continue encouraging them to take their money elsewhere.

D. Although much of Alaska's oil reserves lie off shore, development of these resources will not be a panacea for the decline of Prudhoe, either. These resources are owned by the federal government and therefore, most tax and other revenue benefits will flow back to the feds, not to the state. The only taxes that the state will get are property taxes from onshore facilities. It will not get any lease payments (except from 3-6 miles offshore if President Reagan approves a bill that may be taken up again by Congress in early 1986).

XI. Should any additional changes to the tax code be considered?

A. Ideally, the Alaskan tax code will provide revenue stability to the state even when market forces bring about lower oil prices and even when the quantity of oil in Alaska that can be taxed diminishes. Measuring price and quantity sensitivity is not easy, however.

B. Section VI discusses the fact that separate accounting is a better incentive for exploration and development than modified apportionment because it only requires the payment of taxes when a field is profitable. Many economists believe that a state can facilitate exploration and development of marginal oil fields if it increases the reliance on income taxes and decreases the reliance on severance taxes in the marginal fields. In other words, the state should consider emphasizing taxation of net income instead of gross income in marginal fields. For this reason, Professor Berman concludes that, for marginal fields, net income taxes and net profit shares in leases are superior to excise (such as severance) taxes and royalty shares in leases because a company shares profit with government, not income that just covers expenses. Although 1986 may not be the appropriate time to consider a complete overhaul of our tax and leasing policies, some comprehensive changes may eventually be desirable.

XII. What is the current status of ARCO v. State?

A. The Alaska Supreme Court ruled unanimously in the state's

favor on August 16, 1985. The decision fully supported the state's position that separate accounting is constitutional in every respect.

- B. In fact, the Supreme Court went even farther than it had to in upholding the lower court's decision. Instead of stating that separate accounting was an acceptable method of tax accounting, it stated that, for Alaska, separate accounting is preferable to formula apportionment. (See section V for further details.)
- C. The oil companies declined to petition the Alaska Supreme Court for a rehearing of the case. In November, 1985 they appealed the decision to the US Supreme Court. The justices declined to take the case on January 13, 1986, thus ending the lawsuit.
- D. Though the industry challenged the use of separate accounting in Alaska, it has argued strenuously to be allowed to use it in other states. In at least two states, Wisconsin and South Carolina, the industry took their arguments to the top levels of the court system -- to the state supreme court in South Carolina and to the US Supreme Court in the Wisconsin case. Also, before Prudhoe Bay was in the production stage, the industry tried to file separate accounting returns in Alaska. This demonstrates that the industry is interested in separate accounting when it lowers its tax burden; in other words, when its operations in a state are less profitable than the industry average.

XIII. Was there a conspiracy in 1981?

- A. It has been suggested that the oil companies and the Department of Revenue conspired to convince the legislature to enact amendments in 1981 that substantially lowered our fair share of Alaskan oil wealth. Although this point of view is strengthened by the fact that the 1981 amendments now appear to have cost the state about \$850 million, an analysis prepared by OMB suggests that there probably was no conspiracy. The fiscal information provided by the companies to the department, which in turn was used to prepare the legislation's fiscal note, has turned out to be wrong. But it does not appear likely that wrong information was intentionally provided. According to Gregg Erickson, Senior Economist at OMB, "I know of no evidence which would positively rule out the possibility that this discrepancy resulted from an effort to mislead; ... a more plausible explanation is that the oil company experts simply goofed."
- B. Although the above information is interesting, what did or did not happen in 1981 should not be the motivation for a

return to our pre-81 tax structure. Rather, the motivating forces should be such aspects of HB 353 as the superiority of separate accounting as evidenced by the recent court ruling, its incentives for exploration and development, and the goal of restoring Alaska's fair share of the wealth created by our abundant oil. In this context it is interesting to note that when the legislature enacted the 1981 changes, it did not repeal the findings section of the original 1978 statute which stated the superiority of separate accounting over an apportionment method.

XIV. Is the oil industry healthy?

- A. It would certainly appear that Exxon is healthy. A recent Business Week article made the following observations: "The only surplus at Exxon Corp. is a surplus of cash. ... The bottom line is that Exxon can make a nice living even if the price of oil falls quite a bit more. ... Salomon Bros. estimates that Exxon will have as much as \$7 billion in spare cash to spend through 1988. ...In fact, Exxon's real limitation is not a lack of money but of enough places in which to invest it profitably." Because prices are down right now, Exxon is frugal with investments and cautious about the future. But it is hardly suffering and couldn't be accurately characterized as anything but very healthy.
- B. The legislature commissioned a report by Tanzer Economic Associates, Inc. in 1977. Among other things, the report examined many historical examples of tax changes throughout the world. It concluded that "there is one effect almost invariably caused by such tax changes. Namely, an almost automatic reaction of the oil companies to claim that such increased taxation will force them to look elsewhere for increased future production. These claims are sometimes backed up by actions, aimed at getting the country to rescind the tax increase, such as temporarily cutting present production or reducing exploration and development efforts. ...Some of the actions and much of the rhetoric ... is 'theater', aimed at improving a bargaining position, and often needs to be taken with a very large grain of salt." One can infer from this observation that the industry will often exaggerate how it will be affected by a tax change in order to keep the change from occurring.
- C. In 1985, the industry uses the current production surplus and price decline pattern as justification for laying off hundreds of Alaskans and cutting daily rates paid to the various oil industry support companies that operate on the Slope. Not surprisingly, it also comes to Juneau and complains bitterly about HB 353, implying that the bill is forcing it to cut back and to consider leaving Alaska. Industry testimony is difficult to accept since we know it is not leaving Alaska, with our Prudhoe bonanza and our

undeveloped reserves, and since we know that HB 353 provides the proper incentives to stay. It becomes even harder to accept when one considers the major factor that explains the majors' current restructuring efforts. Because of falling world oil prices, the fear of takeover is prevalent in industry thinking and the desire to cut costs to a minimum is really motivated by the need to have enough cash around to prohibit an unfriendly takeover (or in the case of some majors, to acquire less healthy companies). Furthermore, declining oil prices is a major factor in the majors' cut backs in exploration activity.

XV. How does taxation of the industry in Alaska compare to taxation in other states and at the federal level?

A. Of the top five oil producing states -- Alaska, California, Texas, Oklahoma and Louisiana, two currently require the use of separate accounting to determine income derived from oil production. These states are Louisiana and Oklahoma. California utilizes formula apportionment and Texas does not have a corporate income tax. (Actually California does require separate accounting in cases where formula apportionment under represents income generation within the state.) In addition, the United States government requires the use of separate accounting in certain instances. Moreover, President Reagan has recently taken an active stance against formula apportionment based on worldwide combination. Since apportionment taxes a portion of a company's worldwide income, some important US trading partners oppose it because they feel that American states take tax dollars away from them. Thus, Reagan has asked Congress to prohibit the use of this kind of formula apportionment at the state level.

B. Another way to compare taxation of the industry in Alaska to industry taxation elsewhere is to compare how much is collected by states from the whole tax code and leasing structure, not just the income tax. The ISER study compared tax and leasing policies in Alaska to such policies in Texas and concluded that "... Alaska and Texas collected approximately the same amount of revenue from oil and gas production." This is interesting because the tax and leasing structure in Texas and Alaska are very different yet, essentially, industry is treated the same. Alaska should not be judged by whether it has a separate accounting or a formula apportionment based income tax but rather by how its policies as a whole impact the oil industry.

XVI. Conclusion

A. HB 353 is well constructed tax reform legislation. It is an attempt to restore Alaska's fair share of the oil wealth to provide Alaskans with desired public services, provide an atmosphere that encourages the oil industry to remain in Alaska, and return Alaska's tax structure to the exhaustively

studied and carefully refined one that existed before it was challenged by the oil companies in the late 1970s.

III.

THE SEVERANCE TAX AND THE
ECONOMIC LIMIT FACTOR

I. Introduction

It is generally known that oil producers in Alaska are assessed severance tax rates of 12.25 or 15 percent. However, it may not be so well known that the actual tax rates they pay are much lower than this because of the economic limit factor or ELF. (A severance tax or production tax is a flat tax based solely on the amount produced; in contrast, an income tax is based on profits.)

The ELF is a statutory reduction to the severance tax. It was adopted in 1977¹ to promote production on oil and gas fields with low output and presumably little profit. As the cost of producing the oil gets closer to its value -- the economic limit -- the ELF reduces the tax that is owed. When a field reaches the economic limit the ELF reduces the severance tax to 0. The ELF is applied to both oil and gas, but this discussion deals only with oil.

In practical terms, the ELF dramatically reduces the state's base severance tax rates of 12.25% or 15% on all fields. Prudhoe Bay is a temporary exception to this

¹In anticipation of North Slope production, the Department of Revenue recommended the ELF in its exhaustive 1977 study: "Alaska's Oil and Gas Tax Structure: A Study with Recommendations for Improvement." Previously a "stair-step" approach to severance taxes was used, keyed to Cook Inlet production, with graduated rates to 8 percent. The ELF improved upon the stair steps, retaining the idea that the tax should be reduced as production declined. The ELF also was able to adjust tax rates for both high-volume North Slope fields and the lower-volume Cook Inlet fields.

because of a provision that suspends the ELF for 10 years on high volume fields. However, in FY 88 the 10-year limit expires and Prudhoe will also enjoy tax concessions of the ELF -- and the state will lose \$156 million, according to OMB calculations (see Attachment A). Another example is Kuparuk. In FY 86 the ELF reduced Kuparuk's effective severance tax rate to 6%, and the state lost \$58 million.

An unforeseen consequence of the ELF is that it will greatly reduce the severance tax rates on most of the fields that have yet to begin producing. For example, in FY 90 the effective severance tax rate for Lisburne will be 3% and for Endicott it will be 4%. These cases show that the ELF is actually providing these marginal fields with a substantial incentive -- reducing costs at field start-up.

The ELF's original goal was to extend the life of fields, and thus extend revenues to the state. However, one study shows that the ELF only prolongs a field's life for one or two years, thus its direct benefit to the state is limited. Nonetheless, the ELF does appear to provide an incentive to developers of marginal fields because it reduces the severance tax rate. If the ELF were eliminated, for example, it is likely that some of the marginal fields would not be feasible to develop.²

²In a study entitled "Alaska North Slope Oil Production and Revenue Projections" published Feb. 1985 by the Institute of Social and Economic Research, author and UAA economist Matthew Berman concluded that the Endicott and Milne Point fields might not be feasible to develop without the ELF.

It's also apparent that fields with substantial output and correspondingly high profit rates, such as Prudhoe and Kuparuk, do not require the production incentive that the ELF provides.

II. How the ELF Works

The ELF is a formula that is multiplied by the nominal rate of 12.25% or 15% to obtain the effective rate actually applied to a field. The ELF will never be more than 1. If the ELF is 1, then 100% of the severance tax is owed. An ELF of .8 means 80% of the tax is owed; 80% of 15% equals an effective tax rate of 12%.

Since 1981 the severance tax rate has been 15%, with an exception for new fields; fields that start producing after June 30, 1981 pay a reduced rate of 12.25% for the first five years. The law also requires that the ELF be calculated at 1 during the first 10 years of a field's production any time the ELF goes above .7. (Currently this provision only affects Prudhoe.) For fields with an ELF at or below .7, the actual ELF used. After 10 years the actual ELF is used in all cases.

For example, the ELF for Prudhoe Bay in FY 85 was .864. Since this is more than .7 and within the first 10 years of production, the 1 figure is used. Thus the full 15% severance tax was owed.

In FY 88, however, the 10-year limit will no longer be in effect for Prudhoe (production began in FY 78) and the actual ELF of .82 will be used. This means the amount of severance tax owed will be 82% of 15%, or an effective rate

of 12.5%. The amount to be paid to the state will be \$714 million, \$156 million less than if the full 15% severance tax were paid.

III. Modifying the ELF

It is apparent that the ELF accomplishes its goals but not without some drawbacks. One drawback is providing and unnecessary tax reduction for Prudhoe and Kuparuk. Another issue is whether it goes far enough in reducing the severance tax rate on marginal fields. (A problem with a severance tax as opposed to an income tax is that it is not sensitive to profits or costs, thus a fair tax rate for a large field may be a burden for a small field.)

An additional problem with the current ELF formula is that it is based on daily output per well; total field production is not taken into account. This penalizes a marginal field like Milne Point (30,000 bbls/day) which has high output per well but few wells (about 22). Under the current ELF formula Milne is subject to a severance tax rate almost as high as the tax applied to Kuparuk (240,000 bbls/day), which is clearly not a marginal field. For example, in FY 88, Milne Point will be paying a 7.35% severance tax compared to Kuparuk's rate of 7.6%.

Instead of basing the ELF on individual wells, total field production could be included in the ELF formula to compensate for this inequity, keeping the severance tax low on the smaller fields that would benefit most from a tax break.

The ELF could be modified to accomplish these goals:

-- Dramatically reduce the effective severance tax rates for all marginal fields, including Cook Inlet.

-- Prevent a premature reduction to the severance tax rates for Prudhoe and Kuparuk. These highly profitable fields are years away from being marginal. When they do start approaching the economic limit, the ELF formula will provide them with a tax break.

-- More equitably set the tax rate for each field.

This formula modification would bring Prudhoe's ELF to .99 (now it is at .83); raise Kuparuk's to .8 and drop Milne Point's to .3. These ELFs translate into effective severance tax rates of about 14.85%, 12% and 4.5%.

Here are the current ELFs compared with ELFs under the revised formula.

	Current ELF	Modified ELF	% change
Prudhoe Bay	.80	.99	+23
Kuparuk	.50	.86	+72
Milne Point	.60	.31	-48
Endicott	.31	.0	-100
Lisburne	.11	.05	-54
West Sak	.0	.0	no change
Cook Inlet	.03	.0	-100

The formula change would result in the following positive state severance tax collections*:

FY	millions
87	\$ 32
88	179
89	192
90	184
91	175
92	173
93	170
94	158

* These numbers, based on June 1985 revenue projections, assume the actual ELF is used in all cases and assume a 15% severance tax rate across the board. (If the 12.25% for the first 5 years were retained, there would be little change in these amounts.)

IV. What Legislation Would Require

1) Simplify the law so the actual ELF is always applied. Current law requires that an ELF of 1 be used if the actual ELF goes above .7 any time during the first 10 years of a field's production. (AS 43.55.013)

2) Change the ELF formula. (AS 43.55.013) This modification only alters the exponent part of the formula. It uses a different number as a constant and takes into account average daily production from the whole field.

Current ELF formula:

$$ELF = \left(1 - \frac{PEL}{TP}\right) \exp\left(\frac{460 \times WD}{PEL}\right)$$

Revised ELF formula:

$$ELF = \left(1 - \frac{PEL}{TP}\right) \exp\left(\frac{37,000,000 \times WD}{PEL \times TP / \text{Days}}\right)$$

PEL = monthly production rate at the economic limit
(300 barrels x number of well days a month)
TP = total production (number of barrels) during the month
WD = well days in the month
exp = the expression following this is an exponent
Days = The number of days in the month for which the tax is to be paid

The numbers 460 and 37,000,000 are constants or scaling factors.

V. Conclusion

Enacting these changes to the severance tax would not only maintain our current level of severance tax revenue. More importantly, the revised ELF would provide a new

incentive for future oil exploration and production in Alaska by lowering the severance tax on marginal fields.

ALASKA NORTH SLOPE OIL AND GAS REVENUES

Alaska North Slope Oil Revenue

	Fiscal Years									
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994

June 1985 Pet. Rev. Assumptions										
World Oil Price	26.37	24.81	22.41	22.206	22.731	23.464	24.362	25.465	26.934	28.379
Average Rate of Inflation	4.03	3.92	4.01	4.76	4.76	4.76	4.76	4.76	5.104	5.104
ANS/World Qual. & Marketing Adjust	3.253	2.532	2.663	2.639	2.384	2.447	2.475	2.520	2.507	2.612
Trans-Alaska Pipeline Tariff	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007	6.007
ANS Netback Price FOB (8/bbl)	17.11	15.471	13.74	13.56	14.34	15.01	15.88	17.03	18.34	19.76

Prudhoe Bay Prod. (MMbbl/d)	1.528	1.517	1.508	1.34	1.188	1.03	.874	.815	.753	.641
Prudhoe Bay Price (8/bbl)	17.11	15.471	13.74	13.56	14.34	15.01	15.88	17.03	18.34	19.76
Volume	460.25	509.6	527.1	540.6	524.05	505.15	489.9	466.45	447.65	420.45
ILP	.0648307	.0496946	.0437062	.0285208	.0041141	.7034653	.7540433	.7491265	.7399201	.7145022
Nominal Tax Rate	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Effective Tax Rate	.15	.15	.15	.1230793	.1206171	.1175190	.1131065	.1123690	.1109092	.1071753
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (ILP)	1252.465	1124.336	992.6137	714.2504	656.2593	500.2696	501.7689	490.1835	489.3263	433.5515
SEVERANCE TAX (NO ILP)	1252.465	1124.336	992.6137	870.4757	816.1270	748.6450	664.8966	664.9124	661.5863	606.7802
CONSERVATION TAX	.6100063	.6056140	.6020219	.5349531	.4742719	.4111953	.3409172	.3253633	.3086117	.2550792
Gathering & Cleaning Charge	.7	.72021	.7567350	.7071017	.8245678	.8630172	.9049349	.9400090	.9531351	1.044619
ROYALTIES	1144.023	1020.395	893.2797	780.9031	732.5702	664.7827	597.1494	597.9988	595.9624	547.3410
TOTAL OIL PROD REVENUES	2396.400	2144.731	1885.893	1495.153	1388.029	1245.052	1090.510	1096.102	1085.489	980.8945

Kuparuk River Prod. (MMbbl/d)	.167	.2	.219	.239	.239	.239	.21	.187	.162	.141
Kuparuk River Price (8/bbl)	16.29	14.651	12.92	12.74	13.52	14.19	15.06	16.21	17.52	18.94
Volume	154.5	240.5	284	285.25	285.25	285.25	276.5	276.5	254	254
ILP	.69	.4091136	.4697705	.5067938	.5067938	.5067938	.4627634	.4070192	.3773622	.3312742
Nominal Tax Rate	.125	.125	.125	.15	.15	.15	.15	.15	.15	.15
Effective Tax Rate	.084525	.0599164	.0640297	.0760191	.0760191	.0760191	.0694145	.0610529	.0566043	.0466911
Royalty Percentage	.125	.125	.125	.125	.125	.125	.125	.125	.125	.125
SEVERANCE TAX (ILP)	73.43040	56.07173	57.06143	73.92490	70.45092	82.33865	70.11249	59.10602	51.30973	40.30790
SEVERANCE TAX (NO ILP)	106.4326	114.6395	123.1694	145.8670	154.7985	162.4697	151.5003	145.2160	135.9694	129.7502
CONSERVATION TAX	.0666695	.0790430	.0874209	.0954133	.0954133	.0954133	.0830359	.0746539	.0646734	.0570003
Gathering & Cleaning Charge	.4	.4005	.4010006	.4015019	.4020030	.4025063	.4030094	.4035132	.4040175	.4045226
ROYALTIES	121.0719	130.0358	125.0003	134.5436	143.0436	150.3440	140.4323	134.0590	126.5005	120.9324
TOTAL OIL PROD REVENUE	194.5103	186.1075	182.9497	209.4605	221.4945	232.6827	210.5440	193.4650	177.0102	161.3203

Milne Point Prod. (MMbbl/d)	0	0	.008	.023	.023	.023	.023	.023	.018	.016
Milne Point Price (8/bbl)	17.40	15.041	14.11	13.93	14.71	15.38	16.25	17.4	18.71	20.13
Volume	1	1	21.15	21.15	21.15	21.15	21.15	19.6	17.1	15.6
ILP	0	0	.0092001	.6096111	.6096111	.6096111	.6096111	.6159020	.5978649	.5002759
Nominal Tax Rate	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Effective Tax Rate	0	0	.0133920	.0914417	.0914417	.0914417	.0914417	.0951851	.0096797	.0002414
Royalty Percentage	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625	.1625
SEVERANCE TAX (ILP)	0	0	.4621040	0.955726	9.457195	9.007944	10.44720	11.66967	9.232479	0.607079
SEVERANCE TAX (NO ILP)	0	0	5.175901	14.69000	15.51349	16.23000	17.13761	18.35042	15.44242	14.76037

SEVERANCE TAX (11%)	0	0	0	0	0	0	0	0	0	0
SEVERANCE TAX (NO CLP)	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

MONTH SLOPE Prod. (MMbbl/d)	1.695	1.717	1.744	1.66	1.504	1.48	1.33	1.257	1.17	1.031
AVG. MONTH SLOPE PRICE (\$/bbl)	17.02921	15.37540	13.63733	13.40789	14.13640	14.74674	15.57237	16.70490	10.00509	19.39853
AVG. NOMINAL TAX RATE	.1472906	.1467967	.1401377	.1460136	.1420015	.1450179	.1467192	.1465652	.1462150	.1475722
AVG. EFFECTIVE TAX RATE	.1435491	.1395069	.1370037	.1115651	.1036090	.0986205	.0934909	.0912105	.0892272	.0830136
AVG. ROYALTY PERCENTAGE	.125	.125	.1251720	.1257340	.1262922	.1264004	.1265956	.1267101	.1267017	.1266031
SEVERANCE TAX	1325.903	1100.400	1050.937	797.1311	746.6525	693.3015	623.0119	617.2910	605.4633	540.1976
CONSERVATION TAX	.6766750	.6054506	.6961006	.6621466	.6314206	.5090927	.5299927	.5000326	.4661775	.4100404
ROYALTIES	1245.095	1150.430	1030.594	960.9079	902.9065	961.0279	916.9057	932.5029	936.9096	898.0760
TOTAL OIL PROD REVENUES	2591.675	2331.324	2002.220	1766.701	1730.190	1655.799	1541.240	1530.366	1542.039	1431.404
	14.35421	13.95069	13.70037	11.15651	10.36090	9.862054	9.149006	9.121049	0.922717	0.301360

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

	85	86	87	88	89	90	91	92	93	94
SEVERANCE TAX (MILLIONS OF \$) NO CLP	2330.097	1230.976	1125.702	1039.074	1023.750	1011.050	971.7900	903.0472	903.7061	941.9207
WITH ELP	1325.903	1100.400	1050.937	797.1311	746.6525	693.3015	623.0119	617.2010	605.4633	540.1976
REVENUES RESULTING FROM REPEAL OF ELP	32.99410	50.56776	74.76406	242.7425	277.0974	310.7490	347.9070	365.7653	370.2420	401.7331
CUMULATIVE TOTAL	32.99410	91.56106	166.3267	409.0693	606.1667	1004.636	1352.623	1710.300	2096.631	2490.362

PRUDHOE BAY ONLY

SEVERANCE TAX (MILLIONS OF \$) NO ELP	1252.463	1124.336	992.6137	870.4757	816.1270	740.6450	664.0966	664.9124	661.5063	606.7002
WITH ELP	1252.463	1124.336	992.6137	714.2504	656.2593	500.2696	501.3609	490.1035	409.5263	433.5515
REVENUES RESULTING FROM REPEAL OF ELP	0	0	0	156.2253	159.8670	160.3754	163.5357	166.8009	172.0600	173.2367
CUMULATIVE TOTAL	0	0	0	156.2253	316.0931	476.4685	640.0042	806.8131	970.8730	1152.110

Figures calculated
by OMB

IV.
MAJOR LITIGATION
WITH THE OIL AND GAS INDUSTRY

A. Introduction

Alaska is currently involved in one of the largest litigation efforts in U.S. history. The amounts at issue in the state's oil and gas litigation total at least \$15 to \$20 billion. This section of the report focuses on two of the most important disputes with the oil and gas industry, both of which have to do with a single concern: the value of North Slope oil at the point it enters the pipeline. This is referred to as the wellhead value, and the state's tax revenue and royalty value are based on it. The State v. Amerada Hess case is a dispute over the value of the state's royalty oil; the Trans Alaska Pipeline Rate Case addresses proper pipeline tariffs. Both cases involve all the major oil producers and are characterized by their complexity and the enormous effort required to litigate them successfully.

E. The Process of Valuing North Slope Oil

Putting a price on North Slope oil is difficult because unlike oil produced in the Lower 48, most North Slope oil is not sold at the wellhead but rather far from its source, most often on the West Coast or Gulf Coast. Another complication is that much of the oil is refined by the producers themselves, so there are internal transfers within one company rather than third-party sales. In addition, many third-party sales are often done by

exchanges with other considerations rather than a simple price. Thus the value of the oil at those distant markets is not a clearcut issue, and the state contends the producers significantly understate the value of the oil when it reaches its ultimate destinations.

It is important to determine the wellhead value of North Slope oil, however, because it is at this point where the state determines the value of its royalty share and levies the severance tax. The federal government also sets the windfall profits tax at the wellhead.

Thus the value of the oil is determined by the process called netback. To arrive at netback, a destination price is set for the oil (by the oil companies) and then the costs of transportation -- primarily pipeline and tanker -- are subtracted. All three of these values, destination price, tanker costs, and pipeline tariffs, are not easy to determine and thus are the subject of litigation. It is usually to the benefit of the producers to keep transportation costs high in order to keep the wellhead price down and thus reduce the royalties and severance taxes they owe the state.

Compounding the difficulty of valuing North Slope oil is the fact that the producers, notably the three major North Slope producers, Arco, Exxon and Sohio, have different netback methods. They use different methods to set the destination price, different methods to determine tanker transportation costs and different methods of setting the pipeline tariff. Furthermore, a company's

valuation methods may change from month to month. Some months the state may agree with a particular company's figures; another month, it may disapprove of the same company's figures.

The destination price and tanker transportation costs are currently the subject of multi-million dollar litigation over the value of the state's royalty oil. The State v. Amerada Hess case is a dispute over the proper value to be attributed to crude oil when it reaches the Lower 48 and the proper deductions to be made for tanker transportation. (Similar issues are involved in the company's severance tax disputes with the state, but with this case the royalty contracts are at issue.) The TAPS tariff case addresses the third major area of dispute, proper pipeline charges.

C. State v. Amerada Hess

The amounts at issue in this case for both past and future royalties is probably upwards of \$2 billion in present day dollars.

In general, Alaska's position is that the value of the oil should be higher for West Coast destinations than for Gulf or East Coast destinations (because transportation costs to the West Coast are lower). Some companies agree with this premise but disagree with the actual prices, while other companies disagree with this approach altogether.

While it is not easy to get information on the record on the specifics of the valuation disputes, federal hearings¹ in early 1983 over the windfall profits tax reveal how the major producers value their North Slope oil. The hearings focused in particular on the method used by Arco.

Arco sets a single price for North Slope oil regardless of its destination. The price is based on West Texas sour, an oil comparable in quality to ANS crude and actively traded in the Gulf. Transportation costs to the Gulf Coast are then deducted to arrive at a wellhead value for all its North Slope oil. Thus Arco is valuing all of its oil as though it were sent to the Gulf Coast (it costs roughly \$4 more to transport oil to the Gulf). This pricing method has merit in theory, but was severely criticized during the hearings because in fact, Arco sells 70% of its oil on the West Coast. From Alaska's and the federal government's perspective, Arco is artificially setting its West Coast price too low and thus avoiding paying millions of dollars in taxes and royalties.

The oil companies again explained their valuation methods to the Alaska Senate Resources Committee in late

¹The hearings on the windfall profits tax were held in February 1983 before the House of Representatives Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce.

1983.² One of the points made then was that Alaska prefers Sohio's valuation method. Sohio, which doesn't own refineries on the West Coast or in the Gulf, determines value for North Slope crude by finding out how much refiners would pay for comparable foreign crude. Sohio also adjusts its price for destination.

The disparity between the companies' valuation methods results in strikingly different wellhead values. For example, Arco's West Coast price averaged about \$2.50 per barrel less than Sohio's throughout 1984. For 1985, Arco's price averaged out \$1.50 less.

The transportation part of the dispute is complicated by the fact that some producers own their own tankers while others charter tankers. For example, Arco owns about 70 percent of its tankers; Sohio owns none and charters U.S. flagships; Exxon charters about 70 percent of its tankers.

Sohio deducts the actual costs it is charged, while Arco deducts costs based on a national shipping standard called U.S. Freight Rate Averages. Other producers that own their own tankers deduct actual costs of operation and capital investment. Yet another variable for those who charter tankers is whether to use long-term or short-term rates. According to company figures supplied to the federal government, 1982 shipping charges ranged from .78

²The committee held hearings in September 1983 on oil and gas issues.

to 2.35 a barrel for West Coast deliveries, and from 4.29 to 6.63 for Gulf/East Coast deliveries.

In late 1984 the U.S. General Accounting Office³ drew the following profiles of the major North Slope producers based on information obtained from the windfall profits tax hearings. (While the figures are based on 1982 production, the methods and amounts are still fairly representative today.)

SOHIO

Sohio has no refineries on either the West or Gulf coasts. Thus the company either sells or exchanges all of its North Slope oil, about 597,000 barrels daily in 1982. About 40 percent of Sohio's North Slope oil went to the West Coast, about 60 percent went to the Gulf Coast and Caribbean.

For each of these market areas, Sohio negotiates a selling price for North Slope oil based on prices customers would pay for competing imported crude oils, with what the company considers appropriate adjustments for differences in oil quality.

Sohio transports its North Slope oil in chartered US-flag tankers operated by contract with outside parties. From the value received from those arm's-length, third-party transactions in each geographic area, Sohio deducts the pipeline tariff and waterborne and other transportation costs to establish wellhead price in Alaska.

ARCO

Arco uses most of its North Slope crude in its own refineries. In 1982, about 70 percent of Arco's 340,000 barrels per day went to the company's West Coast refinery at Los Angeles. Arco sold an additional 25,000 barrels on the West Coast. The remainder of Arco's North Slope oil, 50,000 to 75,000 barrels, went to the Gulf Coast.

Arco establishes a single wellhead price for its North Slope oil, regardless of its destination. Arco sets its price in the Gulf Coast, based on West Texas sour which is actively traded in the area. From this market price, Arco deducts pipeline tariffs and waterborne costs to the Gulf Coast. The resulting price is the wellhead value for both West Coast and Gulf Coast deliveries.

³The GAO report entitled "Response to Questions About the Windfall Profit Tax on Alaskan North Slope Crude Oil" was published in December 1984.

About 70 percent of Arco's North Slope production is transported in company-owned ships. For these ships Arco deducts U.S. Freight Rate Averages as costs. Actual charges are used for shipments on chartered vessels.

EXXON

In 1982 Exxon produced about 325,000 barrels a day and used about 94 percent of North Slope oil in its own refineries. About one third of its production went to the West Coast, about two-thirds went to its Gulf and East Coast refineries.

Exxon's general approach to pricing recognizes the West and Gulf/East Coasts as separate marketing areas. Exxon's assessment of market value is based on factors such as its own commercial transactions and posted prices of domestic crudes in the area as adjusted for quality. Then Exxon deducts transportation costs to arrive at netback value. These netback values are then averaged by volume shipped to each market area to arrive at wellhead value.

About 70 percent of Exxon's marine transportation is by U.S. chartered tankers.

The Amerada Hess case will require the state to make a detailed factual review of all West Coast and Gulf Coast oil marketing transactions for a seven-year period. The state will have to track the disposition of billions of barrels of North Slope oil. Fiscal years 1986 and 1987 will be peak years of activity for this case, which is currently in the stage of preliminary discovery.

D. The Trans Alaska Pipeline Rate Case

This is the case which has received the most intense litigation effort at this point. The amounts at issue between the best case and worst case outcomes, over the life of the field, are approximately \$7 to \$10 billion.

Ever since start-up of the Trans Alaska Pipeline System (TAPS) in 1977, the state and the pipeline owners have been in litigation over how much the tariff should be. The pipeline tariff -- the per barrel amount TAPS owners

charge for transporting oil through the pipeline -- affects the wellhead value of North Slope oil. The higher the tariff, the lower the wellhead price and the less the state collects in royalties and severance taxes. The state and others say the tariff is too high. (The prevailing tariff charges have ranged from about \$5.60 to \$6.40 per barrel.)

Last summer the state and six of the eight TAPS owners signed a settlement which affects tariffs through 2011; the Federal Energy Regulatory Commission subsequently approved the settlement which is now in effect. The remaining issue is whether to include the other pipeline owners, Sohio and Amerada Hess, in the settlement. After consulting with legislators and state officials in December, the governor decided to give the companies until February 12 to voluntarily join the settlement. If they don't, the state will continue litigation. However, FERC still has the option of imposing the settlement on the companies.

The settlement has had an immediate impact on state revenues, providing a welcome cushion against declining world oil prices. The increase in revenues is due to lower tariffs and therefore higher wellhead values. This TAPS money⁴ has already been incorporated into current revenue forecasts and increased the forecasts by these amounts:

⁴These amounts are what could be termed net gain to the state's unrestricted revenues. The law requires that 25 percent of royalties be put into the Permanent Fund, so the net amount is what is left over after the Permanent Fund contributions.

FY 86	\$ 59.2 million
FY 87	156.9 million
FY 88	136.6 million

The Department of Revenue estimates the settlement will bring from \$120 to \$150 million each year to the state until 1992 and then the amounts will decline. In the late 1990s, the tariffs will start rising and revenues to the state will accordingly decrease.

In addition to the above amounts, the state expects to receive another \$120 million in refunds and legal expense reimbursements. This money has not yet been added to the current revenue projections. If Sohio signs the settlement, the state would receive an additional \$70-\$75 million in refunds. On the other hand, if litigation continues, the state may ultimately receive more money, although litigation always has its risks and resolution could be years away. It's hard to predict at this point if an eight-company settlement will ultimately occur.

FERC's decision approving the six-company settlement has been appealed by the Arctic Slope Regional Corporation and the Alaska Public Interest Research Group (AKPIRG). If an appeal is successful, FERC will hold more hearings.

This is the second attempt in more than eight years of litigation to settle the case. The 1982 effort failed, and the legislature decided to continue litigation to obtain two goals: to establish a rate-making methodology to last through the century, and to establish a methodology that would aid further oil development on the North Slope (meaning lower tariffs in the 1990s). Litigation has been

expensive. The Department of Law has spent over \$36 million on this case alone, not including in-house costs.

The settlement has been highly controversial, drawing fire from several quarters. Last summer the House Majority Leader hired independent economist Jamie Love to analyze the settlement. Love concluded the state gave away too much when it exchanged its litigation position for the settlement. According to Love's calculations, the settlement means the state will lose from \$5.2 to \$6.4 billion through the life of the settlement -- an amount that would be collected if the state's litigation position were to prevail. According to Department of Law figures, however, the settlement means an overall loss of \$2.5 billion (over the life of the settlement) when compared with the state's litigation position. The settlement is also a \$4.5 billion gain when compared with the TAPS owners' litigation position.

Bob Maynard, the assistant attorney general who's handling the TAPS case for the state, says Love made some big errors and used wrong assumptions in his report. Memos from attorneys working on the case to the Department of Law said Love's conclusions shouldn't be the basis of any policy. Maynard also pointed out that the settlement is a compromise which necessarily means the state gets less than if its litigation position were to prevail.

The Alaska Public Utilities Commission also did its own in-house analysis of the settlement late last year and concluded the settlement is not in the public's best

interest and may have an adverse effect on oil exploration and production on the North Slope. APUC thinks the settlement does not adequately balance the competing interests of past, present and future shippers, carriers, producers, royalty owners, the state of Alaska and the federal government. It also shares Arctic Slope Regional Corporation's concern that the rising tariffs at the end of the century will prevent future developers from producing North Slope oil.

There are many aspects of the settlement that contribute to higher tariffs in later years. One of APUC's biggest criticisms of the settlement is that the 35 cent barrel return is not cost-based and may lead to excessive rates of return and tariffs after 1989. APUC also criticized the settlement for eliminating all refund obligations prior to 1982. This means a potential loss of billions of dollars to early year shippers as well as the state of Alaska and the federal government.

A recent decision by FERC on pipeline ratemaking dubbed "Williams II" has been the subject of much speculation. The decision was handed down the same day last June that the state submitted its settlement proposal. The decision appeared to be more favorable to the state's litigation position, though a Department of Revenue analysis of the settlement shows that the settlement may actually be better than a "Williams II" outcome. In any case, it is difficult to say exactly how or if this case would apply to Alaska. In response to a letter written by

some House Majority members opposing the settlement late last year, FERC said the case was not applicable to TAPS.

Settling the dispute relies on how to compute the tariff, which is made up of operating expenses, depreciation, income taxes and after-tax return. Of these four, operating expenses is the least controversial, depreciation and after-tax return the most controversial. The Williams II decision adopted a hybrid ratemaking methodology involving part depreciated original cost and part trended original cost. A depreciated original cost scenario, as set out in the state's litigation position, is much better for the state than the trended for inflation rate base used in the settlement. The inflated base is somewhat of a compromise between the valuation methodology originally sought by TAPS owners and the state's position.

The six TAPS owners who have signed the settlement are: Arco, BP, Exxon, Mobile, Union and Phillips. They collectively own 65% of the pipeline. The other two owners are Amerada Hess and Sohio; Sohio has submitted its own settlement offer to FERC (which Love said would be "disastrous" to the state were it to be approved).

Comments opposing the settlement were filed by Arctic Slope Regional Corporation, Amerada Hess Pipeline Corp., Sohio Pipeline Co. and Sohio Petroleum Co., Tosco Corp., Alaska Oil Co. and AKPIRG.

E. Conclusion

These cases illustrate how various aspects of the