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# STATE OF ALASKA

## OFFICE OF THE GOVERNOR

OFFICE OF MANAGEMENT AND BUDGET  
DIVISION OF POLICY

*file: ELF*  
STEVE COWPER, GOVERNOR

P.O. BOX AD  
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August 12, 1987

The Honorable Sam Cotten  
Representative  
Alaska State Legislature  
P.O. Box 296  
Eagel River, AK 99577

Dear Representative Cotten:

SUBJECT: ELF

The enclosed information identifies another possible problem with the current version of the Economic Limit Factor -- drilling wells for the sake of reducing taxes.

As more information is developed on this point, we will provide it to you.

Sincerely,

MARY

Mary Halloran  
Director

MH/dmc/88D-311

Enclosures

cc: Hugh Malone, Commissioner  
Department of Revenue

# MEMORANDUM

State of Alaska

Office of the Governor

Division of Policy

TO: Mary Halloran  
Director

DATE: August 5, 1987  
(minor emendations 8/12/87)

FROM: Gregg Erickson *GKE*  
Senior Economist

PHONE: 465-3568

SUBJECT: Potential Severance Tax Loophole

## Summary

Studies currently in progress by DOR economists in Anchorage, and other evidence, suggest that oil producers at Prudhoe Bay may be able reduce state severance taxes through a tax avoidance mechanism involving the newly applicable economic limit factor (ELF). The loophole was largely unanticipated, and has not yet been accounted for in the state's petroleum revenue forecasting models. The likely revenue loss is still uncertain. Efforts are underway to appropriately model company behavior and the potential tax avoidance mechanism in time for the December forecast.

## Background

The ELF was first added to Alaska's severance tax in 1978 as part of an effort not just to increase revenue, but to do so in a way that would reduce the incentives in earlier severance taxes toward underdevelopment of the oil resource.<sup>1</sup> It was understood that the ELF could conceivably produce an opposite incentive -- toward overdevelopment.

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<sup>1</sup>Underdevelopment (sometimes called premature shutdown) occurs whenever a flat percentage tax is imposed on gross revenue. As the resource nears exhaustion the percentage tax takes an ever larger share of the potential profits; eventually it takes everything. At this point -- unless the tax is reduced -- production, profits, and tax revenues all end. This is a premature shutdown since all three would continue if taxes were reduced. Alaska adopted a sliding scale severance tax based on average per-well production in 1970. The ELF adopted in 1978 eliminated the "lumps" in that sliding scale and thus was expected to further reduce the under-development incentive.

This would be just as bad, since overdevelopment would also reduce state revenues.<sup>2</sup> Most analysts thought the overdevelopment risk was mainly a theoretical matter, however, with little potential for practical impacts on drilling, production rates, or major field investments. Even if there were some incentive for overdrilling, it was thought that the regulatory oversight of the Alaska Oil and Gas Conservation Commission would serve to keep it in check.

In past weeks evidence has accumulated suggesting that renewed application of the ELF to Prudhoe Bay, which occurred in June, may trigger a drilling program designed to artificially reduce severance tax rates. Under such a program, additional wells could cost more than the gains from increased oil production as long as the difference is more than offset by the transfer to the companies of severance tax revenue -- revenue that would have gone to the state had the well not been drilled.

From the state's standpoint, overdrilling would cause a fall in state severance tax revenue from a source not thus far anticipated in the state's forecast models. A collateral effect would be a shift in the production curve, moving future production toward the present but steepening the rate of decline later. Output over the life of the field would likely increase. Nevertheless, total economic rents -- the difference between production costs and the value of the oil -- would be reduced.

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<sup>2</sup>Many people have a hard time understanding how overdevelopment can be a bad thing. They forget that it is profits and net tax revenues that make oil production so desired, not more barrels, *per se*. As an extreme example, assume some edict required all profits and tax revenues from a field reinvested to drill additional wells in the field. Both the state and company would find this a bad deal, despite the resulting increase in production. Neither would receive any net benefits from the resource, all of it having been dissipated on the excess investment. Oil drillers and drilling companies would naturally like the idea, but society as a whole would be worse off.

### The New Evidence

The first piece of evidence in this regard surfaced in late March in testimony of ARCO Kuparuk Unit Manager James Weeks before the House Finance Committee. Mr. Weeks provided an example showing that under the present ELF it is possible for total production to increase at the same time total severance tax collections decrease. This is exactly the condition that is necessary for overdevelopment. Weeks argued that this was a desirable characteristic of the tax structure.<sup>3</sup>

The second piece of evidence was the result of ongoing Department of Revenue (DOR) modeling work. Over the past year DOR economists in Anchorage had been preparing fiscal notes on various concepts for revising the ELF. In the course of that work and even before, as a part of their regular forecasting, the DOR economists had modeled the impact of different tax structures and oil prices on the decision to produce Alaska North Slope oil fields. An early version of that model, now called the "production module," was integrated into the large PETREV forecasting model in September 1985.

The production module assumes that prices and tax structures will have no effect on the optimum number of wells or other field investment, only on the decision to produce or not. Initially this assumption seemed like a reasonable simplification; but as the DOR economists got more involved in preparing ELF fiscal notes they became concerned that there might be important field investment effects that the module was not designed to detect.

The ARCO testimony in March added additional urgency to these concerns, since it showed that at least one oil company

<sup>3</sup>ARCO's example and OMB's April 29 critique of the ARCO argument is found in Attachment A.

was talking publicly about drilling wells that were only economic for it because of a potential tax rebate inherent in the ELF structure. Last Friday Dr. Roger Marks at DOR provided us with preliminary results from a new production model, one which shows the effect of changing prices or taxes on drilling.<sup>4</sup> The results suggest that the ELF does indeed create an incentive at Prudhoe for operators to reduce their taxes through overdrilling.

The third piece of evidence is found in July *Anchorage Times* reports of plans by ARCO and Standard Oil Company to increase drilling at Prudhoe Bay. The stories (see Attachment C) speak for themselves. Neither ARCO nor Standard announced any such plans; according to an ARCO official, the plans were revealed to the *Times* only after their reporter directed inquires to field personnel regarding trade press notices showing that ARCO was seeking bids for additional drilling services.

#### Further Action

No immediate action is recommended. I have encouraged Dr. Marks to continue his analysis, and he indicated his intention to do so. He hopes that a new model taking account of drilling incentives can be integrated with the production module and large forecasting model in time for the December forecast, but it is conceivable that it could take longer. I have also asked DOR to model the incentive structure in the ELF formula that passed the House in 1987 (CSHB 164 (fin.) am.). I would hope that the proposed formula would eliminate much of the problem. We will see. In any event, Dr. Marks and his colleagues should be congratulated for calling this potential problem to our attention.

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<sup>4</sup>A draft of Marks' paper is found in Attachment B.

Mary Halloran  
August 5, 1987  
Page 5

- Attachments: A. "Technical Note on ARCO's Kuparuk Example,"  
OMB, 29 April 1987.
- B. "A Model To Evaluate the Economics of  
Drilling Additional Wells," Roger Marks, DOR,  
August 1987.
- C. *Anchorage Times*, "Arco to increase oil  
production," 15 July 1987, and "Standard adds  
drill rig to Prudhoe field," 16 July 1987.

cc: R. Marks, DOR  
J. Rhode, DOR  
R. Fineberg, OMB/Policy

Attachment A

# TECHNICAL NOTE

## ON ARCO'S KUPARUK EXAMPLE

### Tax Effects of Drilling an Additional Well Under Current Law

Mr. James Weeks, Kuparuk Unit Manger for ARCO, provided testimony to the House Finance Committee on March 27, 1987. Examples of severance tax effects (see following page) accompanied his testimony. The examples compare the severance tax effects of adding one additional well in the Kuparuk field under the current ELF and under the proposed ELF (CSHB 154 fin.). The examples show that the addition of one well producing just under 300 barrels per day would increase output from 90,168,000 barrels of oil per year (BOPY) to 90,277,000 BOPY. At the \$9.00 per barrel price assumed in ARCO's example, annual gross revenue to the owners increases by \$981,000.

$$(90,277,000 \text{ BOPY} - 90,168,000 \text{ BOPY}) * (\$9/\text{barrel}) =$$

$$(109,000 \text{ BOPY}) * (\$9/\text{barrel}) = \$981,000$$

The first of ARCO's two examples shows how under current law the owners would collect an annual severance tax *rebate* of \$37,846 on this additional revenue. The effective severance tax rate on the new production is thus -3.9 percent. The effect is analagous to a personal income tax where the effective tax rates become lower as increasing income moves the taxpayer into a higher bracket.

The second ARCO example illustrates how this will be changed under the proposed law. Instead of giving the owners a \$37,846 windfall, the proposed law will collect \$58,611 (6.0 percent) of the incremental \$981,000 for the state in severance tax. The table below summarizes the effects under the current and proposed severance tax laws, as shown in the ARCO examples.

#### TAX EFFECTS OF DRILLING ONE ADDITIONAL WELL (ARCO Kuparuk Example)

	Change In Annual Gross Revenue	Change In Annual Severance Tax	Tax Rate On Incremental Production	Average Tax Rate Before Drilling	Average Tax Rate After Drilling	Percent Change In Average Tax Rate Due To Drilling
Current Law	\$981,000	(\$37,846)	-3.9%	7.820%	7.806%	-0.180%
Proposed Law	\$981,000	\$58,611	6.0%	10.944%	10.938%	-0.055%

**DRILLING/WORKOVER DISINCENTIVE  
COMMITTEE SUBSTITUTE HB 164**

**SEVERANCE TAX CALCULATION**

**CURRENT LAW**

*Field Rate × Wellhead Price × Severance Tax × ELF*

90,168,000 BOPY × \$9/BO × 0.15 × 0.52134

= \$63,461,050/year

Addition of 1 well :

90,277,000 BOPY × \$9/BO × 0.15 × 0.5204

= \$63,423,203/year

A decrease of \$37,846 year

**PROPOSED LAW**

*Field Rate × Wellhead Price × Severance Tax × ELF*

90,168,000 BOPY × \$9/BO × 0.15 × 0.7296

= \$88,811,873/year

Addition of 1 well :

90,277,000 BOPY × \$9/BO × 0.15 × 0.7292

= \$88,870,484/year

An increase of \$58,611 year

[ARCO Handout, March 27, 1987]

## Attachment B

### A Model to Evaluate the Economics of Drilling Additional Wells

Roger Marks  
State of Alaska Department of Revenue  
Petroleum Research Section  
August 1987

The oil production severance tax structure in Alaska causes the tax to be sensitive to the number of wells in a field. Levied on non-royalty barrels, the tax is the product of the wellhead price (market price less shipping and pipeline costs), the severance tax rate, and the economic limit factor (ELF). The ELF is a number between zero and one which reduces the severance tax as well productivity declines and a field approaches its economic breakeven point:

$$ELF = \left( 1 - \frac{PEL}{TP} \right)^{\left[ \frac{460 * WD}{PEL} \right]}$$

where PEL = the monthly production rate at the economic limit  
TP = total production during the month for which the tax is to be paid  
WD = the total number of well days in the month for which the tax is to be paid

Thus, for example, with all other things equal, as wells increase, PEL will increase, PEL/TP will increase, the base of the exponent will decrease, and the ELF, along with severance tax, will decrease.

Recently there have been legislative proposals to modify the severance tax structure, notably the form of the ELF. Meaningful judgements on the merits of the proposals will depend, among other things, on how they affect development, productivity, profitability, and State revenues.

The State of Alaska Department of Revenue's current forecasting model has a component that computes the economic rent of specific fields to assess whether or not they are feasible to produce given price and volume scenarios. When economic rent is negative production is delayed until a start-up year generating positive economic rent is found. This reduces the likelihood that the model will project revenue from uneconomic fields. When economic rent is positive the model finds the profit maximizing amount of enhanced recovery.

Projected price, volume, and well numbers are exogenous input, with the latter two based on producer public information and State engineering assessments. They reflect the current and announced extent of development, a rather limited time horizon.

Consequently, the Department has developed a model to examine the economics of drilling additional wells in developed fields. Such a model indicates the degree of extra in-fill drilling and production that may occur to maximize economic rent for primary recovery, and is also useful for analyzing potential severance tax structures.

The crux of the model is the relationship it establishes between additional wells and the production profile. On that matter the model is generic while reservoirs are unique, but reflects general engineering principles. The model does allow reasonable systematic comparative policy analysis in an area where the answer is unknowable.

The production decline characteristics of many oil wells and fields follow exponential declines. The slope of the decline curve is called the exponential decline rate,  $a$ , where:

$$a = \frac{\ln\left(\frac{q_i}{q_f}\right)}{t}$$

$q_i$  = production rate at the beginning of any time period during the decline

$q_f$  = production rate at the end of the time period

$t$  = number of years between  $q_i$  and  $q_f$

Production in any year is  $1/e^a$  times production in the previous year, where  $e$ , the number whose natural logarithm is one, is approximately 2.71828. We henceforth refer to  $1/e^a$  as the production multiplier,  $P$ . Similarly, the well count will decline as producers are converted to injectors as production, saturation, and pressure drops. The well decline multiplier is estimated at  $.5*(1+P)$ .

In general, the major impetus for in-fill drilling is to produce a finite amount of oil sooner. Given an initial decline rate,  $a_B$ , additional wells will slow down the decline rate on a field basis to  $a_N$ , and the initial production multiplier  $P_B$  ( $1/e^{a_B}$ ) increases to  $P_N$  as  $a_B$  decreases.  $a_B$  will decrease at a decreasing rate as wells are added. At Prudhoe Bay  $a_B$  is estimated to be 0.090, and  $P_B$  is 0.91394.

As wells increase the production multiplier will increase such that

$$P_N = P_B + f(w),$$

where  $w$  is the number of additional wells, and production for a given year,  $V_t$ , will be

$$V_{t-1} * P_N$$

where  $V_{t-1}$  is production in the previous year.

$f(w)$  is approximated by the form

$$C * \left[ \ln\left(\frac{\left(w + T^{\frac{x-1}{x}}\right)^x}{T^{x-1}}\right) \right]$$

where  $T$  = total wells prior to decline. For Prudhoe Bay  $T$  is estimated at 541.

$x = 3$  is determined such that

$$\left[ \ln \left( \frac{(.25T + T \frac{x-1}{x})^x}{T^{x-1}} \right) / \ln \left( \frac{(T + T \frac{x-1}{x})^x}{T^{x-1}} \right) \right]$$

This calibrates  $f(w)$  such that 50 percent of the change in  $f(w)$  that would result from doubling  $w$  is realized after  $w$  is increased 25 percent.

$$c = \left( \frac{1}{e^{a_8 - .002}} - \frac{1}{e^{a_8}} \right) / \ln \left( \frac{(w + T \frac{x-1}{x})^x}{T^{x-1}} \right)$$

This coefficient calibrates  $f(w)$  such that as  $w = T$  (i.e. the number of wells is doubled),  $a_8$  is reduced by two one-thousandths. For Prudhoe Bay  $c$  is estimated to be 0.0002755271.

The intercept term  $(T \frac{x-1}{x})$  calibrates  $f(w)$  so  $f(w) = 0$  when  $w = 0$ .

There is a limited amount of reserves remaining before exponential decline decays into arithmetic. For Prudhoe Bay this is estimated to be 4 billion additional barrels after 1987. The model stops exponential decline when accumulated post-1987 production reaches this estimated limit, and begins arithmetic decline, decreasing production each year by a constant amount equal to the difference in production between the prior two years. Note that arithmetic decline will begin sooner where more wells have been drilled. Also, this gives a more rapid decline where more wells had been drilled, accelerating the arrival of economic shutdown, and consequently total recovery over the economic life of the field may be less with greater numbers of wells even though economic rent is greater.

The model is incorporated into a conventional discounted cash flow profitability model specific to the North Slope. A number of additional wells ( $w$ ) is exogenously inputted (along with their costs), and a third of them are added in each of the three years 1989 through 1991. A ceiling of  $T$  is put on  $w$ . Volume is adjusted as specified above. The model cuts off production when after tax net value is negative. The number of additional wells that maximizes economic rent is found iteratively.

Our estimates of the optimum number of additional wells for Prudhoe Bay under current law, as a function of constant real Pump Station One (PS1) price, are as follows. (These prices are approximately \$5 under market prices.)

<u>Price</u>	<u>Additional Wells</u>
\$15	3
\$20	100
\$25	316

Table 1 compares the well count, production volume, and economic rent, with and without an optimized in-fill drilling program, at a \$20 PSI price.

Table 2 compares the well count, production volume, and economic rent between optimized in-fill drilling programs at \$20 and \$25 at PSI.

Table 1  
 Comparison of Wells, Volume, and Economic Rent  
 With and Without an Optimized In-fill Drilling Program  
 \$20 PSI Price

	<u>No Optimization</u>		<u>Optimization</u> (100 wells)		<u>Increased</u>	<u>Increased</u>
	<u>Wells</u>	<u>Volume</u> (mmbbl)	<u>Wells</u>	<u>Volume</u> (mmbbl)	<u>Wells</u>	<u>Volume</u> (mmbbl)
1988	541	561	541	561	0	0
1989	518	513	551	513	33	0
1990	495	469	560	469	65	0
1991	474	428	569	429	95	1
1992	454	391	544	392	90	1
1993	434	358	521	359	87	1
1994	416	327	499	328	83	1
1995	398	299	477	300	79	1
1996	381	273	457	275	76	2
1997	364	250	437	251	73	1
1998	348	228	418	230	70	2
1999	333	207	400	208	67	1
2000	319	185	383	187	64	2
2001	305	164	366	165	61	1
2002	292	142	351	144	59	2
2003	280	121	336	122	56	1
2004	268	99	321	101	53	2
2005	256	78	307	79	51	1
2006	245	56	294	58	49	2
2007	235	35	281	36	46	1
2008	224	13	269	15	45	2
Total		5196		5223		27
Economic Rent (\$mm)		29467		29501		34

Table 2  
 Comparison of Optimized In-fill Drilling Programs  
 \$20 and \$25 PSI Prices

	<u>\$20</u> (100 wells)		<u>\$25</u> (316 wells)		<u>Increased</u> <u>Wells</u>	<u>Increased</u> <u>Volume</u> (mmbbl)
	<u>Wells</u>	<u>Volume</u> (mmbbl)	<u>Wells</u>	<u>Volume</u> (mmbbl)		
1988	541	561	541	561	0	0
1989	551	513	622	513	71	0
1990	560	469	700	470	140	1
1991	569	429	774	430	205	1
1992	544	392	740	393	196	1
1993	521	359	709	360	188	1
1994	499	328	678	330	179	2
1995	477	300	649	302	172	2
1996	457	275	621	276	164	1
1997	437	251	594	253	157	2
1998	418	230	569	231	151	1
1999	400	210	544	212	144	2
2000	383	192	521	194	138	2
2001	366	176	498	177	132	1
2002	351	161	477	162	126	1
2003	336	147	456	148	120	1
2004	321	134	437	136	116	2
2005	307	123	418	124	111	1
2006	294	112	400	114	106	2
2007	281	103	383	104	102	1
2008	269	94	366	95	97	1
<b>Total</b>		<b>5223</b>		<b>5251</b>		<b>28</b>
<b>Economic Rent (\$mm)</b>		<b>29501</b>		<b>38275</b>		<b>8774</b>

# Attachment C

QUALITY SERVICES

Date JUL 15 1987

Anchorage Times

Client No. 30

## Arco to increase oil production

350 345A 0360 0590 0480 180

By Ray Tyson  
Times Business Writer

Arco Alaska, Inc. plans to sink five more production wells at Prudhoe Bay beginning in September in the first major increase in drilling activity at Prudhoe in 14 months.

Arco's decision to add an additional oil drilling rig is directly related to recent increases in the price of crude oil, said Arco drilling manager Randy Ruedrich.

It means an additional 100 field jobs at Prudhoe and several hundred more jobs in related businesses in Anchorage and Fairbanks, Ruedrich said.

If the oil price climate continues to improve, he said, further drilling can be expected in the near future.

"This is very good news," Ruedrich said. "It's the first sign that higher crude prices are affecting Alaska's economy."

Hugh Depland, spokesman for Standard Alaska Production Co., which along with Arco operates the Prudhoe Bay field, said Arco's decision to increase drilling required the consent of the eight owners, especially Standard, which owns 50 percent of the field.

Depland said any plans to increase production at Prudhoe required approval of at least 90 percent of the owners.

Arco and Exxon Company USA, the other major owners, each own about 21 percent of the field.

Since oil prices collapsed last year, Arco has reduced the number of rigs on the Slope from 10 to 2, eliminating about 800 field jobs and countless thousands of related jobs in the Railbelt.

"When world crude prices came unglued we began to stack (eliminate) rigs," Ruedrich said. "Now we're in a position to begin replacing" those whose contracts have expired. "This means we don't have to stack another rig."

The contractor to provide and operate the new rig to drill \$13 million worth of production wells at Prudhoe will be announced in early August. Drilling will begin about Sept. 1.

Arco also plans to replace a production oil rig at the nearby Lisburne field, which it had planned to eliminate, and continue current production activity at the Kuparuk River field west of Prudhoe.

QUALITY SERVICES

Date JUL 16 1987

Anchorage Times

Client No. 350

# Standard adds drill rig to Prudhoe field

## Anticipates another dozen before end of year

345A 350 0360 0590

Standard Alaska Production Co. has added a drilling rig to its Prudhoe Bay operation, signaling yet another industry response to increasing oil prices following months of relative inactivity.

Arco Alaska, Inc., which along with Standard operates the field on behalf of eight owners, announced on Tuesday plans to add an additional rig to drill five production

wells beginning in September.

Standard spokesman Hugh Depland said today the new Standard rig began operating in mid-June.

Standard, which plans to sink about 12 more production wells by the end of the year, now has two rigs operating on the western portion of the field.

The new Arco and Standard rigs mean an extra 200 field jobs and

several hundred more jobs in related industries in Anchorage and Fairbanks.

It costs about \$2.3 million to drill a production well.

Wells must be added to maintain the 1.5-million-barrel a day production level at Prudhoe Bay.

"The signing on of an additional rig was made possible by the improvement in oil prices," Depland

said. "We had planned to do this all along. But the increase in prices made it possible."

Oil prices have steadily increased since they hit rock bottom at \$8 a barrel last year.

Oil futures today reportedly climbed to \$22 a barrel, the highest in 18 months.

Oil prices at West Texas Intermediate, the U.S. benchmark, jumped to \$22.15 a barrel.

# Opinion

Sunday, May 3, 1987

Editorial Opinion and Comment of

FAIRBANKS

Daily News - Miner

"Independent in All Things Neutral in None"

Other opinions expressed on this page do not necessarily reflect those of the Daily News-Miner.

## Treating the symptom?

Judging from the recent audit, critics of the city's steam heat utility were right all along.

The audit showed that a shocking two-thirds of steam-heated properties had meter bypasses.

Six of the bypasses were found to be active during the well-publicized March audit, meaning the customers got steam without it showing up on their meters or their utility bills. There's no way of telling how many were active when the city wasn't looking.

All of which may do much to explain why the system "loses" about a third of its steam, has lost more than \$3 million since 1980, and expects to lose another \$550,000 this year.

The critics, consisting mainly of steam-heat users who have been paying their bills, had complained that recent rate increases wouldn't have been necessary if the system was run efficiently, and it's clear now they were on target.

An ordinance before the city council should bring the bypass problem under control and stop losses to unmetered users, and the downtown utility work should cut losses from leaks in the steam lines.

Let's hope these improvements end the need for more rate increases, as well as the system's financial hemorrhage.

But let's not forget that MUS management allowed the problem to fester for years, and did the audit chiefly in response to pressure from customers and elected and appointed officials, rather than from any internal drive for efficiency or fairness.

Consequently, it's not safe to assume an ordinance will permanently fix the system's problems. As long as the same managers are in charge of it, the cure may be only temporary.

## The merry month

In May, many things are honored of which we

# Should Alaska change the ELF formula?

## Yes

### Guest Opinion

By SAM COTTEN

The importance of oil and gas development in Alaska's economy can't be overstated. As Alaskans we derive the largest part of our economic development and public revenue from our oil fields and oil taxes. But judging from the fact that Prudhoe Bay producers are due to receive an \$80 million tax break from the state this June, there is something wrong with our existing tax structure.

Prudhoe Bay is by far the most productive and profitable field in United States history. Prudhoe oil producers have made huge profits from developing this resource, owned by the people of Alaska, and from shipping and refining the oil produced there.

It is unrealistic to say, as some industry advocates have, that maintaining the current tax regime for this field (by passing the House bill), will destroy or diminish Alaska's oil industry. Prudhoe Bay and

Kuparuk—the two fields that receive smaller tax breaks under the Economic Limit Factor (or ELF) bill that recently passed the House—are healthy, profitable fields.

This bill makes our oil tax system more equitable and sensible. It does two important things:

1. It prevents large tax breaks for giant oil fields like Prudhoe Bay and Kuparuk, where tax incentives aren't needed. These large tax breaks are scheduled to take effect at the end of June, and they will mean the loss of about \$90 million to \$120 million in revenue per year over the next five years.

## No

### Guest Opinion

By HAROLD HEINZE

It is vital that Alaskans think about how they fit into their local and state economy so they can encourage activities that contribute to jobs and income.

In Fairbanks, the economy is directly impacted by the level of North Slope drilling activity. When oil prices fell, drilling diminished. Now, new oil severance tax legislation passed by the state House would discourage an increase in drilling activity. That's bad news for Fairbanks.

Statewide, the fuel supply for the state's economic engine is the dollars derived from extracting and exporting natural resources, including oil and gas, fish, timber, minerals and coal.

The gross value of oil and gas produced in Alaska in 1986 was \$4 billion. That's the money derived from selling those resources on the world market. In 1985, when oil prices were considerably higher, the comparable number was \$12 billion. If you have wondered why the Alaskan economy is sputtering, it is entirely contained within that one single change. No other natural

resource value changed significantly.

Two other sources of fuel for the Alaska economy are tourism and defense spending by the federal government. State government is not on the list because it does not create wealth; it runs off the same fuel supply as the private economy. (The only exception is the state's Permanent Fund dividend program.)

What does it take to succeed in the natural resource businesses? Since they all are sold in the world market at world prices, the key to success is to be a low cost producer. The resource industries all are sensitive to government regulation and they all require access to the land.

There's been a lot of conversation about diversification of the state's economy. But the best answer I know to what ails the economy is to

2. It provides tax incentives for production from every other known field in Alaska. These are smaller, more marginal fields like Endicott, Lisburne, and Milne Point—which was recently shut down because its production was uneconomic.

This makes sense. Where marginal fields can be developed in Alaska, they provide jobs and in many cases substantial royalty income to the state. They broaden the industry and brighten the future for production from other marginal fields.

Some industry representatives are saying now that the state shouldn't change its tax system, that "tax stability" is the most important issue here. The proposed changes to the ELF will not cause Prudhoe and Kuparuk producers to stop or limit production, which has been growing rapidly. And it will enhance the economic viability of smaller fields.

So the real issue for these indus-

try representatives, of course, is money. It's clear from history that the industry actually favors an "unstable" tax regime when it will benefit.

For instance, when the price of oil was climbing in 1981, the oil industry came to the Legislature and asked for tax breaks. The Legislature responded, implementing a new "unitary" tax system for Alaska. Since that time, the people of the state of Alaska have foregone more than a billion dollars worth of revenue that would have been collected under the former system.

I am not reopening the question of the unitary tax vs. separate accounting of taxes. But I am pointing out that the industry has been the willing beneficiary of select "unstable" tax policies in the past.

In this case, if the Legislature does not change the current tax system, the state of Alaska will forfeit needed revenue that could have been used in our shrinking school

budgets, for maintaining roads, and for continuing resource management programs that the Senate now advocates cutting by 15-25 percent. And smaller, marginal fields in Alaska will continue to be inequitably treated under existing law.

The facts about the ELF and the proposed ELF changes show that we need a different tax system. The vague representations by oil industry representatives—that the industry will be deeply damaged, that Alaska will lose points for being an unstable state—have not been very convincing.

I am strongly supportive of Gov. Cowper's effort to modify the existing ELF law. The House and Gov. Cowper are working together for a tax system that truly serves the interests of Alaskans.

Rep. Sam Cotten, D Eagle River, co-chairs the Alaska House Resources Committee.

figure out ways to help the natural resource industries grow. They are already big contributors to the state's economy and increases in any of them help the economy grow.

When we look at the \$450 million ARCO Alaska has spent in Fairbanks over the last four years, we find, as expected, that the construction companies based in Fairbanks are a big part of that.

However, the construction dollars represent only about a quarter of the money ARCO is putting into the Fairbanks economy. Drilling activities and trucking are major pieces of that dollar infusion.

More than half the traffic on the Dalton Highway, for example, represents Fairbanks carriers hauling things for ARCO Alaska. In the early years of Prudhoe development, most supplies traveled to the North Slope by barge. But Fairbanks people worked together and made freight movement up the highway a very competitive thing.

The changes to the state's Economic Limit factor, which are in a bill recently adopted by the state House of Representatives, would have a major adverse impact on ARCO's

North Slope drilling activity. That means the entire Fairbanks economy will be negatively impacted.

What started as a proposal by the governor to modify one portion of the severance tax law ended as a major restructuring of the severance tax on the oil industry in Alaska. Producers would be penalized for drilling additional wells and adding new production.

The new bill (House Bill 164) would increase the severance tax on the Kuparuk River field by 84 percent, and on the Prudhoe Bay field by 44 percent. We calculate that it would add \$1.8 billion to industry's tax bill over the next 10 years, based on state Department of Revenue oil price estimates.

In restructuring the tax, the House introduced new factors. Instead of basing the tax on production from each well, it relates the tax rate to the production level from an entire field. That means the more oil produced from a field, the higher the tax rate. It removes any incentive to increase production.

In our business, you drill wells and try to increase production to lower operating costs. That's how

we compete and how we generate more jobs and more wealth for everyone. The House bill is counterproductive.

Passing that bill tells me that the House majority is not looking at the impact on the private sector.

I know that many people in Fairbanks are working to get the economy going. But when the vote was taken in the House on the severance tax, the five House representatives from Fairbanks all voted for the tax increase.

The state Senate is going to have to address this issue. Your input to Senate members from Fairbanks will be vital in deciding the issue.

Other oil producing states are looking for ways to encourage oil producers to drill more wells. Those states are aware of the benefits of oil development activity. Meanwhile, the Alaska House has passed new legislation that discourages drilling in the Prudhoe Bay and Kuparuk oil fields. It is new state policy that will further dampen drilling activity on the North Slope and further shrink the state's private economy.

Harold Heinze is president of ARCO Alaska, Inc.

Back  
TAXER

Sam Colter

DEPARTMENT OF REVENUE COMMENTS

February 22, 1988

SENATE BILL 401

S.B. 401 appears to be based on the assumption that -- at least in the limited circumstances covered by the bill -- an administrative agency cannot "fairly" resolve a dispute within its area of responsibility. This assumption is directly contrary to Alaska's basic system of government, which relies heavily on administrative agencies to resolve disputes. It is also contrary to the specific provisions governing hearing procedures within the department of revenue, and court oversight of those procedures.

Our current tax system begins with an audit followed, if necessary, by an assessment. If a taxpayer disagrees with the assessment, it may request an informal conference, and then a formal hearing. After formal hearing, a taxpayer (but not the department) may appeal to superior court for review. The superior court will apply certain standards in reviewing the agency decision. This court review is the way our system guarantees fairness and due process. The court will examine whether or not the agency has provided a fair hearing. If it has not, the court can grant de novo review. It will make sure that the agency has correctly applied the law, and will reverse the agency if it did not. It will make sure that the agency's determination is supported by its findings, and

that the findings are supported by the evidence. In Alaska, the court may exercise its independent judgment on the evidence. It may set aside factual findings if they are not supported by the weight of the evidence as a whole. If appropriate, the reviewing court will augment the record.

The department of revenue applies, administratively, the tax laws that the legislature has passed. This administrative procedure is just like that of a great many other administrative agencies within Alaska, in other states, and in the federal system. States chose the administrative procedure for tax matters, instead of the courts, in order to reduce the burden on the court system, to provide the taxpayer with a forum less formal and costly than the courts, and to provide the taxpayer with a forum that has first hand experience and expertise in the tax laws.

The bill would restructure this basic dispute-resolution mechanism, but only for certain types of taxpayers for certain types of taxes. It would change the administrative procedure from one in which a dispute is resolved by the agency, with an appeal to the court available, to one in which the administrative procedure only finalizes the agency's position. The dispute then would be resolved by the court instead of the agency.

These changes are accomplished in the bill by (1) providing that internal agency review (the present "informal" and "formal" hearings) is for the purpose of establishing an assessment rather than, as now, for the purpose of reviewing the correctness of an

assessment and (2) providing for a trial de novo for any part of the department's final assessment with which the taxpayer does not agree. These changes make the bill inconsistent with the basic duties of the department, as outlined in AS 43.05.010. Paragraph (9) of that section provides that the commissioner of revenue shall "hear and determine appeals involving ... taxes ... and enter orders on the appeals which are final unless reversed or modified by the courts."

In addition to this basic restructuring of the mechanism for resolving disputes, the bill provides serious restrictions that work against the state in both the agency review and in the court proceeding. The highlights of these deficiencies are outlined below:

1. The bill fails to link the time requirements that it imposes or permits. The bill does not change the current requirement that an assessment be made within a three year statute of limitations. However, it adds approximately 300 days of procedures (from the issuance of the preliminary audit conclusions through the policy review decision) that must be accomplished before this statute runs. The shorter timelines set up by the bill may be extended by mutual agreement, but there is no requirement that the statute of limitations would be tolled if such an agreement were made.

Similarly, under the bill the taxpayer may appeal the "reasonableness" of a departmental request for information, but there is no requirement that the statute of limitations is tolled while the appeal is pending. Since the statute runs against the state and not the taxpayer, these provisions will reduce the state's

ability to make accurate assessments within the three year period.

2. The procedural time limits are not workable. The bill cuts the time available to audit the production tax by one third to one half. The severance tax is a monthly tax. The department doesn't audit a single month, but rather joins twelve tax periods (one year) together. This means that when the audit begins, almost a year of the three year period has already run for at least one tax period. The bill adds about a year (300 days) of procedures that are supposed to fit in after the audit but before the three year statute runs. This leaves only slightly more than a year for the audit. In the experience of the department, under the best of circumstances, a severance tax audit takes between two and three years.

3. The taxpayer does not have to, and has no incentive to, provide relevant information to the department. A combination of provisions in the bill would result in the department being unable to base its tax assessments on the best information. First, the bill allows the taxpayer to appeal the reasonableness of a departmental request for information. Since the statute of limitations continues to run, the department must complete its assessment without the requested information. Second, the subpoena and inquiry provisions of AS 43.05.240(c) applicable to other types of taxpayers would not apply to hearings on oil and gas taxes. Third, if information arises during, for example, the closing conference, the department won't have the time (under the bill's schedule) to pursue it. Finally, the type of de novo court review in the bill would permit the taxpayer to introduce factual material

in court that has not been presented to the agency. The combined effect of these provisions is that the department would be forced to assess on insufficient information.

4. The court procedure is unfairly biased against the state. The bill provides for a trial de novo only of "those portions" of the department's tax bill that the taxpayer disputes. This gives the taxpayer the exclusive power to define the scope of the court proceeding. No counterclaim can be raised by the state. But tax matters can often be intertwined. Suppose, for example, that the department had found that a certain expense could not be deducted as a cost, but rather had to be capitalized and depreciated. The taxpayer could appeal the department's determination that the expense could not be deducted. But the department would be bound by its determination that the expense should be capitalized. The taxpayer might end up both deducting and depreciating the same expense.

An important part of our current statutory framework is that the taxpayer must present all his tax information to the department. The taxpayer cannot wait until the case gets to court and then present information. The court will admit new information only if it was unreasonably excluded by the agency or if it could not have been produced earlier. AS 44.62.570(d). This provision ensures that the department can make the best determination regarding a taxpayer's tax liability.

As explained above, the bill allows the taxpayer to withhold information from the department, resulting in

unsubstantiated assessments. By allowing the taxpayer to carefully define the scope of the "de novo" review, the bill ensures that, whenever a gap in information works to the taxpayer's advantage, the gap will not be filled at the court level. However, when the gap can be filled to the taxpayer's advantage, the bill would permit him to fill it.

5. The transition provisions cannot be applied. The bill drastically restructures internal agency provisions. The transition section applies these new procedures to pending matters without any explanation as to how this could be done. The bill requires nearly a year of procedures that have to be finished before the three year statute of limitations runs. But it does not explain how to apply those provisions if, for example, the statute will run next month. The bill does not explain what happens if the assessment has already been issued. Under the bill, an assessment is not final for purposes of the statute of limitations until a policy review narrative and schedules or worksheets are provided to the taxpayer. Since these new steps have not happened in old assessments, it could be argued that the currently outstanding assessments are not valid. The statute of limitations has run on those assessments.

## PERSPECTIVE ON SB 401

SB 401 drastically changes the administration of our tax law. Based on review by department staff, it is my opinion that SB 401 will severely reduce the state's ability to pay for needed government services.

SB 401 would disrupt the scheduling on major tax issues now in the administrative appeal process. SB 401 unrealistically shortens the amount of time available to the state to review and audit a tax filing.

SB 401 would restrict the department's access to information necessary to produce an accurate review of return and determine whether taxes (or a refund) were due.

SB 401 would virtually eliminate the incentive for an affected taxpayer to produce information for an administrative determination on the amount of tax due.

SB 401 would give the specially treated taxpayers the right to a de novo review in the court on issues of their choosing even on issues/facts that were not raised previously by the taxpayer.

In summary, SB 401 will reduce the states ability to collect taxes and royalties. It would weaken the present audit programs resulting in even greater likelihood of non-compliance.

A far better approach would simply be to modify the law to require payment of taxes after the administrative hearing, subject to refunds if the taxpayer prevails in court on any remaining disputed issue.

A. DISPUTED ASSESSMENTS

1. Disputed taxes and royalties

- Disputed taxes and royalties
- complexity of issues
- responses

B. SELF INFLICTED POVERTY

1. Major erosions of the state revenue base since 1977

2. Erosion since 1981

- income tax
- property tax - total in excess of \$1 billion

3. New losses - millions of dollars

FY 88 - FY 89 (2 years)	
ELF	305.0
Property Tax	35.5
Fish Tax Credit	<u>30.0</u>
	370.5

C. PROGRAM FOR IMPROVEMENT

1. Collection a priority - use tools at our disposal
2. Pass HB 164 (ELF)
3. Pass HB 58
4. Initiate program to review our tax structure

D. DEALING WITH THE CURRENT ECONOMIC CONTRACTION

1. Adequately funded government programs
2. Creating jobs
3. Building for the future

When I first saw the subject "disputed assessments" on the Joint Economic Recovery Committee agenda I was not sure what was required.

Right now, the department has over \$2.5 billion dollars in assessed but uncollected taxes, penalties, and interest. These taxes are practically all deficiencies that have been assessed for oil and gas income or production taxes.

Besides the disputed taxes, the amount of money due the state for our royalty oil is in court. A final assessment for the royalty due has not yet been completed, but the amount will be in the hundreds of millions, if not billions of dollars.

Since final determinations have not yet been made on the actual amount of taxes or royalties due, a total dollar amount is not known. But the amount is large.

#### COMPLEXITY OF ISSUES

The disputed tax amounts are part of a a general problem that started in 1977 when the large reservoir at Prudhoe Bay went into production. Our law defines the value of oil for tax and royalty as the value of oil at the point of production or field. As you know, we arrive at this "netback" value by taking the value of the oil in the market and subtracting back the costs of transport to the point of production. This sounds simple. It is not. The early years of Prudhoe Bay products were years when

1. North Slope producers were struggling for a market share, and different producers were applying different marketing strategies.
2. World oil prices zoomed from \$12 up to about \$40, making value difficult to determine and changing investments that led to changes in relative crude value.
3. Federal price controls were in effect making it more difficult for producers to capture the real value of the oil.
4. Windfall profits taxes affected marketing and pricing strategies.

This led to a tumultuous and confusing trail to follow.

Common issues that arise are

You would expect all the oil coming out of the ground at the same place at the same time to have the same value. And I would say it does. But not for our tax laws.

It is possible for the same producer to have their oil going to six or seven different markets.

This does happen. So we have six or seven different tax values for the same oil for the same producer for the same day.

Some producers value the oil when it is produced, some when it is sold. This led to situations where oil produced on the same day, and delivered to the same market, have substantially different values, because prices changed in the month or so it took to get the oil to market.

Some producers sold the oil out right. Some sold it to themselves. Some traded it for foreign crudes that were not subject to price controls. These all produce different values for the same oil.

Transportation costs are, except for the tariff, equally complicated and diverse.

Defining these issues, getting the company data to analyze them, and determining the correct amount of tax or royalty due is an enormous task.

This situation, plus the natural tendency for taxpayers to reduce their tax payments as much as they think they can, gave rise to the present situation.

## SELF INFLICTED POVERTY

We all are aware of how vulnerable we are to oil prices. But there is almost no discussion of what damage we are doing to ourselves.

In 1981, the Legislature repealed the state separate accounting income tax law for oil and gas income tax and replaced by the apportionment income tax we have today. This law was repealed because of a legal challenge by the oil companies in ARCO v. STATE (This law was later upheld by the court). Even though the Legislature increased the rate of the severance tax, in the three years following this change the estimated revenue loss to the state overall was over \$650 million dollars. Lower oil prices would reduce this loss right now, we still continue to suffer from that tax law change.

The income from our 20 mill oil and gas property tax is eroding.

In 1978 the assessed value of the tax base was \$11 billion. The state received 173 million dollars, or 78% of the 20 mills.

In 1987 the assessed value was 18 billion. The state received 102 million, or 28% of the total revenues.

In 1987 we saw the beginning of the effects of the E.L.F. This law, as presently written, provides large tax breaks for high-production oil fields, while at the same time providing insufficient tax reduction for marginal fields.

We also saw the effects of the newly-passed fisheries tax credit which is estimated to cut state fish tax receipts from \$30 million per year down to about \$15.

The decline in state income due to the E.L.F. The reduction in the state share of the oil and gas property tax, and the fish tax credit will cost the state approximately \$370,500,000 in lost revenue for FY 88 and FY 89 combined.

(Comparisons w/FY 87 in  
millions of dollars)

	<u>FY 88</u>	<u>FY 89</u>	<u>2 Year</u> <u>TOTAL</u>
ELF \$ Loss	(147)	(158)	(305)
Oil and Gas Production			
Tax \$ Loss	(27.5)	(35.5)	(63)
Fish Tax \$ Loss	(14.2)	(13.2)	(27.4)
	(188.7)	(206.7)	(395.4)

I know of no other way to describe this situation than self-inflicted poverty.

We are giving away the State's Revenues:

- o ELF Memo
- o Oil and Gas Property Tax Tables
- o 9/87 General Fund Unrestricted Revenues Source Book Table.

State of Alaska  
Department of Revenue  
Oil and Gas Audit Division

RECEIVED  
ALASKA DEPARTMENT OF REVENUE

FEB 19 1988

M E M O R A N D U M

OFFICE OF THE COMMISSIONER

To: Hugh Malone, Commissioner *[Signature]*  
 Thru: William Floerchinger, Director *[Signature]*  
 From: Charles Logsdon, Petroleum Economist *Ch*  
 Date: February 19, 1988  
 Subject: Current Estimate of the Revenue Impact of ELF on Prudhoe  
 Severance Taxes

As you know, since July 1987, the severance tax rate on production from Prudhoe Bay has been subject to the Economic Limit Factor (ELF). The ELF reduces the severance tax rate on an oil field. The magnitude of the tax reduction depends on how much oil is produced from each well in the field. The Prudhoe Bay oil field is not only the State's largest oil field but is produced with the highest average production per well. An aggressive drilling program such as that announced by the Prudhoe producers will keep production at the 1,540,000 million barrel per day level but will do it with more wells than are currently required. For this reason, the severance tax rate will fall even though Prudhoe production will not.

The revenue impact of the ELF depends not only on the magnitude of the tax rate reduction, but also on the tax base which is determined by the value of the production. Based on our current assumptions about price, production, and wells for Prudhoe Bay, we project the cost to the State of the ELF to be \$147 million in FY 1988 and \$158 million in FY 1989. These estimates are considerably higher than those made last Spring when the legislature was considering ELF legislation. The reason is a combination of higher assumed prices, production in FY 1989, and a greater number of wells.

The following tables illustrate the current estimate of the cost to the State of the Prudhoe ELF as compared to the estimates made last Spring and what accounts for the change in the estimate.

Memorandum to Hugh Malone  
 February 19, 1988  
 Page 2

Revenue Impact of ELF on Prudhoe--Comparison  
 Spring 1987 and February 1988 Estimates

	June 1987 Est.	Feb. 1988 Est.	Difference
1988	\$101 million	\$147 million	\$46 million
1989	96 million	158 million	62 million

Components of Increased Cost of ELF Estimate  
 February 1988 vs June 1987 Projections

	Total Difference	Higher Price Production	Increased Wells
1988	\$46 million	\$27 million	\$19
1989	62 million	22 million	40

CLL/pjt  
 Enclosures

AS 43.56. OIL AND GAS RELATED PROPERTY TAX HISTORY

<u>Year</u>	<u>State Assessed Value</u>	<u>Percent Increase</u>	<u>Gross Revenue</u>	<u>Local Credit</u>	<u>Net to State</u>	<u>Percent Increase to State</u>	<u>Percent of Gross to State</u>
1975	1,288,259,900	N/A	25,765,198	9,635,032	16,130,617	N/A	62.6
1976	4,622,605,630	258.83	92,452,113	24,526,617	67,926,767	321.10	73.5
1977	8,492,245,560	83.71	169,844,911	37,527,256	132,317,674	94.79	77.9
1978	11,076,984,670	30.44	221,539,693	48,019,417	173,520,276	31.14	78.3
1979	11,946,447,380	7.85	238,928,947	66,609,309	172,319,637	(0.69)	72.1
1980	12,165,633,950	1.83	243,312,679	72,900,166	170,412,512	(1.11)	70.0
1981	13,170,633,280	8.26	263,412,665	121,116,160	142,296,505	(16.50)	54.0
1982	14,410,448,680	9.41	288,208,973	144,171,544	144,037,429	1.22	50.0
1983	16,059,836,120	11.45	321,196,722	170,818,425	150,378,297	4.40	46.8
1984	18,593,314,880	15.78	371,866,298	242,038,930	129,827,368	(13.67)	34.9
1985	19,020,513,970	2.30	380,410,279	254,063,318	126,346,961	(2.68)	33.2
1986	19,542,046,830	2.74	390,840,937	277,578,082	113,262,855	(10.36)	29.0
1987	18,254,278,680	(6.59)	365,085,574	262,663,565	102,422,009	(9.57)	28.0

1987 AS 43.56 Oil and Gas Related Property Tax  
Tax Distribution

<u>Municipality</u>	<u>Assessed Value</u>	<u>Tax at 20 Mils</u>	<u>Local Rate</u>	<u>Local Credit</u>	<u>Net to State</u>
North Slope	\$12,297,280,780	\$245,953,615.60	18.37	\$225,908,395.93	\$ 20,045,219.67
North Star	572,999,370	11,459,987.40	10.65	6,102,991.63	5,356,995.77
Anchorage	58,938,280	1,178,765.60	13.25	780,148,.47	398,617.13
Kenai	508,435,600	10,168,712.00	8.33	4,233,807.72	5,934,904.28
Mat-Su	4,199,140	83,982.80	5.80	24,355.01	59,627.79
Valdez	1,395,294,400	27,905,888.00	18.3523	25,606,861.42	2,299,026.58
Whittier	279,960	5,599.20	5.0	1,399.80	4,199.40
Unalaska	430,580	8,711.60	12.76	5,605.05	3,166.55
Unorganized	<u>3,416,012,570</u>	<u>68,320,251.40</u>	N/A	<u>N/A</u>	<u>68,320,251.40</u>
Totals	<u>\$10,254,278,680</u>	<u>\$365,085,573.60</u>		<u>\$262,663,565.03</u>	<u>\$102,422,008.57</u>

# General Fund Unrestricted Revenues

In Thousands of Current Dollars

<u>Taxes</u>	FY 1987 Prelim. Actuals	FY 1988 Estimate September	FY 1989 Estimate September	FY 1990 Estimate September
<u>Income</u>				
Corporate-General	20,500	16,000	16,000	16,000
Corporate-Petroleum	120,400	120,000	120,000	120,000
<u>Gross Receipts</u>				
Alaska Business License	1,500	1,500	1,500	1,500
✓ Fish-Canned/Shorebased (1)	17,500	6,000	7,000	9,000
✓ Fish-Floating	9,000	9,800	9,800	9,800
Seafood Marketing	1,400	1,600	1,600	1,600
Salmon Enhancement	4,400	4,900	4,900	4,900
Insurance Companies	23,700	23,600	23,000	23,000
Electric & Telephone Co-ops	2,000	1,900	1,900	1,900
Mining License Tax	300	400	400	400
<u>Severance</u>				
Oil & Gas Production (2)	639,500	728,600	658,700	753,000
Oil & Gas Conservation (3)	1,200	2,500	2,500	2,600
<u>Property</u>				
Oil & Gas	102,500	75,000	67,000	60,000
<u>Sale/Use</u>				
Alcoholic Beverages	12,600	12,300	12,000	11,900
Fuel Taxes-Aviation (4)	8,500	8,300	8,200	8,200
Fuel Taxes-Highway (4)	18,300	19,000	18,700	18,700
Fuel Taxes-Marine (4)	5,400	5,000	5,000	5,000
Tobacco Products	6,600	6,300	6,100	6,000
<u>Other</u>				
Estate	1,100	700	700	700
Total Taxes	<u>996,400</u>	<u>1,043,400</u>	<u>965,000</u>	<u>1,054,200</u>
 <u>Licenses &amp; Permits</u>				
Business (5)	8,600	8,500	8,500	8,800
Non-Business	19,200	19,000	19,000	19,500
Total Licenses & Permits	<u>27,800</u>	<u>27,500</u>	<u>27,500</u>	<u>28,300</u>
 <u>Intergovernmental Receipts</u>				
Federal Shared Revenues (6) (7)	11,700	9,500	9,800	10,000
 <u>State Resource Revenue</u>				
<u>Sale/Use</u>				
Bonus Sales (6) (8) (9)	500	3,300	-0-	-0-
Investment Earnings (10)	161,900	115,000	90,000	60,000
Rents (6) (8) (9)	5,800	6,000	6,500	6,500
Royalties (2) (6)	445,100	654,700	608,800	688,200
Sale of State Property	7,000	7,500	7,500	7,500
Gravel, Timber, etc. (11)	7,200	2,500	2,500	2,500
<u>Facilities Related Charges</u>				
Airports	1,500	1,600	1,600	1,600
Ferry System-Southeast	27,500	29,000	31,000	32,000
Ferry System-Southwest	3,800	3,900	4,000	4,100
Other	4,000	5,000	5,000	5,000

Service Related Charges

Court System	5,300	5,400	5,600	5,700
Other	4,700	4,700	4,800	4,800
<u>Total State Resources</u>				
Revenues	674,300	838,600	767,300	817,900
<u>Miscellaneous Revenues</u>	18,000	15,000	15,000	15,000
<u>Unrestricted Revenues</u>	1,728,200	1,934,000	1,784,600	1,925,400
Plus: Special Settlements (12)	70,600	-0-	-0-	-0-
<u>Total Unrestricted Revenues (13)</u>	1,798,800	1,934,000	1,784,600	1,925,400

(1) The FY 88, FY 89, and FY 90 figures reflect the recent enactment of a shorebased fisheries business tax credit which is limited to 50 percent of the business' total tax liability with any unused portion of the credit carried forward two years (Ch. 79, SLA 1986, effective July 1, 1986). For example, the total FY 88 fisheries business tax liability is estimated at \$30.0 million against which \$14.2 million of estimated credits are applied thus yielding a total net fisheries business tax of \$15.8 million. This state share will then be further reduced by municipal revenue sharing. The canned fisheries business tax has been combined into a single category with the shorebased since the tax credits are applied against the aggregate return and cannot be allocated by specific processing type.

(2) The forecasted numbers for FY 88, FY 89, and FY 90 assume the 30 percent case; however, if the mean case had been utilized for FY 88, FY 89, and FY 90, the production taxes would change to \$798.9 million, \$764.9 million, and \$857.1 million, respectively. The royalty figures would change to \$715.7 million, \$708.6 million, and \$786.4 million, respectively. All of the forecasted numbers include the estimated TAPS settlement.

(3) Ch. 56, SLA 1987 increased the levy from 1.25 mills to 4.00 mills per barrel of oil and per 50,000 cubic feet of natural gas, effective June 13, 1987.

(4) In FY 86 and FY 87 the Department of Revenue began to levy marine fuel taxes on watercraft motor fuel users who purchased fuel out-of-state but consumed fuel in transit through the state. On March 30, 1987, the State adopted hearing decision #87-07 which established that marine fuel users who merely consumed fuel in transit could not be retroactively taxed. In line with this decision, the Department of Revenue has refunded with interest any taxes collected under the earlier interpretation. This forecast estimates that refunds plus interest will total \$1.8 million and assumes that the majority of these refunds paid in FY 87. All motor fuel tax refunds are paid from the Highway Fuel Tax Account.

(5) Figures reflect the recent shift in occupational licensing fees and insurance permit fees from General Fund Unrestricted Revenues to Restricted Program Receipts.

(6) Net Permanent Fund contribution by Ch. 18 SLA 1980.

(7) The FY 87 figure reflects the OCS "8(g)" revenue-sharing settlement of \$4.0 million. The General Fund share represents 49.5 percent of the aforementioned total, whereas the Permanent Fund will receive 50.0 percent. The remaining 0.5 percent will be distributed to the Public School Fund.

(8) Reflects state lease sales of \$0.9 million held June 24, 1986 (Sale 49 - Cook Inlet), \$0.3 million held January 27, 1987 (Sale 51 - Prudhoe Bay Uplands), and \$6.6 million held June 30, 1987 (Sale 50 - Camden Bay). Due to the timing of collections, receipts from the June 1986 lease sale are shown as FY 87 revenue, and receipts from the June 1987 lease sale are shown as FY 88 revenue. The bonus figures represent the General Fund's 49.5 percent share.

(9) The Department of Natural Resources projects the following FY 88, FY 89, and FY 90 state lease sales: FY 88 (Sale 54 - Kuparuk Upland, Sale 55 - Demarcation Point, Sale 66A - North Slope Exempt); FY 89 (Sale 52 - Beaufort Sea, Sale 56 - Alaska Peninsula, Sale 67A - Cook Inlet Exempt); and FY 90 (Sale 59 - Cook Inlet, Sale 57 - North Slope Foothills). However, bonus bids are impossible to anticipate prior to sales; therefore, no estimates are provided.

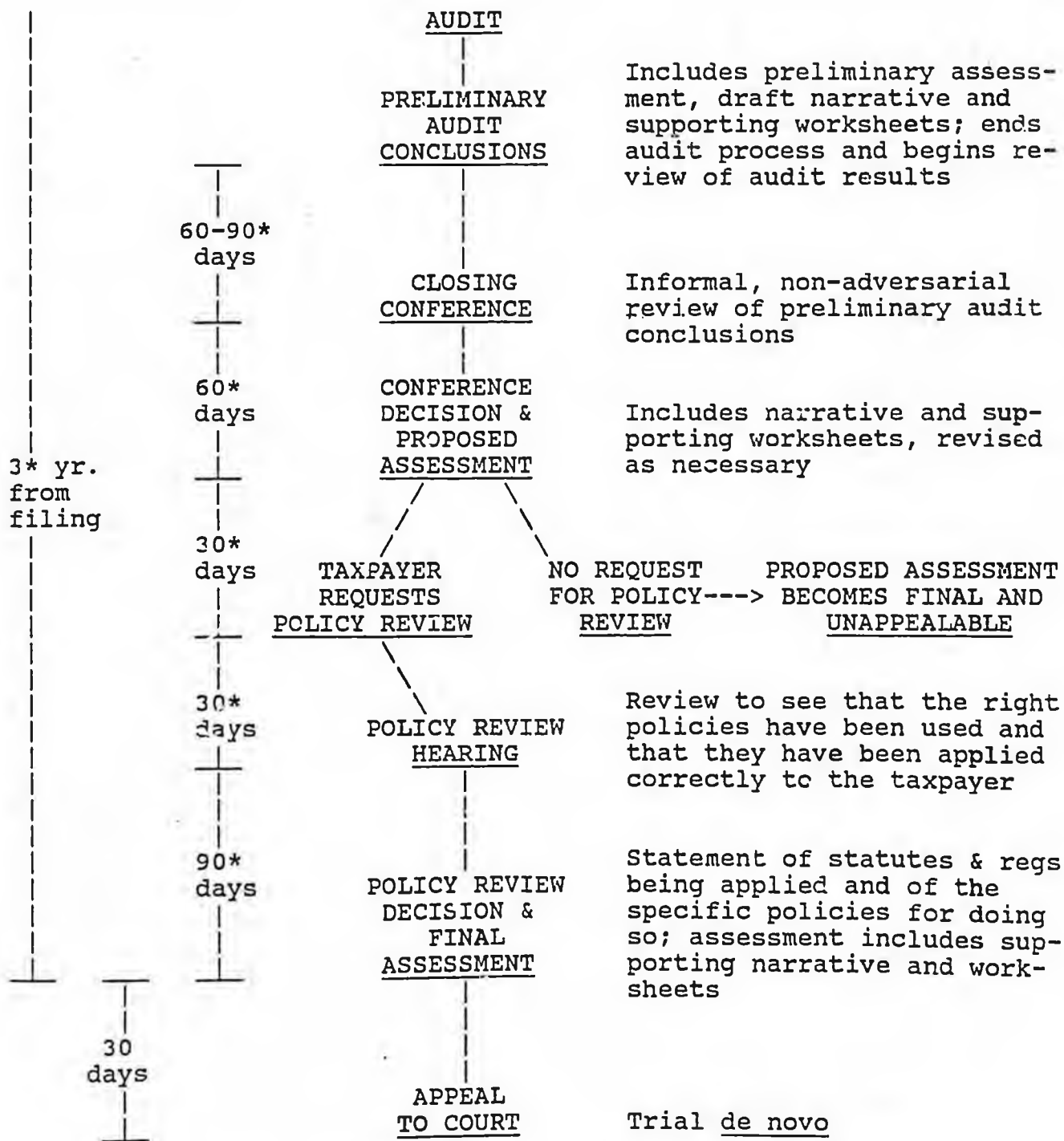
(10) The investment earnings projections reflect the current composition of General Fund assets and current interest rates. The projections reflect a liquidation of General Fund assets over the period because projected General Fund cash expenditure outflows exceed projected General Fund cash revenue inflows. Cash inflows are consistent with the current revenue forecast. Cash outflows are consistent with the current FY 88 budget. General Fund operating expenditures were assumed to remain at approximately FY 88 levels through FY 90.

(11) The FY 87 figure reflects increased construction of roads and drilling pads as projected by the Department of Natural Resources.

(12) The FY 87 figure reflects the General Fund portion from refunds and expenses for prior years relative to the TAPS case (\$65.1 million) and court costs relative to the ARCO settlement (\$1.5 million). Consequently, \$70.6 million was received during FY 87, but this figure is subject to future audits.

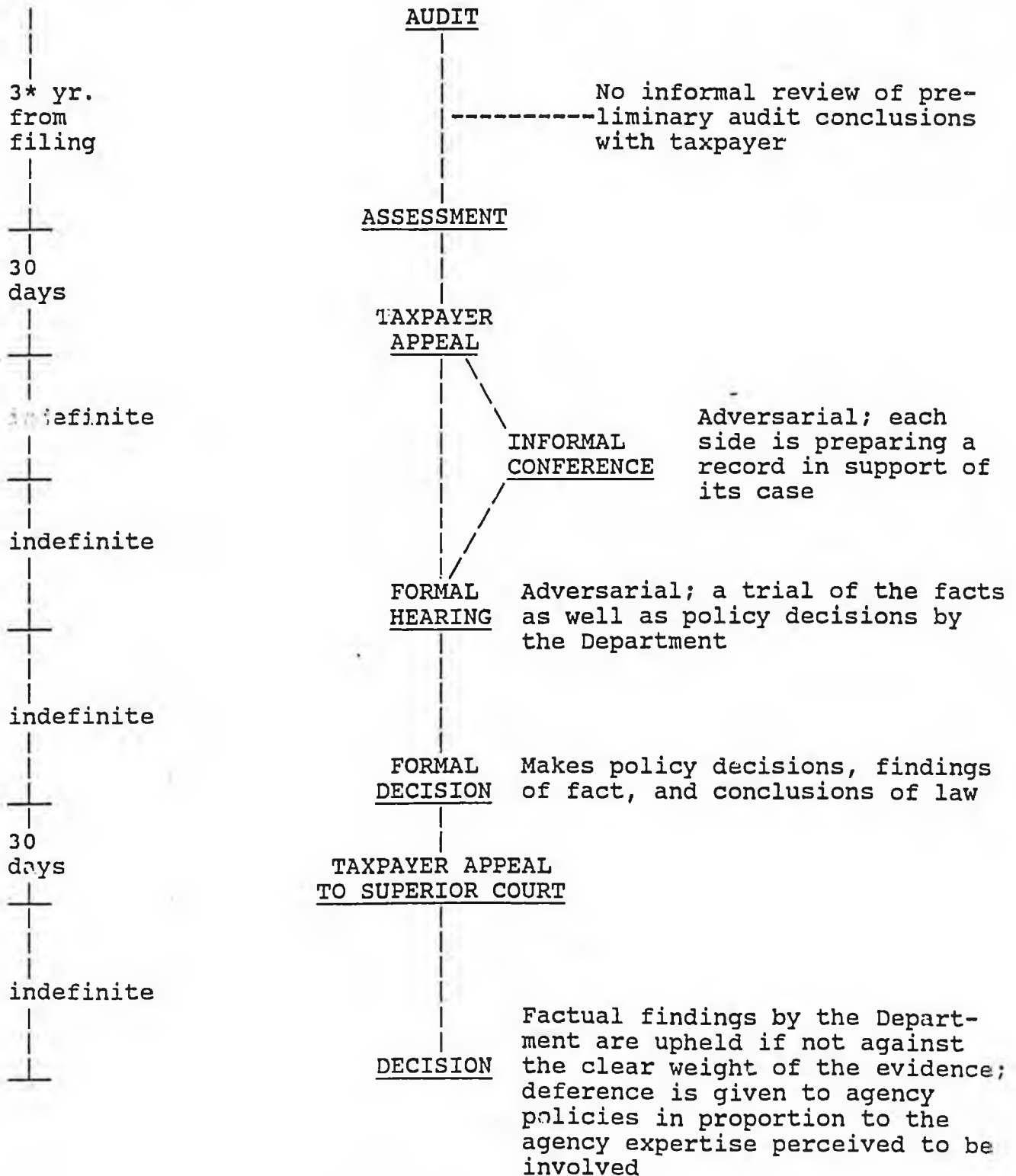
(13) The State, per AS 28.05.180, will be granting incentive credits against royalties, severance taxes, and rentals to the oil companies for drilling exploratory wells. The deduction is approximately \$2.9 million which has not been subtracted from the aforementioned FY 87 figure of \$1,798.8 million. Additional credits are anticipated in subsequent years.

PROPOSED PROCEDURE



\* Time may be extended by mutual agreement.

ALASKA'S PRESENT TAX APPEALS PROCESS



\* Time may be extended by mutual agreement.

## SECTIONAL ANALYSIS

### OIL AND GAS TAX PROCEDURES LEGISLATION

Section 1: Enacts a new section, AS 43.05.055, providing for appeals of requests by the Department of Revenue (DOR) for information or materials requested with respect to an audit, investigation or inspection relating to the four major state taxes imposed on the oil and gas industry. Those taxes are the corporate income tax (AS 43.20), the production tax (AS 43.55), the conservation tax (AS 43.57) and the former separate accounting income tax (AS 43.21).

Because the DOR also conducts audits of oil and gas royalties and net profits for the Department of Natural Resources (DNR), DOR can seek and use information obtained in the course of a royalty or net profits audit to determine a person's liability under one or more of these four principal taxes. This section grants the right to appeal an audit request made in the course of a royalty or net profits audit under AS 38.05 in order to avoid any circumvention of a person's right to appeal an unreasonable audit request by characterizing the audit as a royalty or net profits audit instead of a tax audit.

Section 2: The current procedures for administrative appeals within DOR are set out in AS 43.05.240. This second section of the bill amends AS 43.05.240(a). The new language being added at the beginning of the statute reflects the fact that the new procedures are being enacted for the four principal taxes on the oil and gas industry (corporate income tax, production tax, conservation tax and the former separate accounting income tax). The ad valorem property tax, AS 43.56, is not included because the special procedures for it, which allow the the involvement of affected municipalities and boroughs, have not led to the problems which have resulted from the administration of the four principal taxes.

For all other taxes, the present procedures are not being materially changed. Section 2 also creates a new ground for appeal by a person aggrieved by an action of the DOR in

denying the person's request for a tax refund. Currently this right exists only through the Department's regulations and does not have an explicit statutory basis. Section 2 also amends AS 43.05.240(a) to reflect the new right of appeal of information requests that is being enacted as AS 43.05.055 under section 1 of this bill.

Section 3: This section makes the same changes to AS 43.05.240(b) as Section 2 makes to subsection (a) of that statute.

Section 4: This section amends AS 43.05.240(c) to reflect the fact that a formal hearing before the DOR will no longer be limited solely to questions involving the amount of tax or penalty due the state. The present language reflecting this narrow scope of appeal is replaced with more general language that speaks in terms of considering and deciding the appellant's grievance.

Section 5: This section amends the present law regarding tax assessments, AS 43.05.245. The first insertion of new language reflects the enactment of new procedures for the four principal taxes on the oil and gas industry by making it clear that nothing in AS 43.05.245 will prevent a person from presenting evidence or other information under those new procedures. The second insertion of new language reflects the fact that, under the new procedures for oil and gas taxes, tax assessments will become final under either of two specific rules set out in those new procedures.

Section 6: This section enacts new procedures for the issuance and administrative review of tax assessments for the four principal taxes. Under the present procedures, multimillion-dollar oil and gas tax assessments are issued by the audit staff without any prior discussion with the taxpayer and without any review by the Commissioner to see that they are consistent with other assessments and correctly apply the Department's policies. Under the new procedures, both the discussion with the taxpayer and the Commissioner's review will occur before an assessment becomes final (except in one situation, discussed below).

New section AS 43.05.246 provides for a closing conference to close out the audit process. 60 to 90 days before the conference, the Department is to give the taxpayer a draft of its preliminary audit conclusions. If the preliminary

conclusion is that a penalty or additional tax and interest are due, the taxpayer is given a draft of a preliminary assessment notice to that effect, together with a written narrative and supporting worksheets or schedules to show how and why the preliminary assessment has been determined.

The closing conference is not an adversarial proceeding, but rather an opportunity to correct mistaken assumptions, misunderstanding and other errors of mistakes. Incomplete information can be supplemented, and unsubstantiated items can be substantiated. The auditor in charge of the audit is required to attend unless excused by the taxpayer or for good cause. The director of the division, or the director's designee, presides at the closing conference. The director may not designate the auditor in charge of the audit as the presiding officer.

Within 60 days of the conclusion of the closing conference, the presiding officer issues a written decision. If he or she determines that no assessment should be made, the taxpayer is given written notice to that effect. On the other hand, if he or she determines that additional tax is owed or a penalty should be assessed, or both, then the written decision is to include a proposed notice and demand for payment, together with a written narrative and supporting schedules or worksheets explaining how and why the proposed assessment has been determined. If the taxpayer does not request a policy review hearing within 30 days after the proposed assessment is issued, the assessment becomes final the the taxpayer pays the assessment.

New section AS 43.05.247 provides for the policy review hearing. Such a hearing may be sought to review a proposed assessment or to review a denial of a taxpayer's request for refund of tax under AS 43.20, AS 43.55, AS 43.57 or former AS 43.21. The Department's failure to act within 60 days on a request for refund is a denial for the purposes of being able to request a policy review hearing.

The policy review hearing is to be held within 30 days of the taxpayer's request for it. As with the other deadlines under these procedures, the time may be extended by mutual agreement.

The policy review hearing allows the Commissioner, or his or her authorized representative, to review the matter to ensure that the proper policies of the Department are being applied, and the they are being applied correctly to the taxpayer's particular circumstances. The taxpayer has an opportunity to explain the nature of the grievance and the relief being sought. Although the taxpayer and the division

may present evidence in support of its position, the policy review hearing is not a trial of the facts and the formal rules of evidence do not apply.

Within 90 days after the policy review hearing, the Commissioner issues the policy review decision, stating what relief is being granted and which portions of the Department's actions are being upheld. If evidence was presented at the hearing, the decision must state which additional facts are being recognized and which are being disregarded, as well as which version of the facts is being accepted when there is conflicting evidence. The decision is also to state which provisions of the statutes and regulations are being applied, as well as the specific policy considerations for the particular interpretation and application of those provisions. This is to allow any reviewing court to understand the Department's rationale for its actions, rather than having to guess at it, so that departmental policy can be applied to the facts as finally determined by trial before the Superior Court. If the Commissioner determines that additional tax or penalties are in order, the decision shall include a final notice and demand for payment assessing the tax, with interest, and any penalties. The assessment notice must include a narrative and supporting schedules or worksheets showing why and how it was determined. Such a notice is not final for purposes of the statute of limitations, AS 43.05.260, until the narrative and supporting materials have been served on the taxpayer.

New section AS 43.05.248 provides for appeal to the Superior Court from the Commissioner's policy review decision. The procedure is similar to that under the present law, except that there is a trial de novo before the court on the disputed portions of the Commissioner's decision. Trial de novo allows an independent person (the judge), instead of a highly paid employee who serves at the pleasure of the Commissioner, to judge the facts and decide which evidence to believe and which to disbelieve or give less weight to.

Section 7: This contains the transitional rules. Under subsection (a), the right to appeal an unreasonable request for information or materials is extended to such audit requests that are pending when the bill becomes law.

Under subsection (b), taxpayers who, on the effective date, have not completed the formal hearing in their appeals under the present procedures are given the option of having a closing conference under the new procedures and then following the new procedures from that point on. The option must be exercised within 60 days of enactment.

Subsection (c) extends the right to trial de novo to all appeals of these four taxes that have not reached the Superior Court as of the date of the bill's enactment. Thus, even if a taxpayer elects not to use the new procedures and continues instead under the existing procedures, the taxpayer will have the right to have the facts tried before an independent party instead of an employee of the Department.

Section 8: This section provides for an immediate effective date.

STATE OF ALASKA  
1988 LEGISLATIVE SESSION

BILL VERSION: CSSE 401 (FIN) (a)  
PUBLISH DATE: SENATE 4/25/88

FISCAL NOTE

REQUEST:

Revision Date: \_\_\_\_\_  
Title: Relating to disclosure to the  
Legislature of tax returns...  
Sponsor: Faiks  
Requestor: \_\_\_\_\_

Agency Affected: Revenue  
BRU: Income and Excise Audit Division  
Components: \_\_\_\_\_

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		187.0	187.0	187.0	187.0	187.0
TRAVEL		82.0	82.0	82.0	82.0	82.0
CONTRACTUAL		14.1	14.1	14.1	14.1	14.1
SUPPLIES		3.0	3.0	3.0	3.0	3.0
EQUIPMENT		17.0	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING		303.1	286.1	286.1	286.1	286.1

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND		303.1	286.1	286.1	286.1	286.1
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME		4	4	4	4	4
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See attached.

Prepared by: Senator Rick Halford, Co-Chairman  
Division: Senate Finance Committee

Phone: 465-3753  
Date: 4/25/88

Approved by Commissioner: \_\_\_\_\_  
Agency: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution (by preparer):  
Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

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(ca)

## SB 401 Analysis

## Income and Excise Audit Division

Appeals Section

<u>Personal Services:</u>		137.
Revenue Auditor IV	57.8	
Revenue Auditor III	51.0	
Clerk Typist III	28.2	
<u>Travel</u>		64.1
Closing Conferences	33.6	
Policy Review	25.2	
Court Travel	5.3	
<u>Contractual</u>		9.7
Telephone	1.8	
Printing	1.4	
Office Furnitures	6.0	
Printer Maintenance	.5	
<u>Commodities</u>		2.5
<u>Equipment</u>		13.0
TOTAL - Appeals Section		<u>226.3</u>

FIELD AUDIT

<u>Personal Services</u>		51.0
Revenue Auditor III	51.0	
<u>Travel</u>		17.9
<u>Contractual</u>		4.4
<u>Commodities</u>		.5
<u>Equipment</u>		3.0
TOTAL - Field Audit		76.8

TOTAL		<u>303.1</u>
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STATE OF ALASKA  
1988 LEGISLATIVE SESSION

BILL VERSION: CS CR 401 1988  
PUBLISH DATE: SENATE 4/26/88

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FISCAL NOTE

REQUEST:

Revision Date: \_\_\_\_\_  
Title: Relating to disclosure to the legislature of tax returns...  
Sponsor: Faiks  
Requestor: \_\_\_\_\_

Agency Affected: Revenue  
BRU: Oil and Gas Audit  
Components: \_\_\_\_\_

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		471.2	471.2	471.2	471.2	471.2
TRAVEL		50.0	50.0	50.0	50.0	50.0
CONTRACTUAL		20.0	20.0	20.0	20.0	20.0
SUPPLIES		5.0	5.0	5.0	5.0	5.0
EQUIPMENT		17.0	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING		563.2	546.2	546.2	546.2	546.2
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND		563.2	546.2	546.2	546.2	546.2
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME		9	9	9	9	9
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See attached analysis.

*Rick Halford*

Prepared by: Senator Rick Halford, Co-Chairman  
Division: Senate Finance Committee

Phone: 465-3111  
Date: 4/25/88

Approved by Commissioner: \_\_\_\_\_  
Agency: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

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(b)

CSSB 401 (Finance)

Analysis

Oil and Gas Audit Division

<u>Personal Services</u>		471.2
Revenue Auditor V (2) @ 66.0	130.2	
Revenue Auditor IV (1) @ 57.8	57.8	
Revenue Auditor III (5) @ 51.0	255.0	
Clerk Typist (1) @ 28.2	28.8	
<u>Travel</u>		
Closing Conferences, Policy Review, Court Travel		50.0
<u>Contractual</u>		20.0
<u>Commodities</u>		5.0
<u>Equipment</u>		17.0
<b>TOTAL</b>		<u>563.2</u>

In future fiscal years, requests for any additional positions which may be necessary to implement the bill will be considered by the Legislature as part of the agency's budget process.

FISCAL NOTE

REQUEST:

Revision Date:  
Title: "An Act relating to appeals of information requests...state tax laws"  
Sponsor: Senator Faiks  
Requestor: Senate Finance

Agency Affected: Revenue  
BRU: Commissioner's Office  
Components:

EXPENDITURES/REVENUES: (Thousands of Dollars)

	FY 86	FY 85	FY 90	FY 91	FY 92	FY 93
<b>OPERATING</b>						
PERSONAL SERVICES	-	-	-	437.0	874.0	874.0
TRAVEL	-	-	-	65.5	131.0	131.0
CONTRACTUAL	-	-	-	28.8	57.6	57.6
SUPPLIES	-	-	-	5.0	10.0	10.0
EQUIPMENT	-	-	-	30.3	-	-
LANDS & STRUCTURES	-	-	-	-	-	-
GRANTS, CLAIMS	-	-	-	-	-	-
MISCELLANEOUS	-	-	-	-	-	-
<b>TOTAL OPERATING</b>	-	-	-	566.6	1,072.6	1,072.6
<b>CAPITAL</b>	-	-	-	-	-	-
<b>REVENUE</b>	-	-	-	-	-	-

FUNDING: (Thousands of Dollars)

GENERAL FUND	-	-	-	566.6	1,072.6	1,072.6
FEDERAL FUNDS	-	-	-	-	-	-
OTHER	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-

POSITIONS:

FULL-TIME	-	-	-	6	11	11
PART-TIME	-	-	-	-	-	-
TEMPORARY	-	-	-	-	-	-

ANALYSIS: (Attach a separate page if necessary)

Prepared By: Deborah Vogt, Senior Hearing Officer  
Division: Commissioner's Office  
Phone: (907) 465-2300  
Date: April 21, 1988

Approved by Commissioner: Hugh Malone  
Agency: Department of Revenue  
Date: April 21, 1988

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

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APR 26 1988

LEGISLATIVE FINANCE

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SB 401 Analysis

(c)

Hearing Officer Section

Personal Services

Revenue Hearing Officer (Anch)	86.9
Revenue Hearing Officer (Anch)	86.9
Revenue Hearing Officer (Anch)	86.9
Revenue Hearing Officer (Juneau)	86.9

Clerk IV (Juneau)	34.9
Accounting Clerk III (Juneau)	34.9
Law Clerk (Juneau)	80.0
Law Clerk (Anch)	84.9
Law Clerk (Anch)	84.9
Law Clerk (Anch)	84.9
Accounting Clerk III (Anch)	34.9
Clerk Typist III (Juneau)	29.0
Clerk Typist III (Anch)	29.0
Clerk Typist III (Anch)	<u>29.0</u>

Total \$874.0

Travel

Income & Excise Hearings	\$36.0
Oil & Gas Hearings	55.0
Court/Income & Excise	10.0
Court/Oil & Gas	<u>30.0</u>

Total \$131.0

Contractual

Research	\$18.0
Space Costs	35.6
Telephone	10.0
Printing	5.0
Maintenance	<u>7.0</u>

Total \$75.6

Supplies

Total \$10.0

Equipment

Office Chairs/Equipment	\$22.0
Computer Terminals/Printers	<u>38.5</u>

Total \$60.5

STATE OF ALASKA  
1988 LEGISLATIVE SESSION

BILL VERSION: CSSB 401 (Fin) (d)  
PUBLISH DATE: SENATE 4/26/88

FISCAL NOTE

REQUEST:

Revision Date: \_\_\_\_\_  
Title: Relating to appeals of information requests...state tax laws  
Sponsor: Faiks  
Requestor: \_\_\_\_\_

Agency Affected: LAW  
BRU: Oil & Gas Sol. Litigation Appropriation and Oil & Gas Sol. Project BRU  
Components: Oil & Gas Sol. Litigation Appropriation and Oil & Gas Operations

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		274.2	282.4	290.9	151.3	155.8
TRAVEL		9.6	9.9	10.2	5.3	5.5
CONTRACTUAL		31.8	32.8	33.8	20.4	21.0
SUPPLIES		21.3	21.9	22.6	13.4	13.8
EQUIPMENT		35.6	0	0	0	0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING		372.5	347.0	357.5	190.4	196.1

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND		372.5	347.0	357.5	190.4	196.1
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME		5	5	5	3	3
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See attached analysis.

*Rick Halford*

Prepared by: Senator Rick Halford, Co-Chairman  
Division: Senate Finance Committee

Phone: 465-3753

Date: 4/25/88

Approved by Commissioner: \_\_\_\_\_  
Agency: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution (by preparer):

Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

344

(d)

## CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 401 (Jud.)

This fiscal note supercedes the note of March 1, 1988. Nevertheless, observations made in that note continue to be relevant.

The addition of HB 58 provisions in section 7, particularly with respect to transfer review (AS 43.05.234(a)), edited transcripts (AS 43.05.236), and drafting regulations (AS 43.05.238) creates a substantially increased legal workload. Of these, the editing of transcripts is the most highly speculative. If legislative committees undertake major tax policy review, this function will be especially critical. We note, however, that section 1 of the original SB 401 has been deleted, thus offsetting what we believe to be a reasonable estimate of resources required under new section 7.

Under section 12, the new procedures in the bill would apply to grievances, that have not been appealed to the superior court as of the effective date of the bill. This section raises serious statute of limitation problems as well a practical ones for all current cases. Issues include whether the statute of limitations, which would have run in June 1988, for example, is tolled for a case that is (a) awaiting the commissioner's decision, (b) in hearing, (c) in conference at the division level, or (d) recently assessed or whether a case that is at any given stage at the time of this bill's effective date must begin anew if the taxpayer so desires. We believe that litigation over this section will be particularly intense because its effect could be to eliminate or substantially reduce every taxpayer's ultimate tax exposure. The total at stake in the tax cases that are in some stage of administrative appeal exceeds \$2.5 billion.

We believe that enactment of this section would require two full-time attorneys over a period of three years. Combined with the impact of section seven of the bill, we would also require one full-time secretary.

The timelines and appellate scheme in proposed AS 43.05.248 will also dramatically affect the Department of Law. Currently, the Department of Law handles only a very limited number of tax cases. The litigation model both the Department of Revenue and the Department of Law have been working toward is one in which oil and gas tax cases would not require significant attorney representation at the administrative level within the Department of Revenue. This bill, which places the trial in the court system, will require attorneys for all tax cases because only attorneys are allowed to represent the state in Alaska's superior courts.

We believe that these tax cases must be litigated in the same manner as our current oil and gas litigation, in which we use a combination of outside counsel and experts with state personnel. There are three reasons for this:

CONTINUATION of FISCAL NOTE ANALYSIS

(d)

For Bill/Resolution No. CSSB 401 (Jud.)

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1. There are millions of dollars at stake in each of the cases -- the industry will continue to devote the best legal resources available to these cases;
2. Adverse precedent in one case could seriously harm the state in other cases; and
3. The Department of Revenue, rather than the court system has a corps of decision-makers with expertise in the field of oil and gas taxation. Such a radical change of forum, in the earliest cases at least, could place the state at greater risk in attempting to recover its properly due taxes..

The following table shows the level of expenditure for the two proceedings that are most analogous to the cases that would be generated under this bill; a current tax proceeding and the Amerada Hess royalty case which involves many of the same issues presented in the major tax cases.

Amerada Hess

	<u>Total Expended</u>	<u>Annual Expended</u>
6/30/84	1,722,340.51	1,722,340.51
6/30/85	3,598,666.50	1,876,375.91
6/30/86	6,909,832.82	3,401,166.32
6/30/87	11,478,296.44	4,478,463.57
6/30/88 (Est.)		5,620,000.00
	Total	17,098,346.41
	Avg All	3,419,669.28
	Avg last 3 yrs	4,499,876.66

Production, Oil Income Tax

	<u>Total Expended</u>	<u>Annual Expended</u>
6/30/84	191,041.75	191,041.75
6/30/85	695,356.71	504,314.96
6/30/86	1,568,254.63	872,897.92
6/30/87	2,922,618.52	1,354,363.92
6/30/88 (Est.)		3,975,000.00
	Total	6,847,618.55
	Avg All	1,369,523.71
	Avg last 3 yrs	2,050,753.95

# CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 401 (Jud.)

(d)

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The bill could effectively require the Department Law to litigate simultaneously several trial level cases, while appeals are being argued in the Alaska Supreme Court. Looking at our experience in the tax cases and in Amerada Hess we regard the current expenditure level of \$4 million annually as our base for revenue tax cases. There are several other cases that justify an effort paralleling the current tax case because of the amount at stake. There will also be numerous cases that each involve tens of millions of dollars. In FY 89 we have requested \$1 million above our base. This amount reflects our belief that cases under this bill will not be ready for Department of Law prosecution until mid-year. For FY 90 and FY 91 we believe that in order to effectively prosecute an additional four to six cases per year at the trial court level we would require an additional \$4 million. After that period the amount required should be reduced substantially because of court precedent established through the earlier cases, elimination of backlog, and new cases with substantially less at stake. Accordingly, we believe that in FY 92 and 93 our trial level expenditures could be reduced to \$2 million above base for each year and in FY 94 to our base. Additionally, we have requested \$372,500 in FY 89 for the five new staff positions described above. The impact of Section 1 and Section 7 will be felt on our staff as soon as the bill goes into effect. Two of the five positions will be deleted in FY 92 when work from the transitional period should be completed. We note that extensive litigation will be ongoing even after that fiscal year as audits and tax laws for the years after 1981 are challenged.

Appeals to the Supreme Court would occur under either the current or proposed framework. Accordingly we have not included costs for appeal.

CONTINUATION of FISCAL NOTE ANALYSIS

For Bill/Resolution No. CSSB 401 (Jud.)

(d)

CSSB 401 Fiscal Analysis

Department of Law Staff Costs

	<u>Section 7 Costs</u>		<u>Section 12 Costs</u>			<u>TOTAL</u>
	<u>Atty III</u>	<u>Paralegal Asst. II</u>	<u>Atty IV</u>	<u>Atty III</u>	<u>Leg Sec I</u>	
Per. Svcs.	63.7	43.3	72.0	63.7	31.5	274.2
Travel	2.4	2.4	2.4	2.4	-0-	9.6
Contractual	6.6	6.6	6.6	6.6	5.4	31.8
Supplies	4.5	4.5	4.5	4.5	3.3	21.3
Equipment	6.8	6.8	6.8	6.8	8.4	35.6
Total	84.0	63.6	92.3	84.0	48.6	372.5

Position and associated costs beyond FY 89 include a 3% annual inflation factor, less one-time items. The two attorneys required for Section 7 transitional litigation are deleted after FY 91. The costs for these new positions will occur in the Oil & Gas BRU as interagency funded. However, general funds must also be included in the annual separate appropriation for oil and gas special litigation to offset these costs.

344  
**STATE OF ALASKA**  
**1988 LEGISLATIVE SESSION**

(e)  
**BILL VERSION: CS SB 401 (Finance)**  
**PUBLISH DATE: SENATE 4/26/88**

**FISCAL NOTE**

**REQUEST:**

Revision Date: \_\_\_\_\_  
 Title: Relating to administration  
of state tax laws  
 Sponsor: Senator Faiks  
 Requestor: Senate Finance Committee

Agency Affected: Alaska Court System  
 BRU: Trial Courts  
 Components: \_\_\_\_\_

**EXPENDITURES/REVENUES: (Thousands of Dollars)**

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES		290.6	798.5	798.5	581.2	581.2
TRAVEL						
CONTRACTUAL		10.0	30.0	30.0	20.0	20.0
SUPPLIES		1.5	5.0	5.0	3.0	3.0
EQUIPMENT		14.7	10.0			
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
<b>TOTAL OPERATING</b>		<b>316.8</b>	<b>843.5</b>	<b>833.5</b>	<b>604.2</b>	<b>604.2</b>

CAPITAL						
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REVENUE						
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**FUNDING: (Thousands of Dollars)**

GENERAL FUND		316.8	843.5	833.5	604.2	604.2
FEDERAL FUNDS						
OTHER						
<b>TOTAL</b>		<b>316.8</b>	<b>843.5</b>	<b>833.5</b>	<b>604.2</b>	<b>604.2</b>

**POSITIONS:**

FULL-TIME		5	16	16	10	10
PART-TIME						
TEMPORARY						

**ANALYSIS :** (Attach a separate page if necessary) Funds the following positions:

- 1 Superior Court Judge, PFT, Anchorage
- 1 In-Court Clerk, Range 12B, PFT, Anchorage
- 1 Secretary, Range 12B, PFT, Anchorage
- 1 Law Clerk, Range 13A, PFT, Anchorage
- 1 Court Clerk II, Range 10E, PFT, Anchorage

Prepared by: *Rick Halford* Phone: 465-3753  
 Division: Senator Rick Halford, Co-chairman Date: 4/26/88  
Senate Finance Committee

Approved by Commissioner: \_\_\_\_\_ Date: \_\_\_\_\_  
 Agency: \_\_\_\_\_

Distribution (by preparer):  
 Legislative Finance  
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# The ELF

## A Policy Perspective

April 1988

Division of Policy  
Office of the Governor

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## Preface

Since statehood, oil taxes have been a continuing and difficult policy issue for Alaskans. The current debate centers on the state severance tax and the economic limit factor or "ELF." Put simply, the ELF is a tax reduction formula meant to encourage marginal oil field development. The Governor proposed ELF legislation last year, and a bill to make a change in the ELF formula passed the House.<sup>1</sup> The oil companies, with one notable exception, oppose the change, and the bill has now stalled in the state Senate, where the leaders have said they oppose allowing the bill to come to a vote.

In the Alaska legislature oil tax issues have traditionally received intense scrutiny. Each side has had the opportunity to challenge the assertions of the other, bring its experts forward, and present its case. This process has not been perfect, but the legislators and the public have been able to get the facts to make informed decisions. Nothing will substitute for the give and take of a public hearing, but in the face of the Senate's refusal to allow this major policy issue the open debate it deserves, the state administration has a responsibility to make its perspective known.

We believe passage of the new ELF will help stabilize the Alaska economy at a time when it needs the reassurance of stable state spending. More stable revenues from the new ELF will help guarantee that local governments receive the money they need for roads, public safety and other services, and explains why the Alaska Conference of Mayors, among others, supports the ELF bill. Most importantly, passage of the new ELF

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<sup>1</sup> House Finance Committee Substitute for House Bill 164, amended [CSHB 164 (Fin.) am].

will provide a more reliable incentive for marginal field development — the ELF's original purpose — by lowering tax rates on Alaska's smaller fields, such as Milne Point, Endicott, and Lisburne.

This paper attempts to fully discuss the reasons behind our perspective. We have tried to include all the relevant facts. We also have tried to avoid unnecessary complication. If others have additional information and perspectives, we welcome hearing from them.

Mary Halloran  
Director, Division of Policy  
Office of the Governor

## Executive Summary

- The immediate revenue loss from the current ELF is about 8 percent of Alaska's oil revenues, or about \$150 million this year. This percentage loss will increase over the next six years to about 14 percent and will erode Alaska's fiscal strength.
- The 1987 application of the ELF to Prudhoe Bay was adopted within 72 hours in the closing days of the 1981 legislative session. Legislators and the Governor were assured the tax changes were revenue neutral — incorrectly as it turned out. In fact, the revenue loss has been over \$1 billion from FY82-FY87.
- Neither the Railbelt Energy Fund nor the Permanent Fund earnings reserve provides a long-term response to the on-going loss of 8 percent to 14 percent of Alaska's oil revenues and the erosion of Alaska's fiscal strength. The new ELF does.
- Prudhoe Bay and Kuparuk are extraordinarily profitable oil fields. Industry journals indicate oil companies make \$6.2 million per day in profits from North Slope operations. Currently, the oil industry is taking \$8 Outside for every \$2 it reinvests in Alaska. Without their Alaska holdings, neither ARCO nor Standard would be as strongly positioned against their industry competitors as they are today.

- The oil industry has one of the poorest resident hire records in the state, with major drilling, exploration and service companies employing about 28 percent non-residents.
- The written record of the 1981 legislative deliberations on oil taxes provides no evidence of any legal, moral, or political commitment by state officials regarding any limit on the state's appropriate share of future oil income. In fact, the legislature and the governor explicitly recognized that today's legislature would have to grapple with the revenue problems caused by the reimposition of the ELF.
- At Prudhoe Bay, at a profit of \$3 per barrel, wells that average over 2,000 barrels per day — more than 100 times greater than the national average of 14 barrels per day — are receiving the benefit of an ELF reduction designed for fields whose economics are marginal.
- The new ELF's consideration of total field productivity, as well as per-well productivity, provides a better incentive for marginal field development than the current ELF and better reflects field profitability.
- By adding total field productivity to the ELF calculation, most Alaska fields will receive a larger tax break under the new ELF than under the current ELF. Only the two giant fields, Prudhoe Bay and Kuparuk, will not receive increased tax breaks. Fields with Alaska corporation ownership, such as Endicott, will benefit more under the new ELF than the current ELF.

- The current ELF provides a substantial state subsidy to oil company drilling operations in the nation's two largest and very profitable oil fields by lowering the effective tax rate on an entire field every time a below-average producing additional well is brought on line.

## Introduction

The major issue in the current debate over the ELF (economic limit factor) is whether this tax reduction to the oil industry makes sense for Alaska at this time. Among the different perspectives against which Alaskans judge the issue are the ELF's effects on the rate of oil development and jobs, and its impact on state revenue, budget stability and the economy. The purpose of this paper is to fill in as much as possible of the factual background. The following issues are therefore addressed in detail:

- (1) ELF AND OIL DEVELOPMENT: Does the current ELF tax subsidy work to increase marginal field development? Are Prudhoe Bay and Kuparuk marginal fields? Do ARCO, Standard and Exxon, the major North Slope producers, need a substantial tax break now to continue production from Prudhoe Bay and Kuparuk? How does Alaska's tax structure compare with that of other states?
  
- (2) ELF AND ALASKA'S ECONOMY: How much does the current ELF contribute to industry drilling activity? What will be the effect of the new ELF on drilling activity? Are oil company development dollars spent in Alaska or Outside? How many jobs does ELF create? Who gets those jobs?

(3) ELF AND ALASKA'S REVENUES: What is the difference in revenues between the current ELF and the new ELF? How does ELF affect revenue stability? What is the long-term impact of ELF on the state's fiscal strength? What roles do revenue stability and a balanced budget play in creating a stable Alaska economy?

(4) ELF AND THE PAST: What happened in 1981? Why was the ELF suspended for Prudhoe Bay? What were the commitments?

### Background

The roots of the current tax debate go back to the early days of North Slope oil production. In 1979 several major oil companies sued the state, arguing that the separate accounting form of corporate income tax adopted by Alaska in 1978 was unconstitutional. The state won that lawsuit in 1986, but in 1981, in an attempt to limit the fiscal effects of possibly losing the case, the legislature changed the method for assessing oil and gas corporate income tax from separate accounting to modified apportionment.<sup>2</sup> That legislation also dealt with the ELF.

The 1981 tax package gave Alaska's oil producers a big reduction in their corporate income taxes, but legislators were assured by then-Revenue

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<sup>2</sup> To tax corporate income, separate accounting focuses on the income a corporation actually produces in the taxing jurisdiction. In contrast, the apportionment formula looks at all the income produced worldwide by the corporation and attempts to attribute a portion of that income to the taxing jurisdiction. Alaska now uses a modified version of the standard apportionment method in assessing corporate tax liability.

Commissioner Tom Williams — incorrectly as it turned out — that most of the state revenue lost from the income tax would be offset by gains from a severance tax increase adopted at the same time. The bill also suspended the applicability of the ELF to Prudhoe Bay "for the first ten years following the commencement of commercial production."

The tenth anniversary came in June of 1987, triggering reinstatement of the ELF to Prudhoe Bay. Since the ELF is a formula that reduces severance tax rates, it gave the oil companies a tax cut in addition to the net tax reduction they won in 1981. The 1987 cut was substantial — worth over \$15,000 per hour to the Prudhoe Bay producers or about 8% of Alaska's revenues from oil operations.

#### The ELF Formula: Well Productivity & Field Productivity

The ELF bill, CSHB 164 (Fin) am, substitutes a new formula for calculating the "economic limit" — the point at which production is no longer profitable. The new formula will reduce the tax reduction provided to Prudhoe Bay and Kuparuk, and increase the tax reduction afforded to smaller fields, such as Endicott, Lisburne or Milne Point.

The ELF is a number between one and zero that is multiplied by the nominal tax rate, producing the effective tax rate. The nominal severance tax rate at Prudhoe Bay is 15 percent. With the average FY 88 Prudhoe Bay ELF at .82, the field's effective tax rate is 12.3 percent ( $.15 \times .82 = .123$ ).

The current ELF is determined by *per-well productivity* in the field, measured by the number of barrels produced by an average well in an

average day. If well productivity is high, the ELF is relatively close to 1 (.9 for example), and the field gets a small tax reduction. Fields with low per-well productivity have a smaller ELF (.5 for example), and get a larger tax break. Most fields in Cook Inlet are currently paying no severance tax because their very low per-well production gives them ELF's of zero. (Zero times the nominal tax rate gives an effective tax rate of 0.0 percent.)

In Cook Inlet, the current ELF works properly, encouraging production of marginal fields.

But the super-giant Prudhoe Bay field<sup>3</sup> is a different story. At Prudhoe Bay, wells that average over 2,000 barrels per day — more than 14 times greater than the Texas average and more than 100 times greater than the national average — are receiving the benefit of an ELF reduction designed for fields whose economics are marginal.

This inappropriate ELF break results from the fact that the current ELF takes account only of productivity *per well* and not overall *field* productivity. By giving a profitable field a larger tax break than a marginal field, the current ELF distorts the purpose of this tax subsidy.

Consider, for example, the case of Milne Point, a small field near Prudhoe Bay. Soon after the Milne Point field opened in late 1985, revenue officials, state economists and the management team at Conoco, the oil company operating the Milne Point field, discovered that per-well productivity, if used by itself, can be an inadequate measure of a field's ability to pay severance tax.

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<sup>3</sup> Production from Prudhoe Bay, the largest field in the United States, is five times that of the nation's second largest field (Kuparuk). Industry publications consistently refer to Prudhoe Bay as "super-giant."

The average well in the Milne Point field initially produced 950 barrels per day, giving it an ELF very nearly the same as the Kuparuk field, where the average well produced 1,000 barrels per day. Total Kuparuk production was then 250,000 barrels per day, while Milne Point produced less than one-tenth of that amount.

But due to its smaller size, operators at Milne Point had far fewer barrels of production over which to spread operating costs than the Kuparuk field. Although the two fields had almost identical per-well productivity, the smaller Milne Point field was less profitable, and in January 1987 the owners elected to shut down production. This experience illustrates the deficiency of an ELF formula based solely on per-well productivity.<sup>4</sup>

The new formula incorporated in the ELF bill will correct this perverse and unintended effect *by adding total field productivity to the ELF calculation*. Fields producing less than 120,000 barrels per day, such as Milne Point and Endicott, will have a lower ELF (bigger tax break) than under current law, while fields producing more than that amount will have a higher ELF (smaller tax break). This change will affect estimated FY 89 severance tax rates as follows:

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<sup>4</sup> Under provisions of the current severance tax law, Milne Point producers requested and received additional tax reductions after showing that the field would be uneconomic to operate without the reductions. The administrative uncertainties of this avenue would be eliminated for smaller fields by the automatic reduction provided by the new ELF. Large fields facing similar problems could still apply for and receive the special "hardship" reductions.

### EFFECTIVE FY 89 SEVERANCE RATES

	<u>Existing Law</u>	<u>New ELF</u>	<u>Percent Change</u>
Prudhoe Bay	11.9 %	14.8 %	23 %
Kuparuk River	6.9 %	11.3 %	65 %
Endicott	12.3 %	8.9 %	-27 %
Lisburne	6.8 %	3.6 %	-47 %
Cook Inlet Fields	0.0 %	0.0 %	0 %

That this approach benefits producers in smaller fields is reflected in the March, 1987 testimony of Conoco supporting the new ELF: "This legislation is a positive first step in encouraging the development of marginal fields in Alaska."<sup>5</sup>

#### ELF Subsidy Effect

In the summer of 1987 oil producers increased the rate at which they were drilling additional wells at Prudhoe Bay and Kuparuk. Since total North Slope production is limited by pipeline capacity to just over 2 million barrels per day, more producing wells means that average production per well is being reduced. Lower per-well production, in turn, means a bigger tax break for producers under the current ELF.

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<sup>5</sup> Tom Painter, Conoco Anchorage Division Manager, Transcript of Joint House Finance and House Resources Committees Hearing on House Bill 164, March 19, 1987, pp. 49-54.

Because the drilling increase started about the same time as ELF's application to Prudhoe Bay, state officials investigated the possibility of a cause-and-effect relationship between the two. The ELF's role could not be precisely determined. At the same time, because of the current ELF's sensitivity to per-well productivity changes, the investigation found that the current ELF provides a substantial — and unintended — state subsidy to oil company drilling operations in the nation's two largest and very profitable oil fields.

An example of how this subsidy works was provided by ARCO official James Weeks, during 1987 testimony before the House Finance Committee.<sup>6</sup> Weeks' example showed how a new Kuparuk well, so long as it produced below the Kuparuk per-well average, would result in a lower severance tax payment on the now-higher total Kuparuk production than the severance tax would have been on the lower total Kuparuk production without the well. In Weeks' example, the result was an overall tax savings or subsidy to the producer of \$37,846 yearly from drilling that single additional well.

Weeks' example showed that the per-well emphasis of the current ELF formula will cause the effective tax rate on an entire field to drop when a below-average producing well is brought on line. Despite the increase in total production, the state will receive less tax revenue than if the well and its production had never occurred. This would be a perverse effect even in a marginal field.

Because this subsidy takes the form of a tax reduction rather than a payment from the state's treasury, the subsidy is restricted to fields paying

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<sup>6</sup> A copy of the ARCO handout and the state's analysis of it are in Appendix D.

severance tax. In short, the subsidy is not available to fields like Cook Inlet, where no severance tax is currently paid.

White Weeks' example was restricted to one hypothetical new well at Kuparuk, and may or may not reflect what is currently happening at Kuparuk or Prudhoe Bay, recent econometric modeling studies by the Department of Revenue estimate the Prudhoe Bay drilling subsidy in the range of \$19 million in FY 88, and about \$40 million in FY 89. The model indicates that a tax break that would have totalled about \$240 million during FY88-89 has been increased to approximately \$300 million by the additional drilling.

Not only is this subsidy going to be costly to Alaska, it is an extraordinarily inefficient way to create jobs or additional oil production.<sup>7</sup> The overall effect of this subsidy may be that, by accelerating drilling that would have occurred later anyway, it robs jobs and economic stability from the future for the sake of higher production and profits in the short term.

### ELF and Jobs

Alaskans are concerned about the effects a change in the ELF may have on jobs. Oil industry proponents have said that the recent increase in drilling has created 2,400 new jobs — 800 drilling jobs and 1,600 additional jobs. They implied that those jobs would be lost if the proposed new ELF is adopted.

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<sup>7</sup> A March 1988 analysis by the Dept. of Revenue implies that each barrel gained through the subsidy through the year 2000 costs the state \$175 in foregone revenue.

The figure of 2,400 new jobs (or even 800 ) bears no resemblance to the reality reflected in Department of Labor employment figures taken from employer records. Total oil and gas employment on the North Slope during the fourth quarter of 1987 was 3,994 jobs, down by 122 jobs from a year earlier. Drilling employment at the end of 1987 was actually about 50 jobs less than at the end of 1986. Some modest employment increase may occur this spring, but nothing on the scale of 800 new jobs is conceivable, given that 1987 year-end North Slope drilling employment was only around 500 with 12 rigs operating.<sup>8</sup> The Department of Natural Resources estimates the rig count will climb to 14 on the North Slope this spring. The resulting rise in employment might be 80 to 100. Each rig employs an estimated 40 to 50 workers, depending on the type of drilling.

In total, the oil industry generates about 8,500 jobs in Alaska, about 4 percent of Alaska's work force — and only about 6 percent of the entire private sector work force. Unfortunately, many of those employed by the oil industry are not Alaska residents.

The drilling companies now operating on the North Slope employ about 28 percent non-Alaskans. The hiring record of the major drilling firms ranges from 57 percent non-residents to 15.4 percent non-residents. The hiring of non-residents by other oil industry segments (exploration and services) also runs about 28 percent , with the exception of the production/management sector, which has trimmed its non-Alaskan hiring to about 11 percent.<sup>9</sup> These statistics make for one of the poorest resident hire

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<sup>8</sup> Statewide oil industry employment, however, was up by about 200 jobs over this period. For more detail on recent employment trends, see *Alaska Economic Trends*, Alaska Department of Labor, October 1987.

<sup>9</sup> The Department of Labor developed the statistics by cross-checking employment records with Permanent Fund dividend records.

records in the state, according to the Department of Labor.

Industry-wide, these non-Alaskans have total earnings of about \$80 million, which is the highest amount of wages paid by any industry to non-residents. Much of this non-resident income, of course, does not circulate in or benefit the Alaska economy.

As oil fields mature, labor required to produce a given amount of oil tends to increase. Over the long run, oil and gas employment is likely to increase in Alaska due to these technical factors, regardless of the state's action on the ELF bill. A huge tax increase might discourage additional field development, but economic studies by the state and others indicate that the economic effects of the ELF change will be marginal.<sup>10</sup> Also, correcting the misapplication of the current ELF to Prudhoe Bay and Kuparuk, while improving incentives for smaller fields, is not likely to adversely affect future field developments. From an Alaskan perspective, given the record of the oil industry to date, a real concern will continue to be whether the jobs generated by additional oil development will be filled by residents or non-residents.

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<sup>10</sup> "[T]he economic limit factor in Alaska's severance tax...has limited ability and high revenue cost for conserving oil and gas from producing fields," according to University of Alaska researchers led by Mathew Berman in Alaska Petroleum Revenues: The Influence of Federal Policy, Institute of Social and Economic Research, October 1984, pp. xxvii. See also, "Severance Tax Impact Often Misinterpreted," by John Lohrenz, in Oil and Gas Journal, June 18, 1984, pp. 133-137; "Analysis of ELF Alternatives," by Charles Logsdon, Alaska Dept. of Revenue, October 14, 1986; and "A Model to Assess Economic Feasibility and Optimum Production Volume for North Slope Fields," by R. Marks and J. W. Moore (both with the Alaska Dept. of Revenue) in Journal of Petroleum Technology, August 1987, pp. 943-54.

## Profitability

Does the oil industry in Alaska need a tax break now to continue production at Prudhoe Bay and Kuparuk? This question is at the heart of the current oil tax discussions.

Companies with major oil interests in Alaska are all publicly traded on the stock market. Alaska industry operations have attracted the interest of numerous trade publications, investment advisory services, and occasionally academic and government researchers. All the studies indicate that Prudhoe Bay and Kuparuk are extraordinarily profitable oil fields.<sup>11</sup>

According to a recent study, published February 1, 1988, in *Petroleum Intelligence Weekly (PIW)*, a respected trade journal, oil companies are currently making after-tax profits of \$6.2 million per day from North Slope operations. State and local revenue from North Slope oil, by comparison, is estimated by *PIW* at \$4.7 million per day. (The *PIW* article and the state's analysis of the *PIW* figures are found in Appendix B.)

Under the new ELF, oil companies' profits would continue to be larger than state revenue, though not by as big a margin. Industry profits would decline to \$5.6 million daily, after all expenses, taxes and royalties are paid. As Figure 1 shows, the ELF will have only a small impact on the relative shares of revenue going to the state and the producers.

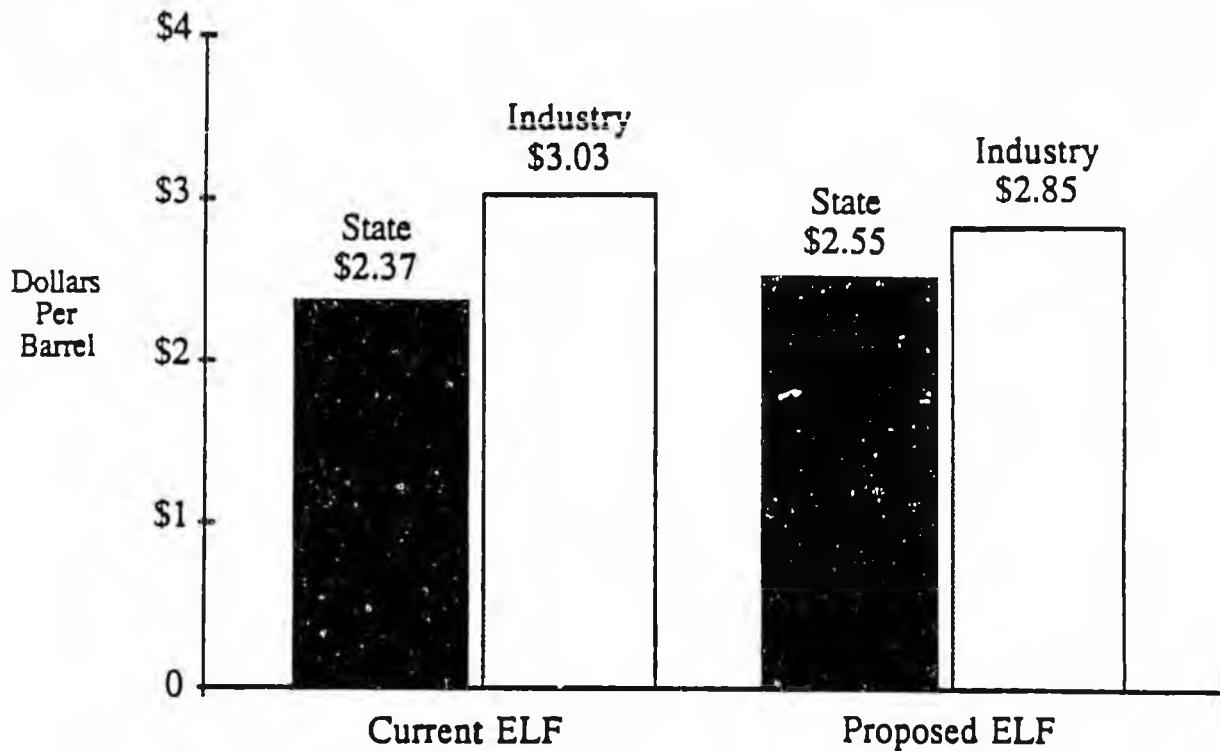
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<sup>11</sup> In addition to the *PIW* analysis described below, the following studies have been released in 1988: "Alaska's Oil Promise Remains Strong," in *International Petroleum Finance*, March 18, 1988, p. 8; "Alaskan Resource Wealth -- The Inestimable Bounty" in *Atlantic Richfield Company -- Restructured and Resourceful, Part II*, by Salomon Brothers (Bernard Picchi, author), March 31, 1988, p. 3-4; "\$30 a Barrel Profits in an \$18 World," in *Forbes*, March 21, 1988, pp. 110-114; and "Income and Investment Flows From Alaska Oil and Gas Producing Activities," by Edward Deakin, in *Joint Special Committee on Tax Policy, Final Report*, Alaska State Legislature, January 1988.

Figure 1

## State and Industry Shares

(Dollars Per Barrel)



Shares under current ELF are from *Petroleum Intelligence Weekly* Feb. 1, 1988; shares under the proposed ELF are by the Division of Policy, April 11, 1987.

Data on the cash flowing to and from North Slope operations suggest that since 1978 in Alaska, only a fraction of the funds generated by North Slope oil have been reinvested in Alaska. According to the *P/W* figures, the companies' current cash flow (profits and depreciation) from the North Slope comes to \$10.6 million per day.<sup>12</sup> The Division of Policy estimates that the rate of oil industry reinvestment in Alaska is \$1.9 million per day. Thus, as shown in Figure 2, the oil industry today is taking \$8 Outside for every \$2 it reinvests in Alaska.

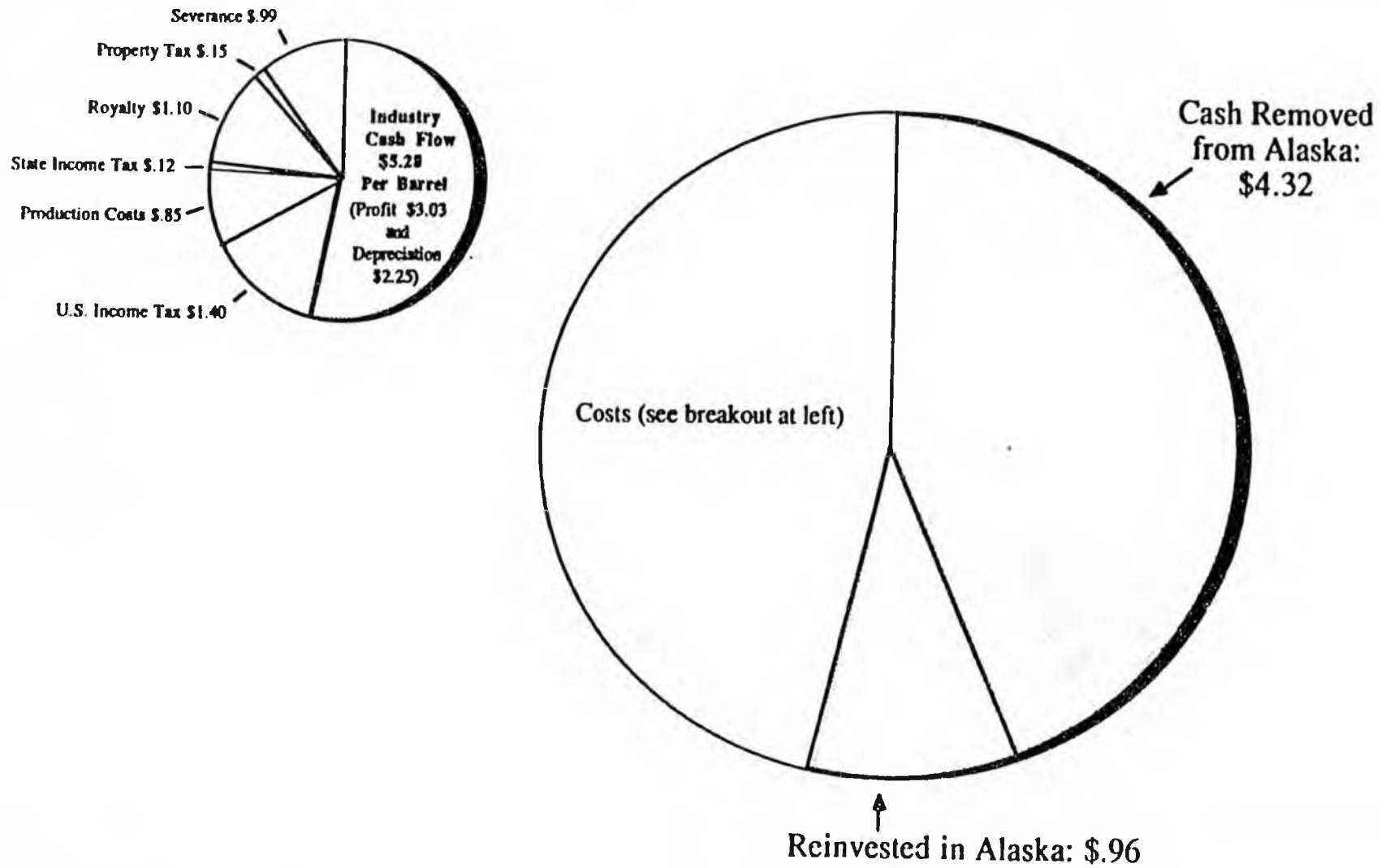
This "takeout" from Alaska's North Slope production has made the major producers in Alaska uniquely successful companies. A March 21,

<sup>12</sup> The *P/W* figures do not include depreciation on the pipeline, so the cash flow to producers from North Slope operations is understated.

Figure 2

# The Economics of North Slope Oil

(Dollars Per Barrel)



Source: Division of Policy, based on  
*Petroleum Intelligence Weekly*  
February 1, 1988.

Office of the Governor  
Division of Policy  
4/12/88

1988 *Forbes* article examined ARCO's phenomenal success: "...a return on equity of 23 percent, just about the best in the industry and roughly twice the industry average." Astute corporate management, company restructuring, and its Alaska resources let ARCO "claim the highest per-barrel profit of any marketer on the West Coast." Key to ARCO's current strength, said *Forbes*, "is its commanding position in the U.S. largest oil reserve, the Alaskan North Slope, from which it derived 68 percent of its production last year." With \$3 billion in cash reserves, ARCO is actively investing its Alaskan profits elsewhere.

A report by Salomon Brothers, March 31, 1988, similarly calls ARCO "the premier equity investment in the domestic oil industry." The report goes on to say, "Arco's Alaskan resource base is without parallel in the industry in terms of its size alone. Arco's net share of the original oil in place in its Alaskan oil fields, 20 billion barrels, is equal to 75 percent of the proved oil reserves of the rest of the country." Top ARCO management also cited its Alaska holdings as key to the company's profitability: "ARCO Alaska's low-cost producing ability provides the base for ARCO's West Coast downstream infrastructure: its integrated transportation and refining and marketing assets." <sup>13</sup>

## Production

Oil development patterns are not easily predictable so forecasts of future production should be interpreted cautiously. Department of Revenue modeling studies nevertheless suggest that while the new ELF

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<sup>13</sup> "Alaska Operations," Harold Heinze, President, ARCO Alaska, Inc., Oil Industry Analysts Meeting, March 31, 1987.

could initially cause lower production, any impact would be small. The probabilities are that the new ELF will decrease North Slope output by a cumulative 1 million barrels during the FY 1988-93 period — equal to about 12 hours of flow through the TAPS pipeline. The cumulative production loss through 2005 is estimated at about 21 million barrels, or about 10 days of North Slope production. Losses taper off in later years but become gains sometime after 2020, when the new ELF increases incentives for production in the later stages of oil field life.

The ELF is a minor factor in industry decisions to pursue Prudhoe Bay development. What matters most is oil prices. For example, a spokesperson for ARCO, commenting on that company's plans to drill five Prudhoe Bay development wells in September, 1987, stated, "resuming production drilling in Prudhoe is good news and strictly the result of higher oil prices."<sup>14</sup> A March 31, 1988, stock research report notes, "West Sak field production could start in 1992, because the field is profitable at oil prices of \$15-20 per barrel."<sup>15</sup>

How does increased production benefit Alaska? Nearly all manufacturing and assembly of equipment used in the oil industry is done outside Alaska so economic impacts from that sector are small, according to Department of Labor economists. The ARCO newsletter of January 1, 1988, states, "Between 1980 and 1986, North Slope development accounted for approximately \$10.5 billion in hard goods alone, according to ARCO Alaska, Inc., Standard Alaska Production Company and Conoco." The newsletter indicates one-eighth of that amount (\$1.35 billion) was spent in

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<sup>14</sup> Alaska Report, p. 1, 7/22/87.

<sup>15</sup> Atlantic Richfield Company---Restructured and Resourceful, Part II, by Salomon Brothers, March 31, 1988, p.1.

Alaska, with the remainder going Outside, with Texas and California the largest beneficiaries.<sup>16</sup> Employment opportunities, however limited, and revenues to the state, are the most readily discernible benefits to Alaska.

### Comparing Taxes

Though the existing tax at Prudhoe Bay is 12.3 percent, the *nominal* rate at Prudhoe Bay, without the ELF, is 15 percent. But no field in Alaska pays the full tax rate. Furthermore, the severance tax rate contrasts with the low corporate income tax rate.<sup>17</sup>

Each state designs its severance tax structure for its particular conditions in that jurisdiction. The range of profitability among fields in Alaska is very different from any other state. In none of the other states is there an oil field even close to the size of Prudhoe Bay. But because the fields in other states are much nearer to oil markets, the wellhead price of a barrel is much lower in Alaska. Unlike other states, Alaska gains little

<sup>16</sup> On Top of ANWR, ARCO Alaska, Inc., January 1, 1988.

<sup>17</sup> Here is how Alaska's effective severance tax rate compares to other major oil-producing states on a percentage basis:

<u>State</u>	<u>Severance Tax as a Percent of Value</u>
Alaska (Prudhoe proposed)	14.8 %
Wyoming (state & average local)	13.0 %
Louisiana	12.5 %
Alaska (Prudhoe existing)	12.3 %
Alaska (Kuparuk proposed)	11.9 %
Alaska (Kuparuk existing)	8.0 %
Oklahoma	7.0 %
Texas	4.6 %
New Mexico	3.8 %

This chart is based on average effective severance tax rates in FY 1988. Under current law the Prudhoe Bay rate will decline to 11.9 percent in FY 1989.

from the manufacturing and retail sales of most of its petroleum resources — although the producers realize additional profits from transporting, refining, and selling North Slope oil. Differences like these make simplistic comparisons regarding which state has the "highest" or "lowest" severance tax of limited use.

On a dollars-per-barrel basis, for example, Alaska's tax rate is among the lowest of all the producing states.<sup>18</sup> If the oil fields in these states were somehow transported to Alaska, all would find their severance taxes reduced or eliminated. The reason for this apparent paradox is that all are so much smaller than Prudhoe Bay or Kuparuk. Prudhoe Bay wells, according to Standard Alaska, are producing an average 2,300 barrels per day. The average oil well in Texas, in contrast, produces 145 barrels per day. A well producing at that rate in Alaska, like most oil wells in Cook Inlet, would pay no severance tax whatever under either the existing or proposed ELF. Similarly, virtually all the fields Outside that would pay tax under the current ELF would pay less tax under the new ELF.

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18

<u>State</u>	<u>Approximate Severance Tax Per Barrel</u>
Wyoming (state & average local)	\$2.02
Louisiana	\$1.94
Alaska (Prudhoe proposed)	\$1.26
Oklahoma	\$1.08
Alaska (Prudhoe existing)	\$1.05
Alaska (Kuparuk proposed)	\$1.04
Texas	\$0.71
Alaska (Kuparuk existing)	\$0.62
Alaska (Cook Inlet)	\$0.00

Estimates for other states are derived from the effective tax rates of other states at a well-head price of \$15.50 (Gulf Coast).

## The "Commitment"

The ELF issue in 1988 is the legacy of a 1981 tax bill that passed in an extraordinary hurry. The issue of how to respond to the North Slope oil producers' legal challenge to separate accounting was the focus of attention for much of the 1981 legislative session. However, the proposal that modified the ELF was first unveiled to a free conference committee on June 22, 1981. Two days later, it passed both houses and was on its way to the governor. There was little time to study the bill; moreover, the fiscal note prepared by then-Commissioner Williams included no projections beyond FY 1985. The confusion concerning what legislators and Governor Hammond meant when they adopted the 1981 legislation is not surprising.

A 1981 post-session analysis by the Legislative Finance Division showed that the ELF provision would cause state revenue to fall sharply in FY 1988. When Governor Hammond reluctantly signed the bill, he expressed "full confidence in the ability of the legislature to deal at that time" with any adverse revenue consequences.

Governor Hammond insisted that the oil tax changes adopted in 1981 not reduce the state's share below the 30 percent that was thought to be the rough percentage level of the state's share *at that time*. Hammond sought to insure that the tax changes would be "revenue neutral;" i.e., that the changes would leave state oil revenue largely unaffected. It is now clear that the changes adopted in that bill were far from neutral as to state revenue: between fiscal 1982-87 total tax collections were reduced by over \$1 billion compared with what would have been collected had the changes not been made.

As shown in Appendix C, the 1981 record contains statements by Hammond, then-Rep. Rick Halford, Commissioner Williams and others addressing the future need to revise the 1981 scheme by 1987 or 1988. But the written record of the 1981 deliberations provides no evidence of any legal, moral, or political commitment by state officials to limit the state's appropriate share of future oil income. Additionally, company officials testified to the Legislature that the state's share should equal the industry share.

### Revenue Effects

As originally introduced by the Governor in 1987, the ELF legislation would have kept the ELF from applying to Prudhoe Bay for an additional five years. The measure that passed the House and now awaits action in the Senate takes a more comprehensive approach: the new ELF applies at Prudhoe Bay, but the formula for calculating the new ELF includes consideration of field productivity in addition to well productivity. The new formula gives Prudhoe Bay a much smaller tax break now, but a larger tax break later when the giant field finally reaches its marginal years of production. Tax revenue from nearby Kuparuk, the second largest producing field in the United States, would also increase. All other producing fields would either pay no tax at all or receive a bigger tax break than they get under the current ELF.

The net effect of the new ELF, using the Department of Revenue's March, 1988 "mid-case" assumptions, would be \$150 million in additional state revenue in FY 1988, and \$152 million in FY 1989. To put this amount

in perspective, \$150 million is about the amount of the combined annual general fund budgets of the departments of Fish and Game, Labor, Commerce, Natural Resources, Revenue and Environmental Conservation, and about one-quarter of the amount the state spends each year on elementary and secondary education. As the table below shows, the revenue gain from the new ELF depends, in part, on the level of oil prices.<sup>19</sup>

<u>Average Oil Prices</u> <sup>20</sup>	Incremental FY 89 Revenue From the ELF Bill, <u>CSHB 164 (Fin) am</u>
\$11.00/B	\$114 million
\$12.00/B	\$125 million
\$13.00/B	\$136 million
\$14.00/B	\$146 million
\$15.00/B	\$157 million
\$16.00/B	\$167 million

According to Department of Revenue projections, the dollar gain from the new formula would peak in FY 91 at \$223 million, and then gradually diminish as Prudhoe Bay production declines. The yearly dollar gain from the new ELF will vary with oil prices and total oil production. Over the next six years, the percentage loss to the state's oil revenue from

<sup>19</sup> Other factors would also affect the fiscal effect of the proposed legislation. The table is based on the "mid-case" assumptions in the current Department of Revenue forecast.

<sup>20</sup> Weighted average of U.S. West Coast and Gulf Coast selling prices for Alaska North Slope crude.

the current ELF will increase from approximately 8 percent this year to nearly 14 percent in fiscal year 1993. (Complete long-run projections are contained in the ELF legislation fiscal note, in Appendix A .)

### Budget Stability and the Economy

In opposing the ELF legislation, one senator argues that "the solution to Alaska's economic problems is not increasing taxes to fuel more government spending," but instead to just cut state spending.

How big a cut would be required to balance the budget? With only weeks to go in the legislative session, Alaska faces a revenue shortfall of about \$150 million to \$400 million, depending on the optimism of the forecaster. Theoretically, the budget could be balanced by cutting hundreds of millions of dollars from spending, but this approach is hard to take seriously in light of the vital impact of state spending on a recovering economy. In fact, the legislature has already recognized the role of state spending in the economy's health in its early passage of the "jobs" bill.

Budget cuts over the last three years have brought per capita real spending down — dramatically. The deepest recession the state has ever experienced was one consequence. Now — as that recession is ending — is not the time for extracting hundreds of millions of dollars from Alaska's economy.

With state spending now well below its 1979 level and the economy starting its recovery, Governor Cowper has proposed a maintenance level budget. The House and Senate can reduce the budget shortfall by eliminating proposed expenditures. But, close to half the budget is pass-

through entitlement programs to local governments, schools, and individuals, politically difficult areas to cut. It appears the majority of Senators and Representatives do not believe this is the time for inflicting the stress of another multi-million dollar spending cut on the Alaska economy. Although reductions and reallocations will certainly occur, deep cuts are not a realistic possibility.

So what options are left? The use of the Railbelt Energy Fund has been proposed. But many Railbelt voters rebel against "their" money being spent to solve a statewide problem, and the construction industry opposes any non-construction use of the money.

Another option is to use the cash reserves (earnings reserve account) of the Permanent Fund. Using the reserves would reduce future dividends. However, the necessary appropriation could be a "loan" with a promised but problematical payback in the future. Combined, the Railbelt Energy Fund and the Permanent Fund earnings reserves are the state's cash reserves since last year the Budget Reserve Fund was emptied to help meet last year's revenue shortfall. Without these funds as backstops, Alaska is left with no emergency monies to meet another precipitous drop in oil prices.

Leaving aside the obvious difficulties inherent in the use of either the Railbelt Energy Fund or Permanent Fund earnings to fill the budget shortfall this year, there remains the issue of revenue stability. This issue deserves very serious consideration for two reasons. First, Alaskans desire and need public services. Second, there clearly exists a now-demonstrated tie between Alaska's revenue stability and Alaska's economic stability.<sup>21</sup>

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<sup>21</sup> For evidence of the relationship of state budget stability to economic activity in Alaska, see "Can State Spending Speed Alaska's Recovery," by Professor Scott Goldsmith and Lee Gorsuch, Institute of Social and Economic Research, University of Alaska, December 8, 1987.

Both reserve sources are only stop-gap measures, providing one or two years of fiscal relief, at most. Neither fund provides an answer to the ongoing loss of more than 8 percent of Alaska's oil revenues and the erosion of Alaska's fiscal strength year after year. The new ELF does. It's a long-term solution to what will otherwise be a long-term loss.

Finally, the legislature simply could pretend that there is no problem. Led by the Senate, the legislature gambled last year that oil price increases would cover the shortfall in the budget with extra revenue. It worked then, due in part to the unexpected receipt of some monies owed the state by the federal government.<sup>22</sup> The legislature could roll the dice again. The risk is that the extra revenue will not materialize and that the state will be unable to pay its bills. If oil prices don't rise, current cash flow projections show that the risk could become reality as early as February or March 1989.

*Division of Policy*

*April, 1988*

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<sup>22</sup> The funds received were \$160 million which had been held in escrow by the federal government pending resolution of the Dinkum Sands boundary dispute.

# Appendix A

STATE OF ALASKA  
1988 LEGISLATIVE SESSION

BILL VERSION: CSH8164 (FIN) 37  
PUBLISH DATE: \_\_\_\_\_

## FISCAL NOTE

### REQUEST:

Revision Date: April 4, 1988  
 Title: An Act Relating to the Oil and Gas Properties Production Tax & Effective Date  
 Sponsor: Rules/Governor  
 Requestor: \_\_\_\_\_

Agency Affected: \_\_\_\_\_  
 BRU: \_\_\_\_\_  
 Components: \_\_\_\_\_

### EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING						

CAPITAL						
---------	--	--	--	--	--	--

REVENUE	150,150	152,330	203,450	222,850	213,940	207,490
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### FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL						

### POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

### ANALYSIS : (Attach a separate page if necessary)

See Attached

Prepared by: Charles I. Logsdon *Charles I. Logsdon* Phone: 277-5627  
 Division: Oil and Gas Audit Date: April 4, 1988

Approved by Commissioner: *[Signature]* Date: 4/4/1988  
 Agency: Revenue

Distribution (by preparer):  
 Legislative Finance  
 Legislative Sponsor  
 Requestor  
 Office of Management and Budget  
 Impacted Agency(ies)

This bill would effectively increase the severance tax rate on fields producing greater than approximately 120,000 barrels per day. At the same time, fields producing less than this amount would be taxed at a lower rate. The relative increase or decrease would depend on the relative per well productivity of the field. The estimates contained in this fiscal note are based on the Department of Revenue March 1988 mid scenario assumptions about production, wells, and oil prices.

The attached tables illustrate the revenue and tax rate impact of the bill by North Slope oil field. The sensitivity of the tax revenues to change in oil prices is also illustrated.

FY 1989 PRICE/REVENUE SENSITIVITY OF CSHB164(fln) am  
(Millions \$)

	\$10.00/bbl	11.00	12.00	13.00	14.00	15.00	16.00	17.00
Prudhoe	93.16	102.47	111.79	121.10	130.42	139.73	149.05	158.36
Kuparuk	21.54	23.69	25.84	28.00	30.15	32.30	34.46	36.61
Milne	0	0	0	0	0	0	0	0
Endicott	-6.49	-7.14	-7.79	-8.43	-9.08	-9.73	-10.38	-11.03
Lisburne	-3.72	-4.10	-4.47	-4.84	-5.21	-5.59	-5.96	-6.33
TOTAL	104.48	114.93	125.37	135.82	146.27	156.72	167.17	177.61

CHANGE IN REVENUE CSHB164  
(Millions \$)

YEAR	PRUDHOE	KUPARUK	MILNE	ENDI	LISE	W SAK	PT THOM	SEAL IS	NICKLX	TOTAL
1988	130.03	30.30	0.00	-4.27	-5.93	0.00	0.00	0.00	0.00	150.15
1989	133.82	31.40	0.00	-9.46	-5.43	0.00	0.00	0.00	0.00	152.33
1990	172.12	39.56	0.00	-2.04	-5.19	0.00	0.00	0.00	0.00	203.45
1991	190.27	40.37	0.00	-2.25	-5.53	0.00	0.00	0.00	0.00	222.95
1992	183.74	39.51	0.00	-2.40	-7.01	0.00	0.00	0.00	0.00	212.94
1993	180.62	38.38	0.00	-5.24	-6.27	0.00	0.00	0.00	0.00	207.49
1994	176.59	35.55	0.00	-5.55	-5.74	0.00	0.00	0.00	0.00	199.74
1995	171.39	30.60	0.00	-7.41	-7.18	0.00	0.00	0.00	0.00	187.40
1996	162.33	22.19	0.00	-7.59	-7.93	0.00	0.00	0.00	0.00	163.59
1997	164.10	14.09	0.00	-7.22	-3.17	0.00	0.00	0.00	0.00	162.70
1998	157.08	6.98	0.00	-3.34	-3.44	0.00	0.00	0.00	0.00	148.78
1999	144.16	2.76	0.00	-4.23	-3.30	0.00	0.00	0.00	0.00	134.33
2000	137.86	1.22	0.00	-2.29	-3.44	0.00	0.00	0.00	0.00	129.25
2001	127.38	0.46	0.00	-0.61	-3.29	0.00	0.00	0.00	0.00	117.94
2002	118.80	0.08	0.00	0.00	-3.79	0.00	0.00	0.00	0.00	109.09
2003	122.08	0.06	0.00	0.00	-3.43	0.00	0.00	0.00	0.00	112.71
2004	116.55	0.04	0.00	0.00	-3.29	0.00	0.00	0.00	0.00	107.32
2005	103.99	0.03	0.00	0.00	-3.50	0.00	0.00	0.00	0.00	95.03
2006	91.47	0.00	0.00	0.00	-3.26	0.00	0.00	0.00	0.00	82.11
2007	80.13	0.00	0.00	0.00	-7.52	0.00	0.00	0.00	0.00	72.57
2008	69.43	0.00	0.00	0.00	-3.12	0.00	0.00	0.00	0.00	62.31
2009	61.76	0.00	0.00	0.00	-4.73	0.00	0.00	0.00	0.00	57.03
2010	55.85	0.00	0.00	0.00	-3.28	0.00	0.00	0.00	0.00	52.48

CHANGE IN SEVERANCE TAX RATE PERCENT OF VALUE CSHB164

YEAR	PRUDHOE	KUPARUK	MILNE	ENDI	LISE	W SAK	PT THOM	SEAL IS	NICKLX
1988	0.0249	0.0391	0.0000	-0.0249	-0.0392	0.0000	0.0000	0.0000	0.0000
1989	0.0281	0.0448	0.0000	-0.0322	-0.0321	0.0000	0.0000	0.0000	0.0000
1990	0.0323	0.0481	0.0000	-0.0340	-0.0324	0.0000	0.0000	0.0000	0.0000
1991	0.0373	0.0513	0.0000	-0.0023	-0.0251	0.0000	0.0000	0.0000	0.0000
1992	0.0394	0.0539	0.0000	-0.0023	-0.0277	0.0000	0.0000	0.0000	0.0000
1993	0.0421	0.0530	0.0000	-0.0098	-0.0270	0.0000	0.0000	0.0000	0.0000
1994	0.0450	0.0545	0.0000	-0.0194	-0.0282	0.0000	0.0000	0.0000	0.0000
1995	0.0488	0.0491	0.0000	-0.0251	-0.0282	0.0000	0.0000	0.0000	0.0000
1996	0.0548	0.0405	0.0000	-0.0315	-0.0289	0.0000	0.0000	0.0000	0.0000
1997	0.0548	0.0234	0.0000	-0.0253	-0.0314	0.0000	0.0000	0.0000	0.0000
1998	0.0574	0.0171	0.0000	-0.0375	-0.0345	0.0000	0.0000	0.0000	0.0000
1999	0.0593	0.0083	0.0000	-0.0320	-0.0368	0.0000	0.0000	0.0000	0.0000
2000	0.0597	0.0042	0.0000	-0.0231	-0.0373	0.0000	0.0000	0.0000	0.0000
2001	0.0595	0.0017	0.0000	-0.0102	-0.0391	0.0000	0.0000	0.0000	0.0000
2002	0.0592	0.0001	0.0000	0.0000	-0.0413	0.0000	0.0000	0.0000	0.0000
2003	0.0559	0.0000	0.0000	0.0000	-0.0425	0.0000	0.0000	0.0000	0.0000
2004	0.0553	0.0000	0.0000	0.0000	-0.0433	0.0000	0.0000	0.0000	0.0000
2005	0.0509	0.0000	0.0000	0.0000	-0.0440	0.0000	0.0000	0.0000	0.0000
2006	0.0462	0.0000	0.0000	0.0000	-0.0475	0.0000	0.0000	0.0000	0.0000
2007	0.0409	0.0000	0.0000	0.0000	-0.0434	0.0000	0.0000	0.0000	0.0000
2008	0.0344	0.0000	0.0000	0.0000	-0.0411	0.0000	0.0000	0.0000	0.0000
2009	0.0289	0.0000	0.0000	0.0000	-0.0357	0.0000	0.0000	0.0000	0.0000
2010	0.0209	0.0000	0.0000	0.0000	-0.0214	0.0000	0.0000	0.0000	0.0000

APPENDIX B  
ALASKA NORTH SLOPE ECONOMICS \*  
Weighted Average of West and Gulf Coast Sales as Reported in PIW

<u>REVENUE, COSTS &amp; INCOME PER BARREL</u>				
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Wellhead price/barrel	\$16.72	\$10.17	\$7.54	\$9.47
LESS:				
Royalty/barrel	\$2.01	\$0.73	\$0.86	\$1.10
Severance/barrel	\$2.21	\$0.87	\$1.00	\$0.99
Property tax/barrel	\$0.21	\$0.18	\$0.16	\$0.15
Producing cost/barrel	\$0.00	\$0.75	\$0.80	\$0.85
Depreciation/barrel	\$1.53	\$2.17	\$2.21	\$2.25
State income tax/barrel	\$0.29	\$0.00	\$0.08	\$0.12
US income tax/barrel	\$4.54	\$0.84	\$0.89	\$1.40
PLUS:				
Pipeline profit/barrel	\$2.18	\$0.64	\$0.58	\$0.43
EQUALS:				
Industry profit/barrel	\$7.22	\$1.56	\$2.13	\$3.03
 <u>NET INCOME SHARES</u>				
<i>Shares in dollars per barrel</i>				
Industry profits/barrel	\$7.22	\$1.56	\$2.13	\$3.03
State & local rev./barrel	\$4.71	\$1.84	\$2.10	\$2.37
Federal rev./barrel	\$4.54	\$0.84	\$0.89	\$1.40
 <i>Shares in billions of \$ per year</i>				
Industry profits/year	\$5.004	\$1.102	\$1.530	\$2.211
State & local revenue/year	\$3.269	\$1.294	\$1.512	\$1.728
Federal revenue/year	\$3.148	\$0.592	\$0.640	\$1.022
 <i>Shares in percent of total</i>				
Industry profits	43.8%	36.9%	41.6%	44.6%
State & local revenue	28.6%	43.3%	41.1%	34.8%
Federal revenue	27.6%	19.8%	17.4%	20.6%
 <u>ALASKA REINVESTMENT PERFORMANCE</u>				
<i>Reinvestment in billions \$/year</i>				
Cash flow (billions \$/year)	\$6.065	\$2.630	\$3.119	\$3.853
Reinvestment (billions \$/year)*	\$0.860	\$1.322	\$0.650	\$0.700
 <i>Reinvestment in \$/barrel</i>				
Cash flow per barrel	\$8.75	\$3.73	\$4.34	\$5.28
Reinvestment per barrel*	\$1.24	\$1.88	\$0.90	\$0.96
 Percentage reinvested in Alaska				
	14%	50%	21%	18%

\* Revenue, costs and income data from *Petroleum Intelligence Weekly* (attached); reinvestment performance estimated by the Division of Policy. See the following page for additional notes.

Division of Policy, 4/11/88

Notes to analysis of *PIW* data on North Slope economics:

1. *PIW* data for the first and second half of 1986 and 1987 were averaged using equal weights to produce the average annual values shown on the preceding page.
2. *PIW* values stated separately for U.S. West and Gulf coasts were combined to provide weighted average figures; the following weighting factors were used (West/Gulf): 1985-50%/50%; 1986-52.5%/47.5%; 1987-56.66%/46.67%; 1988-60%/40%.
3. Annual revenue figures assume production levels of 1.90 MMB/D, 1.93 MMB/D, 1.96 MMB/D, and 2.00 MMB/D in 1985-88 respectively.
4. Data for 1988 are extrapolated assuming costs and revenues continue at the per barrel levels reported in *PIW* for the first two months of 1988.
5. Reinvestment estimates for 1985-6 are from Income and Investment Flows From Alaska Oil and Gas Producing Activities, by Edward Deakin, May, 1987. Estimates for 1987-8 are Division of Policy estimates based on industry statements of current and planned project activity.
6. Cash flow is understated by an estimated \$2.00 per barrel because depreciation on pipeline investments are not accounted for separately in the *PIW* data. (Pipeline tariffs are deducted before determining the wellhead price per barrel.)

*Division of Policy*  
*11 April 1988*

# PETROLEUM INTELLIGENCE WEEKLY

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Office of the Governor, Juneau 3/23/88

• Living With \$15 Oil ..... p.5 • Shift In Tanker War..... p.1

## Short-Haul Sales By Saudis Key To Overseas Stockbuild

Oil markets should be very careful in drawing grand conclusions about Saudi Arabia's oil policies on the basis of its latest foray to charter ships for moving crude oil into its overseas stockpile. The fact is that Saudi Arabia is in the process of placing a large chunk of stockpile crude with several of the Aramco partners on a delivered basis, and it chartered the tankers almost entirely to replenish those supplies, according to well informed PIW sources in shipping circles. The stockpile moves say more about Riyadh's wish to retain a basic presence as a short-haul crude supplier in the Caribbean and Europe (p5) than about its long-term goals or role within Opec (PIW Jan. 25, p1). PIW confirms that the Saudis have lined up five ships to move 10-million barrels of oil into overseas storage in the coming weeks, plus at least one other vessel to supply non-Aramco clients like Ashland and Marathon. In the past, the Saudis have used the Western Hemisphere stockpile for occasional spot sales, and more routinely to supply term customers on a prompt basis.

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By taking nearby crude from the stockpile now, the Aramco partners get the benefit of the oil in the heart of the winter season, rather than in late March or early April when oil loaded today in Saudi Arabia would arrive at Atlantic Basin destinations. The stockpile barrels are within the overall 1.4-million b/d of crude the partners obtained from the Saudis in January, and are expected to take in February. They do not represent any extra supply. Overall Saudi output volume is still below Opec quota in the 3.8- to 4-million b/d range (excluding the Neutral Zone). This suggests Riyadh is willing to cautiously and temporarily stick with other Opec producers in sharing some of the burden of

(continued on p. 4)

## Alaskan Oil Profits Staying Buoyant Amid Volatile Prices

With oil markets again threatening a possible sharp drop in prices, US Alaskan production looks surprisingly well positioned to cope with a repeat of the collapse of 1986. Despite high transport costs that would appear to make Alaskan North Slope output highly vulnerable to lower prices, it is currently making good profits at \$14.50-\$15.50 delivered prices, and has shown it can break even at \$10 a barrel. Profits also bounce back quickly as prices recover, according to a PIW analysis of Alaskan North Slope economics (see table). Producers briefly suffered losses of a few pennies a barrel in mid-1986 when the delivered price at the Gulf Coast fell to \$10. But profits rebounded to an average \$3.50 in 1987, and even managed to average over \$1 a barrel in disastrous 1986. ANS crude — which is one-fourth of US production — realizes a healthy \$2.60-\$3.20 a barrel now, depending on sales destination.

Even if prices dropped below \$10, very little North Slope production would be shut in, mainly because of the large amounts already invested in current output and its importance to US supply. What's more, the oil is primarily absorbed into the refining and marketing systems of producing companies, and low crude prices usually provide

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offsetting improvements in the profitability of downstream refining. Meanwhile, the long-term outlook for Alaskan North Slope crude is encouraging a continuing buildup of production capacity, in sharp contrast to plunging production in other US areas. ANS output surged over 2-million b/d in late 1987 as Alaska displaced Texas for the first time as the largest source of US crude. The North Slope is still regarded as holding the best potential for finding big new fields. But discoveries have to be large to offset growing development and operating costs, already apparent at the Kuparuk River and Endicott fields, and for enhanced recovery in super-giant Prudhoe Bay (PIW Jan.25.p10).

Since the 1986 price collapse, the economics for Alaskan North Slope crude sold on the West Coast have become relatively more profitable than the longer shipments to the Gulf and East Coasts, which used to earn almost as much. As a result, more North Slope crude is moving to the California market, with the West Coast absorbing 60% of last year's higher production versus 50% in 1985. Profits on West Coast sales are now about 65¢ a barrel higher than those to Atlantic ports, compared to a gap of 10¢ in 1985. This mainly reflects the much larger \$11.66 a barrel drop in ANS prices to Gulf and East Coast destinations in the last two years compared to a drop of just under \$10 on the West Coast. The bigger decline in the east is hard to explain but is probably only partly due to the highly competitive Atlantic Basin crude oil market.

THE COMPARATIVE ECONOMICS OF ALASKAN NORTH SLOPE PRODUCTION (in dollars per barrel)

	Sales To US East Coast						Sales To US West Coast					
	1985	1987	1988	1988	1988	Year	1985	1987	1988	1988	1985	Year
Delivered Price	Current	2nd H	1st H	2nd H	1st H	Year	Current	2nd H	1st H	2nd H	1st H	Year
Soho Price	\$15.50	\$18.45	\$17.00	\$12.00	\$16.80	\$27.00	\$14.50	\$17.45	\$16.00	\$11.00	\$15.80	\$25.00
Average Price(a)	15.25	18.82	18.99	12.31	18.72	29.91	14.28	18.48	18.58	10.79	14.54	24.23
Less:												
Shipping Cost	3.35	3.21	3.19	3.38	3.72	4.21	0.99	0.98	0.94	0.94	1.14	1.29
Valuez l.o.b.	11.90	13.61	13.80	8.93	12.00	22.70	13.28	14.52	14.62	9.81	13.40	22.94
Less:												
Pipeline Loss	0.05	0.10	0.05	0.05	0.05	0.10	0.05	0.10	0.05	0.05	0.05	0.10
Pipeline Tariff	3.20	3.95	3.95	4.50	4.50	6.00	3.20	3.95	3.95	4.50	4.50	6.00
Wellhead Price(b)	8.68	9.56	9.80	4.38	7.48	18.69	10.81	10.47	10.62	5.28	8.85	16.64
Less:												
Royalty(c)	1.00	1.11	1.14	0.47	0.85	1.98	1.17	1.23	1.24	0.58	1.02	2.02
Severance(d)	0.91	1.00	1.30	0.59	0.99	2.19	1.05	1.09	1.40	0.70	1.17	2.22
Property Tax	0.15	0.15	0.15	0.18	0.18	0.21	0.15	0.15	0.15	0.18	0.18	0.21
Producing Cost	0.85	0.85	0.85	0.75	0.75	0.90	0.85	0.85	0.85	0.75	0.75	0.90
Deprecation(e)	2.25	2.25	2.25	2.17	2.17	1.53	2.25	2.25	2.25	2.17	2.17	1.53
Pre-Tax Profit	3.49	4.20	4.11	0.23	2.51	5.78	4.54	4.90	4.72	0.88	3.55	9.96
Less:												
State Income Tax(f)	0.10	0.13	0.12	0.01	0.08	0.29	0.14	0.15	0.14	0.03	0.11	0.30
US Windfall Tax(g)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Income Tax(h)	1.19	1.43	1.40	0.11	1.16	4.50	1.54	1.67	1.61	0.41	1.64	4.58
Oil Profit	2.20	2.84	2.58	0.12	1.28	4.99	2.86	3.08	2.98	0.45	1.81	5.08
Pipeline Profit	0.43	0.53	0.53	0.64	0.64	2.18	0.43	0.53	0.53	0.64	0.64	2.18
Overall Profit	2.63	3.17	3.12	0.76	1.92	7.17	3.29	3.62	3.51	1.09	2.45	7.26

a) Average of all producers. b) Price at Pump Station #1. c) Royalty 12.5% after deduction of gathering costs (63¢ 1988, 66¢ 1987 & 1986, 85¢ 1985). d) Severance Tax based on wellhead price after deduction of royalty (11.94% from 2nd Half 1987 to present, 14.96% 1985 to 1st Half 1987). e) Includes depletion. f) Average state income tax rate of 3% for all producers. g) Windfall profits tax not applicable at lower wellhead prices. h) US income tax rate 34% 1987 to present and 46% previously, after deduction of costs, state taxes.

Another big change in the last few years is the more even split between producing company profits and the tax take of federal and state governments. With Alaskan wellhead prices well below the floor level of US "windfall" taxation, the tax burden has shrunk to an estimated \$3.35 a barrel currently. Reduced corporate income tax rates from 46% to 34% starting in 1987 has also helped producers. However, Washington claims that the companies may owe \$200-million in "windfall" profits taxes for 1984 and 1985 due to disparities in pricing and pipeline charges among the various Alaskan oil producers (PIW June 13, '83,p3).

The settlement of a 7-year legal dispute over Alaskan pipeline tariffs has also put an extra squeeze on profits since 1986, with the Trans-Alaskan Pipeline providing 15% of North Slope profits now compared to 30% in 1985. Aimed at fostering greater competition for North Slope leases, the resolution with the seven owners (BP 50%, Exxon and Arco

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20% each, and the rest split between Mobil, Phillips, Union and Amerada Hess) sharply reduced tariffs, settled back claims of overcharges and put the pipeline on a real-rate-of-return basis starting in 1986 (PIW Nov. 4, '85, p8).

The existence of a semi-secret and unofficial "mini-Brent" North Sea market might help London's International Petroleum Exchange win a central role in the globalization of oil futures dealing. Mini-Brent could provide a model for the IPE as it prepares another relaunch for its failed Brent futures contract following the New York Mercantile Exchange's refusal to trade US crude futures in London as a joint venture (PIW Jan. 25, p8). Shocked and disappointed by Nymex's rejection of joint trading of West Texas Intermediate futures, the IPE is considering a number of alternative options, with a restyled 1,000-barrel Brent contract based on cash settlement rather than physical delivery at the top of the list (PIW Jan. 25, p8). Other possibilities include a London-based West Texas Intermediate contract administered independently of Nymex, and a link to another US exchange such as the Chicago Board of Trade, which dabbled with oil futures several years ago.

Steady but largely unpublicized trade in the unregulated mini-Brent market leaves little doubt that demand exists for a financial tool of this type geared to European crude. Also known as the Brent partial market, and only reluctantly revealed to PIW by major players, mini-Brent is the brainchild of US investment banks. But its future is now in doubt due to new UK laws which may leave room for the IPE to take over instead. Mini-Brent works because the investment banks are willing to buy and sell futures contracts for part-cargoes of Brent in 50,000 barrel increments under their own set terms, normally closing out at an agreed cash-settlement price as 600,000-barrel forward Brent cargoes begin to trade in the physical market. However, this trading could fall foul of the forthcoming UK Financial Services Act (PIW Jan. 11, p2). The IPE, as a recognized futures exchange, might win approval of a similar standard contract, using well-established procedures of exchange-of-futures-for-physicals for participants wanting to take delivery. The IPE is now seeking industry advice on how to tailor a new contract, but there's virtually universal agreement that simply restyling the existing 1,000-barrel contract won't work.

Even with its poor track record in marketing and planning, the London futures exchange is still eager to launch its own crude contract that will spark trade both locally and from Mideast and Far East time zones, largely out of New York's normal reach. It plans "some form of significant trading incentive scheme to encourage initial participation" and scope for broader membership, aimed at attracting more active floor traders. While Nymex boasts almost 800 members and last year traded an average 40-million b/d, there are currently just 57 authorized IPE dealers. There's general dismay in European trading circles over the Nymex's "parochial" decision not to come to London, coupled with the recognition that Eastern Hemisphere traders increasingly want to use crude futures (PIW Dec. 7, p6). The IPE has already been approached by the Singapore International Monetary Exchange on possible broad cooperation.

**In Opec  
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Like the big Mideast exporters, Opec's key African members are moving fast to cushion themselves against rapid swings in output even in a weak market. But they are using very different means to achieve the same ends. Resisting straight market-related pricing, the Africans are looking to product sales, processing deals of various kinds and enhanced margins for foreign equity producers to sustain volumes. Though techniques differ, almost all Opec exporters are adapting to an oil market in which some price volatility is seen as inevitable, making maintenance of sales to key customers in ways that cause the least market disruption a top priority (PIW Jan. 25, p1). The various methods reflect marketing strengths of individual producers and preferences of traditional customers, among other factors.

Among African producers, Libya appears to have significantly reduced its vulnerability to short-term market swings. Though volume has fallen somewhat, Tripoli seems to be offsetting much of the recent loss of up to 200,000 b/d in third-party crude sales to traders without flooding the Mediterranean with discounted crude. They've

## APPENDIX C -- EXPLANATION OF 1981 OIL TAX LAW CHANGES

### I. Introduction

The 1981 oil tax legislation (ch. 116, SLA 1981) replaced the separate accounting oil and gas corporate income tax, enacted in 1978, with a modified apportionment-based corporate income tax. To make up the substantial loss in revenues caused by this shift, the legislation also raised the severance tax rate on Prudhoe Bay from an effective rate of just over 11% (with the ELF) to 15%. This increase was accomplished by raising the nominal rate from 12.25% to 15% and effectively suspending the ELF until the tenth anniversary of Prudhoe Bay production in 1987. (For fields beginning production after June 1981, the nominal rate was set at 12.25% for the first five years of production.) Taken together, the two changes were intended to be revenue neutral.

In addition to the two primary changes -- eliminating separate accounting and increasing the severance tax -- the 1981 law also:

- (a) made retroactive technical amendments (known as the "warts" amendments) to state tax laws in order to improve the retrospective constitutionality of separate accounting;
- (b) corrected tax problems posed by the sharing of oil and gas revenues among Native corporations under §7(i) of the Alaska Native Claims Settlement Act;
- (c) allowed for the retroactive deduction of federal windfall profit tax payments; and
- (d) instituted a graduated, stair stepped rate, beginning at 1%, for the taxation of corporate income under \$100,000, and raised the top rate from 9.4% to 11% for one year.

Tax "stability" was not the issue in 1981. The 1981 law was passed solely in response to litigation filed by the oil industry challenging the 1978 separate accounting corporate income tax. Unlike the separate accounting law, which was passed after nearly a decade of study, discussion, and debate, the 1981 oil tax changes were not designed to make the state's tax system fair and predictable, or to encourage future exploration and production. Instead, the 1981 law was designed to limit the state's potential liability as a result of the oil companies' legal challenge to the 1978 separate accounting law. Because the oil industry benefitted from the 1981 law, it did not object to the changes in the state's oil tax structure.

At the time the 1981 law passed, many assumed that the oil tax issue would be revisited, after a decision on the 1978 law was made, and before the June 1987 reimposition of the ELF. The state won the separate accounting litigation in the trial court in May 1983 and on appeal to the Alaska Supreme Court in August 1985. The statute's constitutionality was affirmed by the U.S. Supreme Court in January 1986.

## II. How It Happened

### A. Activity Before 1981

The 1977-78 Alaska Legislature and Hammond Administration, confronted with the prospect of the first commercial production from Prudhoe Bay, instituted a comprehensive revision of the state's oil and gas tax structure. In 1977, the legislature, with the active support of the governor, increased the maximum severance tax rate from 8% (first put in effect in 1970) to 12.25%. An economic limit factor [ELF] formula replaced the statutorily-reduced rates for well production less than one thousand barrels per day (from 1973-1977, a well's first 300 barrels were taxed at 5%, and the next 700 barrels at 6%). The ELF was designed to give the severance tax a curved or sliding scale, instead of stair stepped, rate.

In 1978, the separate accounting oil and gas corporate income tax was enacted. The law was developed and passed in response to detailed analyses, prepared for the legislature and administration from 1970-78, showing that the state's existing apportionment-based corporate income tax would result in Prudhoe Bay oil producers paying less than a third of the statutory rate of 9.4% of net income. The apportionment tax also had the inequitable effect of imposing different tax levels on producers with the same profits in Alaska, in effect penalizing producers with a larger degree of investment and employment in Alaska.

In early 1979, the major Prudhoe Bay oil producers filed suits challenging the constitutionality of the 1978 separate accounting law. Concerned over the amount of revenues at risk in the litigation, in the fall of 1980 the Hammond Administration engaged in substantive settlement discussions with those companies. The options proposed would have required the sacrifice of several hundred million dollars of state revenue in order to settle the litigation.

### B. The 1981 Session -- Policy Background

At the beginning of the 1981 session, House and Senate leaders urged the Administration to pursue solutions to the problems posed by the oil industry suit that would not require revenue losses to the state. On March 18, 1981, the leadership of

both chambers, including Senate President Kerttula and Finance Chairmen Dankworth and Bennett, House Speaker Duncan and Finance Chairman Cotten, and Governor Hammond, Attorney General Condon, and Revenue Commissioner Tom Williams, joined in a statement declaring that "any significant decreases in state oil and gas revenues appear both unwarranted and unsupported by a majority of Alaskans. . . . All agree that any changes which would give large sums of money to the oil industry at the expense of the people of Alaska are unacceptable."

House leaders did not agree with the Administration's view that existing law needed to be changed. They were more optimistic that the separate accounting statute would be upheld, as it was in 1986. They believed that the tax structure put in place in 1977-78 was sound, and preferable to the alternatives of a higher severance tax or an apportionment-based income tax. They also believed any changes to state tax laws should be made after, not prior to, any unfavorable court decision, and that the potential problem of having to refund money to the oil industry was better left to the future, if and when it was more than a hypothetical possibility.

### C. The 1981 Legislation

Because the Administration felt that some action was required to limit the risk posed by the separate accounting lawsuit, the House developed a "backstop" bill (in conjunction with the Administration), which set an oil and gas reserves tax in place to take effect and preserve state revenues if the 1978 separate accounting law were to be found unconstitutional.

Governor Hammond introduced the backstop bill in May 1981 (as SSHB 200). It passed the House (as SB 524) in early June. A free conference committee, consisting of Senators Ray, Bennett, and Dankworth, and Reps. Gardiner, Vaska, and O'Connell, first met on June 11.

During the latter half of the session, Senator Dankworth had attempted to develop a bill that would succeed in settling the separate accounting litigation while preserving, in substantial part, past and future state oil revenues. He was unsuccessful, and gave up the idea of ending the existing separate accounting litigation. He then attempted to craft a bill that would repeal the separate accounting law prospectively and maintain future state oil revenues at a level roughly comparable to those collected under the separate accounting law.

On June 17, following the reorganization of the House, Rep. Halford replaced Rep. Vaska on the conference committee and became the House chair. At that time, the oil industry circulated a settlement proposal which repealed separate accounting, increased severance taxes, and instituted a 10% investment tax credit. The oil

industry estimated the proposal's revenue loss to the state for FY 82-85 at \$1.37 billion; legislative staff estimates of revenue losses ranged from \$1.5 to \$2.1 billion.

Senator Dankworth prepared a draft bill embodying the settlement proposal and distributed it to the conference committee on June 22. At a later point in the June 22 meeting, he also distributed a draft bill that modified the settlement proposal in two important ways, in order to make the bill as revenue neutral as possible. He abandoned the 10% investment credit and suspended the application of the ELF during a field's first ten years of production in order to achieve a 15% effective severance tax rate at Prudhoe Bay. As a result of these changes, the oil industry was not willing to settle the litigation, and stated in testimony that they would continue the separate accounting litigation even if the modified proposal were enacted.

Prior to the next meeting of the conference committee on June 23, Governor Hammond wrote a letter to all legislators clarifying his position on the oil tax issue. He stated his preference was for a public vote on the backstop bill versus the oil industry settlement proposal. Alternatively, he urged the Senate to pass the backstop bill, and stated he preferred passage of any proposal to doing nothing. He noted that legislative action should "[r]educe the likelihood that the oil tax issue will continue to be a perennial political liability for those in public office."

On June 23, Senator Dankworth submitted to the conference committee the legislation ultimately signed by Governor Hammond, described on the first page of this appendix. The June 23 bill, known as "Dankworth 3," retained the basic characteristics of Senator Dankworth's earlier proposal, but suspended the application of the ELF during the first ten years of production only if the ELF was greater than .7. The change did not affect Prudhoe Bay, but did provide a tax break for Kuparuk.

The June 23 legislation received only cursory examination in the free conference committee and on the floor of the House and Senate before its passage on June 24. No committee report or written analysis was provided by either the bill's sponsor, Senator Dankworth, or the Administration. A bare bones fiscal note, which projected total revenue losses from FY 82-85 of \$141 million, did accompany the bill during the legislature's deliberations. Specifically, the note showed revenue losses of \$21 million in FY 82, \$117 million in FY 83, \$18 million in FY 84, and a gain of \$15 million in FY 85. No figures for the effect of the reimposition of the ELF on Prudhoe Bay in 1987 were provided. Revenue Commissioner Williams personally prepared the fiscal note and provided no supporting documentation for it, other than stating the estimates were based on confidential figures provided by the oil industry.

Speaker Hayes refused to allow a minority report opposing the legislation,

authored by Rep. Gardiner, to be published in the House Journal. At pages 2-3 of the minority report, after questioning the validity of the \$141 million estimate, Rep. Gardiner stated the fiscal note "failed to point out an even more significant revenue loss which will occur in the latter half of this decade, due to the sharp decline in severance tax collections from Prudhoe Bay after the reimposition of the economic limit factor in 1987. This loss is on the order of two billion dollars." (The two billion dollar estimate was based on the optimistic oil price assumptions prevailing at the time.) The bill passed over the strenuous objections of the former House majority.

At the time he signed the 1981 law, Governor Hammond noted that the new law would only reduce state income by .6%, relying on the figures in the fiscal note.

The key arguments made in opposition to the 1981 law were:

(a) It was not revenue neutral, because the estimates for the amounts to be collected by the new apportionment formula were overstated and speculative.

(b) A future legislature and administration would be saddled with a huge drop in revenues by the reimposition of the ELF in 1987.

Other arguments concerned the harmful effects of a shift from a net income-based separate accounting tax to a gross revenue severance tax.

Both Commissioner Williams and Governor Hammond explicitly recognized that a future legislature would have to deal with the post-1987 revenue effects from reimposition of the ELF. In the press statement issued on July 21, 1981, at the time he signed the oil tax bill, Governor Hammond declared, "As for the possible revenue effects in 1988 and beyond, I have full confidence in the ability of the Legislature to deal at that time with whatever is required to retain the state's 'fair share' of our oil wealth."

In responding to a question about the post-1987 ELF revenue loss at the June 23 conference committee meeting, Commissioner Williams noted that a future legislature would have the option of reimposing separate accounting if it proved constitutional. A newspaper account of the meeting reported that "If the projected revenue loss proves true, Williams said the Legislature would have the option of hiking taxes." (*Anchorage Daily News*, June 25, 1981, p. A4, "Lawmakers Pass Revision of Oil Tax Law.")

During the June 24 House floor debate on the 1981 bill, Rep. Gardiner noted the ELF factor would cause multi-hundred million dollar losses after 1987. Rep. Halford responded that "by that time [1987], if the companies continue to challenge the portion of funds that are in the state's hands under chapter 21 [separate accounting], 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. That's

pretty far in the future, but we'll have more information available to us at that time."

### III. Postscript

The revenue losses resulting from the shift to the modified apportionment method have exceeded considerably the \$141 million estimate for FY 82-85 made in 1981 by Commissioner Williams. Analyses by the Department of Revenue shows the FY 82-85 revenue loss of the 1981 law at over seven hundred million dollars. Through FY 87, the state lost over one billion dollars in revenue as a result of passage of the 1981 law.

The problems arising from the reimposition of the ELF are the subject of the main body of this report.

## Appendix D

### DRILLING/WORKOVER DISINCENTIVE COMMITTEE SUBSTITUTE HB 164

#### SEVERANCE TAX CALCULATION

##### CURRENT LAW

*Field Rate x Wellhead Price x Severance Tax x ELF*

90,168,000 BOPY x \$9/BO x 0.15 x 0.52134

= \$63,461,050/year

Addition of 1 well:

90,277,000 BOPY x \$9/BO x 0.15 x 0.5204

= \$63,423,203/year

A decrease of \$37,846 year

##### PROPOSED LAW

*Field Rate x Wellhead Price x Severance Tax x ELF*

90,168,000 BOPY x \$9/BO x 0.16 x 0.7296

= \$88,811,873/year

Addition of 1 well:

90,277,000 BOPY x \$9/BO x 0.15 x 0.7292

= \$88,870,484/year

An increase of \$58,611 year

[Copy of ARCO Handout, March 27, 1987]

# TECHNICAL NOTE ON ARCO'S KUPARUK EXAMPLE

## Tax Effects of Drilling an Additional Well Under Current Law

Mr. James Weeks, Kuparuk Unit Manger for ARCO, provided testimony to the House Finance Committee on March 27, 1987. Examples of severance tax effects (see preceding page) accompanied his testimony. The examples compare the severance tax effects of adding one additional well in the Kuparuk field under the current ELF and under the proposed ELF. The examples show that the addition of one well producing just under 300 barrels per day would increase output from 90,168,000 barrels of oil per year (BOPY) to 90,277,000 BOPY. At the \$9.00 per barrel price assumed in ARCO's example, annual gross revenue to the owners increases by \$981,000.

$$(90,277,000 \text{ BOPY} - 90,168,000 \text{ BOPY}) * (\$9/\text{barrel}) =$$

$$(\quad 109,000 \text{ BOPY} \quad) * (\$9/\text{barrel}) = \$981,000$$

The first of ARCO's two examples shows how under current law the owners would collect an annual severance tax *rebate* of \$37,846 on this additional revenue. The effective severance tax rate on the new production is thus -3.9 percent. The effect is analogous to a personal income tax where the effective tax rates become lower as increasing income moves the taxpayer into a higher bracket.

The second ARCO example illustrates how this will be changed under the proposed law. Instead of giving the owners a \$37,846 windfall, the proposed law will collect \$58,611 (6.0 percent) of the incremental \$981,000 for the state in severance tax. The table below summarizes the effects under the current and proposed severance tax laws, as shown in the ARCO examples.

### TAX EFFECTS OF DRILLING ONE ADDITIONAL WELL (ARCO Kuparuk Example)

	Change In Annual Gross Revenue	Change In Annual Severance Tax	Tax Rate On Incremental Production	Average Tax Rate Before Drilling	Average Tax Rate After Drilling	Percent Change In Average Tax Rate Due To Drilling
Current Law	\$981,000	(\$37,846)	-3.9%	7.820%	7.806%	-0.180%
Proposed Law	\$981,000	\$58,611	6.0%	10.944%	10.938%	-0.055%

*Prepared by Division of Policy, April 1987.*

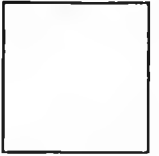
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**Senator Bettye Fahrenkamp  
Alaska State Legislature  
Senate Special Committee on Oil and Gas  
P.O. Box V  
Juneau, Alaska 99811**

**I am interested in hearing your views on the ELF or any other oil and gas issues. Please return this form to my office.**

**Do you feel that the current ELF formula should or should not be changed? Why?**

**Do you have any questions or comments on other oil and gas issues?**

**Have you moved? Do we have your correct address?**

# Understanding ELF

## Senate Special Committee on Oil and Gas

Senator Bettye Fahrenkamp, Chairman

Senator Jack Coghill

Senator Paul Fischer

### The Facts

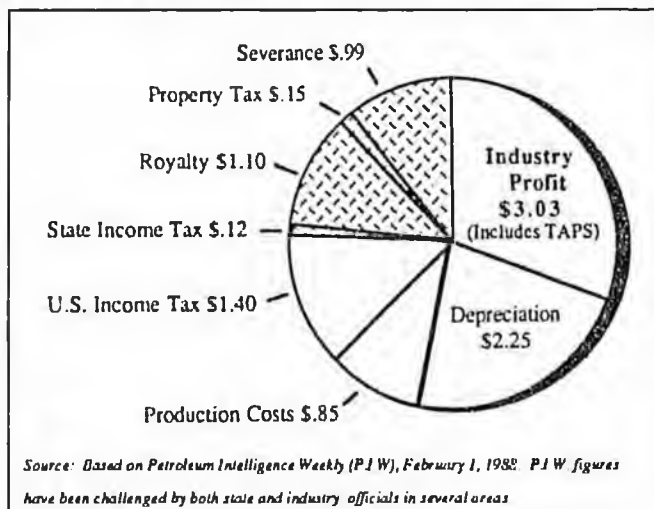
The Economic Limit Factor, or ELF, is used to calculate the amount of tax on each barrel of oil produced.

Oil revenues account for over 84% of state revenues.

Current year petroleum revenues come from:

Royalty	46.3%
Corporate Income Tax	6.5%
Oil and Gas Property	5.2%
Severance Tax	40.2%
Other (Rents, Bonuses)	1.8%

The ELF affects only the severance tax.



*In early 1988, this is what a typical barrel of North Slope crude yielded the state, the oil producers, and the Federal government.*

### What is the ELF?

The ELF (Economic Limit Factor) is a formula for computing the "effective" severance tax rates for different oil fields. It has the effect of reducing the severance tax by variable amounts depending on the per-well production of individual fields. It is a number between zero and one that is multiplied by the basic or "nominal" 15% severance tax rate for Prudhoe Bay and Kuparuk.

### What is the purpose of the ELF?

When it was originally created in 1977, the intent was to keep taxes low at marginal fields, such as in Cook Inlet, to encourage production. As a field declines, the ELF is designed to reduce its tax burden until it reaches its economic limit, the point at which it would be forced to shut in further oil development. At that point the severance tax would be reduced to zero. Most fields in Cook Inlet are currently paying no severance tax because their low per-well production gives them an ELF of zero.

### What happened in 1981?

Because of oil industry suits challenging the constitutionality of using "separate accounting" to compute corporate income taxes, oil and gas taxation statutes were revised. Separate accounting, which considered only those profits made on Alaska operations, was replaced with a modified apportionment method, which uses a percentage of a company's worldwide earnings. To make up the dramatic loss in revenues caused by this shift, the severance tax rate on Prudhoe Bay, the largest oil field in the United States, was raised from an effective rate of just over 11% to 15%. This was done by rounding the ELF to 1.0 on Prudhoe Bay until June, 1987, and raising the nominal rate from 12.25% to 15%. At the time, many policy makers assumed future legislatures would reassess the effects of these changes after the lawsuits had been settled. (Separate accounting's constitutionality was upheld in 1987.)

### What happened on June 20, 1987?

The rounding rule of the ELF for Prudhoe Bay expired. On that day, the effective severance tax rate was reduced from 15% to 12.45%. Because the ELF constantly changes as per-well productivity declines and additional wells are drilled, the rate is expected to decline significantly in future years. For the fiscal year ending June 30, 1988, it is estimated that state revenues were reduced by approximately \$116 million due to this change.

## The Issues

There has been substantial controversy over whether the current ELF formula is accomplishing its original goals. Legislation has passed the House that would change the formula. The answers to the following questions will present opposing views.

**Does the current ELF work to encourage development of marginal fields?**

*YES. All fields, regardless of their size, eventually become economically marginal as operating costs rise and profits shrink. Average production in Prudhoe Bay has declined from almost 10,000 barrels per well per day to about 2,300. The ELF helps to prevent leaving oil in the ground that could have been produced economically without the severance tax. It encourages the drilling of more production wells, which keeps production from declining too early. The current ELF encourages full development of all fields. At Milne Point, the ELF reduced the severance tax to zero for the last six months of production.*

*NO. There is nothing "marginal" about Prudhoe Bay. Even at current rates, the average well at Prudhoe produces 230 times as much oil as one in Texas. According to Petroleum Intelligence Weekly (P.I.W.) and International Petroleum Finance, each barrel of oil from Prudhoe earns the producers well over \$3.00 profit after taxes. At that rate, a tax break is not needed to remain highly profitable. The ELF formula should be changed to delay the tax break until it is really needed. It also is not working as intended because it does not encourage production at truly marginal fields, like Milne Point, which has been shut in since 1986.*

**What is the effect of the current ELF on the state's economy?**

*POSITIVE. The ELF creates positive incentives for oil and gas development. Since the ELF went into effect for Prudhoe Bay last June, the industry claims that there are eight new drill rigs working, creating 2400 direct and indirect new jobs for Alaskans. A survey of companies that do business with Alaska's oil industry shows that employment and sales have risen sharply since June.*

*NEGATIVE. The State Department of Labor disputes the high number of jobs created and cites the industry's history of hiring non-residents. Very little of the increased activity has been felt locally. Even more significantly, when the \$300 million in lost revenues over the next two years are translated into state budget cuts, the ripple effect will cause over 7,000 Alaskans to lose their jobs. This will deliver a severe blow to the Alaska economy just as it begins to climb out of a recession.*

**How does the current ELF formula affect state revenues?**

*INDUSTRY. As a percentage of the State's revenues, the ELF represents a reduction of about 7% in FY 88. The actual amount of reduction depends on the price of oil. However, all petroleum revenues are a product of the value of oil and production levels, and higher prices may actually increase total petroleum revenues despite greater dollar "losses" due to the ELF.*

*STATE. The Department of Revenue estimates that the first year of ELF reapplication will cost the state \$150 million. Using the March mid-case revenue projections, losses will gradually increase, peaking at \$223 million in FY 1991. At this point the loss will represent 14% of total oil revenues. Over the next five years, almost a billion dollars in revenue will be lost by not changing the ELF.*

**Has the current formula encouraged the drilling of unnecessary wells in Prudhoe Bay?**

*NO. Wells are not being drilled unnecessarily just for the tax benefit of the ELF. The ELF does reduce the total oil production tax at Prudhoe Bay for each new well that is drilled. The average tax benefit in FY 1989 will be \$210,000 per well. This reduction helps in deciding whether to drill a well or not, but it is not enough by itself to justify spending \$2 million to drill a well. Without additional wells and workovers to keep existing wells in production, Prudhoe would already be in decline.*

*YES. In the summer of 1987, just as the ELF kicked in, producers accelerated drilling programs at Prudhoe and Kuparuk. Because pipeline capacity is limited to 2 million barrels a day, increasing the number of wells results in lower production per well, a smaller ELF factor and lower taxes. These wells will be needed sometime in the future but are being drilled early to receive a state subsidy. It is irresponsible state policy to subsidize drilling in one of the world's most profitable oilfields while underfunding education, roads, and the needs of children and youth.*

**How important is tax stability for oil industry investments? Isn't this like changing the rules in the middle of the game?**

*YES. The oil industry is prepared to invest over \$20 billion on oil-related work in Alaska over the next ten years. Without assurances of a stable tax climate, they might think twice about it.*

*NO. Oil and gas taxes over the past decade have been quite stable. The last major change, in 1981, lowered taxes. Last June, tax rates were again lowered for Prudhoe Bay producers when the ELF kicked in. The new formula would have the effect of keeping rates at about their pres-*

would have the effect of keeping rates at about their present levels. Each year, legislators have a responsibility to reassess tax laws, which are a vital aspect of public policy. Stability is preferred, but sometimes changes are necessary.

State oil and gas tax policy has been formulated to ensure the state is receiving a proper share of its nonrenewable resource. Over half of the oil ever discovered in Alaska has already been produced. The producers, the state, and the federal government all share in the oil wealth.

**What has been the state's share of oil production over the past few years?**

*INDUSTRY.* When Governor Hammond signed ELF legislation in 1981, he did so on the condition that it would maintain the state's combined royalty and tax share from its non-renewable resource at above 30 percent of the total value of the oil. The state has been receiving far greater than a 30 percent share. According to oil industry analysis, the state's share will rise from 57% this year to over 67% by 1991 at \$15-16 prices and to 103% at lower prices.

*STATE.* Using figures reported in the Petroleum Intelligence Weekly (P.I.W.), this is how the the oil wealth has been divided:

Year	Oil Industry	State and Local	Federal
1985	43.8%	28.6%	27.6%
1986	36.9%	43.3%	19.8%
1987	41.6%	41.1%	17.4%
1988	44.6%	34.8%	20.6%

**How do Alaska's severance tax rates compare with other states?**

*INDUSTRY.* Alaska's nominal severance tax rate of 15% is the highest in the nation. Louisiana is second at 12.5%. Oklahoma has a 7% rate; Texas has a 4.6% rate and California does not have a production tax. Even with the application of the ELF, the effective rate for Prudhoe Bay is the second highest in the U.S.

*STATE.* Each state designs its oil and gas tax rates differently. Our severance tax rate is applied to the wellhead value of the oil, which is now about \$5.00 below most other states. Because of this, the amount of tax per barrel is the lowest of all the producing states. If the ELF were applied to oil fields in the lower 48, severance taxes would be reduced or eliminated. An average oil well in Texas, producing only 10 barrels per day, would pay no taxes here at all under the existing or proposed ELF. In addition, we have a low corporate income tax rate of 9.4%. According to P.I.W., oil companies in Alaska pay an effective corporate income tax rate of only 3%.

## The New ELF

Last session, the Governor introduced legislation to delay the scheduled June reduction in Prudhoe Bay severance taxes. The House of Representatives further revised the formula for calculating the ELF factor. Instead of using the amount of production from individual wells as a measure of field productivity, the new proposal would take into account total production from the entire field. The new formula would limit the tax reduction for Prudhoe Bay and Kuparuk and increase it for most other, less profitable fields.

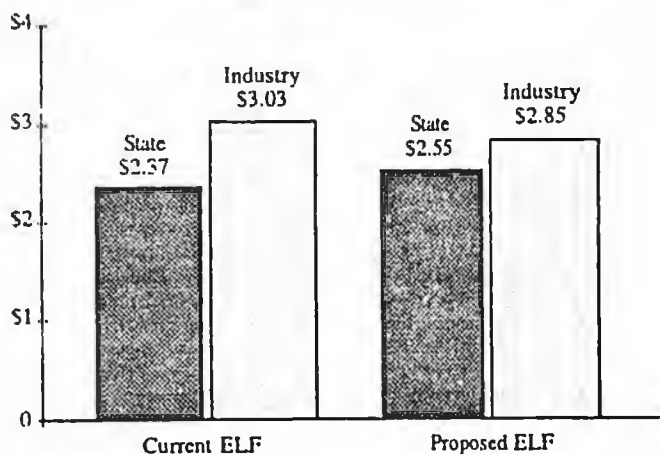
**How would the new formula change oil industry development investment decisions?**

*NEGATIVE.* The new legislation will result in fewer wells being drilled. Production will be taxed at a higher rate, leaving less money available for investment. Under the present formula, the drilling of additional wells lowers the ELF and therefore the tax rate. The new formula would deter full development drilling.

*POSITIVE.* The new formula would provide investment incentives where they are really needed. For example, Milne Point is a small, marginal field on the North Slope. Current low oil prices, high operating costs, and state taxes and royalties have forced production to be shut-in. Conoco, the oil company operator of Milne Point, has testified that the new formula would lower its tax rate and allow it to resume production.

*NEUTRAL.* Oil prices are the major factor in investment decisions and the ELF change should have little effect. Recent articles in Forbes magazine and Petroleum Intelligence Weekly report healthy profits being made on Alaskan production. The reports find that, on the North Slope, profits can be made even at \$10 a barrel.

State and Industry Shares  
(Dollars Per Barrel)



Shares under current ELF are from Petroleum Intelligence Weekly Feb. 1, 1988; shares under the proposed ELF are by the Division of Policy, April 11, 1987.