

SB

158

see HB 164  
folder

***Questions and Answers On The ELF***  
*with related*  
***Briefing Materials***

*April 21, 1987*

***Office of the Governor***

*Office of Management and Budget      Division of Policy*

## STATE OF ALASKA

Department of Revenue

Petroleum Research Section

April 14, 1987

To: Vincent D. Wright, Chief of Research

From: Charles Logsdon, Petroleum Economist

CL

Subject: CSHB164

We have recently made another run of the Petrev model to prepare estimates of the fiscal impact of CSHB164 passed by the House of Representatives. The only change made in this legislation not examined in prior fiscal notes was allowing either the taxpayer or the department to rebut the 300 barrels per well day presumed production at the economic limit (PEL). The fiscal note we prepared for the original CSHB164 fixed the PEL at 300 barrels per well day.

The fiscal impact of the final version is almost exactly the same as with the PEL fixed at 300 (Table 1). As might be expected, the lower PEL (department rebuts) dominates the higher PEL (company rebuts) in both the 30% or downside risk case and the mean except for the near term when very low prices are a distinct possibility. That is, we would expect severance taxes to be higher the higher the price of oil because the PEL would be lower and consequently the ELF would be higher. In general however it turns out that given our assumptions about the probability distribution of oil prices, the higher PELs and lower PELs tend to offset each other with the result that the final outcome at both the Mean and 30% levels is not that much different than if the PEL were fixed at 300.

The revenue and production effects of the final version of CSHB164 as well as a comparison of effective tax rates by field for current law and CSHB164 are found in the following tables.

JB 158  
See 48164 folder

STEVE COWPER  
GOVERNOR



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

March 3, 1987

The Honorable Jan Faiks  
President of the Senate  
Alaska State Legislature  
P.O. Box V  
Juneau, AK 99811

Dear Senator Faiks:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the oil and gas properties production tax. The primary effect of the bill is to postpone the application of the "true" economic limit factor (ELF) to the Prudhoe Bay field. The bill also amends the economic limit factor provisions applying to all oil fields so that the ELF is not sensitive to changes in the value of oil.

Existing AS 43.55.011(a) provides that an oil producer must calculate its production (severance) tax by multiplying the nominal rate calculated under AS 43.55.011(b) and (c) by the economic limit factor determined under AS 43.55.013. The ELF is a formula that has the effect of reducing the severance tax rate. In 1981, the legislature made several changes in oil and gas taxes: the income tax was changed to substitute modified apportionment for separate accounting; the nominal rate of the severance tax was increased for some fields; and the application of the ELF to a lease or property with an ELF of more than .7 was suspended until after that lease or property had been in commercial production for 10 years. Ch. 116, SLA 1981. Suspension of application of the ELF was accomplished by providing that, if the ELF was more than .7, then the ELF was considered to be "one." AS 43.55.013(b)(3). Thus, when multiplying the severance tax rate by the ELF, the full amount of the tax is the product.

Only the Prudhoe Bay and Lisburne fields currently have an ELF greater than .7. The Lisburne ELF is expected to fall below .7 after fiscal year 1988, but the Prudhoe Bay ELF is expected to remain about .7 for a number of years. Prudhoe Bay will have been in production for 10 years in June, 1987; thus, absent an amendment to AS 43.55.013(b)(3), the "true" ELF, as calculated under AS 43.55.013(b)(1), will begin to apply to that field at that time.

The fiscal note on the 1981 legislation did not include projections beyond FY 1985, but an analysis by the Legislative Finance Division showed that application of the "true" ELF provision would cause state revenue to fall precipitously in FY 1988. Governor Hammond noted this possibility, but expressed "full confidence in the ability of the legislature to deal at that time" with adverse revenue consequences, should they prove to be serious. Statement of Governor Hammond on signing FCCSSB 524 (ch. 116, SLA 1981); see July 27, 1981 press release on oil and gas legislation, fourth page.

Application of the "true" ELF to Prudhoe Bay would result in serious consequences for the state in the coming fiscal year: state severance collections would be reduced by over 15 percent, and FY 1988 revenue would fall by \$93,000,000 (already accounted for in the official "mean" forecast). Section 1 of the attached bill would prevent this precipitous decline in revenue by amending AS 43.55.013(b)(3) to delay the applicability of the true ELF to Prudhoe Bay for an additional five years. Section 1 of the bill also makes a conforming amendment to AS 43.55.013(b)(2) and (4). So long as the "true" ELF does not apply, the severance tax rate will be the full 15 percent of value, or \$.80 a barrel, whichever is greater, subject to the adjustment in AS 43.-55.012.

The bill also changes the ELF provisions for all oil fields to remove the sensitivity of the ELF to price fluctuations. An element of the ELF calculation is the "PEL," or "production at the economic limit." The PEL represents the number of barrels a producer must produce in order to recover the costs of production. Currently, the PEL is presumed to be 300 barrels per well per day, but the taxpayer may rebut this presumption at a hearing before the Department of Revenue. At the hearing, the PEL would be calculated by dividing the cost of production into the value of the oil. AS 43.55.013(d). If the price of oil drops, the producer may be able to prove an entitlement to a PEL in excess of 300 barrels; if so, the ELF for that producer will go down. Thus, if prices fall drastically, the state loses severance tax revenue not only because the severance tax is applied against a lower value of oil, but also because the severance tax rate itself goes down as the result of a PEL hearing. Earlier in 1986, because of low prices, we were faced with the possibility that the state might suffer from this double reduction in severance tax revenue.

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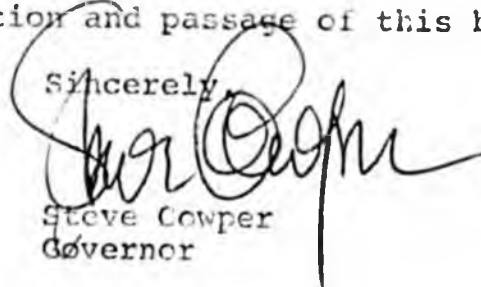
Hon. Jan Faiks

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Section 2 of the attached bill deals with that problem by repealing the portion of existing law that provides for a hearing to change the PEL. The PEL is then simply set at 300 barrels per day. As a result, the ELF will be sensitive to changes in the amount of production, but will no longer be sensitive to fluctuations in price or the costs of production. Section 3 of the bill repeals two subsections in AS 43.55.013 dealing with the two elements of the hearing: costs and values. These changes do not apply to the production of gas.

I urge your early consideration and passage of this bill.

Sincerely,



Steve Cowper  
Governor

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# STATE OF ALASKA 1987 LEGISLATIVE SESSION FISCAL NOTE

**REQUEST:**  
Revision Date: \_\_\_\_\_  
Title: An Act Relating to the Oil and Gas Properties Production Tax  
Sponsor: Rules/Governor  
Requestor: Rules

Bill Version: SB158  
Publish Date: 3-3-87

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

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

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING						

CAPITAL						
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REVENUE		76,730.0	91,950.0	98,480.0	99,850.0	105,610.0
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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 ANALYSIS  
*Vincent Wright*

Prepared by: Chuck Loesdon  
Division: Revenue/Research

Phone: 276-5364  
Date: March 2, 1987

Approved by Commissioner: Hugh Malone  
Agency: Department of Revenue

Date: 3/2/87

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

## Revenue Impact of Extend5 (Million \$)

Fiscal Year	Delta 30%	Delta Mean
1987	0	0
1988	76.73	96.26
1989	91.95	118.06
1990	98.48	128.33
1991	99.85	132.92
1992	105.61	139.09
1993	5.73	7.3
1994	3.9	7.64
1995	3.66	6.56
1996	4.55	5.28
1997	3.67	5.55
1998	2.01	3.91
1999	2.53	2.62
2000	-.16	2.08
2001	-.1	2.79
2002	-.82	2.68
2003	-.73	2.28
2004	.53	2.1
2005	.49	1.87

## Production Impact of Extend5 (Million bbls/yr)

Fiscal Year	Prudhoe Bay	Kuparuk	Milne Point	Endicott	Lisburne	West Sak	Other Onshore	Other Offshore	Total
1987	0	0	0	0	-.01	0	0	0	-.01
1988	-.77	-.12	-.04	-.02	-.02	0	0	0	-.97
1989	-.69	-.12	-.07	-.04	-.03	0	0	0	-.95
1990	-.6	-.12	-.11	0	-.03	0	0	0	-.86
1991	-.57	-.11	-.15	-.03	-.05	0	0	0	-.91
1992	-.52	-.1	-.15	-.06	-.05	0	0	0	-.88
1993	-.49	-.09	-.14	-.06	-.06	0	0	0	-.84
1994	-.44	-.11	-.14	-.04	-.07	0	0	0	-.8
1995	-.39	-.07	-.09	-.05	-.05	0	0	0	-.65
1996	-.35	-.06	-.12	-.05	-.05	0	0	0	-.63
1997	-.32	-.08	.01	-.04	-.06	0	0	0	-.49
1998	-.43	-.05	.03	-.03	-.09	0	0	0	-.57
1999	-.25	-.04	.02	-.01	-.02	0	-.02	0	-.32
2000	-.22	-.03	-.02	-.01	-.03	0	-.02	0	-.33
2001	-.2	-.03	.02	0	-.02	0	-.02	0	-.25
2002	-.18	-.02	.01	0	-.02	0	-.02	0	-.23
2003	-.16	-.01	-.01	0	-.01	0	-.01	0	-.2
2004	-.19	0	.04	0	-.01	0	-.01	0	-.17
2005	-.13	.01	.04	0	0	0	-.01	0	-.09
									0
									0
Total	-6.9	-1.15	-.87	-.44	-.68	0	-.11	0	-10.15

MEMORANDUM

STATE OF ALASKA

Department of Revenue

Petroleum Research Section

February 27, 1987

To: Vincent D. Wright, Chief of Research

From: Charles Logsdon, Petroleum Economist



Subject: More ELF

Per your request, I have examined the revenue and production impact of extending the 10 year period during which the ELF is subject to the .7 or greater test to 15 years and fixing the value of the Production at the Economic Limit (PEL) at 300 barrels per well per day. Prudhoe Bay and Lisburne are the fields currently producing with a calculated ELF greater than .7 and thus would be directly impacted by this change in the State severance tax law. On average, the calculated ELF for Prudhoe is not expected to fall below 0.7 over the next 5 years. We expect the Lisburne ELF to fall below 0.7 in FY 1989 and subsequent years.

By setting the PEL at 300, the ELF no longer would be sensitive to the price of oil or the cost of producing oil and would be totally dependent on per barrel productivity for a producing lease or property. Over the next 5 years as Prudhoe Bay production begins to decline the only reason for an ELF less than 0.7 would be if a significantly greater than expected number of additional wells were drilled. For example we currently expect Prudhoe to produce on average, 0.984 million barrels per day in 1992 from 465 wells providing an ELF of .7911. If this same amount of oil were produced from 705 wells, the ELF would be equal to .6906.

The following tables illustrate the revenue impact and production impact of extending the ELF time line to 15 years and fixing the value of PEL at 300. These results are generated by the DOR revenue simulation model using the December 1986 input assumptions. The most significant result other than the revenues generated is that there is almost no average expected effect on North Slope production.