

**2/25/10
GAS TAX
REVIEW**

<target><bill></bill><subject>2-25-10 GAS TAX
REVIEW</subject><comm>SFIN26</comm></target>

To: Senate Finance Committee

Attn: Senator Bert Stedman

Co-Chair, Senate Finance Committee

From: David Wood

Date: 25 February, 2010

Re: Answer to Question & Request Raised by Senator Thomas during My Testimony Given Today (25 February 2010)

The very pertinent and perceptive question asked earlier today by Senator Thomas sought information with respect to how might the gas dilution / cross subsidy effect identified in Alaska's current production tax rules have impacted the production taxes actually paid in recent periods had a gas line had been in operation at the time?

In order to provide an indicative answer to this question I have taken the data for price, volume and costs (excluding Cook Inlet Gas) for fiscal year 2008 (i.e. July 2007 to June 2008), which is available from the Alaska Department of Revenue (DOR), Fall 2008 Revenues Sources Book (RSB), (Dec 2008). That period is selected because of the wide range of oil prices that prevailed and the fact that the ACES rules were in place. The three tables attached to this document provide the necessary data and calculations to establish the impact.

Table 1 calculates the production tax for oil based on actual data showing the components of that calculation. As no gas is exported the calculations are based upon oil barrels only. This results in total production tax of **\$ 7.482 billion** which is reduced by investment credits of \$411.5 million to \$ 7.071 billion. The calculation shown essentially reproduces the figures from the RSB.

Table 2 assumes a 4.5 bcf/day gas line and calculates production tax for this hypothetical gas stream on a stand-alone basis (i.e. not combined with oil). The calculation uses the U.S. wellhead natural gas prices from the EIA's records for the months in question. There would be some small differentials between these prices and AECO prices in Alberta, but I believe they are close enough for the purpose. I have also assumed gas transportation costs of \$4.5/mcf (\$27/boe) and field costs (capital costs plus operating costs) of \$400 million (\$1.46/ boe) which are those used by Commissioner Galvin in the examples he provided from the DOR in his

testimony of 24 February 2010. This data computes a total production tax of **\$ 1.140 billion** to which no investment credits are applied.

By adding the computed production taxes in tables 1 and 2 the stand-alone oil and gas production tax for this FY 2008 (assuming 4.5 bcf /day) would be **\$8.622 billion** (reduced to \$8.211 billion by the deduction of \$411.5 million investment credits).

Table 3 calculates the production tax by combining the revenue cost and volume streams from table 2 to provide a combined oil and gas production tax calculation of **\$6.795 billion** (reduced to \$6.383 billion by the deduction of \$411.5 million investment credits).

For this period the loss to the State in production tax revenue caused by the cross subsidy effect of combining oil and gas in the production tax calculation would have amounted to:

\$6.795 billion less \$8.622 billion = -\$1.827 billion.

This calculation is in line with the figures of potential loss in fiscal revenue discussed during the testimonies.

Sincerely,

David Wood

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Table 1. Oil Stand-alone Production Tax Calculation (July 2007 to June 2008)

FY 2008 Production Tax Revenues: Actual Versus Potential Under Alternative Mechanisms (Analysis Based on Actual US West Coast Prices and Cost Data)														
Month	US West Coast Oil Price \$/barrel	Per Barrel Total Costs \$/barrel	Per Barrel Production Tax Value \$/barrel	PTV less Progressivity Threshold \$/barrel	PTV less Progressivity Threshold Adjusted PTV \$/barrel	PTV Rate per Dollar of Progressivity Rate %	Incremental Progressivity Rate %	Volume (Millions barrels)	Combined Progressivity Tax (CPT) \$ millions	Base Production Tax (BPT) \$ millions	Base Production Tax (BPT) Rate %	Base Production Tax (BPT) Value \$ millions	CPT + BPT less Investment Credits \$ millions	
														A
Monthly Analysis, \$90 PTV \$/boe threshold and 0.004% progressivity parameter under Current Law as enacted in 2007														
Jul	75.93	-22.88	53.05	-30	23.05	0.40%	9.22%	19.5	95.2	258.3	25.00%	258.3	353.5	
Aug	73.83	-22.88	50.95	-30	20.95	0.40%	8.38%	19.5	83.1	248.0	25.00%	248.0	331.2	
Sep	79.92	-22.88	57.04	-30	27.04	0.40%	10.81%	18.8	116.2	268.7	25.00%	268.7	385.0	
Oct	84.77	-22.88	61.89	-30	31.89	0.40%	12.75%	19.5	153.7	301.3	25.00%	301.3	455.0	
Nov	92.98	-22.88	70.10	-30	40.10	0.40%	16.04%	18.8	211.9	330.2	25.00%	330.2	542.1	
Dec	88.64	-22.88	65.76	-30	35.76	0.40%	14.30%	19.5	183.2	320.1	25.00%	320.1	503.3	
Jan	91.16	-22.88	68.28	-30	38.28	0.40%	15.31%	19.5	203.6	332.4	25.00%	332.4	536.0	
Feb	94.42	-22.88	71.54	-30	41.54	0.40%	16.61%	18.2	216.5	325.8	25.00%	325.8	542.3	
Mar	105.06	-22.88	82.18	-30	52.18	0.40%	20.87%	19.5	334.0	400.1	25.00%	400.1	734.1	
Apr	112.37	-22.88	89.49	-30	59.49	0.40%	23.79%	18.8	401.3	421.6	25.00%	421.6	822.9	
May	125.41	-22.88	102.53	-30	72.53	0.40%	29.01%	19.5	579.2	499.1	25.00%	499.1	1078.4	
Jun	133.78	-22.88	110.90	-30	80.90	0.40%	32.36%	18.8	676.3	522.5	25.00%	522.5	1198.7	
Totals:									3254.2	4228.1	25.00%	4228.1	7482.3	7070.8

Data Source: Alaska Department of Revenue (DOR), Fall 2008 Revenues Sources Book (RSB), (Dec 2008)
 FY2008 Taxable North Slope barrels /day: 626,456
 229.3 millions barrels in FY2008
 Lease Expenditures (\$/bbl): 16.78
 TT&T (\$/bbl): 6.10
 Capex Credits (\$ millions): 411.5

Table 2. Gas Stand-alone Production Tax Calculation (July 2007 to June 2008) [Assuming Gas Line Operational]

FY 2008 Production Tax Revenues: 4.5 bcf/day Hypothetical Gas Sales (Standalone Production Tax Calculation)															
(US Gas Price Data from EIA)															
Month	EIA U.S. Wellhead Price \$/mcf	Per BOE Total Costs for Gas \$/boe	Per Barrel Production Tax Value PTV \$/boe	Progressivity Threshold \$/boe	PTV less Progressivity Threshold \$/boe	PTV Rate per Dollar of Adjusted PTV %	Incremental Progressivity Rate %	Volume (Millions boe)	Progressivity Tax Calculated Separately \$ millions	Base Production Tax (BPT) Value \$ millions	Base Production Tax (BPT) Rate %	Base Production Tax (BPT) Value \$ millions	Total Production Tax (BPT + Progressivity) Value \$ millions	CPT + BPT less Investment Credits \$ millions	
															A
2007/2008															
Monthly Analysis, \$30 PTV \$/boe threshold and 0.004% progressivity parameter under Current Law as enacted in 2007															
Jul	6.32	-28.46	9.46	-30	0.00	0.40%	0.00%	23.3	0.0	55.2	25.00%	55.2	55.2		
Aug	5.87	-28.46	6.76	-30	0.00	0.40%	0.00%	23.3	0.0	39.4	25.00%	39.4	39.4		
Sep	5.42	-28.46	4.06	-30	0.00	0.40%	0.00%	21.6	0.0	22.9	25.00%	22.9	22.9		
Oct	5.90	-28.46	6.94	-30	0.00	0.40%	0.00%	23.3	0.0	40.5	25.00%	40.5	40.5		
Nov	6.58	-28.46	11.02	-30	0.00	0.40%	0.00%	22.6	0.0	62.2	25.00%	62.2	62.2		
Dec	6.97	-28.46	13.36	-30	0.00	0.40%	0.00%	23.3	0.0	77.9	25.00%	77.9	77.9		
Jan	6.99	-28.46	13.48	-30	0.00	0.40%	0.00%	23.3	0.0	78.6	25.00%	78.6	78.6		
Feb	7.55	-28.46	16.84	-30	0.00	0.40%	0.00%	21.8	0.0	91.8	25.00%	91.8	91.8		
Mar	8.29	-28.46	21.28	-30	0.00	0.40%	0.00%	23.3	0.0	124.0	25.00%	124.0	124.0		
Apr	8.94	-28.46	25.18	-30	0.00	0.40%	0.00%	22.6	0.0	142.0	25.00%	142.0	142.0		
May	9.81	-28.46	30.40	-30	0.40	0.40%	0.16%	23.3	1.1	177.2	25.00%	177.2	178.3		
Jun	10.82	-28.46	36.46	-30	6.46	0.40%	2.59%	22.6	21.3	205.7	25.00%	205.7	226.9		
Totals:								275.3	22.4	1117.4	25.00%	1117.4	1139.8	1139.8	

Data Source: EIA for gas price
Hypothetical gas production (bcf/day)

4.5 274.5 millions boe in FY2008 Lease Expenditures (\$/boe) 1.46 TT&T (\$/mcf): 4.5
TT&T (\$/boe): 27.00 Capex Credits (\$ millions): 0.0
Combined Production Tax Calculated on an oil + gas stand-alone calculation: 8622.1 8210.6

Table 3. Oil & Gas Combined Production Tax Calculation (July 2007 to June 2008)

FY 2008 Production Tax Revenues: Oil plus Gas Combined (Analysis Assumes Actual Oil Plus Hypothetical Gas)														
Oil + Gas										Base				
Month	A	B	C	D=	E	F=	G	H=	I	J=	K	L=	M=	N=
		Oil + Gas Effective BOE Price \$/boe	Effective BOE Total Costs \$/boe	Per Barrel Production Tax Value PTV \$/boe	Progressivity Threshold \$/boe	PTV less Progressivity Threshold \$/boe	PTV rate per Dollar of Adjusted PTV %	Incremental Progressivity Rate %	Oil + Gas Volume (Millions boe)	Combined Progressivity Tax (CPT) \$ millions	Base Production Tax (BPT) Rate %	Base Production Tax Value \$ millions	CPT + BPT Value \$ millions	CPT + BPT less \$500 in credits \$ millions
		B	C	(B+C)	E	(D+E)≥0	G	(F*G)	I	(D*H*I)	K	(D*I*K)	(J+L)	(M-P)
Monthly Analysis, \$30 PTV \$/boe threshold and 0.004% progressivity parameter under Current Law as enacted in 2007														
Jul	55.22	-25.92	-30	29.30	-30	0.00	0.40%	0.00%	42.8	0.0	25.00%	313.4	313.4	
Aug	52.79	-25.92	-30	26.87	-30	0.00	0.40%	0.00%	42.8	0.0	25.00%	287.4	287.4	
Sep	54.09	-25.92	-30	28.17	-30	0.00	0.40%	0.00%	41.4	0.0	25.00%	291.6	291.6	
Oct	57.87	-25.92	-30	31.95	-30	1.95	0.40%	0.78%	42.8	10.7	25.00%	341.8	352.4	
Nov	63.13	-25.92	-30	37.21	-30	7.21	0.40%	3.16%	41.4	49.7	25.00%	392.4	442.1	
Dec	63.13	-25.92	-30	37.21	-30	7.21	0.40%	2.88%	42.8	45.9	25.00%	398.0	443.9	
Jan	64.34	-25.92	-30	38.42	-30	8.42	0.40%	3.37%	42.8	55.4	25.00%	411.0	466.4	
Feb	67.66	-25.92	-30	41.74	-30	11.74	0.40%	4.69%	40.0	78.4	25.00%	417.6	496.0	
Mar	74.92	-25.92	-30	49.00	-30	19.00	0.40%	7.60%	42.8	159.3	25.00%	524.1	683.4	
Apr	80.37	-25.92	-30	54.45	-30	24.45	0.40%	9.78%	41.4	220.5	25.00%	563.6	784.1	
May	89.15	-25.92	-30	63.23	-30	33.23	0.40%	13.29%	42.8	359.6	25.00%	676.3	1035.9	
Jun	96.26	-25.92	-30	70.34	-30	40.34	0.40%	16.14%	41.4	470.0	25.00%	728.1	1198.1	
Totals:										505.2	1449.3	5345.5	6794.9	6383.4
Difference Between Production Tax Calculated on a combined Oil & Gas Basis Minus Standalone Oil and Gas Basis:														
												-1827.2	P	
												Capex Credits (\$ millions):		
													411.5	

LEGAL SERVICES

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MEMORANDUM

February 22, 2010

SUBJECT: Gas production tax limitation in AS 43.90.320
(Work Order No. 26-LS1526)

TO: Senator Tom Wagoner

FROM: Donald M. Bullock Jr.
Legislative Counsel

You asked to what extent is the state bound by the tax exemption in AS 43.90.320.¹ The exemption in that section is offered to producers that commit to acquire firm transportation capacity in the first binding open season of the gas pipeline project license under AS 43.90 (Alaska Gasline Inducement Act, "AGIA").

The exemption in AS 43.90.320 is statutory and not contractual. Under article IX, sec. 1 of the Alaska constitution, the state may not contract away its taxing authority except as otherwise provided in article IX. Article IX, sec. 4 authorizes the legislature to grant exemptions from tax "by law." The tax exemption in AS 43.90.320 is granted by law, but as a law, is subject to amendment or repeal by the legislature.²

¹ The amount of the exemption is described in AS 43.90.320(a), which reads as follows:

(a) If a person qualified for a resource inducement under AS 43.90.300 agrees under (c) of this section, the person is entitled to *an annual exemption from the state's gas production tax in an amount equal to the difference between the amount of the person's gas production tax obligation calculated under the gas production tax in effect during that tax year and the amount of the person's gas production tax obligation calculated under the gas production tax in effect at the start of the first binding open season held under this chapter. If the difference is less than zero, the gas production tax exemption is zero.*

(Emphasis added.)

² As you are aware, the legislature has faced the issue of whether a contractual limitation on oil and gas production taxes is permissible under the state constitution. If such a contract were allowed under article IX, the legislature could not pass a law that impaired the obligations of that contract because of the prohibition in article 1, sec. 15. In

While a person offered the exemption may reasonably expect that the legislature would allow the exemption to continue during the specific 10-year period described in AS 43.90.320(b), the continuation of the exemption is subject to legislative discretion. A similar statutory tax incentive was offered in AS 43.55.011(b) (repealed, sec. 34, ch. 2, TSSLA 2006), in which new oil production was taxed at the rate of 12.25 percent of the gross value at the point of production for the first five years, and 15 percent thereafter. That tax incentive was in place from its enactment in 1981 until its repeal in 2006.

Although the exemption in AS 43.90.320 is offered to producers, a change in the law that reduces the value of the inducement may affect the license agreement with the AGIA licensee. The state and the AGIA licensee have a contract under which, in return for commitments and costs incurred by the licensee to develop the pipeline project, the state shares the costs and offers the services of the Alaska Gasline Inducement Act coordinator.³ The royalty and tax exemption inducements are offered as incentives to commit to acquire firm transportation capacity in the pipeline project. If the legislature removes or reduces the inducements and the first binding open season fails to produce sufficient commitments for the project to move forward, the licensee may claim the state reduced the value of its exclusive license, contrary to article I, sec. 15 of the state constitution.

As a practical matter, the licensee's open season is expected to begin May 1, 2010, and the inducements are only offered during this first open season. If no firm commitments are received, the inducements expire. If firm commitments are received, the inducements take effect for the 10-year period described in AS 43.90.320(b), unless amended by law.

If I may be of further assistance, please advise.

DMB:ljw
10-118.ljw

AS 43.90.320, the state offers an exemption in the amount of any increase in gas production tax liability during the designated period.

³ AS 43.90.110(a).