Alaska Oil and Gas Production Tax Calculation ("Order of Operations")



Presented by

Bruce Tangeman, Commissioner Designee Dan Stickel, Revenue Economist Department of Revenue, Tax Division

March 22, 2019 – Senate Finance Committee

Acronyms used in this presentation

- ANS Alaska North Slope
- Avg Average
- Bbl Barrel
- CBRF Constitutional Budget Reserve Fund
- CIT Corporate Income Tax
- DOR Department of Revenue
- GVPP Gross Value at Point of Production
- GVR Gross Value Reduction
- Min Minimum
- NPR-A National Petroleum Reserve Alaska
- PTV Production Tax Value
- Ths Thousands
- FY Fiscal Year

Overview

- Oil and Gas revenue sources how production tax fits in oFY 2017 – FY 2021 oil and gas revenues
- Production tax calculation "order of operations"
 - oDetailed walk-through of each step of tax calculation
 - oDefining commonly used jargon
 - oFocus on North Slope oil
 - oFY 2017 FY 2021 comparison

Disclaimer

- Alaska's severance tax is one of the most complex in the world, and portions are subject to interpretation and dispute
- These numbers are rough approximations based on public data as presented in the spring 2019 forecasts and other revenue forecasts.
- We are economists, not auditors. This presentation is not an official statement of the Department as to any particular tax liability, interpretation, or treatment. This is not tax advice or guidance. This presentation is solely for illustrative general purposes.

Oil and Gas Revenue Sources

- Royalty based on gross value of production oplus bonuses, rents & interest oPaid to owner of the land: State, Federal, or private oUsually 12.5% in Alaska, but rates vary
- Corporate Income Tax based on net income oPaid to State (9.4% top rate)
 oPaid to Federal (21% top rate, used to be 35%)
 oOnly C-corporations pay this tax *
- Property Tax based on value of oil & gas property oPaid to State (2% of assessed value or "20 mills" oPaid to Municipalities – credit offsets state tax paid
- Production Tax based on "production tax value"
 Paid to State calculation to follow

^{* &}quot;C-corporation" is a business term that is used to distinguish the type of business entity, as defined under subchapter C of the federal Internal Revenue Code.

Oil and Gas Revenue Sources – 5 year comparison of state revenue

	FY	FY 2017 F		FY 2018		FY 2019		FY 2020		2021
ANS oil price (\$/bbl)	\$	49.43	\$	63.61	\$	69.80	\$	66.00	\$	66.00
ANS production (ths bbl/day)		526.4		518.4		511.5		529.5		511.7
Property Tax *	\$	120	\$	122	\$	123	\$	121	\$	116
Corporate Income Tax	\$	(59)	\$	66	\$	195	\$	210	\$	210
Production Tax	\$	134	\$	750	\$	735	\$	525	\$	511
Royalties	\$	1,021	\$	1,365	\$	1,453	\$	1,298	\$	1,242
CBRF Settlements	\$	482	\$	121	\$	125	\$	150	\$	125
NPR-A Shared revenue	\$	1	\$	24	\$	8	\$	11	\$	10
Total	\$	1,700	\$	2,448	\$	2,639	\$	2,314	\$	2,214

Revenue amounts in \$ millions. Source: DOR Spring 2019 forecast.

^{*} Property Tax is does not include municipal share.

	Per Barrel	Barrels	Value (\$	million)	
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5			
Total Annual Production/Value		193,782	\$12,789.6		
Royalty and Federal barrels		(21,595)	(\$1,4	125.3)	
Taxable barrels		172,187	\$11,3	864.4	
Downstream (Transportation) Costs (\$/bbl)	(\$8.81)	172,187	(\$1,5	516.3)	
Gross Value at Point of Production (GVPP)	\$57.19	172,187	\$9,8	48.1	
North Slope Lease Expenditures					
Deductible Operating Expenditures	(\$15.55)		(\$2,6	577.7)	
Deductible Capital Expenditures	(\$11.71)		(\$2,0)16.5)	
Total Lease Expenditures	(\$27.26)	172,187	(\$4,6	594.2)	
Production Tax Value (PTV)			\$5,1	53.8	
Production Tax			Min Tax	Net Tax	
Gross Value or Production Tax Value			\$9,848.1	\$5,153.8	
Gross Value Reduction (GVR)			\$0.0	(\$128.0)	
GVPP or PTV after GVR			\$9,848.1	\$5,025.8	
Tax rate			4%	35%	
Tax before credits			\$393.9	\$1,759.0	
Higher of minimum or net tax			\$1,7	59.0	
Per-taxable-barrel credits			(\$1,2	255.7)	
Other credits against liability			(\$2	(\$22.0)	
Total Tax after credits			\$481.3		
Other items / adjustments			\$43.4		
Total Tax paid to the state			\$524.7		
Non-Deductible Lease Expenditures - carried forward			\$82	3.6	

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Non-Deductible Lease Expenditures - carried forward			\$823.6		

1. Royalty & Taxable Barrels

	Per Barrel	Barrels	Value (\$ million)		
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5			
Total Annual Production/Value		193,782	\$12,789.6		
Royalty and Federal barrels		(21,595)		425.3)	
Taxable barrels		172,187	\$11,364.4		
Downstream (Transportation) Costs (\$/bbl)	(\$8.81)	172,187	(\$1,!	516.3)	
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Tax before credits			\$393.9	\$1,759.0	
Higher of minimum or net tax			\$1,7	' 59.0	
Per-taxable-barrel credits			(\$1,2	255.7)	
Other credits against liability			(\$2	(\$22.0)	
Total Tax after credits			\$48	31.3	
Other items / adjustments			\$43.4		
Total Tax paid to the state			\$524.7		
Non-Deductible Lease Expenditures - carried forward			\$82	23.6	

2. Gross Value At Point of Production (GVPP)

	1			
	Per Barrel	Barrels	Value (\$	million)
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5		
Total Annual Production/Value		193,782	\$12,7	789.6
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Tax before credits			\$393.9	\$1,759.0
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Per-taxable-barrel credits			(\$1,2	255.7)
Other credits against liability			(\$2	22.0)
Total Tax after credits			\$48	31.3
Other items / adjustments			\$43.4	
Total Tax paid to the state			\$52	24.7
Non-Deductible Lease Expenditures - carried forward			\$82	23.6

3. Lease Expenditures

	Per Barrel	Barrels	Value (\$	million)
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5		
Total Annual Production/Value		193,782	\$12,789.6	
Royalty and Federal barrels		(21,595)	(\$1,4	125.3)
Taxable barrels		172,187	\$11,3	864.4
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North Slope Lease Expenditures				
Deductible Operating Expenditures	(\$15.55)		(\$2,6	577.7)
Deductible Capital Expenditures	(\$11.71)		(\$2,0)16.5)
Total Lease Expenditures	(\$27.26)	172,187	(\$4,694.2)	
Production Tax Value (PTV)			\$5,153.8	
Production Tax			Min Tax	Net Tax
Gross Value or Production Tax Value			\$9,848.1	\$5,153.8
Gross Value Reduction (GVR)			\$0.0	(\$128.0)
GVPP or PTV after GVR			\$9,848.1	\$5,025.8
Tax rate			4%	35%
Tax before credits			\$393.9	\$1,759.0
Higher of minimum or net tax			\$1,7	59.0
Per-taxable-barrel credits			(\$1,2	255.7)
Other credits against liability			(\$2	2.0)
Total Tax after credits			\$48	1.3
Other items / adjustments			\$4:	3.4
Total Tax paid to the state			\$52	4.7
Non-Deductible Lease Expenditures - carried forward			\$82	3.6

4. Production Tax Value (PTV)

	Per Barrel	Barrels	Value (million)
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5		
Total Annual Production/Value		193,782	\$12,7	789.6
Royalty and Federal barrels		(21,595)	(\$1,4	425.3)
Taxable barrels	Antoniona	172,187	\$11,3	364.4
Downstream (Transportation) Costs (\$/bbl)	(\$8.81)	172,187	(\$1,	516.3)
Gross Value at Point of Production (GVPP)	\$57.19	172,187	\$9,8	48.1
North Slope Lease Expenditures				
Deductible Operating Expenditures	(\$15.55)		(\$2,6	577.7)
Deductible Capital Expenditures	(\$11.71)		(\$2,0	016.5)
Total Lease Expenditures	(\$27.26)	172,187	(\$4,0	594.2)
Production Tax Value (PTV)			\$5,153.8	
Production Tax			Min Tax	<u>Net Tax</u>
Gross Value or Production Tax Value			\$9,848.1	\$5,153.8
Gross Value Reduction (GVR)			\$0.0	(\$128.0)
GVPP or PTV after GVR			\$9,848.1	\$5,025.8
Tax rate			4%	35%
Tax before credits			\$393.9	\$1,759.0
Higher of minimum or net tax			\$1,7	759.0
Per-taxable-barrel credits			(\$1,2	255.7)
Other credits against liability			(\$22.0)	
Total Tax after credits			\$481.3	
Other items / adjustments			\$43.4	
Total Tax paid to the state			\$524.7	
Non-Deductible Lease Expenditures - carried forward			\$82	23.6

5. Gross Minimum Tax

	Per Barrel	Barrels	Value (\$	million)	
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5			
Total Annual Production/Value		193,782	\$12,789.6		
Royalty and Federal barrels		(21,595)	(\$1,4	25.3)	
Taxable barrels		172,187	\$11,3	64.4	
Downstream (Transportation) Costs (\$/bbl)	(\$8.81)	172,187	(\$1,5	516.3)	
Gross Value at Point of Production (GVPP)	\$57.19	172,187	\$9,8	48.1	
North Slope Lease Expenditures					
Deductible Operating Expenditures	(\$15.55)		(\$2,6	577.7)	
Deductible Capital Expenditures	(\$11.71)		(\$2,0)16.5)	
Total Lease Expenditures	(\$27.26)	172,187	(\$4,6	594.2)	
Production Tax Value (PTV)			\$5,1 <mark>53.8</mark>		_
Production Tax			Min Tax	Net Tax	
Gross Value or Production Tax Value			\$9,848.1	\$5,153.8	
Gross Value Reduction (GVR)			\$0.0	(\$128.0)	
GVPP or PTV after GVR			\$9,848.1	\$5,025.8	
Tax rate			4%	35%	
Tax before credits			\$393.9	\$1,759.0	
Higher of minimum or net tax			\$1,7	59.0	
Per-taxable-barrel credits			(\$1,2	255.7)	
Other credits against liability			(\$2	2.0)	
Total Tax after credits			\$48	1.3	
Other items / adjustments			\$43	\$43.4	
Total Tax paid to the state			\$52	\$524.7	
Non-Deductible Lease Expenditures - carried forward			\$82	3.6	

6. Net Tax and Gross Value Reduction (GVR)

			•		
	Per Barrel	Barrels	Value (\$	million)	
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5			
Total Annual Production/Value		193,782	\$12,789.6		
Royalty and Federal barrels		(21,595)	(\$1,425.3)		
Taxable barrels		172,187	\$11,364.4		
Downstream (Transportation) Costs (\$/bbl)	(\$8.81)	172,187	(\$1,516.3)		
Gross Value at Point of Production (GVPP)	\$57.19	172,187	\$9,8	48.1	
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Deductible Operating Expenditures	(\$15.55)		(\$2,6	577.7)	
Deductible Capital Expenditures	(\$11.71)		(\$2,0	016.5)	
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Gross Value Reduction (GVR)			\$0.0	(\$128.0)	
GVPP or PTV after GVR			\$9,848.1	\$5,025.8	
Tax rate			4%	35%	
Tax before credits			\$393.9	\$1,759.0	
Higher of minimum or net tax			\$1,7	59.0	
Per-taxable-barrel credits			(\$1,2	255.7)	
Other credits against liability			(\$2	2.0)	
Total Tax after credits			\$48	1.3	
Other items / adjustments			\$4	3.4	
Total Tax paid to the state			\$52	4.7	
Non-Deductible Lease Expenditures - carried forward			\$823.6		

7. Tax Credits against liability

	1	1			
	Per Barrel	Barrels		million)	
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$66.00	529.5			
Total Annual Production/Value		193,782	\$12,789.6		
Royalty and Federal barrels		(21,595)	(\$1,4	125.3)	
Taxable barrels		172,187	\$11,3	364.4	
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Deductible Capital Expenditures	(\$11.71)		(\$2,0	016.5)	
Total Lease Expenditures	(\$27.26)	172,187	(\$4,6	594.2)	
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Tax rate			4%	35%	
Tax before credits			\$393.9	\$1,759.0	
Higher of minimum or net tax			\$1,7	59.0	
Per-taxable-barrel credits			(\$1,2	255.7)	
Other credits against liability			(\$22.0)		
Total Tax after credits			\$48	1.3	
Other items / adjustments			\$4:	3.4	
Total Tax paid to the state			\$52	4.7	
Non-Deductible Lease Expenditures - carried forward			\$82	23.6	

8. Adjustments and Total Tax Paid

Order of Operations – 5 year comparison

		UAL		UAL		nt Year		ecast		cast
		2017	1	FY 2018 FY 2019		FY 2020		FY 2021		
	-	million)	Value (\$ million)		Value (\$ million)		Value (\$ million)		Value (\$ million)	
Total Annual Production/Value	\$9,4			036.0	\$12,862.4		\$12,789.6			
Royalty and Federal barrels	(\$1,2	234.8)	(\$1,4	144.2)	(\$1,5	537.9)	(\$1,425.3)		425.3) (\$1,362.1)	
Taxable barrels	\$8,2	64.2	\$10,5	591.8	\$11,3	324.5	\$11,3	\$11,364.4		64.6
Downstream (Transportation) Costs (\$/bbl)	(\$1,6	521.8)	(\$1,5	585.7)	(\$1,3	382.5)	(\$1,5	516.3)	(\$1,4	79.6)
Gross Value at Point of Production (GVPP)	\$6,6	42.4	\$9,0	06.1	\$9,9	42.0	\$9,8	48.1	\$9,4	85.0
North Slope Lease Expenditures										
Deductible Operating Expenditures	• • • •	335.6)		581.0)	1	531.1)	8	(\$2,677.7) (\$2,676		
Deductible Capital Expenditures		546.8)	(\$1,4	485.1)	(\$1,6	531.3)	(\$2,016.5)		1	80.9)
Total Lease Expenditures	(\$4,4	182.4)	(\$4,0	066.1)	(\$4,2	262.4)	(\$4,694.2)		(\$4,7	(57.0)
Production Tax Value (PTV)	\$2,1	\$2,160.0		\$4,940.0 \$5,679.6		79.6	\$5,1	53.8	\$4,7	28.0
Production Tax	Min Tax	Net Tax	Min Tax	Net Tax	Min Tax	Net Tax	Min Tax	Net Tax	Min Tax	<u>Net Tax</u>
Gross Value or Production Tax Value	\$6,642.4	\$2,160.0	\$9,006.1	\$4,940.0	\$9,942.0	\$5,679.6	\$9,848.1	\$5,153.8	\$9,485.0	\$4,728.0
Gross Value Reduction (GVR)	\$0.0	(\$73.4)	\$0.0	(\$91.1)	\$0.0	(\$96.3)	\$0.0	(\$128.0)	\$0.0	(\$126.3)
GVPP or PTV after GVR	\$6,642.4	\$2,086.6	\$9,006.1	\$4,848.9	\$9,942.0	\$5,583.3	\$9,848.1	\$5,025.8	\$9,485.0	\$4,601.7
Tax rate	4%	35%	4%	35%	4%	35%	4%	35%	4%	35%
Tax before credits	\$265.7	\$730.3	\$360.2	\$1,697.1	\$397.7	\$1,954.2	\$393.9	\$1,759.0	\$379.4	\$1,610.6
Higher of minimum or net tax	\$73	30.3	\$1,6	97.1	\$1,9	54.2	\$1,7	59.0	\$1,6	10.6
Per-taxable-barrel credits	(\$53	36.0)	(\$1,0	027.0)	(\$1,2	241.5)	(\$1,2	255.7)	(\$1,1	.21.7)
Other credits against liability	(\$3	4.0)	(\$6	50.0)	(\$3	6.2)	(\$2	2.0)	(\$1	4.0)
Total Tax after credits	\$16	0.3	\$61	.0.1	\$67	6.5	\$48	1.3	\$47	4.9
Other items / adjustments	(\$2	5.8)	\$13	39.8	\$58	8.5	\$43.4		\$35	5.7
Total Tax paid to the state	\$13	4.5	\$74	9.9	\$735.0		\$524.7		24.7 \$510.6	
Non-Deductible Lease Expenditures - carried forward (or credit at 35% prior to 2018)	\$31	8.1	\$31	12.5	\$35	59.2	\$82	23.6	\$1,4.	25.6

Thank You

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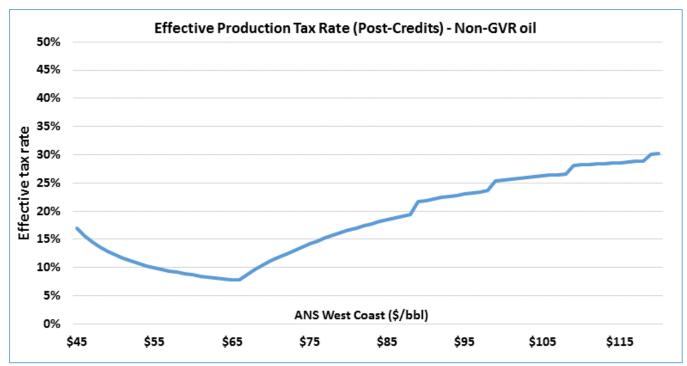
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Addendum

Follow-up Questions from 3-18-19 Senate Finance Hearing

- Provide FY20 effective tax rate
- Provide current Point Thomson feeder pipeline tariff
- Provide additional clarification of when pipeline costs are included in netback vs leases expenditures
- Provide estimated amount of credits that were purchased and later adjusted on audit
- Provide additional clarification of difference between capital credits and per-barrel credits

- Provide FY20 effective tax rate
- At \$66 ANS, estimated average effective production tax rate for non-GVR oil is 8%.



- Provide current Point Thomson feeder pipeline tariff
- As of 1/1/2019, oil produced in Point Thomson is subject to the following feeder pipeline tariffs
 - o\$19.490/barrel from the Point Thomson Pipeline*
 - o\$1.720/barrel from the Badami Pipeline
 - o\$1.300/barrel from the Endicott Badami Connection
 - oTotal feeder tariff charge of \$22.510/barrel for moving Point Thomson production from the unit boundary to the Trans-Alaska Pipeline (TAPS)

^{*} This Point Thomson Pipeline tariff is currently in dispute, the value presented here is the initial Federal Energy Regulatory Commission (FERC) filing that has been disputed.

- Provide additional clarification of when pipeline costs are included in netback vs lease expenditures
- Distinction is "point of production" specifically where processed crude passes through the LACT meter
- "Gathering lines" bring unprocessed oil / gas / water to a production facility (upstream of "point of production") o Deductible as lease expenditures in production tax value calculation
- "Feeder pipelines" bring processed crude to TAPS (downstream of "point of production")
 - oTariffs are regulated by RCA or FERC
 - o Deductible as netback costs in gross value calculation

 Provide estimated amount of credits that were purchased and later adjusted on audit

200	2006-2014 Audits of AS 43.55.023 Credits							
	Amount	Count						
\$	66,967,964	39	Credits Disallowed in Audit (already cashed out under 028 fund)					
	5,057,092	12	Credits Allowed in Appeal (including settlements)					
	61,910,871	12	Credits Paid Back (paid or reduced outstanding certificates)					
		5	Credit Audits Still Open					
		3	Credit Appeals Still Open					

- For all of the audits performed through tax year 2014, the certificates have already been cashed out.
- A thorough due diligence review has been completed on all 2015 2017 credit applications.

- Provide additional clarification of difference between capital (QCE) credits and per-barrel credits
- Two main differences: incentive and monetization
- Incentive: QCE credits provided an incentive for spending; per-barrel credits provide an incentive for production
- Monetization: QCE credits could be applied against tax liability, carried forward, transferred, or sold to the state; per-barrel credits can only be used against liability in the year earned, and are limited by a company's liability before credits and minimum tax floor