

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



Presented by:

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Acronyms

- ANS – Alaska North Slope
- ANWR – Arctic National Wildlife Refuge
- Avg – Average
- Bbl – Barrel
- CBRF – Constitutional Budget Reserve Fund
- CIT – Corporate Income Tax
- DOR – Department of Revenue
- FY – Fiscal Year
- GVPP – Gross Value at Point of Production
- GVR – Gross Value Reduction
- NPR-A – National Petroleum Reserve Alaska
- OCS – Outer Continental Shelf
- PTV – Production Tax Value
- SB21 – Senate Bill 21, passed in 2013
- TAPS – Trans Alaska Pipeline System
- Ths – Thousands

Overview

- Oil and Gas Revenue Sources – how production tax fits in
 - FY 2018 – FY 2022 oil and gas revenues
- Production Tax Calculation “Order of Operations”
 - Detailed walk-through of each step of tax calculation
 - Defining commonly used terms
 - Focus on North Slope oil
 - FY 2018 – FY 2022 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 Fall 2019 Revenue Sources Book and other revenue forecasts.
- The numbers on some slides may not appear to add up due to rounding.
- 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
 - Plus bonuses, rents, and interest
 - Paid to Owner of the land: State, Federal, or Private
 - Usually 12.5% or 16.67% in Alaska, but rates vary
- Corporate Income Tax – based on net income
 - Paid to State (9.4% top rate)
 - Paid to Federal (21% top rate, used to be 35%)
 - Only C-corporations* pay this tax
- Property Tax – based on value of oil & gas property
 - Paid to State (2% of assessed value or “20 mills”)
 - Paid to Municipalities – credit offsets state tax paid
- Production Tax – based on “production tax value”
 - Paid to State – calculation to follow

* 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: Five-Year Comparison of State Revenue

	<i>History</i>	<i>History</i>	<i>Current Year</i>	<i>Forecast</i>	<i>Forecast</i>
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
ANS oil price (\$/bbl)	\$ 63.61	\$ 69.46	\$ 63.54	\$ 59.00	\$ 61.00
ANS production (thb bbl/ day)	518.5	496.9	492.1	490.5	460.1
Property Tax *	\$ 122	\$ 119	\$ 122	\$ 118	\$ 117
Corporate Income Tax	\$ 66	\$ 218	\$ 210	\$ 215	\$ 240
Production Tax	\$ 750	\$ 596	\$ 381	\$ 328	\$ 319
Royalties	\$ 1,365	\$ 1,497	\$ 1,233	\$ 1,092	\$ 1,069
CBRF Settlements	\$ 121	\$ 181	\$ 200	\$ 75	\$ 50
NPR-A Shared revenue	\$ 24	\$ 12	\$ 11	\$ 9	\$ 11
Total	\$ 2,448	\$ 2,623	\$ 2,157	\$ 1,838	\$ 1,805

Revenue amounts in \$ millions. Source: DOR Fall 2019 Revenue Sources Book.

* Property Tax is does not include municipal share.

Fiscal System: Overall Order of Operations

Royalties (State, Federal, or Private)



Property Tax



Production Tax



State Corporate Income Tax



Federal Corporate Income Tax

Production Tax "Order of Operations": FY 2021

	Per Barrel	Barrels	Value (\$ million)	
Avg ANS Oil Price (\$/bbl) & Daily Production (ths bbls)	\$59.00	490.5		
Total Annual Production/Value		179,020	\$10,562.2	
Royalty and Federal barrels		(20,492)	(\$1,209.0)	
Taxable barrels		158,528	\$9,353.2	
Downstream (Transportation) Costs (\$/bbl)	(\$9.78)	158,528	(\$1,549.7)	
Gross Value at Point of Production (GVPP)	\$49.22	158,528	\$7,803.4	
North Slope Lease Expenditures				
Deductible Operating Expenditures	(\$15.90)		(\$2,521.4)	
Deductible Capital Expenditures	(\$13.12)		(\$2,079.9)	
Total Lease Expenditures	(\$29.02)	158,528	(\$4,601.3)	
Production Tax Value (PTV)			\$3,202.2	
Production Tax				
Gross Value or Production Tax Value			Min Tax	Net Tax
Gross Value Reduction (GVR)			\$7,803.4	\$3,202.2
			\$0.0	(\$130.2)
GVPP or PTV after GVR			\$7,803.4	\$3,072.0
Tax rate			4%	35%
Tax before credits			\$312.1	\$1,075.2
Higher of minimum or net tax			\$1,075.2	
GVR Per-taxable-barrel credits				(\$26.5)
Non-GVR Per-taxable-barrel credits				(\$742.6)
Other credits against liability				(\$1.4)
Total Tax after credits				\$304.7
Other items / adjustments				\$23.4
Total Tax paid to the state				\$328.1
Non-Deductible Lease Expenditures - carried forward				\$1,322.3

Source: Department of Revenue – Fall 2019 Revenue Sources Book. Illustration only of North Slope oil production tax calculation and may not exactly match company-specific calculations

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1. Royalty & Taxable Barrels

Source: Department of Revenue – Fall 2019 Revenue Sources Book. Illustration only of North Slope oil production tax calculation and may not exactly match company-specific calculations

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2. Gross Value At Point of Production (GVPP)

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3. Lease Expenditures

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5. Gross Minimum Tax

Source: Department of Revenue – Fall 2019 Revenue Sources Book. Illustration only of North Slope oil production tax calculation and may not exactly match company-specific calculations

Gross Value Reduction

- Gross Value Reduction (GVR) is an incentive program for new fields.
- Available for the first seven years of production and ends early if ANS prices average over \$70 per barrel for any three years.
- Allows companies to exclude 20% or 30% of the gross value from the net production tax calculation.
- In lieu of sliding scale Non-GVR Per-Taxable Barrel Credit, qualifying production receives a flat \$5 GVR Per-Taxable-Barrel Credit.
- The \$5 GVR Per-Taxable-Barrel Credit can be applied to reduce tax liability below the minimum tax floor, assuming that the producer does not apply any sliding scale Non-GVR Per-Taxable Barrel Credits.

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6. Net Tax and Gross Value Reduction (GVR)

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7. Tax Credits against Liability

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8. Adjustments and Total Tax Paid

Source: Department of Revenue – Fall 2019 Revenue Sources Book. Illustration only of North Slope oil production tax calculation and may not exactly match company-specific calculations

Order of Operations: Five-Year Comparison

	ACTUAL FY 2018		ACTUAL FY 2019		Current Year FY 2020		Forecast FY 2021		Forecast FY 2022	
	Value (\$ million)		Value (\$ million)		Value (\$ million)		Value (\$ million)		Value (\$ million)	
Total Annual Production/Value	\$12,082.7		\$12,597.9		\$11,443.3		\$10,562.2		\$10,243.8	
Royalty and Federal barrels	(\$1,449.3)		(\$1,552.4)		(\$1,356.4)		(\$1,209.0)		(\$1,181.4)	
Taxable barrels	\$10,633.3		\$11,045.4		\$10,086.9		\$9,353.2		\$9,062.4	
Downstream (Transportation) Costs (\$/bbl)	(\$1,584.7)		(\$1,275.3)		(\$1,438.7)		(\$1,549.7)		(\$1,511.3)	
Gross Value at Point of Production (GVPP)	\$9,048.7		\$9,770.1		\$8,648.2		\$7,803.4		\$7,551.0	
North Slope Lease Expenditures										
Deductible Operating Expenditures	(\$2,694.6)		(\$2,679.3)		(\$2,687.4)		(\$2,521.4)		(\$2,511.7)	
Deductible Capital Expenditures	(\$1,424.2)		(\$2,014.1)		(\$2,090.1)		(\$2,079.9)		(\$2,103.7)	
Total Lease Expenditures	(\$4,118.8)		(\$4,693.4)		(\$4,777.6)		(\$4,601.3)		(\$4,615.4)	
Production Tax Value (PTV)	\$4,929.9		\$5,076.7		\$3,870.6		\$3,202.2		\$2,935.6	
Production Tax	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>
Gross Value or Production Tax Value	\$9,048.7	\$4,929.9	\$9,770.1	\$5,076.7	\$8,648.2	\$3,870.6	\$7,803.4	\$3,202.2	\$7,551.0	\$2,935.6
Gross Value Reduction (GVR)	\$0.0	(\$88.6)	\$0.0	(\$107.1)	\$0.0	(\$104.1)	\$0.0	(\$130.2)	\$0.0	(\$100.9)
GVPP or PTV after GVR	\$9,048.7	\$4,841.3	\$9,770.1	\$4,969.6	\$8,648.2	\$3,766.5	\$7,803.4	\$3,072.0	\$7,551.0	\$2,834.7
Tax rate	4%	35%	4%	35%	4%	35%	4%	35%	4%	35%
Tax before credits	\$361.9	\$1,694.5	\$390.8	\$1,739.4	\$345.9	\$1,318.3	\$312.1	\$1,075.2	\$302.0	\$992.1
Higher of minimum or net tax	\$1,694.5		\$1,739.4		\$1,318.3		\$1,075.2		\$992.1	
Per-taxable-barrel credits	(\$1,001.3)		(\$1,002.0)		(\$921.8)		(\$769.1)		(\$693.5)	
Other credits against liability	(\$33.0)		(\$24.1)		(\$29.3)		(\$1.4)		(\$1.3)	
Total Tax after credits	\$660.1		\$713.3		\$367.2		\$304.7		\$297.4	
Other items / adjustments	\$89.8		(\$117.8)		\$13.5		\$23.4		\$22.0	
Total Tax paid to the state	\$749.9		\$595.5		\$380.7		\$328.1		\$319.4	
<i>Lease Expenditures Earned & Carried Forward</i>	\$0.0		\$544.0		\$470.7		\$1,322.3		\$1,550.4	

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THANK YOU

Please find our contact information below:

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Addendum: Distribution of Cash Flows and Additional Requested Information

Distribution of Cash Flows: North Slope Oil

- Share of net cash flows after transportation costs and lease expenditures that go to government vs company
- Modeled two ways
 - Typical non-GVR production
 - All North Slope production and spending

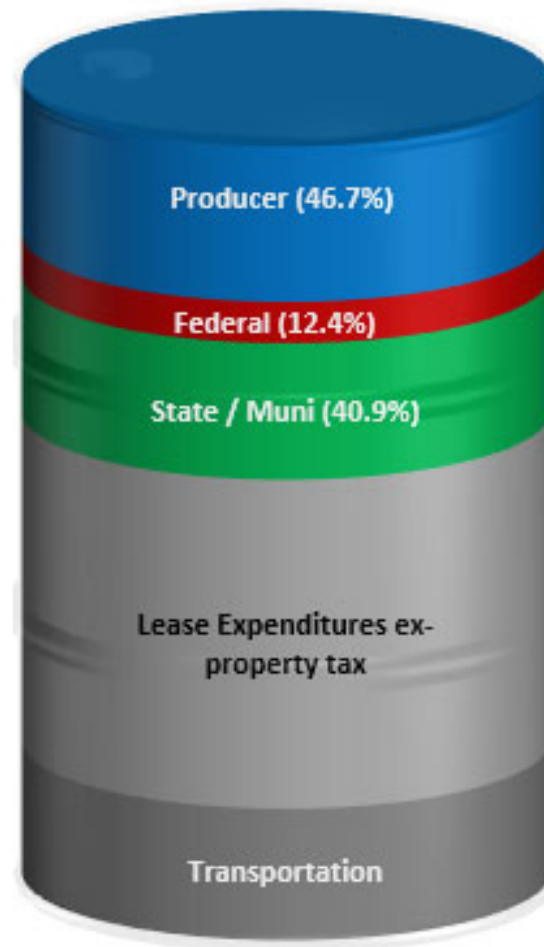
Distribution of Cash Flows: North Slope Oil Typical Non-GVR Production

- Charts shown are produced using DOR "Snapshot" model
- Assumes a single company with all deductible costs
- Simplifying assumptions such as non-GVR oil only; North Slope only; etc..
- Transportation costs, production, and lease expenditures, and other assumptions from Fall 2019 forecast for FY 2021
- Prices are expressed in nominal terms

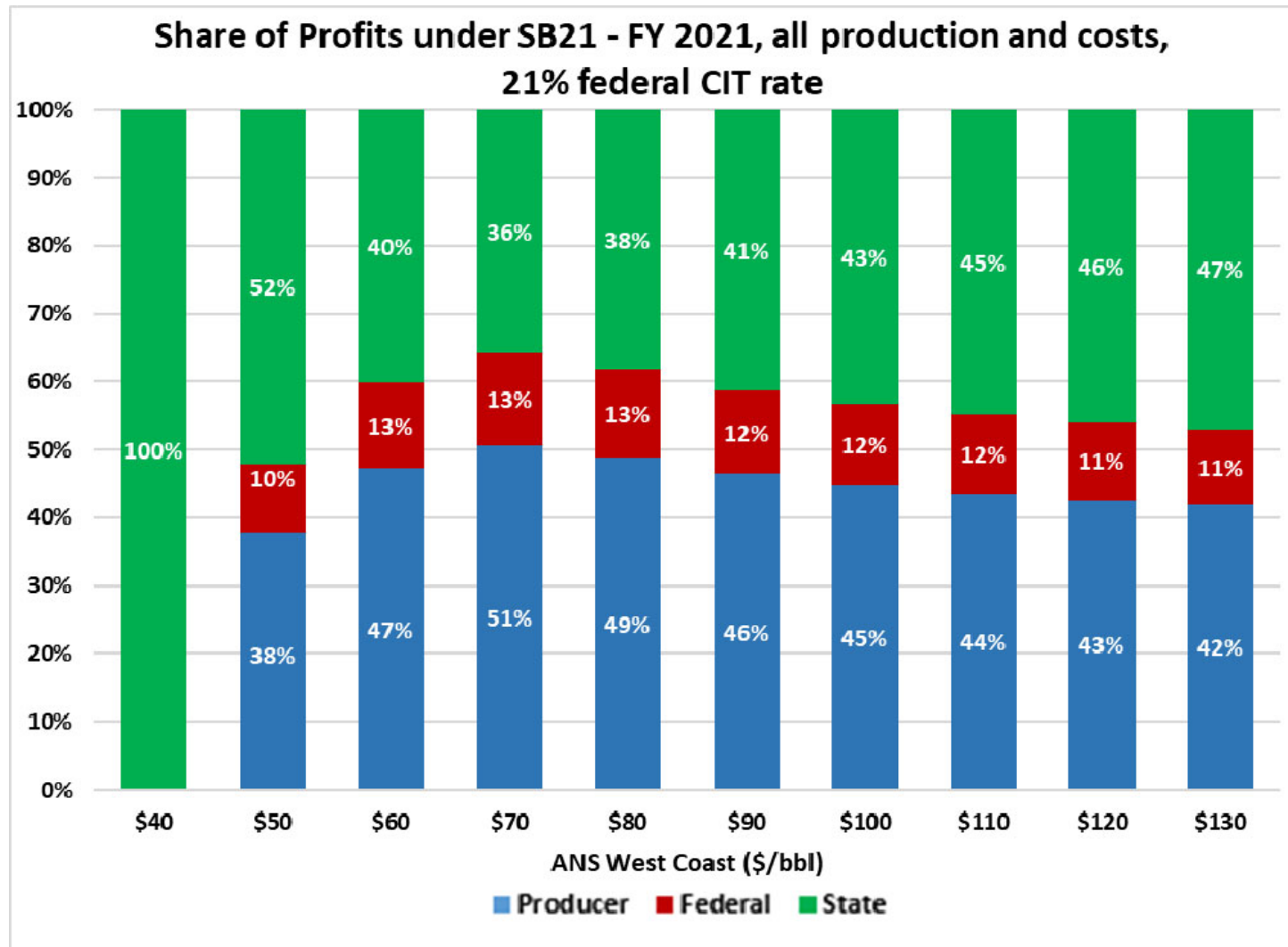
Transportation Costs (\$/bbl)	9.78
Royalty Rate	12.50%
State CIT Rate	6.50%
Federal CIT Rate	21.00%
Deductible Upstream CAPEX (\$/ total bbl)*	11.62
Deductible Upstream OPEX (\$/ total bbl)*	<u>14.08</u>
Total Upstream Costs (\$/ bbl)*	25.70
Daily Production (ths bbls / day)	490.5
Property Tax (\$/bbl)	1.25

* Upstream cost in this analysis is calculated per each barrel produced including royalty barrels. Costs represent total estimated deductible costs for FY 2021 and incorporate estimated industry spending in the Fall 2019 forecast.

Distribution of Cash Flows from One Barrel of Typical Non-GVR Production, FY 2021



Government Take at Range of Prices from Typical Non-GVR Production



Distribution of Cash Flows: North Slope Oil Using All Slope-wide Production and Costs

- Charts shown are produced using DOR “Snapshot” model
- Assumes two companies with all costs (one GVR, one non-GVR)
- Simplifying assumptions such as oil only; North Slope only; etc..
- Transportation costs, production, and lease expenditures, and other assumptions from Fall 2019 forecast for FY 2021
- Prices are expressed in nominal terms

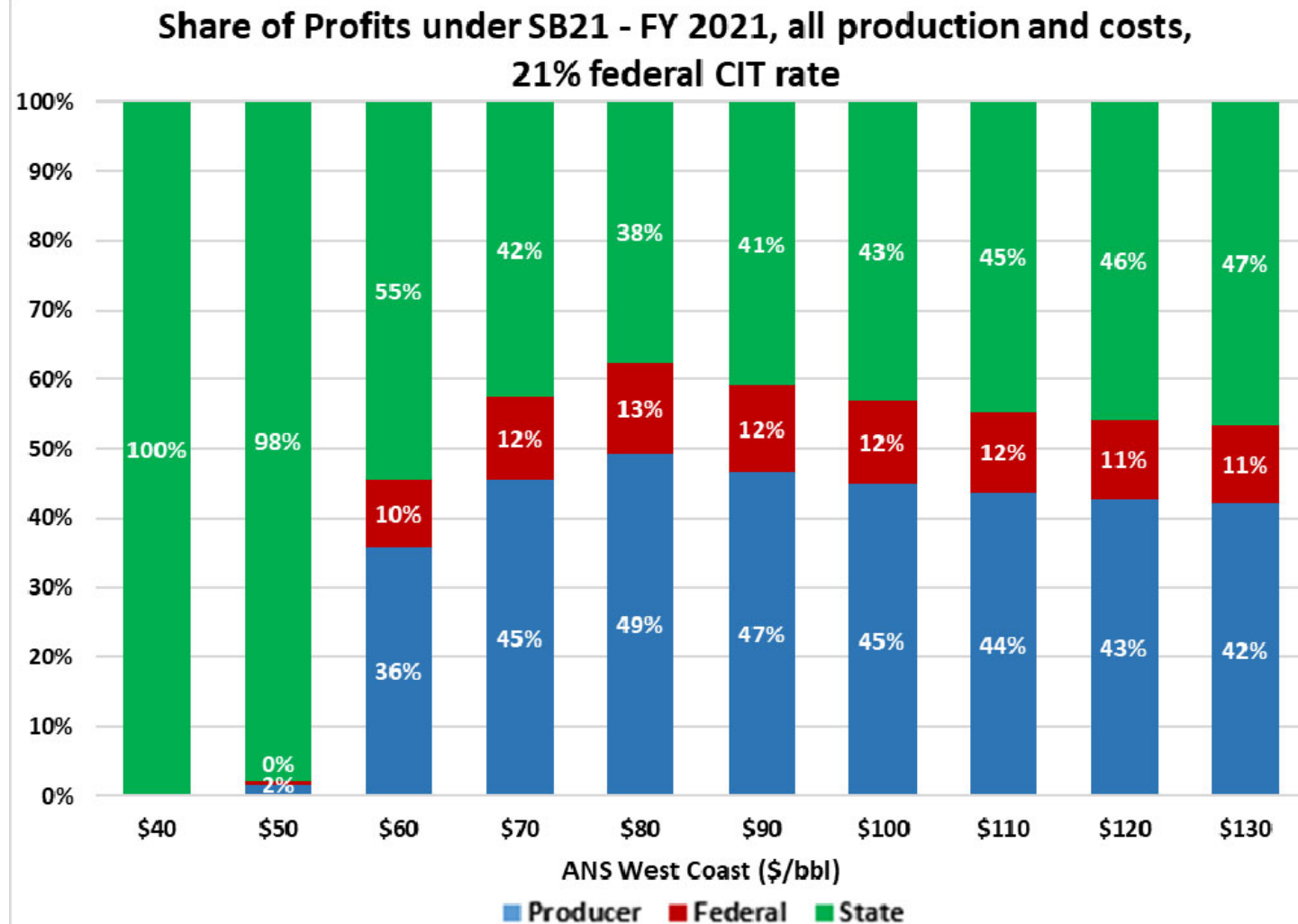
Transportation Costs (\$/bbl)	9.78
Royalty Rate	12.50%
State CIT Rate	6.50%
Federal CIT Rate	21.00%
TOTAL Upstream CAPEX (\$/ total bbl)*	18.86
TOTAL Upstream OPEX (\$/ total bbl)*	<u>14.90</u>
Total Upstream Costs (\$/ bbl)*	33.76
Daily Production (ths bbls / day)	490.5
GVR Production (ths bbls / day)	51.2
Property Tax (\$/bbl)	1.25

* Upstream cost in this analysis is calculated per each barrel produced including royalty barrels. Costs represent total estimated costs for FY 2021 and incorporate estimated industry spending in the Fall 2019 forecast.

Distribution of Cash Flows from One Barrel, Using All Slope-wide Production and Costs, FY 2021



Government Take at Range of Prices from All Slope-wide Production and Costs

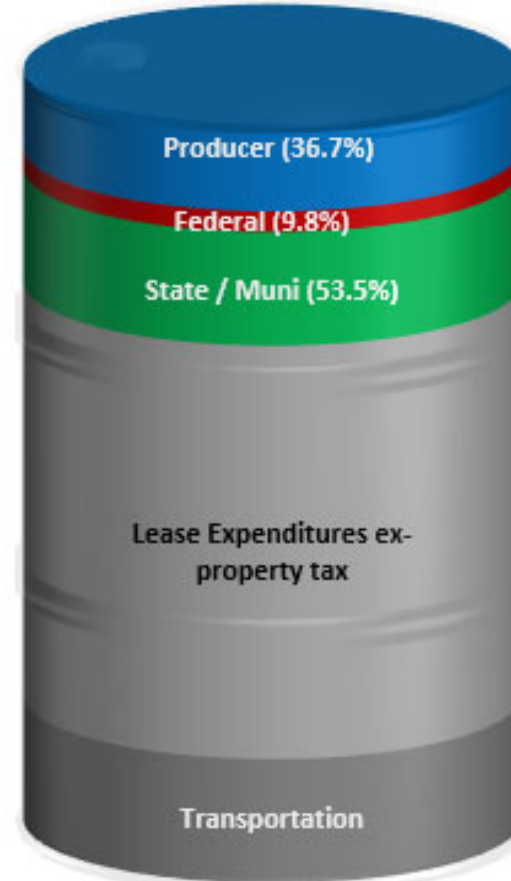


Impact of Corporate Structure on Cash Flows, an Illustration Using Slope-wide Production & Costs, FY 21

Assuming All Production Subject to State Corporate Income Tax



Assuming No Production Subject to State Corporate Income Tax

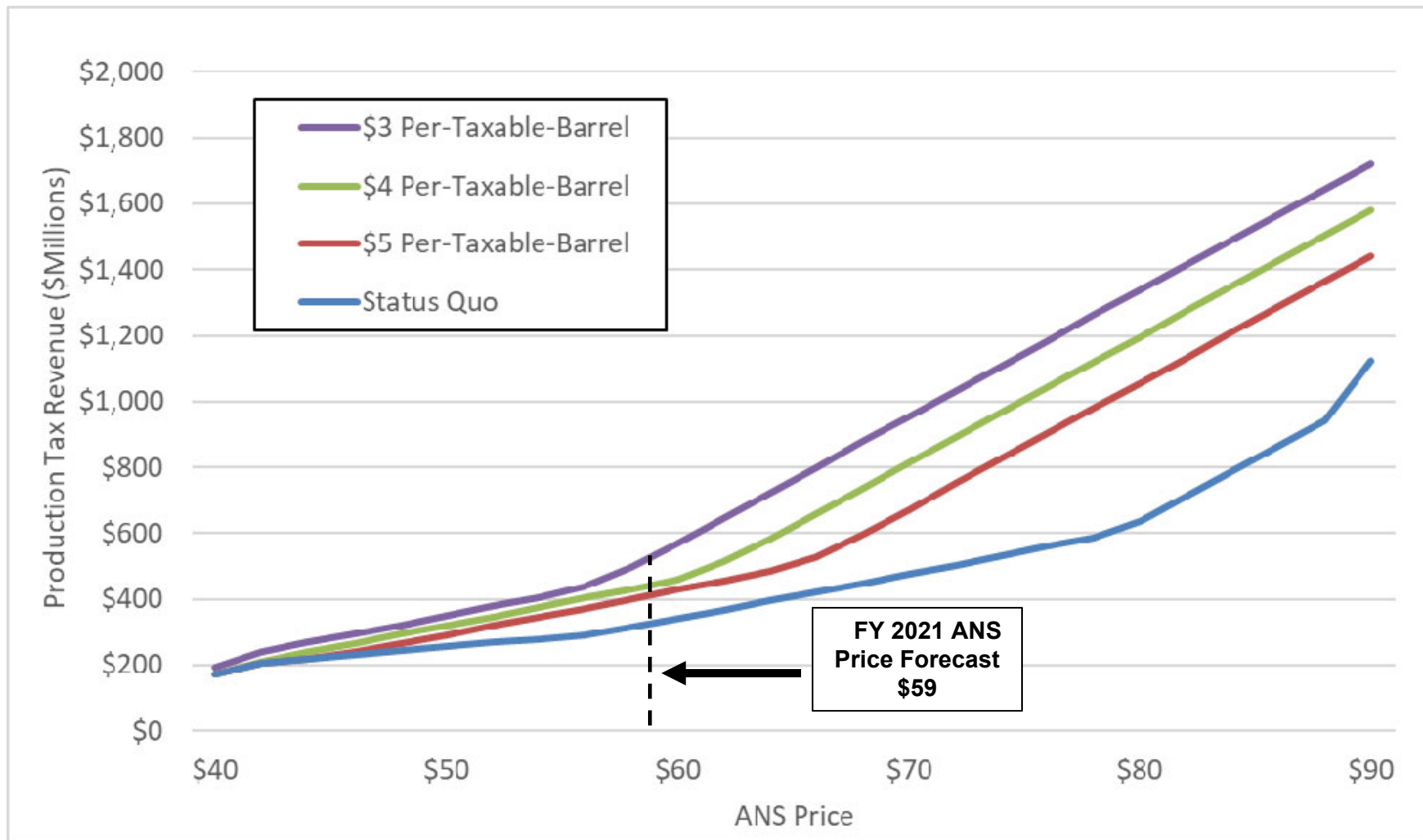


For Production subject to State Corporate Income Tax (CIT), we assume a State CIT average rate of 6.5% and a Federal CIT rate of 21%
For Production not subject to State CIT, we assume a State tax rate of 0% and a Federal overall tax rate of 21%.

FY 2021 Tax Calculation, Assuming Varying Non-GVR Per-Taxable-Barrel Credit Rates

	\$8 per-taxable-barrel		\$5 per-taxable-barrel		\$4 per-taxable-barrel		\$3 per-taxable-barrel	
Tax rate	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>	<u>Min Tax</u>	<u>Net Tax</u>
	4%	35%	4%	35%	4%	35%	4%	35%
Tax before credits	\$312.1	\$1,075.2	\$312.1	\$1,075.2	\$312.1	\$1,075.2	\$312.1	\$1,075.2
Higher of minimum or net tax	\$1,075.2		\$1,075.2		\$1,075.2		\$1,075.2	
GVR Per-taxable-barrel credits		(\$26.5)		(\$31.0)		(\$31.0)		(\$52.1)
<i>Non-GVR per-taxable-barrel credits</i>		(\$742.6)		(\$624.5)		(\$560.2)		(\$422.1)
Other credits against liability		(\$1.4)		(\$22.6)		(\$56.1)		(\$89.5)
Total Tax after credits	\$304.7		\$397.1		\$427.9		\$511.5	
Other items / adjustments	\$23.4		\$17.2		\$17.2		\$19.6	
Total Tax paid to the state	\$328.1		\$414.3		\$445.2		\$531.1	

FY 2021 Production Tax Sensitivity, Assuming Varying Non-GVR Per-Taxable-Barrel Credit Rates



"Count the Cash": Petroleum Net Fiscal Impact

valuing carry-forward expenditures at net tax rate

	History FY 2018	History FY 2019	Forecast FY 2020	Forecast FY 2021
Petroleum Property Tax (State Share)	121.6	119.5	121.6	117.9
Petroleum Corporate Income Tax	66.4	217.7	210.0	215.0
Production Tax				
<i>Production Tax Revenue (1)</i>	749.9	595.5	380.8	328.1
<i>Credits Purchased by the State (Assuming Statutory Appropriation)</i>	(78.0)	(100.0)	(1.1)	(166.0)
<i>Lease Expenditures Earned & Carried Forward (Tax Value)</i>	0.0	(190.4)	(164.7)	(462.8)
Production Tax, Net of Above	671.9	305.1	215.0	(300.7)
Oil & Gas Royalties (Includes Rents, Interest & Bonuses)	1,365.4	1,497.0	1,233.5	1,092.1
Other (2)	145.0	193.5	211.3	84.5
Petroleum Revenue to State, Net of Above	2,370.3	2,332.8	1,991.4	1,208.8

Notes: Includes Restricted and Unrestricted Revenue

(1) Includes Hazardous Release

(2) Includes NPR-A Rents, Royalties, Bonuses, and Constitutional Budget Reserve Fund Deposits

(3) Some lease expenditures earned in FY 2018 may be represented in FY 2019.

"Count the Cash": Petroleum Net Fiscal Impact

assuming no value to carry-forward expenditures

	History FY 2018	History FY 2019	Forecast FY 2020	Forecast FY 2021
Petroleum Property Tax (State Share)	121.6	119.5	121.6	117.9
Petroleum Corporate Income Tax	66.4	217.7	210.0	215.0
Production Tax				
<i>Production Tax Revenue (1)</i>	749.9	595.5	380.8	328.1
<i>Credits Purchased by the State (Assuming Statutory Appropriation)</i>	(78.0)	(100.0)	(1.1)	(166.0)
<i>Lease Expenditures Earned & Carried Forward (Assuming Minimum Tax)</i>	0.0	0.0	0.0	0.0
Production Tax, Net of Above	671.9	495.5	379.7	162.1
Oil & Gas Royalties (Includes Rents, Interest & Bonuses)	1,365.4	1,497.0	1,233.5	1,092.1
Other (2)	145.0	193.5	211.3	84.5
Petroleum Revenue to State, Net of Above	2,370.3	2,523.2	2,156.1	1,671.6

Notes: Includes Restricted and Unrestricted Revenue

(1) Includes Hazardous Release

(2) Includes NPR-A Rents, Royalties, Bonuses, and Constitutional Budget Reserve Fund Deposits

(3) Some lease expenditures earned in FY 2018 may be represented in FY 2019.

State Petroleum Revenue by Land Type

Land status	Revenue component			
	Production tax / credits	Royalty	Corporate Income Tax	Property Tax
Offshore beyond 6 miles - Federal OCS	Do not apply	Federal royalties applies; zero shared back to state (in Alaska; other states do receive shared royalties)	Not included in apportionment factor	Does not apply
Offshore 3-6 miles - Federal OCS 8(g) area	Do not apply	Federal royalties applies; 27% shared back to state with no restrictions	Not included in apportionment factor	Does not apply
State lands and offshore 0-3 miles	All credits available; tax applies to all taxable production	State royalty applies	All property, production, and sales included in apportionment factor	Applies to all oil and gas property
NPR-A - federal owned	All credits available; tax applies to all taxable production	Federal royalty applies; 50% of royalties are shared back to state but must be used for benefit of local communities	All property, production, and sales included in apportionment factor	Applies to all oil and gas property
ANWR	All credits available; tax applies to all taxable production	Federal royalty applies; 50% shared back to state with no restrictions (under current law)	All property, production, and sales included in apportionment factor	Applies to all oil and gas property
Other federal land	All credits available; tax applies to all taxable production	Federal royalties applies; 90% shared back to state with no restrictions	All property, production, and sales included in apportionment factor	Applies to all oil and gas property
Private land (including Alaska Native Corporation)	All credits available; tax applies to all taxable production	Privately negotiated royalty applies; not shared with state. However state levies 5% (oil) or 1.667% (gas) gross tax on the value of private landowner royalty interest as part of production tax	All property, production, and sales included in apportionment factor	Applies to all oil and gas property