



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Revenue

TAX DIVISION

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February 19, 2016

The Honorable Paul Seaton
Alaska State Representative
State Capitol Room 102
Juneau AK 99801

Representative Seaton,

This letter is in response to your request to the Department of Revenue on December 2, 2015 for life cycle modeling of a hypothetical Cook Inlet oil project. You indicated that you would like modeling of the development of an oil field similar in size to the 50 million barrel field that we modeled for the North Slope life cycle analysis provided to you in a letter dated November 5, 2015 (with subsequent updates containing additional requested information).

Like the development of oil fields on the North Slope, the method and cost to develop one oil field in Cook Inlet could be completely different than the method and cost to develop another. Among the largest influencing factors is whether the oil is located on land or offshore. Whereas some Cook Inlet fields can be developed with conventional drilling or with extended reach drilling methods, there are potential developments that require the installation of offshore drilling platforms. The method in which the field is developed will influence the cost of the project, and therefore it's economic viability. Our Cook Inlet modeling has been prepared with such cost variability in mind. Presented in this analysis is one set of assumptions about production and costs, but we can provide additional analyses as appropriate.

The analysis presented in this letter contemplates the development of known resources from a Cook Inlet oil field by a company that has no other business activity in the state. Over the 30-year life of the field, the company produces approximately 50 million barrels of technically and economically recoverable light conventional oil, with oil production peaking at 16,900 barrels per day. The field pays a 12.5% royalty rate.

Capital costs to develop the field total approximately \$600 million, or about \$12 per barrel, with most of the costs incurred early in the project life. Operating costs average \$20 per barrel and total \$1 billion over the 30-year period. The field is developed under the current Alaska production tax statutes for Cook Inlet oil, which includes credits for exploration, capital expenditures, well lease expenditures, net operating losses, and small producers. We assume that the company that develops the field receives cash refunds from the State for all production tax credits received in excess of any production tax liability. Current statutes also include Cook Inlet production tax limitations, which on oil are currently zero. These limitations are set to expire in

CY 2022, and our modeling incorporates that expiration date. All oil prices and oil development costs are in real 2016 dollars—that is, they are not adjusted in future years for inflation.

On the following pages are some of the results of the 30-year life cycle modeling given these assumptions. The end of the report includes a table showing Net Present Values (NPV) using the Permanent Fund's September 2015 earnings rate of 6.15% as a discount rate. NPV is shown for Total State and Municipal Revenues, General Fund Unrestricted Revenue to the state, and Total Production Tax Revenues (including credits) over the 30-year period.

I hope you find the enclosed analysis to be useful. Please do not hesitate to contact me if you would like further analysis or if you have any questions.

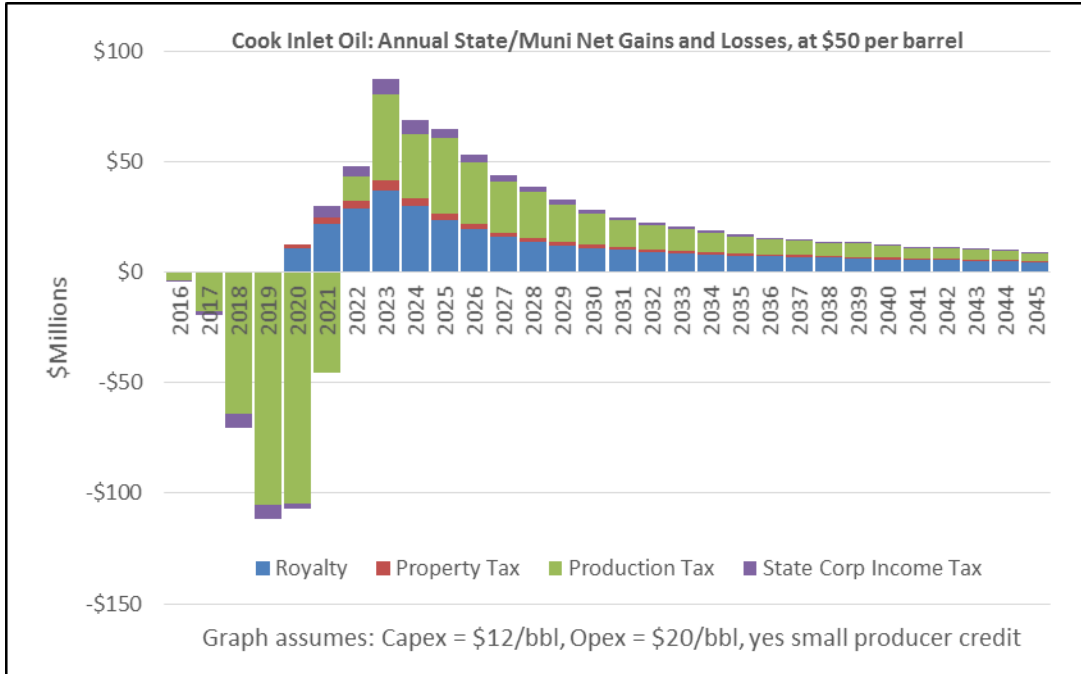
Sincerely,

A handwritten signature in blue ink, appearing to read 'K Alper', is written over the typed name.

Ken Alper
Tax Division Director

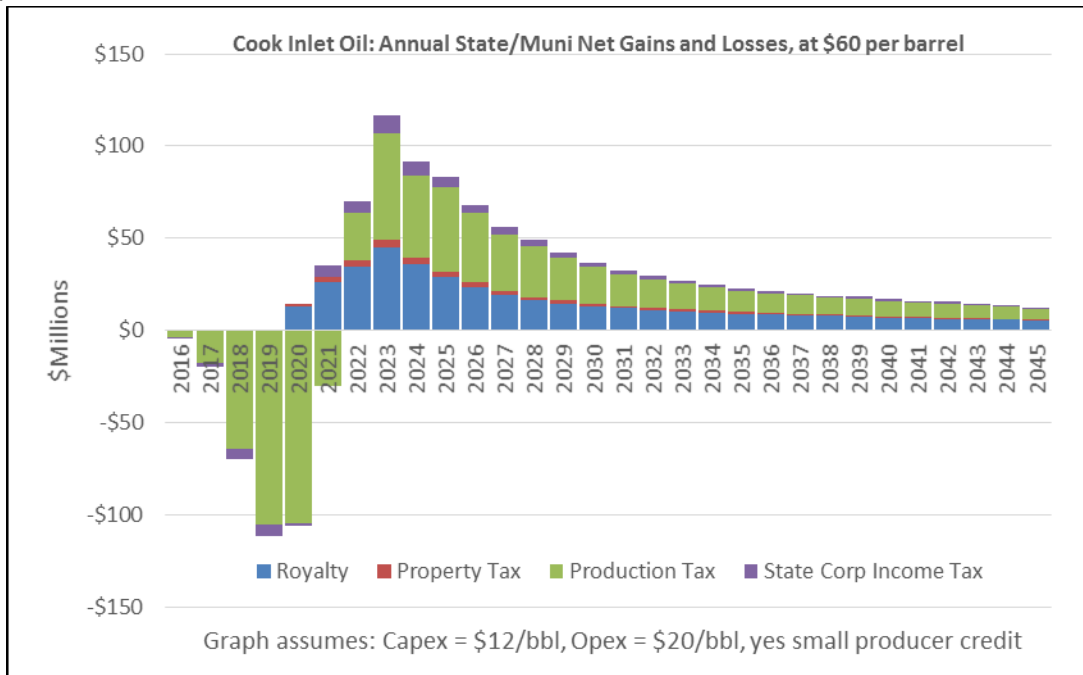
Cook Inlet Oil: Annual State/Muni Net Gains and Losses

Graph 1: Annual State/Muni Net Gains and Losses and NPV 6.15%, \$50 Oil Price



| |
|---|
| Total Annual State/Muni Losses = \$316 million |
| Total Annual State/Muni Gains = \$691 million |
| Net State/Muni Gain (Loss) = \$375 million |
| Production Tax NPV 0.0615 = \$68 million |

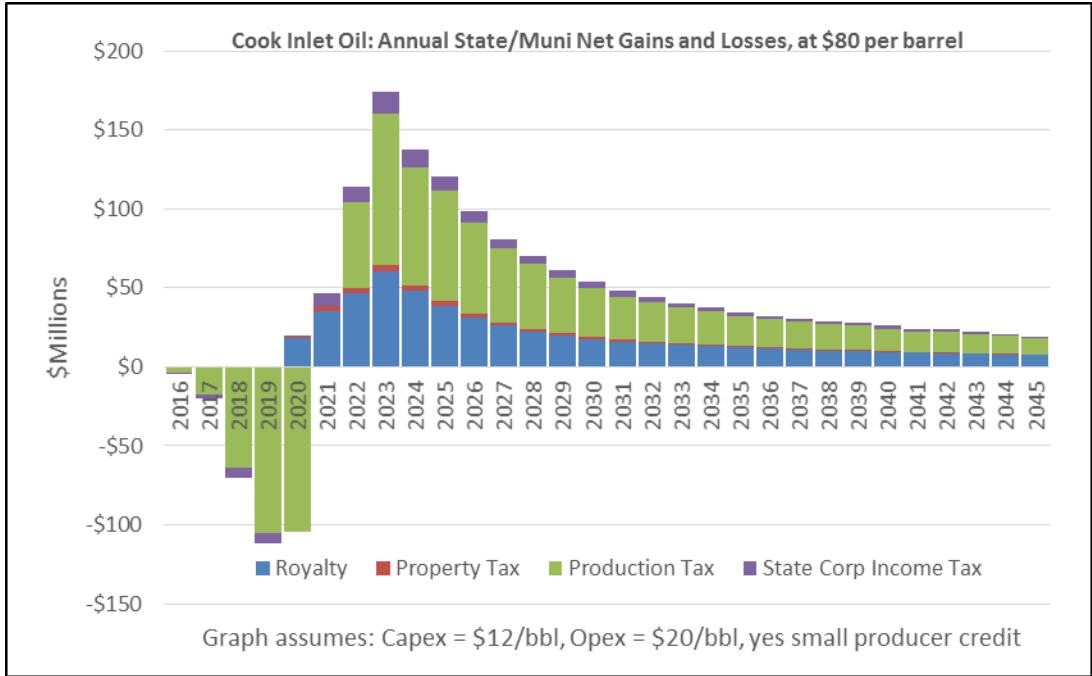
Graph 2: Annual State/Muni Net Gains and Losses and NPV 6.15%, \$60 Oil Price



| |
|---|
| Total Annual State/Muni Losses = \$297 million |
| Total Annual State/Muni Gains = \$922 million |
| Net State/Muni Gain (Loss) = \$625 million |
| Production Tax NPV 0.0615 = \$190 million |

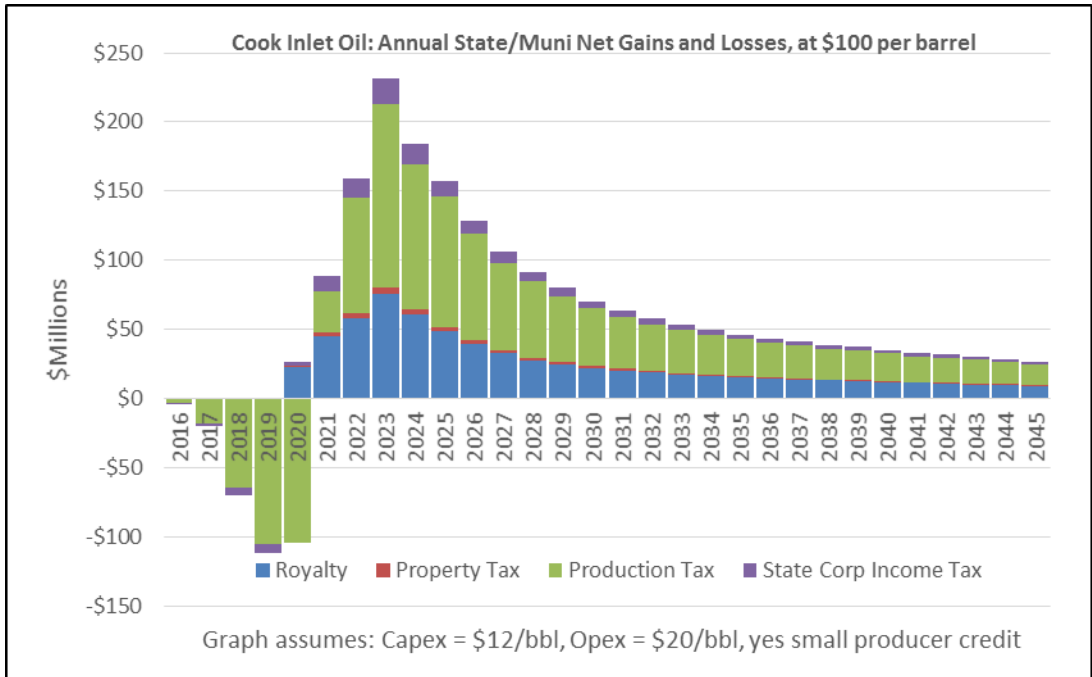
Cook Inlet Oil: Annual State/Muni Net Gains and Losses

Graph 3: Annual State/Muni Net Gains and Losses and NPV 6.15%, \$80 Oil Price



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|--|
| Total Annual State/Muni Losses = \$290 million |
| Total Annual State/Muni Gains = \$1417 million |
| Net State/Muni Gain (Loss) = \$1127 million |
| Production Tax NPV 0.0615 = \$432 million |

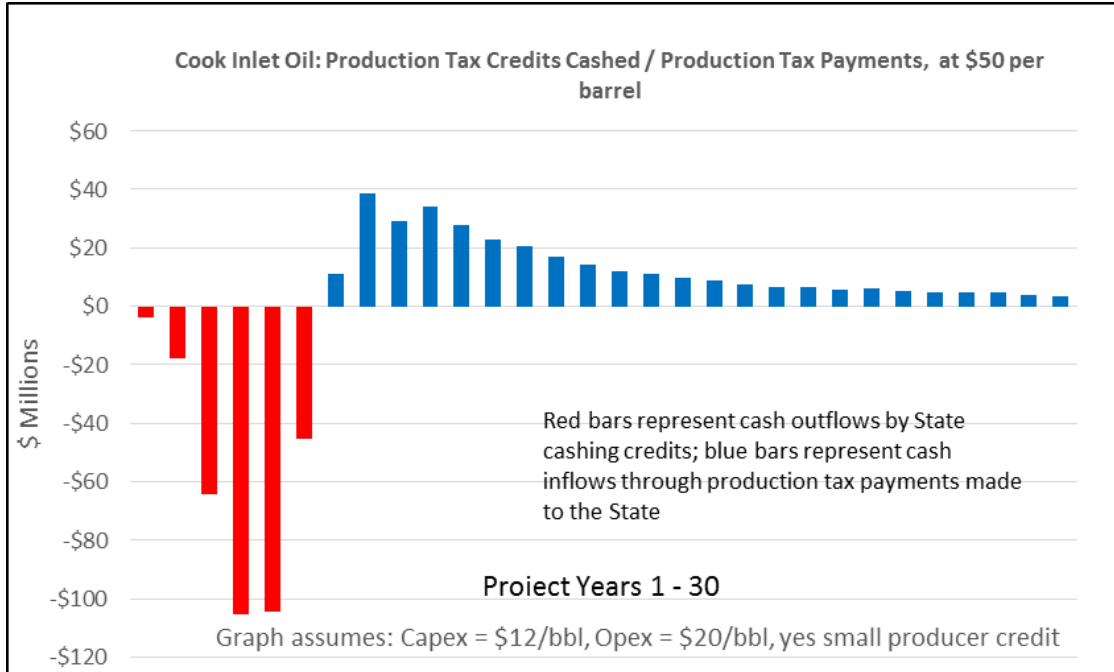
Graph 4: Annual State/Muni Net Gains and Losses and NPV 6.15%, \$100 Oil Price



| |
|--|
| Total Annual State/Muni Losses = \$284 million |
| Total Annual State/Muni Gains = \$1911 million |
| Net State/Muni Gain (Loss) = \$1628 million |
| Production Tax NPV 0.0615 = \$674 million |

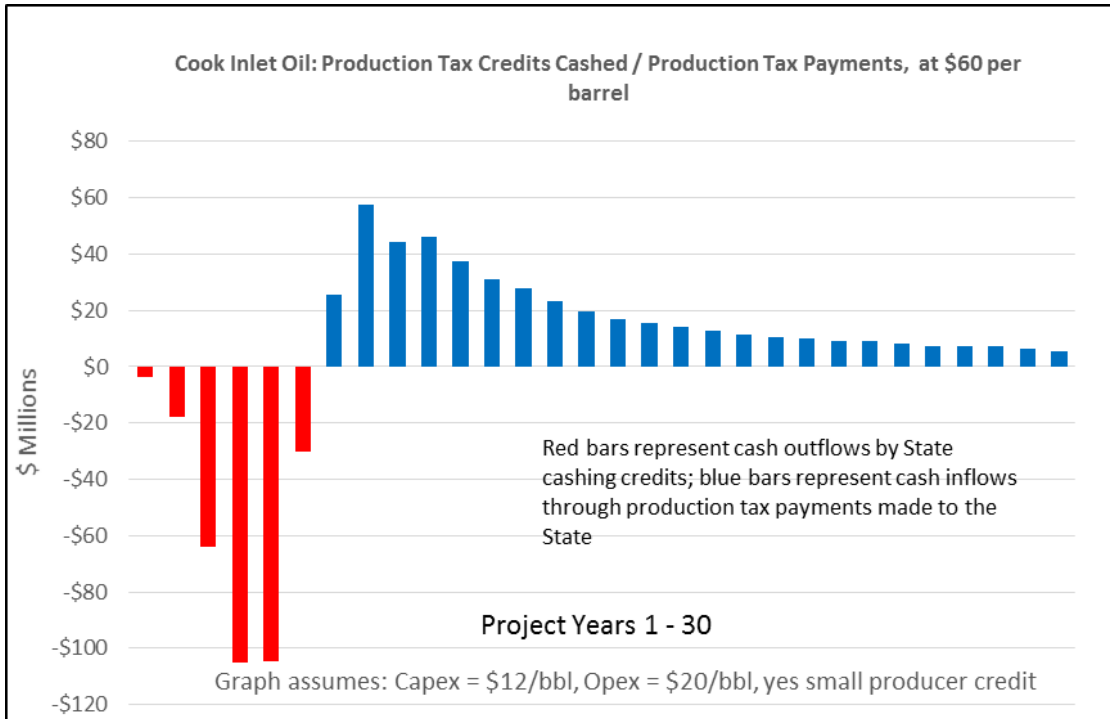
Cook Inlet Oil: Production Tax Credits Cashed and Payments

Graph 5: Production Tax Credits Cashed/Production Tax Payments and NPV 6.15%, \$50 Oil Price



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|---|
| Production Tax Credits Used = \$341 million |
| Production Tax Paid = \$317 million |
| Net Production Tax = \$-24 million |
| Production Tax NPV 0.0615 = \$-121 million |

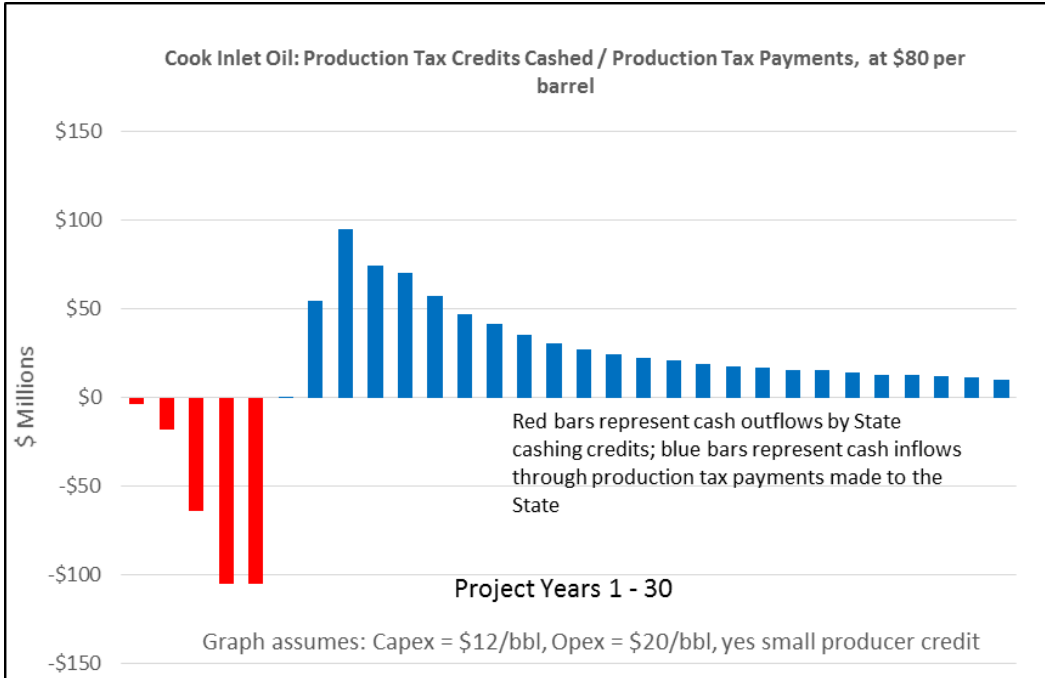
Graph 6: Production Tax Credits Cashed / Production Tax Payments and NPV 6.15%, \$60 Oil Price



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| Production Tax Credits Used = \$326 million |
| Production Tax Paid = \$465 million |
| Net Production Tax = \$139 million |
| Production Tax NPV 0.0615 = \$-42 million |

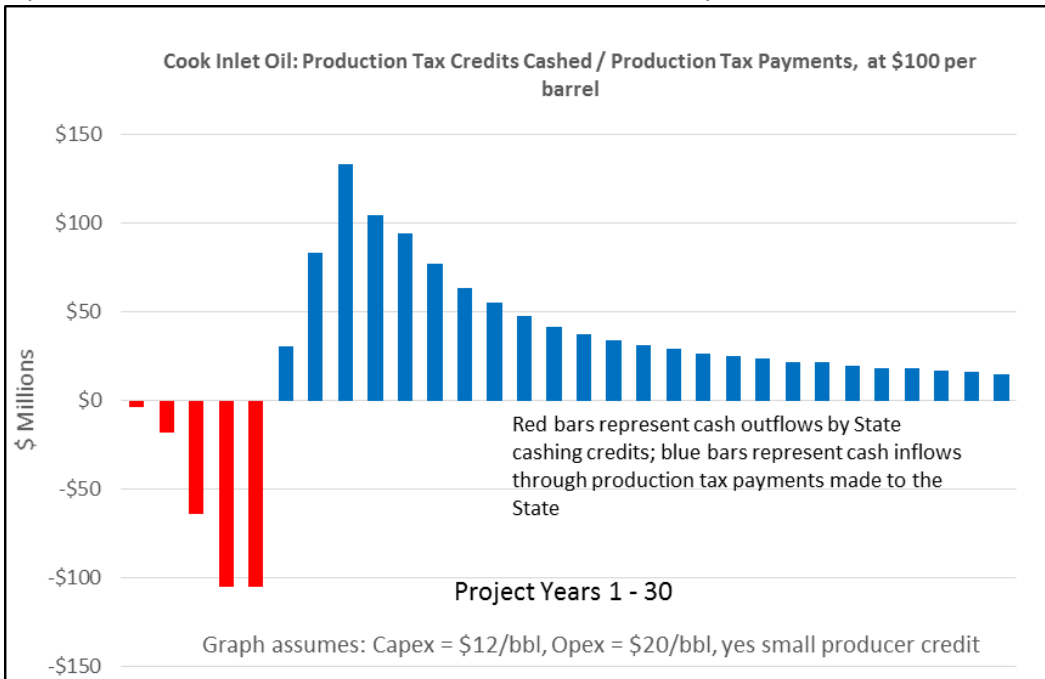
Cook Inlet Oil: Production Tax Credits Cashed and Payments

Graph 7: Production Tax Credits Cashed / Production Tax Payments and NPV 6.15%, \$80 Oil Price



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| Production Tax Credits Used = \$296 million |
| Production Tax Paid = \$761 million |
| Net Production Tax = \$466 million |
| Production Tax NPV 0.0615 = \$115 million |

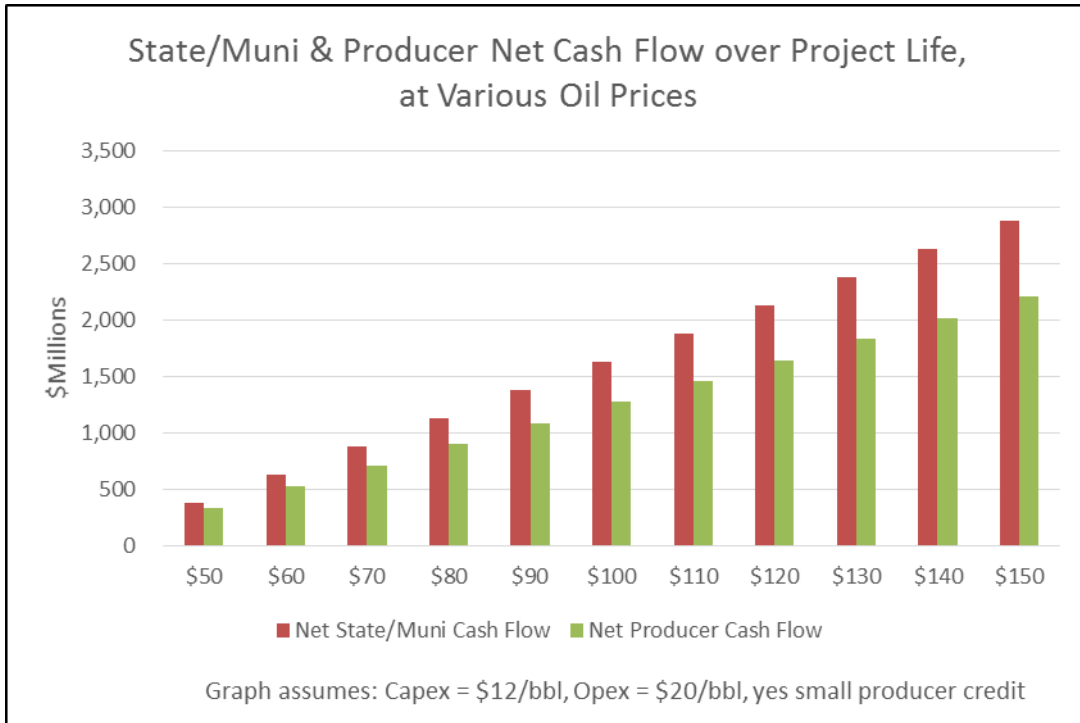
Graph 8: Production Tax Credits Cashed / Production Tax Payments and NPV 6.15%, \$100 Oil Price



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| Production Tax Credits Used = \$296 million |
| Production Tax Paid = \$1088 million |
| Net Production Tax = \$792 million |
| Production Tax NPV 0.0615 = \$273 million |

Cook Inlet Oil: Net Cash Flow over Project Life

Graph 9: State/Muni & Producer Net Cash Flow over Project Life



Net Present Value of 30-Year Project

Total Revenues to State/Muni at NPV6.15%

| Oil Price | Producer Total Revenues NPV 6.15% in \$Millions | State/Muni Total Revenues NPV 6.15% in \$Millions | GFUR* Approximation NPV 6.15% in \$Millions | Production Tax <u>Only</u> NPV 6.15% in \$Millions |
|-----------|---|---|---|--|
| \$50 | 120 | 68 | 20 | -121 |
| \$60 | 211 | 190 | 133 | -42 |
| \$80 | 393 | 432 | 359 | 115 |
| \$100 | 576 | 674 | 585 | 273 |

Note: *The values shown in columns two and three of this table include all revenue from the project as divided between the Producer and the State/Muni. Total State/Muni revenue includes all taxes (production, corp income and property), and all royalties. The fourth column is the same as the third column minus 25% of royalties and minus the municipal share of property tax (about 49%), approximating General Fund Unrestricted Revenue revenue from the project. The State currently receives about 51% of property tax collected from Kenai Peninsula Borough properties.