THE STATE of ALASKA
GOVERNOR BILL WALKER

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February 21, 2018

The Honorable Andy Josephson and the Honorable Geran Tarr
Alaska State Representatives
Co-Chairs, House Resource Committee
State Capitol Rooms 102 and 126
Juneau, AK 99801

Dear Co-Chairs Josephson and Tarr:

The purpose of this letter is to provide you with responses to the questions asked of the Department of Revenue (DOR) during my presentation to the House Resources Committee on January 26, 2018. Please see questions in italics and our responses immediately below the questions.

1. ***Update Slide 9 with the Royalty Revenue information.***

   It was requested to add the royalty revenue to the table in Slide 9. Because the analysis on this slide looks at a single taxable barrel, it does not translate naturally to royalty revenue information. However, a Total Royalty Revenue Forecast is shown at the bottom of the table. This assumes a royalty rate of 12.5% applied to the total barrels produced of ~192 million which is equivalent to the forecasted 170 million taxable barrels. This is for illustrative purposes only, assuming fixed state royalties on all North Slope production, and therefore does not match the *Fall 2017 Revenue Sources Book* amounts for FY19 forecasted royalty revenue.

Revenue Impact is a Function of Price

Production Tax Calculation At Different Prices

per one barrel of taxable oil; FY19 costs per Fall 17 RSB

	Price	$40	$50	$60	$70	$80	$90	$100
	Transport	$9.86	$9.86	$9.86	$9.86	$9.86	$9.86	$9.86
	GVPP	$30.14	$40.14	$50.14	$60.14	$70.14	$80.14	$90.14
	Lease Expend	$26.79	$26.79	$26.79	$26.79	$26.79	$26.79	$26.79
	PTV (net)	$3.35	$13.35	$23.35	$33.35	$43.35	$53.35	$63.35
	Tax at 35%	$1.17	$4.67	$8.17	$11.67	$15.17	$18.67	$22.17
	Per-BBL Credit	$8	$8	$8	$8	$8	$7	$6
Existing	Tax per Net	-$6.83	-$3.33	$0.17	$3.67	$7.17	$11.67	$16.17
Existing	4% Minimum Tax	$1.21	$1.61	$2.01	$2.41	$2.81	$3.21	$3.61
Existing	**Higher Of**	**$1.21**	**$1.61**	**$2.01**	**$3.67**	**$7.17**	**$11.67**	**$16.17**
Proposed	Tax per Net	-$6.83	-$3.33	$0.17	$3.67	$7.17	$11.67	$16.17
Proposed	7% Minimum Tax	$2.11	$2.81	$3.51	$4.21	$4.91	$5.61	$6.31
Proposed	**Higher Of**	**$2.11**	**$2.81**	**$3.51**	**$4.21**	**$7.17**	**$11.67**	**$16.17**
	Tax Increase with 170 million taxable barrels ($millions)	**$154**	**$205**	**$256**	**$91**	**$0**	**$0**	**$0**
	Total Estimated Royalty Revenue for 170 million taxable barrels ($millions)	**$725**	**$966**	**$1206**	**$1447**	**$1687**	**$1928**	**$2169**

2. ***Provide lifecycle analysis information for a hypothetical small field.***

   It was requested to provide similar information in Slide 18 for a small field. We are using the same size small field that was modeled last year with a total field production of 50 million barrels and peak production of about 15,000 barrels per day. We have completed that lifecycle analysis and have also included information for a $70 oil price scenario. We have added the $70 oil price scenario to the large field lifecycle analysis which is also included as a revision to Slide 18.

   The lifecycle analysis results for the small field are similar to the large field in that the proposed HB288 oil and gas tax bill increases the amount of estimated production tax due and thus reduces the producer's internal rate of return (IRR) at each oil price point. But, the breakeven price for the small field is quite a bit lower than the large field. The breakeven point is the price when the net present value (NPV) equals zero. This is true even though the small fields have higher per-barrel capital costs to develop compared to a large field. However, due to their faster development timing and more rapid ramp-up of production, they are able to recoup their larger initial investment in the same time period as the large field. Also, the small fields have a ten-year shorter lifecycle which greatly impacts the time

value of money. As a result, the small fields show a higher rate of return for the producer, and a lower breakeven point, than the large fields.

Issue for Consideration – New Fields

Lifecycle Analysis for hypothetical new field
(Large field model; 750 million barrels,
120,000 bbl / day peak production)

	Total Production Tax ($millions)		Producer IRR		Breakeven Price (NPV 10)	
Oil Price	Status Quo	HB288	Status Quo	HB288	Status Quo	HB288
$ 60.00	5,918	6,288	7.5%	7.4%	$72	$73
$ 70.00	9,442	9,854	9.6%	9.4%		
$ 80.00	13,484	13,652	11.4%	11.2%		
Fall 17 FC	6,635	6,988	8.0%	7.8%		

Issue for Consideration – New Fields

Lifecycle Analysis for hypothetical new field
(Small field model; 50 million barrels,
15,000 bbl / day peak production)

	Total Production Tax ($millions)		Producer IRR		Breakeven Price (NPV 10)	
Oil Price	Status Quo	HB288	Status Quo	HB288	Status Quo	HB288
$ 60.00	93	127	8.7%	8.4%	$63	$64
$ 70.00	234	265	13.1%	12.8%		
$ 80.00	420	426	17.0%	16.8%		
Fall 17 FC	104	132	8.8%	8.6%		

3. Clarify the timing of the downlift provisions of HB111.

There was question requiring clarification regarding when the so-called "downlift" provisions of carried forward annual losses (CFALs) in HB111 start. The issue is whether the clock starts when the carry-forwards are earned, or when the field starts production. HB111 states that the timing is based on when they are earned.

HB111 Section. 28. AS 43.55.165 added language:

(p) A carried-forward annual loss for a lease expenditure incurred on a lease or property that

(1) did not commence regular production of oil or gas before or during the year the lease expenditure was incurred decreases in value each year by one-tenth of the value of the carried-forward annual loss in the preceding year, beginning January 1 of the 11th calendar year after the lease expenditure is carried forward under(a)(3) of this section; a decrease in value under this paragraph does not apply for a year in which the department determines that regular production of oil or gas did not commence because of a natural disaster, an injunction or other court order, or an administrative order;

(2) commenced regular production of oil or gas before or during the year the lease expenditure was incurred decreases in value each year by one-tenth of the value of the carried-forward annual loss in the preceding year, beginning January 1 of the eighth calendar year after the lease expenditure is carried forward under (a)(3)of this section.

For modeling purposes, we are using the following methodology for the downlift provisions for the CFALs: If the CFAL was earned in calendar year 1 when the field was not in production, it would start decreasing in value in year 12 regardless of when production begins. If the CFAL was earned in year 1 when the field was in production, it would start decreasing in value in calendar year 9 regardless of when production begins.

4. Clarify the "tax increase" in HB288 as 75% vs. 3%.

There was some discussion in committee when Slide 17 referred to a "75%" tax increase. This was based on the tax as a percentage of gross value increasing from 4% to 7% if the price of oil would result in use of the minimum tax calculation. Each 1% tax increase represents 25% of the existing 4% rate, thus a 3% increase to the <u>nominal</u> rate (7 – 4) represents a 75% increase to the <u>effective</u> rate ((7 – 4) / 4).

It is important to recognize that the production tax is not the only revenue Alaska receives from oil production, and thus the overall tax impact on producers could be less than 75%. Additionally, analysis of fiscal systems generally considers "total government take," which is generally a description of the split of profits, after accounting of all costs rather than of gross value.

The chart provided by ConocoPhillips on Slide #8 of their January 29th testimony illustrates that split of "government take" at a range of prices. On that chart, at $65 oil, the producer share of profits is shown to be 48%, thus the "government take" would be 52%. Although hard to calculate precisely without knowing all the assumptions behind Conoco's figures, we

estimate the change proposed in HB288 would modify that calculation by 5%, to a government take of about 57%.

I hope you find this information to be useful. Please do not hesitate to contact me if you have further questions.

Sincerely,

Ken Alper
Tax Director