

**ALASKA STATE LEGISLATURE  
HOUSE RESOURCES STANDING COMMITTEE**

February 22, 2017

1:06 p.m.

**MEMBERS PRESENT**

Representative Andy Josephson, Co-Chair  
Representative Geran Tarr, Co-Chair  
Representative Harriet Drummond  
Representative Justin Parish  
Representative Chris Birch  
Representative DeLena Johnson  
Representative George Rauscher  
Representative David Talerico

**MEMBERS ABSENT**

Representative Dean Westlake, Vice Chair  
Representative Mike Chenault (alternate)  
Representative Chris Tuck (alternate)

**COMMITTEE CALENDAR**

PRESENTATION(S): OCEAN ACIDIFICATION IN ALASKA: ECOSYSTEMS AND ECONOMICS

- HEARD

SENATE BILL NO. 30

"An Act approving and ratifying the sale of royalty oil by the State of Alaska to Petro Star Inc.; and providing for an effective date."

- MOVED SB 30 OUT OF COMMITTEE

HOUSE BILL NO. 111

"An Act relating to the oil and gas production tax, tax payments, and credits; relating to interest applicable to delinquent oil and gas production tax; and providing for an effective date."

- HEARD & HELD

Oil & Gas Industry Testimony

- REMOVED FROM AGENDA

**PREVIOUS COMMITTEE ACTION**

BILL: SB 30

SHORT TITLE: APPROVAL: ROYALTY OIL SALE TO PETRO STAR

SPONSOR(s): RULES BY REQUEST OF THE GOVERNOR

01/20/17 (S) READ THE FIRST TIME - REFERRALS  
01/20/17 (S) RES, FIN  
01/30/17 (S) RES AT 3:30 PM BUTROVICH 205  
01/30/17 (S) Moved SB 30 Out of Committee  
01/30/17 (S) MINUTE(RES)  
02/01/17 (S) RES RPT 7DP  
02/01/17 (S) DP: GIESSEL, WIELECHOWSKI, HUGHES,  
COGHILL, VON IMHOF, STEDMAN, MEYER  
02/06/17 (S) FIN AT 9:00 AM SENATE FINANCE 532  
02/06/17 (S) Scheduled but Not Heard  
02/08/17 (S) FIN RPT 4DP 2NR  
02/08/17 (S) DP: HOFFMAN, MACKINNON, BISHOP, VON  
IMHOF  
02/08/17 (S) NR: DUNLEAVY, OLSON  
02/08/17 (S) FIN AT 9:00 AM SENATE FINANCE 532  
02/08/17 (S) Moved SB 30 Out of Committee  
02/08/17 (S) MINUTE(FIN)  
02/10/17 (S) TRANSMITTED TO (H)  
02/10/17 (S) VERSION: SB 30  
02/13/17 (H) READ THE FIRST TIME - REFERRALS  
02/13/17 (H) RES, FIN  
02/22/17 (H) RES AT 1:00 PM BARNES 124

BILL: HB 111

SHORT TITLE: OIL & GAS PRODUCTION TAX;PAYMENTS;CREDITS

SPONSOR(s): RESOURCES

02/08/17 (H) READ THE FIRST TIME - REFERRALS  
02/08/17 (H) RES, FIN  
02/08/17 (H) TALERICO OBJECTED TO INTRODUCTION  
02/08/17 (H) INTRODUCTION RULED IN ORDER  
02/08/17 (H) SUSTAINED RULING OF CHAIR Y23 N15 E2  
02/08/17 (H) RES AT 1:00 PM BARNES 124  
02/08/17 (H) Heard & Held  
02/08/17 (H) MINUTE(RES)  
02/13/17 (H) RES AT 1:00 PM BARNES 124  
02/13/17 (H) Heard & Held  
02/13/17 (H) MINUTE(RES)  
02/17/17 (H) RES AT 1:00 PM BARNES 124  
02/17/17 (H) Heard & Held

02/17/17 (H) MINUTE (RES)  
02/20/17 (H) RES AT 1:00 PM BARNES 124  
02/20/17 (H) Heard & Held  
02/20/17 (H) MINUTE (RES)  
02/22/17 (H) RES AT 1:00 PM BARNES 124

#### **WITNESS REGISTER**

JESSICA CROSS PhD, Research Associate  
Pacific Marine Environmental Laboratory  
National Oceanic and Atmospheric Administration  
U.S. Department of Commerce  
Seattle, Washington

**POSITION STATEMENT:** Provided a PowerPoint presentation entitled, "Ocean Acidification in Alaska: Ecosystems and Economies," dated February 2017, and answered questions.

JIM SHINE, Commercial Manager  
Division of Oil and Gas  
Department of Natural Resources  
Anchorage, Alaska

**POSITION STATEMENT:** During the hearing of SB 30, provided a PowerPoint presentation entitled, "Proposed Sale of the State's Royalty Oil to Petro Star: Senate Bill 30" dated 2/22/17, and answered questions.

DOUG CHAPADOS, President/CEO  
Petro Star Inc.  
Anchorage, Alaska

**POSITION STATEMENT:** Testified in support of SB 30.

BRYCE WARD, Mayor  
North Pole, Alaska

**POSITION STATEMENT:** Testified during the hearing of SB 30.

COLLEEN GLOVER, Commercial Analyst  
Tax Division  
Department of Revenue  
Anchorage, Alaska

**POSITION STATEMENT:** Provided a PowerPoint presentation entitled, "Alaska's Oil and Gas Taxation - HB111\O Lifecycle Scenario Analysis," dated 2/17/17, and answered questions.

#### **ACTION NARRATIVE**

[1:06:21 PM](#)

**CO-CHAIR ANDY JOSEPHSON** called the House Resources Standing Committee meeting to order at 1:06 p.m. Representatives Josephson, Parish, Talerico, Rauscher, Johnson, and Tarr were present at the call to order. Representatives Birch and Drummond arrived as the meeting was in progress.

**PRESENTATION(S): OCEAN ACIDIFICATION IN ALASKA: ECOSYSTEMS AND ECONOMICS**

[1:07:37 PM](#)

CO-CHAIR JOSEPHSON announced that the first order of business would be a presentation on ocean acidification in Alaska, by Jessica Cross, PhD., of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

[1:07:49 PM](#)

JESSICA CROSS, PhD, Research Associate, Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, provided a PowerPoint presentation entitled, "Ocean Acidification in Alaska: Ecosystems and Economies." She recalled several years ago the state invested almost \$3 million in the Ocean Acidification Research Center (OARC) at the University of Alaska Fairbanks (UAF) for the purpose of research, and also to attract matching federal research funds, which it did. Dr. Cross informed the committee the phenomenon of ocean acidification results from levels of global carbon dioxide (CO<sub>2</sub>) continuing to rise; in 2013, atmospheric CO<sub>2</sub> concentrations rose above 400 parts per million (ppm) as reported by the Mauna Loa Observatory in Hawai'i. Last year CO<sub>2</sub> peaked at 408 ppm, leading the global community to seek limiting the amount of CO<sub>2</sub> entering the atmosphere because of global warming, sea level rise, coastal erosion, and other problems due to excessive greenhouse gases [slides 1 and 2]. The evil twin of the CO<sub>2</sub> problem is ocean acidification, because as the CO<sub>2</sub> is emitted into the atmosphere, approximately one-third is absorbed by the ocean. Alaska waters are naturally very high in CO<sub>2</sub>, and the extra CO<sub>2</sub> causes the potential hydrogen (pH) [measure of acidity] in the oceans to drop [slide 3].

[1:10:43 PM](#)

REPRESENTATIVE BIRCH asked for the time period applicable to the data illustrated on slide 3.

DR. CROSS said in a time scale of one thousand years the aforementioned atmospheric CO2 levels have been seen before; however, the change is happening much faster than before in the geological record, and thus is unprecedented from that perspective. She continued, noting since the oceans have absorbed approximately one-third of the human-caused CO2 in the atmosphere, ocean acidification has caused the pH to drop so low that carbonate minerals in the Bering Sea are dissolving. As many species use carbonate minerals to build shells and biogenetic structures, since 2009 this is now a problem for red king crab and blue king crab populations [slides 4 and 5]. Ocean acidification could threaten Alaska fishing and food security because 60 percent of the commercial fish and shellfish for the U.S. comes from Alaska [slide 6]. Federal laboratory studies reveal impacts to shellfish species are: slower embryonic development; fewer larvae hatch; high juvenile mortality; stressed adults [slide 7]. Ocean acidification impacts to fish includes higher sensory effects, which interfere with the ability to see and smell prey as observed in pollock [slide 8]. In addition, ocean acidification impacts the food web and food sources for shellfish and fish by disrupting pteropods which are a food source for Alaska pink salmon [slide 9]. Dr. Cross said laboratory studies have been coordinated with state and federal field missions - conducted around the state - that measure the surface and subsurface for ocean acidification. Field missions are conducted by ships, autonomous vehicles, and in-situ [slides 10-13]. All of the studies are combined to generate disaster risk assessments for Alaska fisheries by census areas; areas most highly at risk are those that rely on threatened fisheries as their primary source of protein or jobs [slide 14]. Slide 15 illustrated predicted increases in ocean acidification from 2012 through 2100, and she pointed out in 2012, on an annual average, most of the waters around the state are not highly corrosive. However, by 2050, on average, waters will be corrosive in the Chukchi Sea and Beaufort Sea. She stressed ocean acidification does not happen in a vacuum and provided slides of temperatures and sea ice in the Arctic in 2017 [slides 16 and 17]. Ocean acidification occurs along with warming temperatures, ice loss and low oxygen, stressing organisms [slide 18]. If organisms cannot adapt, the populations of important commercial fisheries will be impacted, and research indicates, without intervention between 2035 and 2045, the red king crab fishery could collapse [slide 19].

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REPRESENTATIVE JOHNSON asked if there is evidence of a large scale die-off, and whether species are moving north or changing their behavior in response.

DR. CROSS said it will not be possible to separate the effects of ocean acidification from the normal seasonal impacts of colder and warmer years until around 2020. Further, a shift in population has not been confirmed at this time and is an area of ongoing research. Dr. Cross returned attention to the presentation and explained in response to projections, NOAA seeks to build adaptive capacity and community resilience by bringing communities together to profile disaster risk mitigation strategies such as to diversify economic regions, encourage job training and education, increase access to alternative protein sources, and reduce other environmental stressors [slides 20 and 21]. The Alaska Ocean Acidification Network connects scientists, stakeholders, fishing organizations, and other interested parties with industry to support ongoing research around the state [slides 22 and 23]. Dr. Cross stated awareness of ocean acidification across Alaska is three times higher than in the Lower 48 [slide 24]. The interest of Alaska's citizens and industry has been recognized by the U.S. Department of Commerce [slide 25]. At the federal level, NOAA research covers ocean chemistry research, species response research, and economic modeling, and she urged the committee to contact researchers with questions [slide 26]. Dr. Cross stated further monitoring throughout the state will expand using new technology, such as the Saildrone vehicle, which can cover Alaska's extensive coastline [slide 27]. She summarized the following: ocean acidification is already impacting areas in Alaska; coastal communities in Southeast and Southwest are the most vulnerable; ocean acidification is likely to worsen; there are opportunities to mitigate risk and adapt to changes through economic diversification, access to alternative sources of protein, and the reduction of environmental stressors; the best defense against ocean acidification is the long-term reduction of CO2 emissions [slide 28].

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CO-CHAIR JOSEPHSON asked for the name of the secretary of commerce.

DR. CROSS said Wilbur Ross. In further response to Co-Chair Josephson, she stated the mission guidance she has received from the agency has not yet changed [since the beginning of the Trump Administration].

REPRESENTATIVE BIRCH questioned what the House Resources Standing Committee should do.

DR. CROSS advised her role as a researcher is to monitor economic and environmental impacts and provide information to regulatory bodies. She suggested the committee communicate with regulatory agencies.

REPRESENTATIVE PARISH inquired as to whether subsistence and commercial fishing as presently known are projected to end within his lifetime.

DR. CROSS said that commercial and subsistence fishing is not likely to end in that time period, but will be impacted by ocean acidification; however, if the risks are reduced, economically viable commercial fishing and subsistence fishing will continue in Alaska.

REPRESENTATIVE PARISH returned attention to slide 19, and asked whether the red king crab decline in Bristol Bay would be mirrored in other shellfish populations.

DR. CROSS said, "That's possible, it's research that's ongoing." She added NOAA monitors CO2 levels in commercial hatcheries; in fact, a shellfish hatchery it is easier to monitor than the crab fishery. Further, the projections on slide 14 are based on the present rate of ocean acidification and fishing.

CO-CHAIR TARR referred to OARC at UAF and asked about its work with NOAA.

DR. CROSS advised the funding from the state for OARC was almost \$3 million in a one-time investment that went directly to UAF. At this time, NOAA maintains the infrastructure built with those funds, including the time-series moorings. There were four mooring sites, but due to the limitations of federal funding, only two of the four sites are operational.

[1:31:05 PM](#)

CO-CHAIR TARR asked to be informed if federal funding for maintenance on the functioning two sites is threatened.

DR. CROSS added the two sites that are maintained are regular time-series sites used by other research organizations; the two sites that were eliminated were in Southeast and near Kodiak.

REPRESENTATIVE DRUMMOND questioned why Alaska's coastal waters are naturally high in CO2.

DR. CROSS explained this is because cold water holds more CO2 and the global circulation process moves CO2 toward the North Pacific via the global conveyor belt: phytoplankton bloom on the surface of the world's oceans, sink to the bottom, are respired by bacteria, releasing CO2, which moves from the North Atlantic south and north, and is upwelled in the North Pacific and Alaska waters. In further response to Representative Drummond, she said recruitment failure in shellfish is the inability to replenish the shellfish population to its previous level.

REPRESENTATIVE RAUSCHER returned attention to slide 19, and asked why the Bristol Bay red king crab fishery fell and rose sharply from 2005 to 2015.

DR. CROSS said the chart on slide 19 emphasizes physical impacts on certain populations. Eventually, ocean acidification impacts overwhelm the normal climatic cycles expected for a particular population. In further response to Representative Rauscher, she explained without a change in the status quo, "the battle continues."

REPRESENTATIVE RAUSCHER questioned whether types of CO2 other than human-caused are a factor.

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DR. CROSS restated the natural concentrations of CO2 in Alaska are about 65 micro mil per kilogram of anthropogenic CO2 in the water; the remainder is natural as a result of cooler temperatures, and global circulation processes. The ecosystem has adapted to the natural level of CO2, but additional human-caused CO2 may suddenly push the organisms in the system past "the tipping point." In further response to Representative Rauscher, Dr. Cross will provide the percentage of human-caused CO2 as compared to the percentage of naturally-occurring CO2.

REPRESENTATIVE PARISH returned attention to slide 14, which indicated Southeast is at high to medium disaster risk, and asked what timescale and severity of disaster is forecast.

DR. CROSS said the timescale illustrated is about 50 years, and the disaster is the loss of income and the loss of protein.

**SB 30-APPROVAL: ROYALTY OIL SALE TO PETRO STAR**

[1:39:02 PM](#)

CO-CHAIR JOSEPHSON announced that the next order of business would be SENATE BILL NO. 30, "An Act approving and ratifying the sale of royalty oil by the State of Alaska to Petro Star Inc.; and providing for an effective date."

[1:39:45 PM](#)

JIM SHINE, Commercial Manager, Division of Oil and Gas, Department of Natural Resources, provided a PowerPoint presentation entitled, "Proposed Sale of the State's Royalty Oil to Petro Star: Senate Bill 30," and informed the committee SB 30 is similar to last year's legislation enabling a contract with Tesoro for a royalty-in-kind (RIK) sale. He said royalty-in-value (RIV) occurs when a producer ships, transports, and sells the state's royalty share, along with its own, and remits the royalty value to the state; RIK occurs when the state assumes ownership of its royalty barrels of oil and disposes of them through statutory sales procedures. The bill is the culmination of a long process including commercial negotiations, a best interest finding, a public review, and other procedures. Mr. Shine said the state has participated in RIK sales procedures since 1979, and directed attention to a chart provided in the committee packet that illustrated the history of RIK sales [chart not provided]. The contract with Petro Star Inc. (Petro Star) in SB 30 will yield the state from \$22 million to \$28 million more over RIV revenue. Currently, the state has a one-year contract with Petro Star that would be followed by the four-year contract within SB 30, commencing 1/1/18. Together, the two contracts will yield the state from \$29 million to \$37 million more over RIV revenue [slide 2]. The best interest finding has determined SB 30 is in the state's best interest, and the Alaska Royalty Oil and Gas Development Advisory Board, Department of Natural Resources, recommends the legislature approve the sale by its Resolution 2016-2, a copy of which was provided in the committee packet [slide 3]. In addition, the commissioner of DNR considered the following decision criteria [slide 4]:

- cash value offered
- projected effects of the sale on the economy of the state
- the ability to provide refined products for distribution and sale within the state

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MR. SHINE restated the approval process for the RIK sale began with the preliminary best interest finding issued in 2016, followed by public review, review and recommendation by the royalty advisory board, the contract, and SB 30 [slide 5]. He provided slide 6 which listed the statutory criteria that must be considered by the royalty advisory board. Mr. Shine provided details of the contract enabled by SB 30 such as projections of royalty volume over a five-year period of 50,000 to 55,000 barrels per day of royalty oil in 2017, and 36,000 to 50,000 barrels available from 2018 through 2021. He recalled last year a Tesoro RIK contract was approved that is providing 20,000 to 25,000 barrels of royalty oil over a five-year period and was used as a guide in the state's projections [slide 7].

REPRESENTATIVE PARISH questioned whether the state will have the ability to pick up additional capacity in the event of an increase in throughput [in the Trans-Alaska Pipeline System (TAPS)].

MR. SHINE said the contract has built-in quantity flexibility that allows the state to offer additional oil on equal terms. He returned to contract terms and pointed out in the event of default the state is exposed in two scenarios: a complete default - in which the state does not receive payment for barrels produced and sold, and a denomination risk - in which the buyer defaults after a certain volume of oil has been nominated. In order to protect the state against either of the aforementioned events, the contract has a security provision clause for a \$46 million surety bond. In addition, the contract urges Petro Star to use commercially reasonable efforts to manufacture refined products in the state and employ local residents [slide 7]. In regard to RIK contract price, he explained the contract begins with the monthly/daily average U.S. West Coast price for Alaska North Slope (ANS) oil. The RIK differential of \$1.95 is a reduction of the price to determine the value of an in-state barrel of oil, thus in an RIV context the state is subject to marine transportation costs of between \$3.30 and \$3.50 per barrel; however, in an RIK contract, the state uses a \$1.95 RIK location differential that represents the value of a barrel of oil sold within the state. The location differential is determined by the Department of Revenue and DNR to ensure the oil remains competitive, and to maximize the value of the resource to the state.

CO-CHAIR JOSEPHSON asked how the differential compares to that of last year's royalty oil sale.

MR. SHINE said the differential is the same. In 2014, a previous contract with Flint Hills carried a differential of \$2.15 per barrel. He advised the other deductions are the same as found in an RIV formula as follows [slide 8]:

- TAPS tariff allowance and tariffs for oil transported upstream of Pump Station 1
- quality bank adjustments required by regulation by the Federal Energy Regulatory Commission
- line loss calculated at an industry standard amount for metering in and metering out

MR. SHINE summarized as follows [slide 9]:

- the contract is in the state's best interest
- the contract will yield \$29 million to \$37 million in additional revenue over what the state would receive if the volume of royalty oil is taken RIV
- location differential is a static number and marine transportation costs are expected to exceed the differential
- Petro Star employs 44 Alaskans in refining operations and others statewide

MR. SHINE presented slide 10 which was a short comparison of the contract within SB 30 and last year's contract with Tesoro.

REPRESENTATIVE BIRCH expressed his support.

REPRESENTATIVE DRUMMOND questioned why DNR needs the legislature's permission to sell royalty oil.

MR. SHINE explained for royalty oil sold in excess of a one-year contract, there is a statutory requirement for DNR to obtain legislative approval.

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DOUG CHAPADOS, President/CEO, Petro Star Inc., acknowledged the efforts of the commissioners of DNR to support the contract. He said after long negotiations, the contract is a fair agreement.

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BRYCE WARD, Mayor, City of North Pole, opined the ability to sell RIK is beneficial to the state and Petro Star provides benefits to the City of North Pole. He expressed his concern related to the differential in the RIK contract and pointed out the product is state oil provided to state residents by a state producer, but at a differential price that is higher than the spot market price. He acknowledged the contract is bringing in an additional \$30 million to the state, however, he questioned whether this is a benefit for all residents of the state since Interior residents will be paying the differential cost. Mayor Ward encouraged the committee to look at the intent of the differential as the oil is not being exported, but is provided solely to state residents.

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CO-CHAIR JOSEPHSON opened the hearing for public testimony, and after ascertaining no one wished to testify, closed public testimony.

[1:59:18 PM](#)

CO-CHAIR TARR moved to report SB 30 out of committee with individual recommendations and the accompanying fiscal note. There being no objection, SB 30 was reported out of the House Resources Standing Committee.

[2:00:12 PM](#)

[Co-Chair Josephson passed the gavel to Co-Chair Tarr.]

The committee took an at ease from 2:00 p.m. to 2:03 p.m.

**HB 111-OIL & GAS PRODUCTION TAX;PAYMENTS;CREDITS**

[2:03:13 PM](#)

CO-CHAIR TARR announced that the final order of business would be HOUSE BILL NO. 111, "An Act relating to the oil and gas production tax, tax payments, and credits; relating to interest applicable to delinquent oil and gas production tax; and providing for an effective date."

[2:03:48 PM](#)

COLLEEN GLOVER, Commercial Analyst, Tax Division, Department of Revenue (DOR), provided a PowerPoint presentation entitled, "Alaska's Oil and Gas Taxation - HB111\O Lifecycle Scenario Analysis," dated 2/17/17. Ms. Glover gave the committee brief personal background information. She noted the sectional analysis for HB 111 was previously presented, and her presentation would focus on lifecycle modeling that is based on two hypothetical North Slope fields and which will reveal the impacts of any tax policy on a large or small new field, including the present tax policy, identified as status quo, and the potential impacts of HB 111 [slide 2]. On slide 3, impacts by HB 111 such as the net operating loss (NOL) credit change from 35 percent to 15 percent, changes to sliding scale credits, the elimination of cash repurchases on the North Slope, the change in the minimum tax from 4 percent to 5 percent, and provisions to harden the floor, were highlighted in green.

REPRESENTATIVE BIRCH directed attention to page 4 of fiscal note Identifier: HB111-DOR-TAX-02-10-17 that indicated HB 111 "raises \$300 million." He asked whether the presenter would characterize the net effect of HB 111 as a major tax increase.

MS. GLOVER clarified the model is a hypothetical field and the fiscal note is based on the Fall [2016 Revenue Sources Book (RSB)] forecast of projected revenues to the state. She acknowledged it is an increase and the modeling would present the impact of HB 111 on each of five scenarios.

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REPRESENTATIVE BIRCH asked whether the Fall forecast recognizes the recent increased quantity of oil flowing through the Trans-Alaska Pipeline System (TAPS).

MS. GLOVER deferred to the director of the Tax Division, DOR.

CO-CHAIR TARR stated the \$300 million referred to in the fiscal note are fiscal year 2025 (FY 25) and FY 26 estimates.

MS. GLOVER explained the model assumptions are as follows [slide 4]:

- development begins 1/1/18
- designed for the period of development through production not including exploration costs or abandonment costs
- uses inflation of 2.25 percent per year

- for status quo, producers move to non-gross value reduction (non-GVR) status and cannot go below minimum tax
- for status quo, producers apply for \$35 million repurchase sliding scale credits
- assumes North Slope only

MS. GLOVER, in response to Representative Johnson, restated the model does not include exploration costs or abandonment costs. She explained the field lifecycle modeling assumptions are as follows [slide 6]:

- one 50 million barrel oil field over the life of production
- one 750 million barrel oil field over the life of production
- price points of \$40, \$60, \$80, and Fall 2016 forecast price
- status quo tax provisions with one or four partners
- HB 111
- each scenario has a dashboard with four quadrants [slide 7]: 1. production tax; 2. state revenue; 3. producer revenue; 4. summary economics: a. total cash flows, b. net present value (NPV) analysis; c. split of profits; d. split of gross

[2:13:41 PM](#)

REPRESENTATIVE BIRCH asked whether [quadrants] 1-4 include state royalty share.

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MS. GLOVER said royalty is a component of state revenue, [quadrant] 2. Slide 8 illustrated a hypothetical small field over 30 project years. There was no activity in the first years and under the current tax system cash credits were generated. Cash repurchases paid to the producer by the state were shown in red. In later years, production tax paid by the producer was shown in green, and the gold line was the minimum tax.

REPRESENTATIVE BIRCH questioned whether the model assumes the state honored its commitment to the explorer in the amount of \$150 million.

MS. GLOVER said the model assumes \$35 million per year would be paid by the state. She turned attention to the four components of state revenue: production tax shown in green, property tax shown in red, royalties shown in blue, and state corporate

income tax shown in purple. On the North Slope, the state gets a 7.5 percent share of property tax [slide 9].

REPRESENTATIVE BIRCH recalled the state collects 20 mills in property tax statewide, and reimburses communities along the pipeline for their share. He opined property tax for the state is a significant amount.

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MS. GLOVER explained the property tax shown is for the hypothetical field. However, 92.5 percent goes to municipalities. She returned attention to slide 9 that illustrated income tax is paid after producers begin to make a profit. Slide 10 illustrated cash flows for producers over the duration of the field, beginning with huge net operating losses and followed by production. Slide 11 summarized economics during the life of the project: lifecycle totals with rates of return; split of profits based on entity such as the state or municipalities; split of gross by entity. She pointed out state net present value (NPV) is 6.95 percent and producer cash NPV is 10 percent. Ms. Glover presented the small field modeling assumptions, noting that any changes can be easily accommodated [slide 13].

CO-CHAIR TARR questioned why the state corporate income tax rate is lower than in statute.

MS. GLOVER said the rate is 6.5 percent of the net. Slide 14 illustrated the production profile curve for a small field, showing almost \$200 million in capital investment before production begins at year four. However, operating expenditures correspond with the production curve.

[2:24:18 PM](#)

REPRESENTATIVE JOHNSON asked what taxes are being paid at the beginning of development.

MS. GLOVER said none.

REPRESENTATIVE BIRCH noted total capital expenditures shown on slide 14 are \$500 million before production.

MS. GLOVER agreed. Slide 15 illustrated the four modeling components for a small field under the current tax regime that were previously discussed on slides 8-11. In the small field

model it was assumed there would be no production until year four, and thus no production tax or royalty revenue is due the state until year four. Total net gain to the state for the life of the hypothetical field was \$870 million and net cash flow to the producer was \$815 million.

REPRESENTATIVE BIRCH returned attention to slide 15, and asked for clarification on the total amount of credits and capital spend.

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MS. GLOVER responded slide 14 was a representative profile and slide 15 illustrated the actual scenario. In further response to Representative Birch, she said in the aforementioned scenario the lifecycle total credits that were purchased are \$161 million. Ms. Glover presented slide 16 which illustrated the small field model under the proposed HB 111 tax regime. As shown in the upper left graph, there are no cash repurchases and the producer pays the minimum tax; as shown in the upper right graph, there is no revenue to the state until production begins; as shown in the lower left graph, there is little change; as shown in the lifecycle totals, production tax remains the same as adjusted for net present value.

REPRESENTATIVE RAUSCHER asked whether royalty was increased in slide 16.

MS. GLOVER answered royalty is not impacted by HB 111. Slide 17 illustrated cash flows for the small field, one partner scenario, at \$40, \$60, \$80, and Fall 2016 forecast prices, under the status quo and HB 111.

[2:35:01 PM](#)

CO-CHAIR TARR surmised at \$40 companies have higher losses under HB 111 due to the price of oil [from the point of development].

[2:35:19 PM](#)

MS. GLOVER provided additional data on the eight small field scenarios under the status quo and HB 111 [slide 18]. Ms. Glover presented the large field modeling assumptions [slide 20]. She explained the production profile differs as production for a large field is assumed to begin at year five, however, similarly to the development of a small field, there is a large capital investment in the first years, followed by peak

production and declining production [slide 21]. Modeling for the large field included three scenarios: current tax policy [status quo], one partner with annual \$35 million maximum repurchase; status quo, four partners; HB 111 with one to four partners. As shown on the slide 22 upper left graph, cash repurchases are received for the first seven years, minimum tax is paid to about year twelve or thirteen, and higher production tax is paid in the following years; because of early losses, the producer carried forward tax credits to use against tax liability, and when the NOL credits are exhausted, production tax greatly increases. As shown in the upper right graph, state revenue also peaks around year twelve. As shown in the lower left graph, positive cash flow begins around year eight.

CO-CHAIR TARR observed in the foregoing scenario, the producer chose to use its \$35 million in credits, and carried the remaining credits forward.

MS. GLOVER said DOR assumed the producers would opt to carry forward credits for their full value rather than taking 75 percent cash value.

REPRESENTATIVE RAUSCHER asked whether the model is based on an average historical lifecycle of a production field.

MS. GLOVER said the model is based on a production profile curve developed by DOR and the Department of Natural Resources (DNR), looking at natural field production profiles and working with tax consultants. She further explained the large field assumes 750 million barrels over the life of the field, so the profile curve estimates percent of production by year. She returned to the presentation, noting slide 23 illustrated the large field with four partners, which qualifies the project for the \$140 million per year cash repurchase maximum and impacts GVR credits. As shown on the slide 23 upper left graph, state repurchased credits are bigger, and production tax is paid earlier, however, the total tax paid to the state is unaffected.

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CO-CHAIR TARR directed attention to the amount of \$1.6 billion in repurchased tax credits, based on the large field scenario with four partners.

MS. GLOVER presented slide 24 that illustrated a large field scenario with one or four partners under HB 111. As shown on the upper left graph, there are no tax repurchases, tax payments

begin at year five at production, the producer pays minimum tax until exhausting NOL credits, and pays the full production tax for the remainder of the life of the field. As shown on the upper right graph, the state does not receive revenue until production begins.

CO-CHAIR JOSEPHSON returned attention to slide 23 - which illustrated a partner or joint venture with a large field - and noted the lifecycle of tax credits repurchased under current law is \$1.6 billion and the state nets \$22 billion.

MS. GLOVER said correct.

CO-CHAIR JOSEPHSON acknowledged this is a high rate of return albeit over a long period of time. Considering the all of the variables such as price, the state should know the quality of its investment. He questioned how residents of the state can be assured of a worthy investment.

MS. GLOVER said that is not her expertise.

REPRESENTATIVE RAUSCHER asked what part of the model incents the production of an oil field.

MS. GLOVER advised the model is designed to show the impact made by HB 111 on a hypothetical field, and does not predict activity or decisions by producers.

CO-CHAIR TARR said the upper left graphs on [slides 15, 16, 22, 23, and 24] show the changes in "incentives" because of the changes to the repurchase cash credits, which are one of the current incentives in tax policy.

MS. GLOVER advised there are analyses in this regard later in the presentation. Slide 26 provided additional data on the eight large field scenarios under the status quo one partner, status quo four partners, and HB 111, and slide 27 was an outline of all of the scenarios that were modeled on the large field.

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REPRESENTATIVE JOHNSON pointed out the economics of a large field are better than those of a small field, and opined increased exploration on smaller fields was the purpose of Senate Bill 21 [passed in the 28th Alaska State Legislature].

CO-CHAIR TARR compared the summary on slide 18 for small fields to the summary on slide 26 for large fields, and pointed out producer cash flow at \$40 is negative for small fields - but is not for larger fields - due to economies of scale.

MS. GLOVER noted from the results of the model DOR sought to determine how the five components of the tax drive changes to the state and to the producers. For example, DOR completed an analysis on the five components using Fall 2016 forecast price on a large field with one partner, compared to HB 111 [slide 27]. Slide 28 illustrated the tax changes made by HB 111 in state net cash flows. The biggest difference was made by changing the NOL credit from 35 percent to 15 percent, which was a gain of \$2 billion. Additional impacts are a gain of about \$1 billion from changes to the sliding scale credit, and a gain of about \$25 million from hardening the floor. Other changes are insignificant to cash flows.

CO-CHAIR TARR restated the analysis is over the lifecycle of the modeled field, thus the total potential earnings are approximately \$22 billion, and the total potential change for the life of the field would be the aforementioned \$2 billion and \$1 billion.

MS. GLOVER added on slide 28 the blue bar on the left represents approximately \$22 billion in net cash flow for the status quo, and the purple bar on the right represents net cash flow earned under HB 111. Slide 29 illustrated the difference by HB 111 in state net present value (NPV), incorporating the time value of money over the lifecycle of the field. The biggest impact of HB 111 was again changing the NOL credits from 35 percent to 15 percent; the sliding scale credits, hardening of the floor and other changes have smaller impacts. Eliminating cash repurchase has no impact. Slide 30 illustrated the difference made by HB 111 in producer net cash flows: status quo for the producer was about \$18 billion in cash flow, changing NOL credits from 35 percent to 15 percent was a reduction of about \$2 billion, and the change in sliding scale credit was a reduction. Slide 31 illustrated the difference by HB 111 in producer NPV. Under status quo the producer is at a negative NPV and changing NOL credits has the biggest impact; sliding scale credit, hardening the floor, changing the minimum tax, and eliminating cash repurchase have further impacts.

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CO-CHAIR JOSEPHSON inquired as to the price forecast that was used on the model for slide 31.

MS. GLOVER said the Fall 2016 RSB forecast was used. In further response to Co-Chair Josephson, she explained there are no cash credits reflected in slide 31.

MS. GLOVER, in response to Co-Chair Tarr, further explained the status quo of the producers is negative in slide 31 because of the time value of money. Slide 22 indicated the same negative NPV due to the outlay of money in the beginning of a project, which is shown in 2018 dollars.

REPRESENTATIVE PARISH surmised there was a 10 percent rate of return on other funds.

MS. GLOVER said correct.

[HB 111 was held over.]

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#### **ADJOURNMENT**

There being no further business before the committee, the House Resources Standing Committee meeting was adjourned at 2:59 p.m.