

HOUSE FINANCE COMMITTEE
March 23, 2017
1:33 p.m.

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CALL TO ORDER

Co-Chair Foster called the House Finance Committee meeting to order at 1:33 p.m.

MEMBERS PRESENT

Representative Neal Foster, Co-Chair
Representative Paul Seaton, Co-Chair
Representative Les Gara, Vice-Chair
Representative Jason Grenn
Representative David Guttenberg
Representative Scott Kawasaki
Representative Dan Ortiz
Representative Lance Pruitt
Representative Cathy Tilton
Representative Tammie Wilson

MEMBERS ABSENT

Representative Steve Thompson

ALSO PRESENT

Rich Ruggiero, Consultant, Castle Gap Advisors, LLC;
Christina Ruggiero, Consultant, Castle Gap Advisors, LLC;
Representative Jennifer Johnston.

SUMMARY

HB 111 OIL & GAS PRODUCTION TAX;PAYMENTS;CREDITS

HB 111 was HEARD and HELD in committee for further consideration.

Co-Chair Foster addressed the meeting agenda.

#hb111

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."

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RICH RUGGIERO, CONSULTANT, CASTLE GAP ADVISORS, LLC, introduced himself.

CHRISTINA RUGGIERO, CONSULTANT, CASTLE GAP ADVISORS, LLC, introduced herself.

Mr. Ruggiero provided a PowerPoint presentation titled "Petroleum Fiscal Design HB 111" dated March 23, 2017 (copy on file). He addressed slide 2 and reviewed the presentation agenda. He intended to address his professional background, oil patch stage setting concepts pertaining to fiscal taxation, and to provide time for questions. He planned to address interactive Castle Gap models the following day. He shared that he had 40 years of energy industry experience. He characterized his experience as a three-legged stool. He had two decades with big oil - running operations and commercial and big projects. He had spent a decade helping to run a consultancy and had primarily provided sovereign advice for governments around the world. He continued that the consultancy had been purchased and he had then served as an executive at a service company.

Mr. Ruggiero reported that he had gained a new perspective on the business while working for the service company. He referenced that the state was dealing with credits. He relayed that the service company had gotten involved because it was an unpaid creditor in a couple of company bankruptcies in Alaska. The big issue was where the credits went - to the companies' financier or the trade - when the companies got paid the credits. Most of the credits had not gone to the trade.

Mr. Ruggiero addressed his fiscal background. He shared he had been involved with designing or redesigning petroleum fiscal systems for multiple countries (including legislation, regulation, and associated contracts involving license rounds (seismic) to get maximum value for the government). He had worked with new emerging countries including East Timor in 2002 - at the time the country had

no prior energy development or experience. Additionally, he had worked on foreign company re-entry for Saudi Arabia and Kuwait - two of the more sophisticated players in the business. He noted that working with a wide variety of clientele required a broad toolbox. As an operator he had spent substantial time testifying to bodies like the House Finance Committee with respect to competition, opening of markets, and fair third-party access to pipelines in the U.S. and Europe.

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Mr. Ruggiero continued that he had been on both sides (governments and companies) of the table negotiating large contracts. He briefly highlighted slides 5 and 6. Slide 6 showed a range of consulting clients he had worked with and the associated scope of work provided. He turned to slide 7 and discussed his current role in Alaska. He had been hired by Legislative Budget and Audit (LB&A) to help the legislature make needed decisions, to analyze proposed oil and gas legislation (HB 111), and to provide advice and recommendations. He credited the House Resources Committee for allowing him to share what he did and did not believe in. He noted that based on a variety of reasons valid to the legislature, many times legislators did not agree with his recommendations, which was fine. Based on what the legislature decided, his job was to highlight potential pros and cons for consideration when forming legislation. He did not advocate for one side or the other; he was merely bringing experience to the table for the legislature to consider.

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Representative Wilson appreciated Mr. Ruggiero's analysis on HB 111 and she asked if he had spent time analyzing SB 21 and other to determine how it had met the state's goals and how HB 111 may or may not fit into proposed changes.

Mr. Ruggiero answered that he had worked extensively on Alaska's Clear and Equitable Share (ACES), which had required reading and understanding the Petroleum Production Tax (PPT) and the Economic Limit Factor (ELF) tax systems. Following those systems there had been work putting in a step progressivity instead of continuous, which he had been involved with. He spoke to the Alaska Gasline Inducement Act (AGIA) and the gas line discussion and relayed he had

missed SB 21, but he had reviewed much of the work on SB 21 and HB 247 [from the prior year].

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Co-Chair Seaton noted Representative Jennifer Johnston was in the audience.

Mr. Ruggiero moved to slide 9 and addressed how he saw Alaska's priorities. He detailed there were long-term drivers and short-term drivers that needed to be balanced. Long-term drivers included gas for Southcentral (for heating, industry, and utility), more from legacy fields, and the development of new big North Slope fields. In recent years there had been testimony that with the right investment and incentives there was several billion barrels remaining in legacy oil fields. He stated that the long-term drivers were balanced against the state's financial shortfall. Alaska was a government with high dependency on oil-based revenues.

Mr. Ruggiero addressed his recommendations on slide 10. He had presented a model in the House Resources Committee showing a stepped total net system, which would make it possible to eliminate 90 percent of the gas taxation language in the current legislation; it would deliver the same results in terms of the net tax paid by a player at given price at a given production tax value (PTV). He furthered that removing all the different levels would simplify and would remove many of the issues involving audits and the time it took to get things done. Simplification would make it easier for everyone to model and understand whether they wanted to invest in Alaska and by how much.

Mr. Ruggiero discussed simplification of the multitude of special terms in the current legislation. He listed terms including special Cook Inlet, Middle Earth, and oil versus gas in-state versus gas going out-of-state. He remarked that the distinctions had been included because the legislation had relative values, or it had been discussed that something remaining in-state may have more or less in value than something going out-of-state. If the state had a system based on unit profit, it was not necessary to include all the different exceptions or conditions in the legislation.

Mr. Ruggiero addressed that to achieve the state's desired objectives (much more oil on the North Slope that would continue to keep the Trans-Alaska Pipeline System (TAPS) above its minimum operating limit), oil companies should be allowed to recover 100 percent of their costs and net operating losses (NOLs). He remarked he had been quoted as saying it would move the state to the bottom of the rankings if it did not allow the cost recovery. He confirmed his belief that it would move the state close to the bottom of the list of comparative systems.

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Mr. Ruggiero clarified that in most tax and royalty systems, costs became a deduction, much like interest on a home mortgage. It was possible to deduct the amount paid and it saved a company from paying tax on the amount. For example, if someone was in a 25 percent bracket and had \$1,000 of mortgage interest, the deduction would save the person \$250 in tax. In production sharing contracts it was a full recovery of the amount, not a deduction. In a production sharing contract, if there was \$1,000 in cost, the entity could recover the \$1,000 of income before any tax was assessed. He relayed it was the reason there was substantial investment in countries with marginal tax rates greater than Alaska - the countries allowed full recovery. He explained that options included full recovery, partial deduction, and no deduction. It took an entity from the top of class to the bottom of class.

Mr. Ruggiero explained that every regime he had worked in either allowed companies to deduct or recover all the costs spent on developing the oil and gas. He recommended eliminating all cashable credits except for the failed explorers. If the state was giving companies incentives to invest in Alaska, the incentive was to get to development and get into production. By making it deductible only against the income from produced barrels, it provided motivation to get production underway as soon as possible.

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Representative Ortiz observed the option recommended on slide 10 was clear and would be simpler for everyone. He wondered what would prevent the state from simply choosing that route.

Mr. Ruggiero responded that there was not always the will of the two legislative bodies to make something happen. The issue came down to what there was support for and what the legislature could get done. He stated that like every system he had worked with, at any point in time it was a combination of what had all been good decisions at the time they had been made. After being out of Alaska for about four or five years, he had not seen it for the individual things he had helped work on, but as a whole. He stated that the whole looked very messy and confusing. He referred to various items in the bill including per barrel credits, the gross value reduction (GVR), the hard floor or soft floor, and other. He had observed there had to be a simpler way. If there was the legislative will to do it and the time to do it in, there was a solution that eliminated many of the little "one offs."

Mr. Ruggiero provided scenario where there were two items in HB 111 and the legislature could elect to do option A but not option B; however, option B had been based on moving forward with both options. Therefore, it became necessary to go back to fix option A to ensure it accounted for the fact that option B had not been included. He used the carnival game "whack-a-mole" as an example - every time one issue was solved, two more popped up. He explained that was what took place with a system with so many moving parts.

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Representative Guttenberg stated that some people tried to convince legislators that every decision it made on a project, tax base, or other, would determine the entire outcome of a company's project down the road. Over the years he had heard that it was just one factor when people went into the board room to try to sell a project. He spoke about high prices, need for production, the economy, and Alaska's own set of variables. He asked about important factors for organizations making decisions on whether to invest in a location.

Mr. Ruggiero shared his personal experience taking large projects to the board of a company had had worked for in the past. He explained that the tax system was one component. But there were also various associated risks that the company would consider how to mitigate. In some regimes or locations it was very difficult or not possible

to mitigate certain things. The company would also determine how the investment fit into the diversification of its desired portfolio. Many companies published their target of investment in long-term projects, short-term projects, and midstream or downstream projects. There was never just one factor, it was a combination of factors. He referred to the fable the Princess and the Pea. He detailed that certain things had bothered a management team to the point where very good projects had not been done because of that one little "pea under the mattress." He could not specify what the issue would be for any company; however, there would be certain things that merely bothered a management team looking to make the decision to invest or not.

Representative Grenn asked Mr. Ruggiero to address where the bill put Alaska on the competitive spectrum and how the state compared to other locations.

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Mr. Ruggiero answered the presentation contained a section related to the traditional comparative studies that were done.

Vice-Chair Gara stated he would be amenable to rewriting the law along the lines Mr. Ruggiero had addressed earlier in the meeting. However, he recognized the legislative reality that it was possible to make some changes that fit within people's willingness and some that did not. He assumed it would not be possible to do a new rewrite that increased the tax rate based on company profitability. Currently oil prices were low, and he was not interested in making big tax changes when companies were operating in the red. He asked how Mr. Ruggiero would view a proxy that raised the gross tax rate slightly at price points as company profitability increased. He noted that according to the Department of Revenue (DOR), the average field was profitable at about \$41 to \$42 per barrel on the North Slope. The tax rate would be 5 [percent] at \$50, 6 [percent] at \$56, and 7 [percent] at \$62 - it would let companies take in extra money, but would give the state a share at the low prices.

Mr. Ruggiero replied that the first question that needed answering was whether they were talking about the hard floor. He referred to Vice-Chair Gara's suggestion of going

from 4 to 5 [percent] at a price point and from 5 to 6 [percent] at a price point. He stated that 1 percent increments would be a 20 to 25 percent growth in the minimum tax, but when compared to a company's cost structure, the percentage would be around 1 percent of the company's operating cost, which was not that big. If the conversation was merely about the increment it was one thing, but if the conversation was about hardening the floor and raising the tax, it became a fairly large number. Individual projects would impact them differently. For example, a larger project with a low unit cost and a relatively low tariff would not be significantly impacted because the net tax would be greater than the gross minimum. Alternatively, new or high-cost fields would probably be impacted much more significantly. The change would be much more onerous to companies at the high end of the cost spectrum.

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Vice-Chair Gara spoke to the three percentage points for a high-cost field, which could be eligible for royalty relief. He wondered how it would impact the analysis.

Mr. Ruggiero answered that if the legislature decided to increase the gross minimum, fields that were adversely impacted would have the ability to apply for royalty relief. Raising the tax by up to three points was the same as raising the company's royalty by that much. If the increase was enough to extremely and adversely impact the economics of an operator, they could always apply for royalty relief with the Department of Natural Resources (DNR). That way, instead of trying to pick and choose language to fit everyone in the state, it would be possible to pick and choose what the legislature chose to vote on and pass forward; if there was an outlier that was impacted they could apply for relief under royalty relief.

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Representative Wilson asked if all fields were profitable at prices of \$42 per barrel. She noted that each field was different and had different oil. She asked if it was possible to specify that a certain price would always be profitable.

Mr. Ruggiero answered that all fields were profitable at an oil price of \$200 per barrel; however, at a \$42 price, he had no idea which fields were profitable and which were not.

Mr. Ruggiero moved to slide 12 titled "Philosophy of Fiscal Design." The slide included a chart showing a breakdown, split 1 and split 2. The gray bar on the left showed the various components that went into the determination of what each player in the system got - it began with the exploration and finding costs and moved up through operations and cost of capital. The gray bar included the various components that nonproducer entities took such as royalty, corporate taxes, petroleum taxes, and other. He pointed to "split 1" and explained that everything below the red line pertained to producers (shown in blue) and everything above pertained to nonproducers (shown in green). The bar also included a piece pertaining to the return on capital. He noted that what constituted a fair return on capital was subject to a spectrum of differing views. He pointed to "split 2" and specified that the yellow portion represented the recovery of cost, the remainder was the profit oil (shown in red); there was a split on profit. The profit oil was generally more on the nonproducer side versus the producer side, which was reflective of almost every jurisdiction worldwide.

Mr. Ruggiero relayed that the internal capital was sometimes called the internal rate of return (IRR). He advanced to slide 13 and addressed what constituted a fair split of profit from the perspective of a company. He explained it was necessary for a company to get back what it spent on a project. There were generally extras that went into the consideration of the desired IRR. Factors included the location or situational risk (e.g. whether there were hostilities staff had to deal with, if it was a country that was easy to get goods into and out of, and other). Certain companies would have risk premiums for different locales of the world. Another factor was exploration success. He remarked that producers had to account for the fact that it may have taken three or four exploration plays to be successful; the dry hole costs had to be paid for somewhere. The company had to generate the capital to continue to explore. Additionally, there were research and development costs for new technology. He noted that over half the oil currently produced in the Lower 48 was due to technology that did not exist in 2000.

Mr. Ruggiero stated that one of the biggest factors was what constituted a non-allowed expense. He specified that the idea that expenses could either be deducted or recovered was not universal; different regimes put different limits on what constituted a recoverable expense. He elaborated that in some places the exploration counted and in other places only development counted; and some places allowed writing off abandonment and carry back costs, while other places did not. He spoke about the break between direct and indirect costs (what was out in the field versus what may be in an office). All those components were factored into what an oil company estimated a fair IRR to be; it was necessary to make enough to keep growing and be profitable.

Mr. Ruggiero relayed that companies he had worked with that were new to energy wanted the money right away and wanted to put people to work. He continued it really did not matter if the company was merely running the food concession outside the workplace - it was something and it was more than the company had at present. Those companies generally approached the workings of their fiscal system with that type of concept in mind. More experienced companies were focused on how to maintain constant work - continued rigs running and fields under development. Periods of high activity and low activity were not good for economies. More experienced companies also became more interested in multigenerational wealth and growth. Local content had migrated to local ownership - in many countries instead of the requirement for 10 percent to be spent with local companies, it had become required to have a 10 percent local company as a partner.

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Mr. Ruggiero continued to address slide 13. He referred to his prior example of a company running a food vendor outside the workplace - it had been a LNG Trinidad project he had been involved with as part of Amoco. At present, Trinidad had advanced as a country that built offshore platforms. In the past the company had been worried it would not find enough tradespeople to meet the local content rules. As governments found themselves on different spots on the spectrum, the idea of what constituted a fair return for the company and the government changed.

Mr. Ruggiero addressed slide 14 titled "The 100,000 Foot Overview" pertaining to the oil business worldwide. The only constant in the oil patch was change. He shared he was in the fifth down cycle of his career in the oil patch. He explained that the industry changed based on the price of its commodity and the amount of work occurring at any given time. He explained that downturns were good because changes in technology occurred during those times, which had allowed the oil patch to emerge and grow out of the downturn even during low prices. There would be times of low and high prices in the future. He urged the committee to not tie anything to one specific view of what the future would be. He guaranteed the idea would be wrong. Change did not necessarily mean instability, but change in the wrong direction did. He addressed the right versus the wrong direction. He believed the legislature had heard from companies about what currently constituted the wrong direction. As a government, he believed the state needed to decide on its needs as well and what sort of change it wanted. He stated that fiscal systems built for predicted future outcomes failed sooner or later. Alternatively, it led to situations that were not intended or considered, which could result in someone getting too little or too much, meaning adjustments were necessary.

Mr. Ruggiero continued that the new trend and his recommendation was that something based on net unit profitability could be self-correcting. Wherever triggers were set could be set to self-correct so when profits went lower the system would correct one way and if profits went high it would correct another way. If the terms were set accurately, it would provide a durable long-term system that could accomplish the desired outcomes. He cautioned a myopic view related to the present problem, which could put future long-term goals at risk. He underscored finding the right balance.

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Mr. Ruggiero advanced to slide 15 and provided a DOR table as an example of Alaska change. He noted the table had been provided by DOR to the House Resources Committee. The table included data for 2007 to 2016 and the per barrel costs were highlighted in red, which had gone from \$17 up to over \$40 and back down as costs had come down. To the right of the table he had added when various oil legislation had passed. During the time of Alaska's Clear and Equitable

Share (ACES) and PPT, people had said that at \$30 per barrel progressivity started, but he noted it was not accurate. He elaborated that ACES had been based on profit per barrel, not price. All the thinking and work that had followed in subsequent sessions and bills treated things a bit differently. Things were run based on the assumed profitability at a point in time and price, but as the cost structures went up and down, profitability changed at that price. For example, if in 2007 oil prices had been \$60 per barrel with almost \$40 in profit, the \$60 per barrel in 2015 only had \$20 in profit per barrel. There were very different situations when firm taxes were set at a price instead of profitability. One thing that may make sense at a \$40 profit did not make the same sense when making \$20 profit at a \$60 price of oil. He stressed the importance of ensuring underlying parameters and assumptions could move when setting a mechanism based on a set of circumstances.

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Vice-Chair Gara addressed that not all fields were the same - not every field on the North Slope was profitable at an oil price of \$41 per barrel (some were profitable at lower prices, while others were profitable at higher prices). He noted that \$41 had been DOR's average estimate. He spoke to royalty relief in Alaska - not all fields were the same and outlier fields could see their royalty reduced. He asked how much the state could reduce a company's royalty and how effective it may be. He surmised that the tax had to be somewhat the same for fields, but royalty relief provided a relief mechanism. He asked for detail.

Mr. Ruggiero understood that the state had royalty ranging from 12-plus percent to 16-plus percent. New fields could get relief down to 5 percent - 7 to 11 percent royalty relief could be granted. He noted it was the same as saying 7 to 11 percent gross tax. He believed mature fields were allowed to go down to 3 percent. He noted that many things presented to the legislature always used averages. Looking at the average did not consider the two extremes on either end and whether the standard deviation was small or large. He stated that building to averages became a problem, but as a legislature that was all it had; therefore, terms were built on averages. If terms did not work for an operator, it had the ability to apply for royalty relief.

Vice-Chair Gara believed it allowed for developing a tax system a government believed was fair and if the system overshot on one field, a company was able get 7 to 13 percent royalty relief. He asked about the accuracy of his statements.

Mr. Ruggiero replied it sounded right.

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Representative Wilson remarked on varying prices over the years and how some fields had peaked and gone down and others were peaking at present. She observed they were trying to have a one-size-fits-all tax regime. When it did not fit all, the state tried options like royalty relief and tax credit incentives. She thought the bigger picture was trying to fix a tax regime. She believed the issue was that one size did not fit all. She referred to slide 15 and noted that the table showed the barrels but not the price or what fields tried to come online and what their costs were compared to legacy fields. She asked what specifically the committee should glean from the table.

Mr. Ruggiero made clarifying remarks about the table on slide 15. He wanted members to take away that if a regime chose to set a mechanism in its petroleum fiscal policy at \$80 per barrel - at the time the amount was set the government had a view of what \$80 per barrel represented (i.e. an amount of profit or activity) - three or four years down the road most of the original assumptions no longer held at a price of \$80 per barrel. He furthered that assumptions may hold at \$98 or \$110 per barrel instead. However, legislation tied to a specific price as opposed to the concept the state was trying to achieve meant that the legislation did not move with changes in the industry. He continued that costs would change, unit profitability would change, different fields would be discovered. He used a potential unconventional development by Great Bear compared to a standard development by ConocoPhillips or Caelus. He stated it was the things that were not considered at the time something was fixed at a price. He recommended against fixing on a price, but fixing on a concept like unit profitability where regardless when underlying parameters changed, whether \$10 per barrel was made at an oil price of \$100 per barrel or \$10 per barrel at an oil price of \$40, the profit was still \$10 per barrel.

Representative Wilson believed trying to fix an issue because of a fiscal gap was the wrong reason to change the oil tax structure compared to what was best for the industry at the time.

Mr. Ruggiero believed it was necessary to consider whether the current system was good for the industry - the industry may say the current system was fine and should not be changed. He thought it was also necessary to consider that things at present were very different than they had been when the existing parameters had been set, which brought different results than anticipated. He believed that was the reason for the legislation.

Representative Wilson asked if the legislation would have been introduced if the state was not in the current fiscal situation.

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Mr. Ruggiero replied that he had no idea.

Representative Wilson believed she knew the answer.

Mr. Ruggiero turned to slide 16 related to fiscal design takeaways. He relayed there was no ideal structure for taxing oil and gas - if there was the legislature would not have to continue to address the issue and he would be out of a job. Every tax regime was unique because a country always tweaked general concepts to meet its needs. There were certain durable tools that tended to work well and other things that came and went. He shared that he had recently advised a client against doing several things because other countries had tried them, and they had been unsuccessful; it was possible to benefit from the mistakes of others. He reiterated that countries all had different internal drivers and reasons for doing something a particular way.

Mr. Ruggiero continued that regimes generally tried to provide as much balance as possible between existing and new players. New players always brought fresh thinking and were positive for incumbents. Regimes also tried to provide the right incentives to encourage new production and additional production from existing fields. Early on, some conventional fields may have only produced 20 to 25 percent of the oil in place before the company moved on and left

the remainder for someone else; some of those fields - through new techniques and technology - were currently over 60 percent recovery of the oil in place.

Mr. Ruggiero addressed the last bullet point on slide 16 and relayed that every system would create some biases. He detailed that companies would optimize their operations within those biases to maximize their profits. He noted that people [law makers] may react to companies' actions by saying "look what they're doing to me." He clarified that the companies were not doing anything to the state - the state gave them a law and they were getting the best benefit for their shareholders within the law. He had done the same thing as an operator; his job had been to maximize the returns for the company within a country's legal structure.

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Representative Pruitt appreciated the point. He believed there was the idea that the system would be fixed; however, no matter what was done, there would always be different ways to analyze things and a different way that a company would use the current structure to - do what it was supposed to do - bring a benefit to shareholders. He stated that legislators needed to remind themselves that as Alaskans they were shareholders. There was a substantial amount invested in the various companies through the Permanent Fund. There would always seem like there were loopholes even if they were not glaring. He stated it was the way to handle it with a very complex tax structure like a net structure with the various other incentives the state wanted to bring to balance. He asked for the accuracy of his understanding.

Mr. Ruggiero responded that Representative Pruitt was not wrong. He referred to his past personal objectives or the objectives of the company he had worked for and relayed that employees had asked why they had elected option A versus option B when they had been identical. He answered that option A had fit his bonus and option B had not. He referenced the term "punish by reward" and explained that everyone would work to optimize within whatever system was implemented. States built systems around the objectives they had and that they were trying to accomplish. The takeaway was the state would do some design based on things that were important for Alaska, which would create some

biases in the system. He hoped to help the legislature by identifying biases that were being created in whatever option it elected and whether the results were something the legislature could live with or to determine if an additional change was necessary.

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Mr. Ruggiero advanced to slide 17 and addressed why companies invested in high take regimes.

Great Rock

- Size of potential reservoirs and projects
- Economies of scale
- Degree of control
- Project Management

Shape of the production curve

- i.e. slow declines, long life

"Durable" terms

Incentives that mitigate or minimize largest risks

Mr. Ruggiero elaborated on slide 17. He explained that countries with good rock charged more than countries with bad rock. He continued that generally good reservoirs led to larger size project. Another factor was degree of control - how much of the world the oil company controlled versus how much a government agency controlled in project development and day-to-day operations. The ability to bring skill sets and manage large and complex projects to get maximum value was important. Good rock also led to the shape of the production curve. He stated that shale was "hot," but in the five or six shale basins in the U.S., in the first 18 months anywhere from 60 to 80 percent of the total hydrocarbon was recovered. Whereas, reservoirs in countries with high government take may last for 40 or 50 years - many fields found decades ago had been producing that long or longer.

Mr. Ruggiero addressed durable terms on slide 17. Many investments were under contract, which made them more durable. There were also places where the regime had changed frequently, but as long as companies received better terms when prices were low and took more when prices

were high, the system was durable and a bit predictable to the industry. The things that were not visible were the number of different incentives that helped mitigate or minimize the largest risks of the project.

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Vice-Chair Gara referred to high take regimes. He understood that at high prices North Dakota was not considered a high take regime, but they were considered high take at current prices. He relayed that ConocoPhillips had testified the previous day that it was still investing in North Dakota. He wondered how North Dakota's tax related to Alaska's at the current price regime. He referred to a Conoco report on profits - Conoco was the only company investing in Alaska that reported its Alaska profits. The committee had been told the previous day that Conoco earned roughly a quarter-billion dollars in Alaska in the fourth quarter the previous year and had not done as well in other locations (it had lost money in the Lower 48 and Canada). He asked if that said anything about Alaska in terms of competitiveness and why the company be investing in places it was losing a large amount of money. He believed that with low oil prices in 2015 that Conoco had lost \$2 billion in the Lower 48.

Mr. Ruggiero addressed the question about North Dakota first. He knew there had been substantial discussion of comparing Alaska to several of the Lower 48 states. The reality is that all projects compete against each other for capital. He explained that companies broke up their capital into strategic buckets. One of the buckets for many companies included high-dollar, high-reserve, high-production, long-life fields with long lead times, which was the category Alaska fell within. There were also quick-in, quick-out, quick-profit fields onshore in the Lower 48. He did not believe that overall the onshore Lower 48 fields competed significantly with Alaska because they were different buckets of capital. He continued that the investments in Alaska compared to the Lower 48 were very different worlds - worlds that both needed to exist for companies to have diverse portfolios. The diversity enabled companies to live through the highs and lows of the business.

Mr. Ruggiero continued to speak to North Dakota and specified there was a difference between legacy and new

leases. He estimated the royalty on legacy leases was probably one-eighth or 12.5 percent royalty just like Alaska. On top of that companies paid 10 percent - an ad valorem and extraction tax with a trigger to add another 0.5 or 1 point. He estimated the gross tax would be approximately 22 percent in North Dakota. Gross taxes were regressive at low prices - the share of the oil prices paid in taxes went way up or became infinite when costs exceed "what you're getting out there" and it went down as prices went up.

Mr. Ruggiero stated that at present there were people paying as much as \$12,000 to \$15,000 an acre. He considered 160 spacing on Bakken wells to the Middle Forks formation, which added about \$2 million to each 160-acre section. He added the \$2 million to a \$7 million well - a total investment of \$9 million. He continued that generally about 400,000 barrels of economically recoverable reserves were generated - at \$40 per barrel, the revenue was \$16 million. He factored in the royalty and severance taxes and noted it became difficult to make money. He noted that new royalties were typically in the range of 20-plus percent for new acreage. He combined the 20-plus percent royalty, a 10 percent severance (extraction and ad valorem tax), and an acreage acquisition charge became expensive. When comparing two tax regimes it was important to include all the same items for each system. He added that in a few slides he would discuss a comparison that did not include all the items needed to compare to regimes.

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Mr. Ruggiero addressed the second portion of the question related to the profitability of ConocoPhillips. He remarked that because Conoco reported Alaska separately, it was possible to see that the company had been profitable in Alaska. A Conoco representative had referenced the company's analyst presentation the previous day, which included two slides specific to Alaska. One of the slides showed that in an all-in, all-inclusive basis, the company could make money for a 10 percent return at an oil price of \$40 per barrel at present because the company had been able to reduce its cost by 40 percent in Alaska. He guessed the company had been losing money terribly 1.5 years back at a \$40 oil price. Due to reduced costs, the company was now able to weather the storm in a lower price environment. He

stated the shift had come with substantial work by the company and its employees.

Mr. Ruggiero moved to slide 18 and addressed that standard regime comparisons were not necessarily predictors of producer investment activity. He shared that he was not a believer in any charts that purportedly ran economics, because of having to really understand what went into each of the curves. He used the chart by Daniel Johnston as an example to show that although things looked great in one spot and bad in another, where activity was taking place was much different than the graph may imply. The chart related to marginal dollars. He considered the government take under a profit mode scenario with \$1 more in revenue. The scale on the graph was lower on the right and increased to be higher on the left. The implication was that everything up to the right was good because it showed a low take, while everything to the bottom and left was bad because it reflected high take. The arrows on the graph indicated where things were in 1997, while the box and arrow showed 2007. The graph included 2017 and provided a 10 to 10 to 10-year comparison. The graph also implied that the companies on the top portion would receive all the investment because they had very low government take, meaning most of the money would go into the producer pocket. However, that was not the issue. He spoke about where the industry invested.

[2:41:01 PM](#)

Mr. Ruggiero advanced to slide 19 titled "Regimes with Government Take Lower than Alaska." The slide excluded locations that appeared under Alaska in the graph on slide 18. Alaska was plotted at approximately 62.5 percent, which was the ACES marginal rate. Countries where large oil companies were investing were highlighted with a red box. Large companies included the three on the North Slope [ExxonMobil, BP, and ConocoPhillips] and about 15 other companies. He highlighted several locations with lower government take than Alaska.

[2:41:51 PM](#)

Vice-Chair Gara asked if the chart was older (from the ACES regime) or reflective of the current year.

Mr. Ruggiero responded that the chart was from Daniel Johnston and presented where things stood in 2007. He used Colombia as an example and explained government take was about 48 percent in 2007, whereas in 1997 it had been above 70 percent. The chart reflected 1997 through 2007.

Mr. Ruggiero advanced to slide 20 which showed regimes with government take greater than Alaska (a large number of the countries with overall nonproducer take greater than Alaska getting investment from the major oil companies). He noted that he had added Iraq to the bottom of the chart (it had not been present in 2007). He stated that basically "Iraq's round one and round two" was a government take of about 98 percent. He referenced an aspect of the Iraq contract and detailed that if an oil company invested \$1 billion, the oil company received its \$1 billion back prior to the split of profits.

Representative Wilson asked about the acronym "PSC" [in the charts on slides 18 through 20].

Mr. Ruggiero clarified that PSC stood for production sharing contract. He elaborated that the charts included three different types of oil patch contracts, which were reflected in the legend [on the lower right side]. The first was a royalty/tax system indicated with diagonal lines and was equivalent to the Lower 48, Alaska, and some other regimes. The black box reflected a PSC contract, which was present in myriad countries. The third was a service contract reflected by a checkerboard box, which was similar to a PSC, but typically the company helping the government was not allowed to take ownership of barrels. He noted the company did not book reserves, but it may receive value as though it had.

[2:44:52 PM](#)

Representative Grenn asked for a number or percentage of countries looking for the same type of large fields Alaska was. He asked if all the countries on the list [slides 18 through 20] were looking for the same type of fields.

Mr. Ruggiero responded that many countries would love to discover a mega field, or an "elephant" as termed by the oil industry. A large field always brought associated development, jobs, and work. Everyone would love to have a large field, but geology did not make it so.

Representative Grenn asked if Ireland was expecting to find an elephant field. He asked for more detail.

Mr. Ruggiero replied that Ireland was at the top of the list for the lowest government take; it had a very low petroleum tax. Over several decades there had been attempts to find oil in and around Irish onshore and offshore with limited success. In order to keep the industry going, the country charged very little government take. He used Iraq as another example and explained that it knew it had elephant fields prior to the conflict that shut its oil fields down; therefore, it had designed its fiscal system around the large fields.

Vice-Chair Gara wondered if there were regions that were more similar to Alaska that could be used to compare government take. He wondered if there were locations Alaska was in higher competition with.

Mr. Ruggiero answered that when considering the top four or five places that would be truly competitive with Alaska he thought about the offshore eastern coast of Alaska and compared it to places like Nova Scotia and Newfoundland with high-cost, big reservoirs, harsh winter environment, and other. Other locations included Norway, Australia (with long lead-time projects and its offshore projects only), subsalt basins in Brazil, and West Africa's deep-water reserves. The examples were all large reservoirs with long lead-time projects. He specified Angola as a primary location in West Africa with all the same characteristics of high-cost development with long lead-time and long-lived reserves.

Vice-Chair Gara stated there were countries with high taxes or low taxes that were nothing like Alaska where companies went in knowing they may be nationalized (e.g. Venezuela). He wondered if companies were willing to pay a bit more to invest in safe locations.

Mr. Ruggiero replied that he did not want to oversimplify a decision down to only one metric because decisions were always based on a host of metrics. He detailed that when coming up with a company's anticipated return on investment for a project, the company upped their expectation prior to choosing to invest in countries on the worst end of the

metrics, whereas they may have a lower threshold for investing in countries on the better end of the scale.

2:50:42 PM

Representative Guttenberg asked for Mr. Ruggiero to discuss a comparison between Alaska and Norway. He discussed that Norway is a northern country with cold weather and a challenging environment. Norway had significant [oil] activity with a higher government take.

Mr. Ruggiero answered that the information would be a bit dated, but he had personal experience from being posted in the North Sea. The one thing Norway had brought to the table was that it had a very involved government. He noted he had not liked that at first, but had come to like it. He elaborated that the government was involved with potential designs, timing, and acted as a gatekeeper on what projects got to come online because it wanted to minimize the offshore pipe infrastructure. The country staged fields based on when capacity would be available, instead of building new lines; however, when there were four or five discoveries Norway would commission a new line. He added that the country had been the gatekeeper in terms of doing things that were positive. Norway's government take was roughly 78 percent, but it allowed rapid recovery of money spent and had an investment credit/uplift companies were able to get in the first four years of coming on and spending money. There were numerous nuances that made it attractive for companies to invest. Norwegian-owned companies also had a substantial share of each project. The reason numerous companies chose to do business in Norway involved a combination of things involving how business was done, how easy it was to work with the government, and how well things got done.

Representative Guttenberg discussed that Norway had a nationalized corporation functioning as a coordinator that decided what projects to do and when. The corporation parsed sections out to different companies with different specialties. He believed the corporation coordinated the activity for the benefit of the country and everyone took a piece. He asked if he was accurate.

Mr. Ruggiero replied that it was an accurate representation of what had taken place while he had been there.

2:54:13 PM

Mr. Ruggiero moved to slide 21 and discussed where Alaska currently stood against the Lower 48. He stated that apart from offshore, deep water in the Gulf of Mexico the locations were not comparative. He addressed a comparison beginning with only tax terms and explained that Alaska's royalty was comparable to old royalties, but it was much more favorable compared to new royalties and high acquisition prices in the Lower 48. Even though newer leases had higher royalties in the Lower 48, many of those leases came with "drill or drop" clauses. He detailed that some of the early leases signed in the Lower 48 contained clauses that if a company drilled one well (many times it was one well per square mile), the company could hold every reservoir above and below ground in perpetuity as long as the one well continued to produce. Royalty owners and their representatives had learned quickly that development may take place on adjoining sections where they may drill three or four wells, but they could not force the person to drill another well because all the acreage was held as long as the one drill continued to produce.

Mr. Ruggiero explained that royalty owner associations had gotten smarter and had developed clauses specifying if an leasee had not drilled at least one well in a set amount of time, they had to pay an annual rental on the lease. He noted it became very expensive to hold onto property if no development occurred. After a period of five to seven years the leasee lost the land if no activity had occurred. Leases also specified that the leasee had to keep up with the tightest spacing - if neighboring leasees had drilled four wells per square mile, it was necessary to drill four wells instead of four. Although Alaska may say it had a lower and superior royalty, the Lower 48 had a penal financial obligation to ensure obligations were filled under the new leases even though they were more expensive. He noted that the charts from Daniel Johnston did not include anything about "drill or drop" or about PSCs where countries gave companies rights to in perpetuity whereas others required activity on a property within three to five years or the property was leased to another party. He explained those were nuances that never showed up in comparative tables.

Mr. Ruggiero addressed how Alaska compared to the Lower 48 based on the effective tax rate (slide 21). At current oil

prices Alaska's tax rate was low relatively speaking, because they were all gross taxes, which were regressive - the lower the price went, the worse the effective tax rate came on the Lower 48 locations. He addressed exploration and production credits - many had expired or had sunset clauses. He discussed that Alaska had been unique when it had the credits and it had been very valuable to companies - he believed the credits had been responsible for some of the activity levels in Alaska. Alaska also had a number of unique aspects that operators did not run into in other locations - operators did not have to worry about gas versus oil or Cook Inlet versus Middle Earth or the North Slope. There were some credits for horizontal wells or for secondary recovery where there was some separation, but primarily that type of separation did not exist in the Lower 48. Alaska was unique in some positive ways, but it was the only location he knew of that did monthly taxation. Others collected monthly, but the taxes were annual.

[2:59:19 PM](#)

Vice-Chair Gara referred to a memo from Ken Alper (director of the Tax Division, Department of Revenue) that translated the effect of the actual profits tax rate in Alaska at various prices. Mr. Alper specified that older non-GVR [gross value reduction] fields had a 4 percent tax rate until about \$70 to \$73 per barrel and GVR fields had no minimum tax. The state had a zero percent production tax until about \$70 per barrel. He stated that some GVR fields were post 2003 and some were new. He wondered if the state was giving away too much with its GVR tax rate. He noted that Point Thomson was one of the fields.

Mr. Ruggiero wanted to address the question the following day when he presented a model. He would show a chart later in the presentation and explained that the table Vice-Chair Gara was referencing had been run with one set of costs. As cost structures change - there was a wide range of costs across fields - at different prices different people were subject to the minimum or net tax. He believed the question would be better answered with the model.

Representative Wilson remarked that it seemed the discussion always pertained to only one piece of the puzzle. She believed that when the committee talked about the state's share, the discussion should include production tax, royalties, severance tax, property tax, and other. She

thought the items should all be discussed at one time. She asked if it was fair to try to fix one piece without considering the whole structure.

Mr. Ruggiero agreed that the whole structure should be considered. He detailed that when one-off issues were dealt with separately it could cause issues somewhere else. In making the decision to fix one piece, he assumed the legislature was considering the structure as a whole.

Representative Wilson asked if the discussion the following day would look at the entire scenario and would show how a change to one component would shift things or bring in more or less oil.

Mr. Ruggiero replied in the affirmative. The committee would be able to modify sliding scales, minimum tax, GVR, and other items to view the immediate impact [in the model the following day]. He stated the model would allow one change at a time or multiple changes to view the impacts.

Representative Wilson asked if the model would show how much oil down the line the state could expect under various scenarios. Mr. Ruggiero replied he could not predict the information.

Representative Wilson stated that was her point. Her goal was to see more oil down the line. She stated that if the component was not part of the modeling, they had missed the mark. She surmised they may get more money at the beginning, but the change would mess things up in perpetuity if it resulted in less oil down the line. She thought it had to be a part of the puzzle.

[3:04:07 PM](#)

Mr. Ruggiero agreed it was important to find the way. He thought it was a place the oil companies could help the committee to understand existing oil that could be brought on and the most significant hurdles facing companies and preventing them from investing.

Representative Ortiz referred to slide 9 that highlighted the state's overall goal. He asked about the relevance of slide 21 pertaining to how Alaska compared to the Lower 48. He asked if it was a critical question for the state to be asking itself. Alternatively, he wondered if the more

significant question should be about how competitive Alaska was with countries with similar regimes and reserves.

Mr. Ruggiero recommended looking at the regimes Alaska was competing against. The arguments pertaining to the Lower 48 were included because they were easy, and it was easy to draw a conclusion that may not be accurate. For example, he did not believe Alaska should match the structure in North Dakota just because it was producing more oil. He had included the slide in response to the numerous questions that had arisen about the Lower 48. He added that a graph of North Dakota production over a 30-year period would look pretty flat for 30 years. He noted that North Dakota had not changed its fiscal system, the change had been in technology. The state had gone from having average/sub-average rock to great rock in terms of development at present due to shale that was easily accessible.

Mr. Ruggiero continued to answer Representative Ortiz's question. He shared that he had done a study a couple of years earlier that looked at the top 75 non-major oil companies in the U.S. Between 1990 and 2008 they had taken on plus or minus \$80 billion from private equity and hedge funds. After the 2008 financial crash they had taken on \$110 billion between 2009 and 2014. They had gone from an average debt to equity ratio of 40/60 to 90/10. He noted at that time the price of oil had been above \$100 per barrel. He continued that the country had been in a prolonged period of zero percent federal interest. Many industries had been struggling and were not growing, but when the price of oil collapsed with the financial crisis in 2008 and 2009 everyone had bet the price of oil would come back, which it had done with a fury. Subsequently, all the money poured in and continued to pour in even after the price peaked at \$120 to \$130 per barrel. Much of the activity and barrels were there because the money had been easy and quick to receive.

Mr. Ruggiero continued that a couple of economists had done a study that of all the money spent in North Dakota - almost 10,000 wells had been drilled at an average cost of \$8 million per well (\$80 billion invested) - after royalties and severance taxes were subtracted, only about \$50 or so billion had been recovered. He added that most of the wells were beyond their production peak. He stated that they may have produced 1 million barrels of oil, but the

jury was still out as to how much money would be made in North Dakota.

[3:08:54 PM](#)

Representative Guttenberg pointed to slide 21. He addressed the last bullet on the right of the slide under the relative risks category pertaining to competitive access for all producers. He asked if the statement was true. He asked for detail about unpredictable tariff levels.

Mr. Ruggiero answered by referencing his experience working in the North Sea. He relayed that in the U.S. he had been taught about all the things that could and could not be done under SEC rules and what governments should and should not do. He recalled being told by Norway to wait in line for a development he brought forward. He explained that Norway had seen all the problems with overbuilt facilities and because its regime allowed the recovery of any money spent (any unnecessary dollar spent was a dollar out of Norway's treasury), the country controlled and ensured access. He continued that if the parties involved could not come to an agreement Norway deemed reasonable, the country would intervene. He noted the country had direct, indirect, and passive aggressive ways of intervening. He explained that Alaska had one main pipeline and if the goal was a long-term future on the North Slope, the state needed to ensure that whatever needed to be in place and whatever needed to be done was done to ensure any new player could get access into the pipeline at fair and reasonable rates.

Representative Guttenberg shared that he had introduced a facilities access bill in the past. He recalled meeting with an independent CEO who had said that when he had been young the facilities had been antiquated and if he had not been given a good rate, it had been more economical to build his own facility. He reasoned that not everyone had the opportunity or economy of scale. He asked if there was a way to show a history of access fees and who had paid for what and how competitive it was for various partners or independents. He asked how restrictive it had been for people.

Mr. Ruggiero replied that he did not have access to that data. He added it would be a good question to ask the TAPS owners.

3:12:24 PM

Mr. Ruggiero moved to slide 22 and addressed more regimes using self-correcting mechanisms. He referred to his recommendation to use a net tax system with brackets to mimic what the state currently had. He spoke about historical actions resulting in different outcomes, many of the outcomes were due to firm triggers at prices. He relayed that more and more regimes were using self-correcting mechanisms. In order to get additional production and new developments, a self-correcting system could predict what was going to happen. He explained that a self-correcting system would know exactly how low profitability in the current year, a high write off, or great profits the following year would treat them. The economics could be set up and run. He acknowledged there would still be the risk that any legislature could change legislation at any time, but it would be much more predictable. He provided a hypothetical scenario where a system was not predictable - an entity's costs would be high, the trigger would be at \$90 and costs would be \$75, and the entity wondered if it could move the trigger up so the costs were not as onerous.

Mr. Ruggiero continued to address the benefit of a self-correcting mechanism. He detailed that in practice, taxes were set ahead of time (i.e. guessing about the future). He stated that oil patches changed often and regularly and there was not the ability to set a tax regime with 20:20 hindsight. A number of mechanisms had been developed and put in practice to allow fiscal systems to adapt to changing markets. He listed numerous options including profit per barrel, overall rate of return, and an R-Factor (the amount of money received versus the investment amount). All the options could be set up with one or more brackets and provided different ways to establish a long-term durable system.

Mr. Ruggiero addressed slide 23 titled "Why use Self-Correcting Mechanisms." He explained that every government and legislature had thought it was doing the best it could at the time they agreed to something in a bill. He agreed the action lasted for a while, but because of the biases of every system, the future would bring some unintended results (either because prices were higher or lower than anticipated or there were interdependencies where a fix to

one area inadvertently impacted other areas in a structure).

3:16:08 PM

Mr. Ruggiero addressed the flaw of averages and avoiding unintended consequences on slide 24. He shared that in his past experience with ACES and later, the average numbers had tended to be used. He did not know of a field that had the average transportation or cost rate - they all had either lower or higher rates than the average. When a system was designed around averages did not address the outliers. He pointed to a cartoon on slide 24 depicting a stream that was three feet deep on average, but that did not address the 20-foot hole partway across the stream. He stated it was acceptable to use the average for general descriptions, but it was important to consider the range. He referred to a slide provided the previous day by DOR related to tariffs. The slide had included tariffs ranging from \$9 to almost \$30 per barrel. He underscored that when building all the models and systems, the use of a \$10 average would be wrong. He spoke to the importance of testing systems as they were built.

Mr. Ruggiero moved to slide 25 and addressed effective tax rate at costs of \$40, \$55, and \$65 per barrel. The graph showed the existing system under SB 21. He explained that the three sets of lines resembling the shape of a hockey stick used a total tariff and operating cost of \$40, \$55, and \$65 per barrel. The lowest point came down at roughly \$73 per barrel - it included a 4 percent minimum tax. When average numbers were used, at \$73 per barrel, instead of paying the gross minimum, a net basis was used. At a \$55 per barrel cost, the number moved up to somewhere around \$76 to \$77. At a \$65 per barrel cost, the number increased to over \$85 per barrel where the minimum gross tax would be paid at every price below that number (\$65). He pointed out that the top end did not move because a stake had been set at a specific price. As cost structures went up over time, the tax increased. He stressed that the cost structure used in a model would give a different answer about where something should or should not be done. He advised that during his modeling presentation the following day the committee should consider low and high ends to go with the average to see all three.

Vice-Chair Gara asked for verification the slide showed the non-GVR fields, not the GVR fields that did not pay the minimum tax.

Mr. Ruggiero replied in the affirmative. He detailed the fields on the slide all paid the minimum tax (it did not go to zero). The graph had been run with a 4 and 5 percent minimum gross tax.

[3:20:09 PM](#)

Representative Wilson asked for a brief description of GVR versus non-GVR fields.

Mr. Ruggiero replied that within the current legislation, for fields that met certain criteria to be deemed a new field, companies could take a 20 percent deduction from the gross value at the wellhead. He noted another 10 percent could be added as well. It was a deduction for new fields along with a \$5 per barrel credit. The graph on slide 25 showed a minimum tax being payable at very low prices because the per barrel credits could not pierce the floor, but the GVR fields could (meaning the tax could go to zero).

Representative Wilson asked if the slide related to the big three oil companies or other.

Mr. Ruggiero answered that slide 25 did not reflect specific companies. He elaborated the slide provided a representation of what would happen when the total cost structure of non-GVR eligible fields changed. The chart indicated the point when fields switched from paying the gross minimum to paying the net tax. He referred to an earlier question of what happened at 7, 8, or 9 percent [taxes] and relayed he would model the information the following day to see the impact. As long as there were anchor points (the sliding barrel credit had anchor points at \$150, \$140, and \$130) on the right side, but costs moved the left side of the graph. He would provide additional detail the following day.

[3:22:27 PM](#)

Mr. Ruggiero addressed slide 27 pertaining to the value of extending the life of legacy fields. He had heard numerous people say that Alaska had numerous giveaways to new

fields. He used the following assumptions shown on slide 27:

- Assumptions
 - o 250,000 bpd physical shut in rate
 - o 50,000 economic shut-in rate
 - o New oil sufficient to keep pipeline running into the future
 - o 6% decline on legacy from 250k to 50K
 - o Prices \$50 to \$100 ANSWC
 - o Net tax rates from 5% to 35%

Representative Ortiz asked what the physical shut-in rate was.

Mr. Ruggiero answered that the physical shut-in rate was the rate where there would be so little flow in the pipeline that it could not keep running. There was a minimum rate required to keep the pipeline running. The economic limit shut-in rate would be for the legacy fields - once production got down, given the number of wells and facilities, the costs would probably start to outrun the revenue. There was a large fixed cost for running the fields. He noted that the assumptions on slide 27 were guesses. The third assumption listed on the slide was the development of sufficient new oil to keep the pipeline running. He had used a 6 percent decline rate on the legacy fields "from 250k to 50k." He had looked at prices between \$50 and \$100 and at net tax rates from 5 percent to 35 percent.

Mr. Ruggiero estimated that extending the life of legacy fields could result in additional revenue to Alaska ranging from \$5 billion to \$50 billion in petroleum tax, royalty, and property tax. He stressed there was value in keeping the legacy fields operating. He remarked that if companies knew the pipeline would have a long life, there may be additional work they would be encouraged to do because they had the other fields keeping the flow going at a high enough rate. He noted that Caelus's Smith Bay project had extremely light oil and light oil relative to all the heavier oil would help tremendously in the operation of the pipeline; it would enable much heavier oil to be produced and blended out.

[3:25:42 PM](#)

Mr. Ruggiero addressed the time value of money on slide 29. He had modeled a hypothetical field that bore no resemblance to any existing field. The model included an investment of \$100 in year-one, \$400 in years two through ten, \$100 in cost recovery to the producer, and \$300 of profit split between the producer and government. He underscored that it was the same amount of money in the same years. The only alteration to the model would be who received the money when.

Mr. Ruggiero turned to slide 30 and addressed differences in cost recovery based on the hypothetical scenario on slide 29. The graphs on the left showed immediate deductibility recovery with (with no uplift). The top graph on both sides used the total available money within a year and showed the percentage split between the producer (blue) and the non-producer (green). The plot on the bottom left and right showed the actual dollars during the period. The example on the left showed accelerated cost recovery - the small amount of non-producer recovery in years three and four mirrored receiving a royalty, with the remainder going to the producer. The lower left chart showed an IRR of 20 percent. If the recovery was spread out over five years (the amount of costs to be recovered was limited by spreading it across the five-year period), the producer's economics on the project worsened and dropped to a 14 percent IRR. The net present value (NPV) was almost cut in half.

[3:28:51 PM](#)

Mr. Ruggiero moved to slide 31 and addressed cash credits versus 50 percent NOL. He explained the chart would show why many companies were interested in cashable credits ahead of time versus waiting for production and taking deductions later. The chart on the lower left showed the state as an investor in year-one of 35 percent cashable credits. The producer IRR went to 27 percent. He reminded the committee the scenario had provided a 20 percent IRR with accelerated recovery and a 14 percent IRR with delayed recovery. He pointed to the charts on the right where the company was only allowed to recover 50 percent of its costs - the IRR decreased to 6 percent and the NPV was negative; it was a "definite no-go project." Taking the same hypothetical field and applying various ways of handling the recovery or deductibility of cost, provided vastly different results.

Mr. Ruggiero referred to an earlier question about why a company may chose to invest in a 78 to 90 percent government take country, while questioning investment in Alaska at a 60 percent government take. The answer was due to things like the items presented on slides 30 and 31 - it was the things that were hidden that were not always seen when graphical comparisons of regimes were conducted. He noted that each of the graphs could represent countries A, B, C, and D as well. He had run an analysis of an existing field in seven different countries, which had resulted in an IRR ranging from 4 to 38 percent. The counties used all had very different tax regimes. He stressed the importance of considering the system as a whole, and looking at real possible fields. Even though the same royalty and tax rate was applied in his hypothetical example, there were very different results (slides 30 and 31). He spoke to the goal of filling the pipeline and noted that the state did not have 100 different operators or 100 potential fields to be developed. The number of operators could be counted on one or two hands and the number of potential fields that could be developed to keep the pipeline running was minimal. Those facts would need to be considered when making changes to the tax system.

[3:32:22 PM](#)

Mr. Ruggiero spoke to slide 32 titled "Impact of Interest Rate on Time Value of Money." He had included the slide based on discussions about uplift and interest rates and what it was worth or not worth. The y-axis (vertical) showed a number of years and the x-axis (horizontal) showed an interest rate starting at 4 percent increasing in 2 percent increments up to 20 percent. The boxes highlighted in yellow indicated the number of years it would take to double your money. In a conversation about providing uplift to an NOL or other, the chart would be a quick interest rate guide (if money had never been deducted). He used the 2 percent interest (highlighted in yellow) as an example - if an 8 percent uplift was offered, the money would double in size in nine years. He detailed if the NOL was \$100 and it was not deducted during that nine-year period, it would be worth \$200 in the ninth year.

[3:34:05 PM](#)

Mr. Ruggiero concluded his presentation on slide 34 related to question topics that had come up in testimony. He mentioned questions pertaining to what other countries and other regimes did, how different mechanisms worked, and what may be perceived as good or bad in various countries.

Representative Ortiz relayed that the previous day he had asked about the concept of hardening the [tax] floor. He asked if hard floors were common in other regimes.

Mr. Ruggiero answered that any regime that has royalty, by definition, has a hard floor. The gross tax in Alaska was no different than royalty; it could have just been added to the royalty and it would work the same way. There were other countries with somewhat of a net-based system that would put in a minimum. Countries or regimes that depended on oil revenue for 30 or more percent of their treasury intake, had mechanisms including hard floors within their fiscal regime, to get revenue every year. Others only depended on oil for 2 to 3 percent of their treasury - those companies typically had an absence of floor or minimum because they were not reliant on oil to keep government running.

Representative Ortiz surmised that a floor in terms of a production or severance tax was not very common. Mr. Ruggiero responded that with the clarification that royalty acted as a floor, it was very common because royalty was very common.

Representative Guttenberg referred to information sharing in other regimes and what information was shared in Alaska versus what was not. He referenced the ability to know what was going on to make a decision. He asked for detail.

Mr. Ruggiero addressed his experience working with the Netherlands, UK, and Norway in the North Sea. He relayed that before he ever recommended moving forward on a project to executive management he had two to five meetings with different governmental agencies to go over the project (i.e. to address the reservoir, how much money would be spent, how many drills would be needed, what pipeline would be used, and other). He continued that during the first meeting they may discuss numbers plus or minus 50 percent, but by the end, the agencies would know where and how he planned to drill and what he expected to earn. He had involved parties ranging from engineers to treasury

officials. By the time he received internal approval to go forward, filing the petition for the right to develop would be a foregone conclusion.

Mr. Ruggiero explained the process had been beneficial because government agencies may have suggested moving a well a bit to the north or talking to a company because capacity may have been opening in its facility. The process had also been the governments' way of ensuring an optimum amount of facilities were built. In regimes that allowed companies to recover or deduct costs, every dollar that was deducted or recovered was a dollar that did not go into the treasury (it was not exactly dollar for dollar, but close). He stated that those countries were much more involved and much more information was shared. He had worked on development projects in other countries where the agencies basically saw everything the company had except for the sales contracts. The North Sea countries were beginning to take it to a further extreme. He could provide some links at a later time. He detailed that it was possible to go into Norway, look into a field and find the ownership history, the production, the annual capital expenditures, the five-year forward forecast, what rig had drilled a well, and other information. The information was all accessible online.

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Representative Guttenberg discussed that Alaska had some significant credits. He explained that the numbers were aggregated, and it was not possible to see the impact of the credits and where they had been successful or unsuccessful. He asked if there were similar regimes (outside of taxes) where it was possible to analyze what was effective and what was working. The goal was for credits to result in increased production. He asked if [visibility into the data] was a reasonable thing to ask.

Mr. Ruggiero answered there was a significant amount of available data that would not be a violation of SEC rules if disclosed. He noted there was a fine line between when that line was crossed; however, there was substantial information that could be made available. He noted that the state did not necessarily need to have the taxpayer information. He explained that much of the data that went into a tax return was also very basic data on production, amounts of oil in pipelines, wells drilled, and other. He

believed there were numerous things the state could ask for and see without putting the state or oil companies at risk of violating any laws. He added that companies provided the information internationally.

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Representative Wilson asked how many regimes had changed their tax structure as often as Alaska.

Mr. Ruggiero replied it depended on the timeframe. There was a survey that went out to company executives that rated the attractiveness of fiscal regimes. One of the places that had always been near the top of the list was the United Kingdom. He relayed that from 1981 going forward, the UK had changed its fiscal regime more than any location in the world, yet it was considered one of the top three stable places to conduct business. The country was quick to remove terms and lower rates when prices went way down, but it was equally quick to raise rates and government take when prices increased.

Representative Wilson asked if the state was doing damage to its reputation. She believed the state appeared to be constantly looking at its fair share as being more.

Mr. Ruggiero replied that it all came down to timing and direction. He elaborated that if it was in the right direction at the right time it would be overlooked and people would move on; however, it became more problematic if change was perceived to be in the wrong direction or was late to the game.

Representative Wilson referred to Mr. Ruggiero's testimony to the importance of ensuring the barrels flowing through the pipeline in Alaska did not fall much farther. She observed that it was not possible to change how cold it was or difficult it was to operate on the North Slope. She asked if it was the right time and move to change the state's tax structure in HB 111.

Mr. Ruggiero replied it depended on how the system was changed.

Representative Wilson asked looked at HB 111 as currently written. She asked if the bill would be positive or negative for the state if it passed in its current form.

Mr. Ruggiero believed there were aspects in the bill that would make a change in the wrong direction.

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Representative Pruitt stated that he had a conversation with some Scottish investors several years earlier. He recalled that the individuals had complained that Westminster had increased the rates too high. He noted that the individuals had thought the change had occurred too quickly. Subsequently, there had been a change back that recognized prices were low. He surmised the issue was not necessarily that Alaska was changing the tax structure, but it was what the state did when it made the change. He looked at the fiscal note and observed that the bill asked for a tax increase. He did not believe it was the direction the UK would go under the current price environment. He asked for comment on his statement.

Mr. Ruggiero was not aware of what the UK was currently doing. He believed Representative Pruitt's point was the bill would result in a revenue increase to the state. He recommended looking at the state's goals and determining a balance. He returned to slide 9 regarding the state's priorities. He explained the state had opposing drivers - the long-term indicated the state needed to go in one direction, while the short-term indicated the need to go in a different direction. The state needed to decide how far to tilt to the right before causing significant damage to the left. It was necessary to determine the goal prior to making decisions on taxation. Too many times changes were made to fix a problem that had no relation to the overall goals. If the goals were used as a guide, it became a matter of the balance and how far it was tilted one way or the other.

Representative Pruitt appreciated the recommendation to begin with the state's goals to determine how to make the policy. He added that the current bill was not the only bill the legislature should use that recommendation for.

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Representative Tilton spoke to Mr. Ruggiero's testimony about changing regimes in the right way at the right time. She noted that HB 111 would increase government take in

Alaska. She referred to slide 21 from an Alaska Oil and Gas Association (AOGA) presentation from the previous day. She detailed the slide had specified that regimes worldwide were looking at more fiscal incentives rather than increasing government take. She asked Mr. Ruggiero if he believed HB 111 was being considered at the right time.

Mr. Ruggiero answered that looking at the AOGA chart and one he had used as well, government take tended to increase when oil prices rose and decrease when prices fell. However, about one-third of the locations on the chart were in the opposite direction. He returned to slide 9 and relayed that although those governments were going in the opposite direction, there had been a reason that had been specific to that location. The locations had been trying to balance out their goals. He agreed that when a tax regime went in the wrong direction industry would let a government know. He added that it definitely did not help when companies had to pay more taxes. He believed it was necessary for the legislature look at the state's overall situation and to look at goals and priorities as a state to find the right balance.

Representative Pruitt stated that during discussion on SB 21 they had heard comments that ACES had not been modeled at higher numbers. Similarly, the legislature was currently hearing that SB 21 had not been modeled at lower numbers. He asked if it was possible create a system that addressed both ends. He noted Mr. Ruggiero had mentioned that other regimes adjusted as prices increased. He asked if it was possible to implement something that would not require consistent alteration.

Mr. Ruggiero corrected that during ACES he had been requested by the House Finance Committee to run prices up to \$400 per barrel. He had presented prices from zero to \$400. He shared that thousands of scenarios had been made based on requests from the committee at the time. He addressed how to make something self-correcting. He recommended basing trigger points (when changing an incentive, credit, or tax rate) on something calculated at that time based off profitability, not price or gross. The profitability could be unit profitability - ACES had been based off unit profitability. He clarified that ACES did not do anything at prices of \$60 per barrel. He could predict what ACES had done at \$60 of profit per barrel, but not at a price of \$60 per barrel. He had seen many

presentations misrepresent ACES. He spoke to getting into understanding things based on net and profitability versus things based on gross or fixed points. He referred to one of his recommendations of a bracketed net system, which was based off unit profitability. Currently, there were people at the very low end of unit profitability (e.g. gas in Cook Inlet) and people at the higher end of unit profitability (e.g. large legacy fields). A system that taxed or approached companies based on their profitability was much more responsive and predictable going forward.

Representative Pruitt noted that he had not been present during ACES and had only heard the conversation about SB 21. Mr. Ruggiero replied that he had also been blamed for the 0.4 percent progressivity, but it had been the other body.

Co-Chair Seaton referred to the 10 percent GVR for any field above 12.5 percent royalty. He had been trying to figure out why it would be reasonable to use the production tax system to reverse royalties when people bid on oil fields based on timing and bid terms higher than 12.5 percent royalty. He surmised the provision took away more royalty than would be reasonable. He asked Mr. Ruggiero had comment or would address the issue the following day.

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Mr. Ruggiero answered it was something that could be shown. He added that he had been dumbfounded by the concept that if a company had just accepted 2 more points in its royalty, it would get a 10 percent royalty reduction. He did not understand why the provision had come into being. He explained that the 10 percent extra on the GVR was applied to the same dollars as the royalty. He expounded that if a company agreed to 2 more points upfront it would get 10 off the back end, meaning it would be a net 8 points better off. If that type of relief was necessary for a new field, the state already had royalty relief in place in statute and regulation; when needed companies could apply for the relief and could show why and for how long it would be needed.

Co-Chair Seaton stated he was concerned about how the provision impacted the entire [tax] regime. He believed that going to a 30 percent GVR would significantly distort everything that had been attempted.

HB 111 was HEARD and HELD in committee for further consideration.

Co-Chair Foster provided the schedule for the following day.

ADJOURNMENT

3:58:14 PM

The meeting was adjourned at 3:58 p.m.