ALASKA STATE LEGISLATURE
HOUSE RESOURCES STANDING COMMITTEE
February 25, 2016
1:02 p.m.

MEMBERS PRESENT

Representative Benjamin Nageak, Co-Chair
Representative David Talerico, Co-Chair
Representative Mike Hawker, Vice Chair
Representative Bob Herron
Representative Craig Johnson
Representative Kurt Olson
Representative Paul Seaton
Representative Andy Josephson
Representative Geran Tarr

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

HOUSE BILL NO. 247
"An Act relating to confidential information status and public record status of information in the possession of the Department of Revenue; relating to interest applicable to delinquent tax; relating to disclosure of oil and gas production tax credit information; relating to refunds for the gas storage facility tax credit, the liquefied natural gas storage facility tax credit, and the qualified in-state oil refinery infrastructure expenditures tax credit; relating to the minimum tax for certain oil and gas production; relating to the minimum tax calculation for monthly installment payments of estimated tax; relating to interest on monthly installment payments of estimated tax; relating to limitations for the application of tax credits; relating to oil and gas production tax credits for certain losses and expenditures; relating to limitations for nontransferable oil and gas production tax credits based on oil production and the alternative tax credit for oil and gas exploration; relating to purchase of tax credit certificates from the oil and gas tax credit fund; relating to a minimum for Gross Value at the Point of Production; relating to lease expenditures and tax credits for municipal entities; adding a definition for "qualified capital expenditure"; adding a definition for "outstanding liability to the state"; repealing oil and gas exploration incentive credits; repealing the

limitation on the application of credits against tax liability for lease expenditures incurred before January 1, 2011; repealing provisions related to the monthly installment payments for estimated tax for oil and gas produced before January 1, 2014; repealing the oil and gas production tax credit for qualified capital expenditures and certain well expenditures; repealing the calculation for certain lease expenditures applicable before January 1, 2011; making conforming amendments; and providing for an effective date."

- HEARD AND HELD

PREVIOUS COMMITTEE ACTION

BILL: HB 247
SHORT TITLE: TAX;CREDITS;INTEREST;REFUNDS;O & G
SPONSOR(s): RULES BY REQUEST OF THE GOVERNOR

01/19/16	(H)	READ THE FIRST TIME - REFERRALS
01/19/16	(H)	RES, FIN
02/03/16	(H)	RES AT 1:00 PM BARNES 124
02/03/16	(H)	Heard & Held
02/03/16	(H)	MINUTE(RES)
02/05/16	(H)	RES AT 1:00 PM BARNES 124
02/05/16	(H)	Overviews Continued from 2/3/16 Meeting:
02/10/16	(H)	RES AT 1:00 PM BARNES 124
02/10/16	(H)	Heard & Held
02/10/16	(H)	MINUTE(RES)
02/12/16	(H)	RES AT 1:00 PM BARNES 124
02/12/16	(H)	Heard & Held
02/12/16	(H)	MINUTE(RES)
02/13/16	(H)	RES AT 1:00 PM BARNES 124
02/13/16	(H)	-- Public Testimony Postponed --
02/22/16	(H)	RES AT 1:00 PM BARNES 124
02/22/16	(H)	Heard & Held
02/22/16	(H)	MINUTE(RES)
02/24/16	(H)	RES AT 1:00 PM BARNES 124
02/24/16	(H)	Heard & Held
02/24/16	(H)	MINUTE(RES)
02/25/16	(H)	RES AT 8:30 AM BARNES 124
02/25/16	(H)	RES AT 1:00 PM BARNES 124

WITNESS REGISTER

JANAK MAYER, Chairman & Chief Technologist
enalytica

Consultant to the Legislative Budget and Audit Committee
Washington, DC
POSITION STATEMENT: As consultant to the Legislative Budget and Audit Committee, provided a PowerPoint presentation and analysis entitled, "IMPACT OF HB 247: NORTH SLOPE ASSESSMENT," dated 2/25/16.

ACTION NARRATIVE

1:02:46 PM

CO-CHAIR BENJAMIN NAGEAK called the House Resources Standing Committee meeting to order at 1:02 p.m. Representatives Hawker, Johnson, Josephson, Seaton, Olson, Talerico, and Nageak were present at the call to order. Representatives Tarr and Herron arrived as the meeting was in progress.

1:03:12 PM

CO-CHAIR NAGEAK announced that the only order of business is HOUSE BILL NO. 247, "An Act relating to confidential information status and public record status of information in the possession of the Department of Revenue; relating to interest applicable to delinquent tax; relating to disclosure of oil and gas production tax credit information; relating to refunds for the gas storage facility tax credit, the liquefied natural gas storage facility tax credit, and the qualified in-state oil refinery infrastructure expenditures tax credit; relating to the minimum tax for certain oil and gas production; relating to the minimum tax calculation for monthly installment payments of estimated tax; relating to interest on monthly installment payments of estimated tax; relating to limitations for the application of tax credits; relating to oil and gas production tax credits for certain losses and expenditures; relating to limitations for nontransferable oil and gas production tax credits based on oil production and the alternative tax credit for oil and gas exploration; relating to purchase of tax credit certificates from the oil and gas tax credit fund; relating to a minimum for gross value at the point of production; relating to lease expenditures and tax credits for municipal entities; adding a definition for "qualified capital expenditure"; adding a definition for "outstanding liability to the state"; repealing oil and gas exploration incentive credits; repealing the limitation on the application of credits against tax liability for lease expenditures incurred before January 1, 2011; repealing provisions related to the monthly installment payments

for estimated tax for oil and gas produced before January 1, 2014; repealing the oil and gas production tax credit for qualified capital expenditures and certain well expenditures; repealing the calculation for certain lease expenditures applicable before January 1, 2011; making conforming amendments; and providing for an effective date."

1:03:48 PM

JANAK MAYER, Chairman & Chief Technologist, enalytica, and consultant to the Legislative Budget and Audit Committee, noted that enalytica will be providing two presentations over the next two days analyzing the projected impacts of HB 247 on the oil and gas industry in Alaska. He said today's PowerPoint presentation, "IMPACT OF HB 247: NORTH SLOPE ASSESSMENT," will focus on the North Slope and how enalytica views some of the proposed changes from a North Slope prospective, while tomorrow's presentation will focus on the Cook Inlet.

1:06:03 PM

MR. MAYER turned to slide 2, "KEY QUESTIONS RAISED BY HB 247 RE NORTH SLOPE," to provide some of enalytica's high level thoughts and conclusions. He said the biggest thing in looking at HB 247 with regard to the North Slope is that on the one hand it is not a tax overhaul, it is not looking at fundamental pieces of the fiscal system and making widespread changes. On the other hand, the bill includes a number of very small changes in key parameters that collectively have a substantial effect. There are legitimate concerns that the bill raises, including many big ones such as the roll of the gross floor, how that protects the state when prices are low, and what the right approach to that is - the balance between what the fiscal system does when prices are high and what the fiscal system does when prices are low, what the state's potential liability is in terms of refunded credits in various scenarios into the future. These are important questions to be contemplated.

MR. MAYER advised that the impact of the bill's proposed changes will be highly variable per company depending on each company's positions and investment profiles. Most companies would see substantial adverse effects over the coming years from the biggest changes that are being proposed. He said enalytica also has concerns in regard to the retroactivity of some of the proposals as well as the proposed July 1 [2016] effective date in the context of investment cycle in that they are on numerous major projects currently underway, and some projects sanctioned

as recently as late last year. Additionally, large oil and gas companies have a budgeting cycle and have made plans for this year. They would need to come back because halfway through the year everything has substantially changed due to the passage of new legislation.

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MR. MAYER stressed that stability, more than anything, is the single most important element in any fiscal system as long as a system is broadly competitive and does not have horrendous problems in terms of what the returns are to the investor or horrendous problems in terms of the sustainability for the sovereign. More than anything, what matters is that when an investor calculates the economics on its projects and makes a final investment decision to proceed or not, the investor needs to know that the terms it counted on are going to remain the terms into the future or that if the terms change they change very rarely and for reasons that are well understood and well thought through.

MR. MAYER said enalytica's biggest concern with HB 247 in regard to the North Slope is not any single one of the changes, but rather a collection of small incremental steps, each one of which is a small tax hike. From an investor's or oil company's perspective it is easy to look at this incremental approach of taking a little more revenue here and a little more there and wonder where it will stop. That is scary from an investor's perspective. When it is one change because it was not the right policy call and needs to be changed and there is clearly articulated rationale for why it needs to change, an investor can look at that and understand it even if not liking it, but have some degree of certainty that from this point forward there will be some stability. Mr. Mayer said that more than anything else when looking at a series of incremental revenue-raising measures, his biggest concern is about the message that is being given about the stability of the regime in terms of not big policy decisions but the danger of incrementalism.

1:10:56 PM

REPRESENTATIVE HAWKER asked whether Mr. Mayer is aware of any other jurisdiction that is significantly increasing taxes on an industry that is clearly losing money all around the world, particularly when the stated intent behind the tax increase is only for the purpose of raising government revenues.

MR. MAYER replied he thinks anyone would say that, in general, raising taxes on industries that make losses is not optimal policy. When looking around the world the answer to that question depends greatly on how resource dependent a jurisdiction is. Oil and gas companies consider jurisdictions with high degrees of resource dependency a form of substantial political risk precisely for this worry. Large and well-diversified economies for whom oil and gas revenues are only a small piece of a well-managed overall tax base can manage this sort of volatility. One would therefore expect that in times of an industry downturn jurisdictions would be trying to make life easier for that industry, not harder. However, that is not always the case in smaller, less-diversified, highly resource dependent economies and that is one reason why companies look at those places and think twice about what things are going to be like in a range of circumstances before investing. So, while he wouldn't say that nowhere in the world does it happen that a resource dependent economy tries to extract more when times are tough from the goose that lays the golden egg, it would certainly not be optimal policy if one could avoid it.

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REPRESENTATIVE HAWKER opined that for a company to invest in Alaska, a highly resource dependent state, the company would understand that Alaska is a much higher political risk than is investing in jurisdictions with a more balanced economy. He inquired whether that would not also lead to a presumption that the industry, in order to invest in Alaska, would require a higher return in the face of a higher risk.

MR. MAYER agreed. More than anything else, he said, the biggest thing Alaska can do in any price environment to reduce that risk is to show over time that in fact it is a stable jurisdiction and that it does not try to tweak the levers every time it has a problem. As a hybrid system, Alaska tries to have the best of both taking on the high side through net taxation and taking on the low side through gross taxation. Always focusing on whichever price environment the state is in and trying to do a little better has some serious problems when it comes to long-term stability and predictability of a regime and overcoming the hurdle of being a resource dependent state, and therefore needing to show that the state is in fact stable and dependable.

1:14:25 PM

REPRESENTATIVE SEATON inquired whether enalytica's presentation is coming to the committee from the perspective of a resource investor or from the aspect of the state's financial capability to sustain these credits.

MR. MAYER responded he would like to think that enalytica has always tried to balance those things and give the most objective advice it can. Part of enalytica's responsibility in providing dispassionate advice to the state is to think through when the state has certain policy objectives and proposes a course of action. What are the impacts of that on an investor? If one of the policy aims is to encourage investment, do changes that meet certain policy objectives have unfortunate consequences on other fronts because of the way they are seen by investors? That is part of what enalytica tries to give advice on.

REPRESENTATIVE SEATON requested that as Mr. Mayer goes through his presentation he make clear to the committee as to whether enalytica is recommending a policy for investors and their stability or for Alaska's fiscal certainty and fiscal stability.

1:16:03 PM

REPRESENTATIVE JOSEPHSON, following the logic described where the industry might view with more anxiety a situation where a sovereign is virtually wholly dependent on that industry, stated that what this administration seems to be saying is that through no fault of anyone Alaska cannot do that anymore, Alaska must wean itself from the industry and find stability in another way. The administration has about a dozen measures and HB 247 is part of that fiscal stability. He asked whether this tracks with what Mr. Mayer is saying about industry wanting stability.

MR. MAYER answered that it comes back to his starting point of saying that certain big questions are raised by the bill and that are legitimate questions to raise about what is optimal tax policy for the sovereign to maintain its revenue base across a wide range of oil prices and all the rest. Different people can come up with different conclusions in that regard. But, from an investor's perspective, one could see changes made that one really did not like or found very painful, particularly if taxes are being raised at a time when there is no value to tax and is essentially just extracting money. One might still be able to live with that in some scenarios if one thought that this was a solidly debated, well-thought-through change and things were not going to change any further after that. Mr. Mayer said that what gives him the most cause for concern is the overall

impression of making slice-by-slice-by-slice progress in extracting further revenue. Always most disconcerting about that approach from an investor's perspective is where does that stop. There is a substantial difference between a well-reasoned debate on some issues and a resolution of them in a way that one feels confident that things are not going to keep changing versus gradual incrementalism. More than anything else, that is what he would warn against.

1:19:03 PM

CO-CHAIR NAGEAK remarked that, like it or not, Alaska is a one-resource state. He recounted that when he was growing up the federal government ran all of Alaska because it was a territory. After becoming a state the state took over most of the responsibilities to govern itself. When he was growing up the resources available for funding the state were fisheries, logging, and mining. Then, when oil was discovered in the 1960's, state government became oil and gas taxes. As a one-resource state Alaska must find ways to use its other resources. For example, a road is needed to his house so the state can take advantage of those resources.

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REPRESENTATIVE HAWKER requested Mr. Mayer to state who he is working for while he is before the committee today.

MR. MAYER stated that enalytica and he as an employee and officer of enalytica are employed for the legislature as consultants by the Legislative Budget and Audit Committee to give dispassionate advice to the entire legislature.

REPRESENTATIVE HAWKER inquired whether it would be fair to say that, as chair of the Legislative Budget and Audit Committee, he asked enalytica to provide a fair analysis to the best of its ability of HB 247 for the legislature to consider in making its decisions.

MR. MAYER replied, "Absolutely yes."

REPRESENTATIVE HAWKER asked whether Mr. Mayer has allegiances to anyone else in this matter.

MR. MAYER responded, "Absolutely not."

REPRESENTATIVE HAWKER inquired whether Mr. Mayer is providing any testimony on behalf of the industry or any other investor in the state of Alaska.

MR. MAYER answered, "We provide testimony ... on behalf of no one other than ourselves and our best dispassionate analysis of what is in the best of the State of Alaska." In doing so, enalytica tries to think through what a particular change looks like from an investor perspective, what might the consequences of that be, and therefore whether the policy does or does not meet that test of the best interest of the State of Alaska.

REPRESENTATIVE HAWKER asked whether Mr. Mayer is an expert here to testify on the state's budget issues and the state's cash flow requirements and needs.

MR. MAYER replied that enalytica's focus is on questions of oil and gas fiscal systems and commercialization of oil and gas more broadly. There is some degree of overlap between good fiscal system design and what that provides the state in terms of a solid financial position in terms of cash flow over a range of price decks. But, beyond that, enalytica is not here to provide advice on how the state manages its budget.

REPRESENTATIVE HAWKER thanked Mr. Mayer for the clarity.

1:22:59 PM

MR. MAYER moved to slide 3, "REFUNDED CREDITS REACHED NEW HIGH IN FY 2015." He said one large key to this debate in the difficult fiscal circumstances that the state finds itself in, is the question of the role of tax credits in general and in particular refunded credits that the state pays out through the tax system. This is about what the state pays out as refunded credits to individual companies, particular to companies that meet the threshold of being below 50,000 barrels a day in production. Then, there is the question of gross minimum floor and credits that can take a company below that floor. But core to all of this is this question of credits. At $628 million this last fiscal year, refunded credits reached the highest point ever. Not only has the amount of refunded credits been growing for the last many years, most striking about this is how the balance has clearly shifted. In 2014 and 2015, however, the majority of credit refunds were spent in Cook Inlet, not the North Slope. According to forecasts by the Department of Revenue (DOR), refunded credits will exceed $1 billion in fiscal years 2016 and 2017. Part of that may be self-correcting in

that investment may not be what was hoped in an extended period of low prices. When one considers the impact of low prices on the state's revenues, anyone should look at those numbers and conclude that serious thought needs to be given to what the impact of this is and how sustainable this is.

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MR. MAYER drew attention to slide 4, "BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET," and explained that the graph uses actual 2015 numbers for revenue and credits. He said the split between the North Slope mostly relies on actual DOR numbers and the royalty is an estimate by enalytica rather than hard numbers, but the totals on the graph are hard numbers. The fiscal system overall still generates more than $2 billion in revenue. Relatively speaking much, much, much less of that comes from production tax than from royalty. Two years ago that was a very different situation and that is because the idea of a Net Production Tax is to tax profit, to tax value. When there is very little profit to tax, that number is always going to be very small and that is an intentional design of the system. As a whole the system still generates more than $2 billion of revenue, he reiterated, and that is true just looking at the North Slope in isolation. Compared to that $2 billion in revenue, the system overall spent a little over $200 million on credits this last year. However, he continued, the Cook Inlet is a very different scenario. [The year 2015] is just one snapshot in time and does not take into account the question of what future revenues those credits may or may not generate. The Cook Inlet is much, much less revenue for relatively much greater credits. This is an important distinction to draw and understand, he said, and is why enalytica is reviewing the North Slope and the Cook Inlet on two different days.

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REPRESENTATIVE HAWKER understood that the real imbalance with regard to Cook Inlet is because these credits are refundable and are not required to be used by the person actually generating them, and this is why there is a significant amount of negative cash flow for Cook Inlet.

MR. MAYER confirmed the aforementioned and further noted that Cook Inlet has no production tax on oil and only has a low fixed [production tax] on gas of $0.17 per thousand cubic feet (MCF). Another big driver of that imbalance is that the Cook Inlet has all of the credits that the Alaska's Clear and Equitable Share

(ACES) [House Bill 2001, passed in 2007, Twenty-Fifth Alaska State Legislature] system applied to the North Slope, as well as some additional credits on top of that.

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REPRESENTATIVE SEATON inquired whether local property tax share is included in that or whether it is actually the share of money from the North Slope or Cook Inlet that comes to the state and that the state has available to pay those credits.

MR. MAYER responded that these high level numbers are statewide, so they do include money from property tax that goes to municipalities and to the state. The graph shows unrestricted royalty revenue to the state in yellow and restricted royalty [in orange]. Responding further, Mr. Mayer noted that the total amount of restricted royalty revenue is $670.5 million and the total amount of unrestricted royalty revenue is just over $1 billion.

REPRESENTATIVE SEATON requested Mr. Mayer to distinguish between how much revenue goes to the state and how much goes to the municipalities as he proceeds in the presentation.

1:30:49 PM

MR. MAYER moved to slide 5, "ALASKA'S HYBRID SYSTEM: LOTS OF BIRDS, FEW STONES," to discuss the fiscal regime that applies on the North Slope. He pointed out that Alaska has a hybrid system of both gross and net taxes, which enalytica is lightheartedly describing as "lots of birds, few stones" in the context of an ideal world where one likes to kill as many birds as possible with a single stone. It is an effective metaphor because that is difficult if not impossible to do. The analogy is that Alaska has many aims that it wants to achieve from its fiscal system - it would like to take as much of the profit as possible when times are good, but would like to protect itself on the low end when times are bad. There is some extent to which one can do both of those things, but it is limited, there is a trade-off to be made here. It is hard to be both Norway and North Dakota at the same time. North Dakota has a very regressive fiscal regime that is very punishing when prices are low, but is still an attractive place for investment across the commodity cycle because it also gives away a lot when times are good. Norway has a net profit based system that has very high government take at high prices, but because it is a pure net system it is also relatively more attractive when prices are lower.

MR. MAYER elaborated that the idea and benefit of a net system is to aim to minimize distortion and maximize returns across the commodity cycle. However, a net system can be quite volatile in the way it generates revenue. For that reason, net systems are particularly well suited to large diversified economies that can manage revenue well, or to economies that take as prudent and thoughtful an approach to managing their revenues as possible in terms of things like sovereign wealth funds and, to the extent that one is a highly resource dependent state, that tries to run off its source of endowment rather than off the government revenue that it generates from taxes. States that run off government revenue that is generated off taxes struggle the hardest in some ways with net profit tax systems because net profit systems amplify that volatility.

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MR. MAYER noted that royalties and gross taxes minimize that volatility because they take the greatest share of value, including all or more of the value, when times are the worst, when costs are high, or when prices are low, and they take the least when times are fat. For that reason, there are lots of circumstances under which gross systems can be quite distorting, quite prohibitive, of certain types of investment. High cost investment becomes very difficult in certain gross systems. It becomes very difficult to invest in gross systems in prolonged periods of low prices, but the great benefit they provide the sovereign is relative stability over the revenues over a long period of time because they are fundamentally regressive.

MR. MAYER pointed out that it gets very difficult to balance these two competing priorities. In lots of cases there is one system or the other. Alaska, partly because of its resource dependence and partly because of the historical circumstance of having come from a long tax royalty tradition, has a mix of both gross and net taxes. That has many strengths. However, the danger is that when times are good, the focus and the emphasis is always on "times are really good and we have this net profit tax, shouldn't we maybe be getting a little bit more for the money now that there is so much coming in and are we really getting the fair share?" And when times are bad the focus is on "times are really bad, wouldn't it be good if we were better protected at the low end?" He said he thinks that dynamic has been played out in public debate and in politics and discussion on this issue over many years and ultimately one can, to a

limited extent, address both of those competing priories but the ability to do that is very limited.

MR. MAYER advised that a competitive fiscal regime balances risk and reward. A lot of certainty can be had at the low end if one is willing to give away a lot at the high end. Or, one can take a lot of the high end if one is willing to distort as little as possible and be as generous as possible at the low end. But one cannot always do both - too many birds, not enough stones.

1:35:58 PM

MR. MAYER turned to slide 6, "GROSS VS. NET TAX: TWO VERY DIFFERENT APPROACHES," to review the aforementioned in more detail. He stressed that it is important to understand the math of gross taxes versus net taxes and how they work. Having a true understanding of that becomes very important when getting into questions such as the gross minimum floor and how that works. Gross taxes and net taxes look very different across different prices and different spending environments. He reiterated that gross taxes are less volatile, they shift risk to the private sector, and they are simple and easy to administer because the only two things that need to be known are how much oil came out of the well and the price it sold for. Gross tax has a very high government take at low prices and low government take at high prices.

MR. MAYER addressed the gross tax example in the left column of slide 6 and noted that it is essentially the simplest possible fiscal system - nothing other than a single 10 percent gross tax. He explained that the gross and net examples depicted on the slide include three columns for three different oil prices (shown in blue) and three columns for three different capital expenditures ("capex") (shown in blue). The constant number of $10 [for transportation cost] is subtracted from each of the different prices to arrive at the Gross Value at the Point of Production (GVPP). Operating expenditures ("opex") and capex are then subtracted and, in this example, they are each $18. These calculations arrive at the net value, which in Alaska's system is called the Production Tax Value (PTV) per barrel. At a price of $90 there is Production Tax Value of $44, the value that is there to be taxed after deducting all the costs. At a price of $60 the Production Tax Value is $14. At a price of $30 the Production Tax Value is minus $16, assuming a tax system that recognizes a negative value. Alaska's tax system does effectively allow negative value by saying that that number cannot go below zero but there is a net operating loss. A 10

percent gross tax on the GVPP is a tax of $2 at a price of $30, a tax of $5 at a price of $60, and a tax of $8 at a price of $90 (GVPP values of $20, $50, and $80, respectively). When looking at what the $8, $5, and $2 represent as a proportion of the net value, the $8 tax at a price of $90 represents 18 percent of the net, the $5 tax at a price of $60 represents 36 percent of the net, and for the $2 tax at a price of $30 there is no number applicable for the percent of net because there was no value in the first place.

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MR. MAYER continued addressing the gross tax example on slide 6, explaining that as prices go higher and higher, the percent of the net becomes a lower and lower share. As prices go lower and lower, the percent of the net becomes a higher and higher share; it looks like a "hockey stick" as an infinite rate of tax is approached at the lowest prices. He said this same variation is true when looking at different spending levels. If the price remains constant at $60, but the capex spending varies at levels of $30, $20, and $10 (shown in blue), the same aforementioned effect occurs. A 10 percent gross tax is a much lower net tax rate (23 percent) for the lowest cost of production ($10 capex) and a much higher net tax rate (250 percent) for the highest cost of production ($30 capex). This is an example for when it is said that there is high government take at low prices and low government take at high prices and, similarly, higher government take on the most expensive production and the least government take on the cheapest production. However, the overall numbers in a gross tax system change relatively little. In the worst case, the government gets $2 a barrel and in the highest case the government gets $8 a barrel. That compares in a net tax system to maybe getting as much as $11 a barrel in the highest case, but possibly a negative value when times are bad and a net loss is being generated. So, this is that fundamental question of revenue volatility and the difference between very stable revenues, relatively, under the gross system and very volatile revenues under the net system.

MR. MAYER then reviewed the net tax example in the right column on slide 6. He explained that the tax is a constant 25 percent of the net value, the production tax per barrel, and is always the same at all the different costs and at all the different prices. The idea behind net tax is that it is as minimally distorting on investment as possible. Whether an investment is very cheap or very expensive, if it makes sense in and of its own terms it is wanted for the imposition of this tax to not

change that. Whereas under a gross regime an investor might not proceed with a high cost investment because of how the gross tax fundamentally alters things. The idea behind the best net profits taxes is to be as close as possible to an equity investor: when times are bad and an investor is cash negative, the government is also cash negative; when times are good and the investor is taking lots of cash, the government is also taking lots of cash. In the best of these systems there is almost no difference between - from a cash flow perspective - what that looks like versus what an equity investor looks like. Over the course of commodity cycle, one can, in general, take more of the overall profits over the entire cycle because it is non-distorting. If an investor takes that long-term view the investor can do substantially better through a net system. Also, more investment is encouraged because those high cost projects that might not have been possible under the gross system are possible under the net system; but, the jurisdiction ends up with these more volatile revenues that it needs to find a way to manage.

1:43:13 PM

MR. MAYER moved to slide 7, "CASHFLOW TAXES: MORE EFFICIENT, MORE VOLATILE," to discuss the distinction between taxes on cash flow versus taxes on income. In the pure world of net taxes, one can tax either of these, he explained. In the world of resource taxation, one frequently tends to see net taxes structured as taxes on cash flow. This is because, when wanting to minimize the distorting impact on investment, the best way to do that is to make the state's receipts from the tax system as close as possible to those of an equity investor in a project. The idea behind a cash flow tax is that in the years an investor makes an investment, that investor is cash flow negative and so is the state through the tax and credit system. In the years when that investment is paying off and generating a lot of cash, the state is cash flow positive and generating a lot of cash through the system. The distinction in that sense between the cash flow tax versus the income tax is that the cash flow tax treats costs as happening in the year they actually occurred, whereas an income tax does not think about that and instead capitalizes and depreciates assets over time and that provides this measure of stability.

MR. MAYER brought attention to the example on slide 7 of highly simplified cash flow and income. In the early years there is no revenue, he explained, because there is not yet any production. The capex gives a negative cash flow [shown in red and labeled

"Pre-Tax Cashflow"]. At a pure 25 percent rate, which in the context of Alaska can be thought of as a 25 percent Net Operation Loss Credit, a company gets that money back as either a refund from the treasury or as a write-off against its other tax liabilities. In an income tax world, that negative cash outflow is not recognized because instead of subtracting the opex and capex and ending up with a tax value that asset is capitalized at the point that it enters production and is then depreciated over time (labeled in the chart as asset value and depreciation). Referring to the red line labeled "Net Income", Mr. Mayer explained that if, after calculating the cash flow, the capex is added back in and the depreciation is instead subtracted, the result is something roughly approximating net income; it is always positive, it never goes negative the way the cash flow did. When the income is taxed rather than the cash flow, there is not as much revenue in the later years and there are no negative outflows when the investment is happening. The reason Alaska has a cash flow focused system and not an income focused system is because it aims to be as close as possible to an equity investor in a project in its impact over time, which is to say to have the least distorting impact possible. These distinctions are very important to bear in mind at times like this when a number of companies have said that their Alaska operations are cash flow negative. That may particularly be the case when, for booking purposes, the companies post a profit for certain months of the year. The profit that they are posting is a profit on an income basis, not taking into account what they are actually spending, but the depreciated asset at their values over time. It is important to understand the distinction between those things and how a company can post a small profit for parts of the year but still be cash flow negative when prices are low and the company is spending a lot of money.

1:47:29 PM

MR. MAYER turned to slide 8, "ALASKA'S PRODUCTION TAX: ORIGINS IN 2006 PROPOSAL," to address the way Alaska's tax regime works. He explained that it is useful to first think about the system that was proposed [in 2006] by Dr. Pedro van Meurs, a previous administration's consultant who worked on what a profit based tax might look like. It remains the heart of Alaska's fiscal system today even though it has changed over time with the production profits tax (PPT) and ACES systems. Dr. van Meurs' proposal included a 25 percent flat tax on cash flow; a 25 percent credit for Net Operating Losses (NOLs), meaning the value can go negative and when it does the state pays out

instead of receives; and a 20 percent credit for capital spending. So overall there could be up to 45 percent government support for spending for [both new and incumbent players]. For example, a small company that is newly developing a resource with no other tax liability is cash flow negative in those early years when it is spending money but not receiving any. That 25 percent credit would be paid out to the company, which is exactly the way an equity investor in the project would contribute 25 percent of the upfront capital, and then in the later years the company pays 25 percent of the cash flow through the tax system. The additional 20 percent capital credit could also be received regardless of whether a company was large with a tax liability and able to write down 25 percent of the value of its spending on its tax liability or whether a company was a small producer claiming that Net Operation Loss Credit.

MR. MAYER remarked that in today's environment it is interesting to go back and read Dr. van Meurs' paper written [10 years] ago. Dr. van Meurs looked at gross floors and recommended against them because of the idea that they distort investment, among other things. But, Dr. van Meurs did say that one of the aims should be to have a statewide floor of zero on the tax base, which is to say that a responsible sovereign needs to manage its revenues and should not, in net, be paying out. The idea in Dr. van Meurs' model was that credits would be tradeable rather than actually paid out by the treasury. A small company with a negative liability could take the credits that it is owed and sell them to a company that does have a tax liability and that could then use the credits to reduce that liability. But, in net, that system could not go below zero. In subsequent years, Mr. Mayer said, that turned into a system of reimbursement for reasons related to what the value of the credits were when they were traded. Probably having a system of reimbursable credits has made all sorts of things happen that might not have otherwise happened, but they also mean that there is no longer that statewide floor of zero that having solely traded, rather than reimbursable, credits creates.

1:51:15 PM

REPRESENTATIVE HAWKER requested Mr. Mayer to explain why a reimbursable credit can take the state below zero, but a tradeable credit would not.

MR. MAYER replied that a new company developing a new asset and not yet making any money would have a new cash outflow; it would under such system effectively have a negative liability which it

can take as a credit. The impact is very different when the company cannot take that credit to the state for payment in cash but must instead do something else with the credit. The only place this new company can go with that credit is to a large company that does have a liability and can use that credit to reduce its liability by the value of the credit. In net, this system can only pay out down to zero because when no one has a liability then there will be no one who wants to buy a credit. The only remaining source of potential funds into this system would be the state itself and the state has said that it does not purchase these credits, it only issues them and allows them to be traded.

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MR. MAYER returned to slide 8 and reviewed the example on the lower half of the slide. He said working through this example will help in remembering the starting core as the calculations become more complex in forthcoming examples. He began with the scenario of an oil price of $60 from which a transportation cost of $10 is subtracted to arrive at a Gross Value at the Point of Production (GVPP) of $50. He then subtracted [opex and capex at $18 each] to arrive at a net value of $14. A 25 percent [net] tax on the $14 is $3.50 per barrel. He added in the 20 percent capital spending credit of $3.60 to arrive at an after-credits loss [of $0.10]. The percent gross would then be 0 percent. The percent net would be a negative [1 percent] tax rate on a loss; what was a 25 percent tax before the capital credit becomes effectively negative after the application of the tax credit. Mr. Mayer related that in the context of Senate Bill 21 [passed in 2013, Twenty-Eighth Alaska State Legislature] he often hears that it is a 35 percent tax rate, but is really not a 35 percent tax rate because there is a fixed dollar per barrel credit that takes it down below. That is absolutely true, he said, and it was true of the original system proposed by Dr. van Meurs and of ACES. In this case, the feature that made that happen was the 20 percent capital credit. In this case, capital spending is independent of the oil price, at least in the short run. It is a fixed amount versus the oil price and the oil revenue which go up and down. Because it is a fixed portion it represents a much bigger portion when prices are low and a much smaller portion when prices are high. It is by itself, without any of the ACES progressivity, a progressive tax rate. It will go up and approach 25 percent at the highest prices but it will approach it asymptotically, meaning it will never actually get there, and it will come down or come to zero or even go negative because at certain prices the capital credit by itself is enough

to take it there. It is important to understand that that basic dynamic has been in the tax system since the word go, and even before the word go, which is the intellectual genesis of the idea behind the tax system rather than the system itself. Any net tax system with some sort of fixed credit component is inherently progressive. One reason for that is because there is a highly regressive component, the royalty, and the aim is in part to balance these two things against each other to create something that is overall a little more neutral.

1:56:07 PM

MR. MAYER addressed slide 9, "ACES: STEEP PROGRESSIVITY, HIGH SPENDING SUPPORT," to look at how some of the aforementioned basic ideas morphed into the system known as ACES. In ACES, he explained, the 25 percent fixed tax rate was changed to a sliding system that could go from 25 percent up to 75 percent, varying with Production Tax Value per barrel. The 20 percent capital credit remained, a 40 percent exploration credit was added, and the 25 percent Net Operation Loss Credit remained. That high progressivity where it could go from 25 to 75 percent meant there were very high marginal tax rates, up to 86 percent, meaning that through a $1 increase in the price of oil, 86 percent of that increase went to the state and only 14 percent went to the company. Similarly, a $1 increase in spending by a company could see $0.86 of that dollar effectively written off against taxes. From a producer's perspective, that meant that the period of very high oil prices, particularly above $100, never really happened in Alaska because the vast majority of the cash that would have resulted went to the state rather than to the companies. So, the corresponding incentive to get out and build new developments while prices are high and crazy profits are to be made never happened in quite the same way in Alaska as it did in some of the regressive regimes in other states that saw a big investment boom during that time. It also meant that a company could have potentially very high state support from the spending. A new producer with no tax liability could get the 25 percent loss credit and could get a 20 percent credit stacked on top of that for pure capital spending, for a total of 45 percent government support for the spending. A large producer at the highest prices could potentially write up to 80 percent or more against its taxes and also have a 20 percent credit. In certain circumstances that could be the full value of the spending or maybe even slightly more. The value of that benefit varied wildly with volatility in oil prices. So, on one level it might be a real benefit, but on the other hand it is a benefit that is very hard to model when running economics on a

project because what that looks like can vary so significantly day by day with the oil price.

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MR. MAYER noted that overall the ACES system meant that when prices were high and spending low, massive amounts of cash were brought into Alaska's treasury. This is very clearly seen when looking back at the last several years of the state's finances. It also meant that there was a huge potential liability from the system if prices were ever low and spending was ever high because it is a system with very high government support for spending. Bringing attention to the table for different prices on slide 9, he pointed out that the first several lines on the table at an oil price of $60 look exactly the same as the table on slide 8: transport, opex, and capex are subtracted from the Gross Value at the Point of Production (GVPP) to arrive at the Production Tax Value (PTV) per barrel [of $14.00] to which is applied a 25 percent net tax rate for a net tax of $3.50 per barrel. If a 4 percent gross tax is applied instead of a net tax, the tax is $2.00; that $2.00 is less than $3.50, so the tax rate is $3.50. At an oil price of $30 a barrel, the 25 percent tax would yield the state nothing while a 4 percent gross would yield the state $0.80 so the tax rate is $0.80, which is the basic idea of how that gross floor works. However, in the ACES system, that gross floor was not actually binding because there was still the question of capital credits and these credits were applied after that calculation was done. Adding the Capital Credit and the Net Operating Loss Credit to the $0.80 results in a tax after credits of negative [$6.80]. Even if a company could not take a reimbursed Net Operating Loss Credit because it was below the production threshold that enabled it to do that even if the company could not be negative at all, this negative amount may be something that is accrued through the tax system as a future loss rather than taken out in cash. The ACES system either paid some part of this out in large amounts of cash at low prices or accrued that as a loss against future years' income. So, notionally, there was a 4 percent gross minimum floor, but in practice as long as there was any spending that occurred, it never actually existed and therefore a large producer could go down to zero and a small producer could receive net cash from the state.

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REPRESENTATIVE SEATON understood that in the aforementioned ACES example, Mr. Mayer was calculating and showing the net cash even though it might be a carry forward.

MR. MAYER replied that for the larger companies it was carried forward as a liability. For producers that were eligible for that reimbursement, it was actually a net negative cash outflow. This was because at various stages in the process between PPT and ACES came the ability to have credits reimbursed from the state.

2:02:20 PM

MR. MAYER moved to slide 10, "[SENATE BILL] 21: PROTECT ON THE LOW END, GIVE BACK AT THE HIGH," and reviewed the basic ideas that were behind the bill. He said a big motivator was that the ACES system took a lot when prices were high due to the very high marginal rates. The idea was to try to have a more even distribution over the range of prices between what the state receives and what the company receives in order to create an overall more attractive environment for investment. But, in return for doing that, the state should have some better protection on the low end. For the production making up the vast bulk of Alaska's revenue base, there is the sliding-scale Per-Barrel Credit that effectively reduces the tax rate steadily as prices go down, but eventually a hard 4 percent floor is reached and that floor is binding in a way that it wasn't under ACES. On the revenue generated from legacy fields, that substantially increases the amount of revenue brought in in the lowest prices. At an oil price of $90 the Gross Value at the Point of Production (GVPP) is $80 after subtracting $10 in transport cost, and after subtracting the opex and capex the Production Tax Value (PTV) is [$45]. Applying a 35 percent [net] tax rate gets a notional tax liability of $15.40. The sliding-scale Per-Barrel Credit is $7.00. Subtracting the $7.00 of credit arrives at a net tax liability of $8.40 rather than $15.40. A 4 percent gross floor is $3.20 and since the net of $8.40 is higher than the gross, the net tax rate is $8.40. As a proportion of the actual net value that is effectively a 19 percent tax rate after taking out the $7.00 sliding credit. At a price of $150 it would be a full 35 percent [tax rate] because at that point the sliding tax credit is zero. At a price of $60 the net tax rate is 14 percent. As prices go down this rate steadily decreases, except it decreases down to somewhere not much below that and then it starts to go up again. The reason it starts to go up again, and it goes up very steeply, is because the gross floor is hit.

2:05:23 PM

MR. MAYER demonstrated how the gross floor works under Senate Bill 21 by reviewing the price scenarios on slide 10. At a price of $90 the tax rate would be 19 percent, he noted. At a price of $60 the tax rate would go down to 10 percent, but because of the gross floor a tax of $2.00 is applied rather than a negative tax value [of $3.10], making the tax rate go up to 14 percent. Senate Bill 21 provides, however, that the Net Operating Loss Credit can penetrate that floor, the idea being that if industry is losing money barrel by barrel on a cash flow basis, the state will lower the tax rate to zero but no further. For example, at a price of $30 a barrel the tax after credits is negative $4.80, but for a large producer the tax would be capped at zero and be carried forward as a future liability rather than being paid out. He explained this sets the stage for what the committee is thinking about in terms of the net tax system, the gross floor, how some of these things interact with the sliding-scale Per-Barrel Credit and stepping through how that actually works. Where the ACES system had a widely varying level of support for government spending, from 45 percent up to 100 percent, the idea in Senate Bill 21 was that it should be 35 percent support for everyone. It was to ensure that even for smaller companies that are actually receiving net cash from the state it should never be more than 35 percent. There was a transitional period where it was 45 percent and it was brought down this year to 35 percent. A big part of this impetus was to acknowledge being painfully aware of the potential liabilities to the state from some of these things in the lower oil price environments. So, while the state is taking less on the upside, it is limiting the potential liability on the lower side. All those things were key to some of the provision that were put into Senate Bill 21.

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REPRESENTATIVE TARR agreed with the aforementioned, but pointed out that regarding the Net Operating Loss Credit the committee never looked at an oil price of $30 [during its consideration of Senate Bill 21] and therefore she does not think the committee fully considered a scenario where the big three producers would have had a year of operating loss. Thus, she added, the column on slide 10 for a price of $30 helps answer questions about the unintended consequence of that low price scenario.

MR. MAYER allowed that in the oil price environment of a couple years ago not many people thought about a scenario in which the major companies might be in a position to have a net operating loss. It is a difficult question to ask as to what the correct policy in that environment should be, he said. On the one hand the state wants to protect itself and its revenues. On the other hand the difficulty with a gross floor, particularly in times where there is actually a net operating loss being generated, is that it is just extracting money and is not taxing value because there is no value left to tax. It is just asking for money because "we're the state and we want to protect ourselves," he continued. That is a benefit of a gross system, but, again, it is about that balance between the protections that a gross system offers the state and the benefits that a net system gives the state and how to judge that balance.

2:09:52 PM

REPRESENTATIVE HERRON asked whether there is any tax regime that did predict the oil price environment of today.

MR. MAYER replied that, in general, any pure gross tax system, whether in the heavily royalty based systems of the world such as some of the Lower 48 resource plays, is not necessarily that they predicted that or that those tax systems exist primarily for that purpose. In many cases those systems exist because they are simple to administer since the royalties are collected by landholders rather than by sovereigns. But their effect is to provide very good protection at the low end and, in return, they give away a lot at the high end.

2:10:50 PM

REPRESENTATIVE HAWKER noted that Alaska crude was recently trading at $26 a barrel and agreed that this was not an anticipated circumstance. He inquired at to what the worldwide consequences might be upon the industry and its ability to survive should this cycle of $25-$30 per barrel be prolonged.

MR. MAYER answered that in any sustained low price environment the costs involved in the industry have to come down substantially. Costs have risen very substantially over the last decade. A decade and a half ago a price of $30 would have seemed like a really great price. It seems so painful now because the costs involved in producing a barrel of oil have skyrocketed. Part of that increase in cost was that high prices enabled more and more difficult, less economic resources to be

tapped. That is the natural flow and effect of high prices and what high prices are supposed to do. The boom for investment that created different projects competing for capital, steel, and labor drove a steady escalation in costs across the entire industry. In any prolonged period of low prices a lot of those costs have to come down. That can be seen happening across the Lower 48 as companies get incredibly squeezed by this price and have to become much more efficient at what they do, and only the most efficient will survive. Looking at the last year across the world, no one is sanctioning anything that breaks even above $50 a barrel, and in the last couple months probably no one has sanctioned anything. Commodities are cyclical, he said, and part of why they are cyclical is the dynamic he described earlier. When prices are high, everyone wants to pile in and a bunch of new resource is developed. Because of the lags in all of these things the tendency is to overshoot and develop more resource than the market can actually handle. When prices are low everyone cuts backs and because everyone cuts back the resource becomes underdeveloped for what the market is going to need in the future. The longer the period of depressed oil prices, the more will be cut back. That has dramatic implications for the industry as a whole across the globe, and also increases the possibility of the subsequent boom that eventually happens when all that shakes out.

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REPRESENTATIVE HAWKER drew attention to the statement on slide 7 that the philosophy behind the net cash flow tax system is that it makes the state's cost and benefit as close as possible to an equity investor, it is sharing the equity in a project. The fact that the state can tax more money out of an entity does not mean the state is increasing its economic pie, he opined. The state is not increasing the value available to be taxed, rather it seems like the state as an equity investor is overdrawing the equity from the relationship between the investor and the state, leaving a weakened investor and unsustainable growth in state government. This tax structure was designed to make the state in parity as an equity investor. Industry is scaling back to reduce costs and this ought to be the state's reaction rather than trying to extract more money from a shrinking economic pie that even further weakens the state's investors.

MR. MAYER replied that in an ideal world he would agree. There are very difficult tradeoffs and choices that come with having to make these decisions in these sorts of time without wanting to pay for all of the essential services that the government

provides. In a resource state it is easy to turn to the goose that lays the golden egg. It is important to remember that the goose that lays the golden egg does so because it can generate returns across a wide range of prices and across a commodity cycle. The more one turns to that as a sole source of cash when times are hard, even if there is no value to turn to for tax purposes, the more unstable the system is over time and the less attractive that is as an investment proposition in the future.

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REPRESENTATIVE SEATON stated he likes the idea of mimicking an equity investor as being put forth by Mr. Mayer. However, he continued, he does not recall legislators as having looked at the system they were designing as [the state] being an equity investor and the ramifications. He recalled there being a discussion that maybe [the state] should be an equity investor with a production sharing agreement or something, but it was discounted as being too radical from the current system. If in retrospect [the state] is considering itself as mimicking an equity investor, then [the state's] response would be to limit the credits or cash that it is investing during this time of low prices, he proffered, just like projects are not being sanctioned. [The state] cannot be the only investor and trying to take a bigger and bigger share of the equity investment. He asked whether he is wrong in this analysis of talking about [the state] as being an equity investor.

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MR. MAYER allowed the aforementioned are excellent points, but answered the question by describing Australia's fiscal regime, which he said looks more like a pure profit tax. In general, Australia does not have the protection of the gross royalty that makes that relationship very different, he said, so in many ways Australia's system is designed to look much more like a pure equity investment. In previous tax reform periods in Australia, efforts have been made to take that one step further to being more like an equity investor by paying out what would be the equivalent of Alaska's credits in times of bankruptcy and other things; that is a way where Australia really is not like an equity investor in that when an investment fails Australia is not on the hook. A way to look at a regime like that is that it tries to be as much like an equity investor as possible. From a company's perspective, the cash flows look like an equity investor but the state is not really a very reliable equity partner. This is because, while the state may have actually put

up all the cash and may provide more cash further down the track, unlike a real equity investor the company cannot rely on the state for a capital pool. The other side of that is that the state sort of has cash flows that look like an equity investor but the state does not have the control that goes to an equity investor; the state is not around the table thinking about whether or not it can afford the investment and be on the hook if the investment goes ahead. The Australian system does not have traded credits of the sort originally proposed and in part enacted when this system was first developed in Alaska. All of Australia's credits are carried forward at essentially the government bond rate, or, in most cases, at a rate higher than that, which is to say that they maintain their net present value rather than there being a steady reduction in the time value of money. So, already from an equity investor's perspective, the state is much better protected in that environment. However, from a company's perspective notionally in academic terms, the net present value of the state's contribution and eventual take out from this project may be the same as an equity investor but it is the company putting up all the capital, and that looks very different. It is a really difficult balance, particularly given the state does not have control in seeking to mimic the behavior of an equity investor through the tax system. Absolutely, he advised, there are sensible things the state should do to protect itself, but where to draw the best line can vary.

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MR. MAYER continued answering Representative Seaton's question, pointing out that the final thing to layer into the Alaska example is that Alaska has a 12.5 percent royalty. Therefore, as an equity investor Alaska is already much better protected on the downside than is a pure equity investor or would be the case in a pure net tax system. There are numerous ways to protect on the downside, he said, and one of them would have been the original system that was proposed of traded credits and a hard floor of zero across the state. When one does not have that, the present scenario and the present outflow of credits are less concerning than a scenario in which a major new resource is discovered and goes into development, he warned. Prices would presumably need to be substantially higher than they are at the moment for that to occur, but it could happen that prices are not high enough that that is not a billion or multi-billion liability for the state. It is therefore quite reasonable to look at that scenario and think about what the state could be on the hook for in a range of prices and potential future capital

environments; those are all really important questions to be asking. However, while there are a number of things in the bill that are important questions to be asking and thinking about, his worry is about some of the specific solutions and some of the incremental nature of what is proposed.

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REPRESENTATIVE SEATON opined that an investor would have the same response of cutting back its investments and capitalization as would a company during times of very low oil prices. The refundable tax credits and their usage are talked about as being an investor, and the response of an investor is to cut back on its costs in times of low oil prices. He requested Mr. Mayer to address this.

MR. MAYER agreed this is true, but pointed out that any large, well-capitalized company in this price environment is still making investments. A benefit had by Alaska is that it has small independent companies as well as some of the largest companies in the world with large balance sheets that can maintain investments across a broad range of the commodity cycle. Large companies make those investments not because they are going to pay off in the next one to five years, but because they are multi-decade investments that must continue to be made despite the tough times and cuts in operating costs in order for the company to have the ongoing cash for future operations in five or ten years' time. That same analogy also holds true for the State of Alaska as far as it being a particularly hard time right now and as far as having had a remarkable degree of success in sanctioning new projects. Even with low prices last November, major capital spending on the North Slope was sanctioned. That implies cost write-downs against production tax, or potential Net Operating Loss Credits, or other things that are very difficult on the state's current tax base. Those investments are very, very difficult for those companies to be making in this time. It is also really good that they are - for their financial futures and the state's. It is really hard to reinvest when times are tough, but it is also really important to continue to do it.

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REPRESENTATIVE JOHNSON commented that the balance the committee needs to strike is that decision point of continuing to make those investments and not doing anything in HB 247 that would tip the scale because the companies could decide that there are

other places where they could invest more. "I just want to be keenly aware that we are on a teeter totter here," he said, "we can go down just as easily as we could go up."

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REPRESENTATIVE OLSON inquired whether any other sovereign nations or states are using a taxing mechanism similar to that proposed in HB 247.

MR. MAYER replied he is unsure whether it is particular aspects of HB 247 that Representative Olson is thinking about in terms of the changes that would be made. He said his overall impression of HB 247 is that it does not change the fundamental tax system or tax structure that exists, but it does raise some important questions about things like the gross floor and limits on tax credits that need to be debated. However, there needs to be caution on the impacts of those things. In other areas HB 247 is a sort of series of incremental tax increases that can be done without fundamentally changing the tax structure and which are the things that give him the greatest pause for concern. In and of itself, HB 247 is not a tax structure as far as comparing it to other regimes around the world.

REPRESENTATIVE OLSON asked whether what is being done now is closer to Mexico, Venezuela, and some of the emerging countries in how they handle this issue, or whether it is similar to the Lower 48 in broad terms of protecting the state on the top and bottom. Noting that Alaska's structure changes every two or three years, he further asked whether the game changes that often anywhere else around the world.

MR. MAYER responded he cannot think of many places that debate oil and gas taxes, and oil and gas fiscal systems, on such a regular basis as does Alaska.

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REPRESENTATIVE TARR noted that HB 247 proposes to change some of what is refundable to being carried forward for a future year. She requested Mr. Mayer to comment as to the relative value from an investor's perspective of using each of these two methods for a net operating loss.

MR. MAYER said he will be dealing with this in future slides.

REPRESENTATIVE TARR recalled Mr. Mayer's statement that any large company will still be making investments even in today's low price environment because the company is looking five to ten years ahead and wanting to ensure volume and profit during those time periods. A challenge in understanding what the impacts would be relative to the proposals in HB 247 is that it is simultaneously being heard that there is a long planning time of five to ten years ahead while also hearing that these small modifications will have immediate changes. For example, during consideration of Senate Bill 21 it was heard that the changes were going to lead to increased investment fairly immediately after the new tax regime was put in place and in the case of HB 247 people are talking about immediate reactions to the proposed changes. She said she is having difficulty reconciling these two things from the perspective of the company.

MR. MAYER specified that long term and short term varies dramatically depending on where geographically in the world the nature of the resource is being talked about. For example, some of the resource places in the Lower 48 can change levels of investment and production very quickly based on price signals and other things because there are operations that are quite variable, such as whether to engage a rig next month or next quarter or how many wells will be drilled. There is some of that work on the North Slope, such as within the existing mature producing fields about what level of activity the company wants to invest in. For example, there may be a rig that the company does not own and that would be an investor variable rather than fixed cost as far as whether the company wants to be paying for that rig to be drilling infill wells. In places like the North Slope, however, most of the activity is very, very long lead time, high dollar, investment activity, even when coming to the question of Senate Bill 21 and its impacts. He reiterated that even in this low price environment there has been a surprising amount of new projects being sanctioned, which can be seen by looking at the data showing drilling numbers in recent times as well as the hiring activity. Some of that impact in terms of production is still in the forecast as far as how long the decline can be flattened. Passage of Senate Bill 21 did not suddenly fire new production because that is not the nature of the oil and gas investment cycle in general and particularly not in a place as capital intensive as the North Slope where projects are big capital investments that have long times.

2:34:04 PM

MR. MAYER drew the committee's attention back to slide 10 to resume his presentation. He said [key aims of Senate Bill 21] were to provide 35 percent government support for both new entrants and incumbents with a substantial tax liability, as well as a hardening of the floor as compared to ACES.

MR. MAYER then moved to slide 11, "[SENATE BILL 21]: SPECIAL INCENTIVES FOR 'NEW OIL.'" He explained that new oil reduces the Gross Value at the Point of Production (GVPP) in general by 20 percent and for certain units by 10 percent. The purpose behind the GVPP is to provide an effective reduction in the tax rate on new oil versus old oil. Previous bills had tried to do that directly by proposing a specific different tax rate on new production. But a problem with that is a key feature of the fiscal regime that has always existed on the North Slope, which is that nothing is ring fenced - costs incurred in one place and costs incurred in another place are all the same thing. A company's production, total revenues, and total costs are deducted against each other slope-wide to arrive at the company's total tax liability. Ring fencing would instead look project by project and allocate costs to each project, and that gets very difficult and very complicated very quickly. In general, net systems, whether they are net taxes, whether they are production-sharing contracts, are much more complicated to administer than gross regimes because the costs have to be actually assessed and there must be the ability to audit them and all the rest. That gets even more complicated when trying to establish a legitimate cost, exactly where it was incurred, and to which project it should be attributed. So, when wanting to differentiate tax regimes between mature producing assets versus new investments, and trying to split those two things out and allocate cost between them, the idea is to instead focus on the easy to distinguish amount of production and the gross value of that production. With gross systems all that needs to be known is what came out of the well and the price at which it was sold. The idea behind the Gross Value Reduction (GVR) is to reduce and hypothetically imagine the Gross Value at the Point of Production. For example, at a price of $90 and a transportation cost of $10, the net of $80 is instead considered to be 20 percent less [$64] and the production tax is then calculated on that basis to arrive at a lower production tax rate. The aim of the system is to lower the rate further than the 35 percent or what would have been even lower after the application of the credit, and thereby provide an incentivized rate for the new oil without having to get into the messy business of attributing costs to one place or the other.

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MR. MAYER further explained that [during consideration of Senate Bill 21], the 20 percent reduction was seen as an already big incentive and therefore the GVR-production-eligible fields would not receive the sliding Per-Barrel Credit of $0-$8 because in many scenarios it would take it down to $0 or below. So, there was deliberate discussion to say that the floor was being hardened on the base production because that was fair game in terms of protecting the state on the low side. That the purpose of net taxation was to be as minimally distorting of investment as possible and for that reason on new production the hard floor could go down to $0 when there was no value to tax, but to at least ensure a more gradual decline by having the fixed $5 credit rather than the varying $0-$8.

MR. MAYER demonstrated how the calculation would work for new oil by using the $90 price scenario on slide 11. Subtracting the $10 transportation cost arrives at a gross value of $80 at the point of production before applying the 20 percent GVR. Twenty percent of $80 is $16 and subtracting the $16 arrives at $64 in Gross Value at the Point of Production after GVR. For purposes of the tax system for new oil, the gross value is then assessed at $64 rather than $80. The opex and capex are then subtracted from the $64 to arrive at a Production Tax Value of $28. Multiplying the $28 by the 35 percent net tax rate arrives at a net tax of $9.80. Because the $9.80 is higher than the 4 percent gross floor tax of $2.60, the $9.80 is the tax that is charged. The $5 Per-Barrel Credit is subtracted from the $9.80 to arrive at a tax of $4.80 before subtracting the Net Operating Loss (NOL) Credit, but because a profit is being made, the NOL Credit is $0. Thus, the tax after the GVR and credits is $4.80, which is a tax rate of effectively 11 percent. At the lower prices of $60 and $30, the tax after applying the GVR and the two credits is a negative number, so the company would receive money from the state for its net operating loss.

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REPRESENTATIVE SEATON observed that every scenario on slide 11, except the one at a price of $90, arrives at negative gross and net tax rates. He proffered that as time goes by, new oil will become a larger and larger percentage of the total oil production and therefore it will be a negative situation unless prices are high. He requested Mr. Mayer to give his perspective on this relationship.

MR. MAYER answered the question by turning to slide 18, "CHANGES MAKE REGRESSIVE SYSTEM EVEN MORE SO." He explained that the two graphs represent the output of a lifecycle economic model and what the different components of government take would be on GVR-eligible oil (new projects) at different prices [the graph on left being for Senate Bill 21 and the graph on the right being for HB 247]. The hypothetical model is for a new field of 1 million barrels producing 20,000 barrels a day by a new producer able to claim the GVR, the Net Operating Loss Credit, and all the rest. A big part of the design of Alaska's system was to say that across the widest range of prices possible, as neutral a system as possible is wanted, and that Alaska would like to be relatively speaking at the lower end of the government take threshold compared to where the state has been historically and more in the realm of the places elsewhere in the world that Alaska is competing against. That aim was around 62 percent government take, which is not one of the most generous fiscal regimes around, but is a highly competitive one. As seen on the graphs, that net result is indeed very flat at that level [of 62 percent] across a really wide range of prices.

MR. MAYER continued, pointing out that the production tax (in green on the graphs) is a substantial amount at high prices, tapering down as prices go down until at prices below $70 the production tax is no longer a feature in the tax system. He explained that the graphs depict what the contribution would be over time of each of the elements of the fiscal system when using the assumption that a new project developed today goes for 20 years and the price is applied consistently for the entire 20-year period. He noted that under the former ACES system there would have been a much higher take at prices of $70 and upward, but below $70 the take would have been pretty similar. Part of that is by design: underneath the production tax is a big regressive royalty that takes up more and more of the value of the barrel as prices decline. The purpose of the net tax that is put on top is not to increase the burden of that net royalty when prices are lowest. [As prices go down from $150 to $40 a barrel, the royalty goes from being a low level of government take to being more than 100 percent in government take.] Rather, the idea is that a profits tax only kicks in when, after the royalty and all the other things have been calculated, there is actual value to tax. What is trying to be created is something that is as neutral as possible across a wide range of price environments. Mr. Mayer drew attention to how the production tax goes negative at the lowest prices, which is essentially saying that on the one hand across the cycle of the investment there were credits put in up front, there was

production tax in the tail, and at the lowest prices the production tax in the tail is nowhere near as much as the credits that went in up front. But, when put in the context of the overall fiscal system, this is still not a fiscal system that is doing anything but generating a proportional share of value from the project, it is never going down below that 62 percent level, and it is still actually regressive at the lowest prices because of the element of the royalty.

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REPRESENTATIVE SEATON observed on slide 11 that the percentage of the gross is always negative except in the price scenario of $90. He opined that new oil will account for a greater and greater percentage of production under this fiscal system, that there is a negative percent of the gross [at prices below $90], and that the system is only barely positive on the percent of the gross at a price of $90. He asked how that will create long-term stability for any fiscal system for the state.

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MR. MAYER replied by again drawing attention to the charts on slide 18 and saying they are more useful than slide 11 because the price scenarios are shown in increments of $10 rather than $30, and the charts look at the actual cash flow across the cycle of an actual investment. There are times when there is an outflow from the credits and times when there is an inflow from the tax, and the net result of those two things is seen. It is a net positive down to a price of about $70; a price of $60 starts to be a net negative; and prices of $50 and below are substantially negative. That is happening precisely at those levels that the royalty, as the regressive element of the regime, is taking off in terms of overall government take, and it is partially compensating for that but not fully compensating for that. If Alaska had nothing but a completely neutral net profits tax, the state would still be taking more at the low end than it would be if it had an Australian, United Kingdom, or Norwegian model of pure net profits tax, regardless of the level of government take. Those completely neutral regimes are neutral across the price deck, [but Alaska's system] uses a tapering and progressive tax that across the cycle can go negative because the credits are greater than the value that is paid out. This partially, but not fully, counteracts the regressive nature of the royalty, which is why the dashed line depicting government take across the price deck is 62 percent across almost all the prices until reaching a price of about $50

a barrel. At a price of $50 per barrel, that government take starts climbing until at $40 it reaches 100 percent despite that the production tax element is net giving out money; the rest of it is taking so much when there is no value to take that it is still at 100 percent government take. Mr. Mayer noted that for legibility purposes the chart is cut off and the royalty actually goes up to about 250 percent government take at a price of $40 a barrel and net outflow from the production tax is slightly greater than [negative 50 percent]. The point of the chart, he explained, is to show the total government take of the overall system as depicted by the dashed black line. It is important to see there is an interplay between the production tax and the royalty. Just focusing on the production tax without thinking about the rest of the system fails to see that this was not an accident in design. There was an intention here to create an overall neutral system for as much of the price deck as possible.

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REPRESENTATIVE SEATON clarified he is not talking specifically about the production tax as a whole across this. Rather, he does not see the chart on slide 18 as looking at new oil. The chart is not separating out that new oil as the new oil becomes a greater and greater proportion of the production and which is taxed at a different rate than is existing oil.

MR. MAYER responded that the purpose of slide 18 is an assessment on the actual lifecycle cash flow economics of a new investment to which the GVR applies.

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REPRESENTATIVE JOSEPHSON offered his understanding that slide 18 is, effectively, showing that the industry is suffering so much that the state is getting all the money because of royalty. He inquired whether Mr. Mayer is saying that, even though the state is impoverished, when looked at vis-à-vis the industry, the state is the rich one.

MR. MAYER answered "absolutely correct." He stated that he is discussing the distinction between gross and net taxes and showing what gross taxes do at low oil prices due to being regressive. The point is that the royalty at these low prices quickly takes everything and more than everything, and that to achieve anything even close to neutrality, by definition there are other elements of the system that are handing back money.

REPRESENTATIVE JOSEPHSON related that his general sense of what is going on in the North Slope is that there is development from the small independents and ConocoPhillips is still investing particularly in the western field. However, he said, he is not so sure it is a time of high investment in Alaska. He therefore questioned the accuracy of the statement on slide 18, "In times of high investment...."

MR. MAYER clarified that the statement is, "In times of high investment or low prices." He further clarified that the statement "as in 2016" refers to the confluence of some major capital spending projects being in the pipeline from recent years or before, such as the CD5 and Point Thomson projects. These are each billion or multi-billion dollar projects and these costs have been incurred last year or this year. The dollar per barrel cost figures in the Revenue Sources Book are staggering. The spending that is happening now for future production is being deducted against the current tax base. When there is high spending relative to declining production, and low prices meaning very low revenue, and a fixed gross royalty of 12.5 or 16 percent plus a 4 percent Gross Minimum Tax, a point is very quickly reached where there is no value left to tax. Taking a fixed portion means that 100 percent, 400 percent, and eventually an infinite amount are being taken because there is no value left.

REPRESENTATIVE JOSEPHSON asked whether he is correct in recalling that Mr. Mayer earlier stated that HB 247 does not change the fundamental structure of the existing system.

MR. MAYER replied that he said HB 247 does not change the fundamental structure or system that exists, instead it incrementally takes small slivers without changing that fundamental structure. It makes small alterations and small revenue enhancements, which, in some ways, is more concerning. This is because fundamental changes done to the structure for a well thought through and well-reasoned purpose, and that an investor has reason to believe will remain stable going into the future, is very different than thinking that when the environment gets bad folks are going to come back to look at where another slice can be taken.

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REPRESENTATIVE TARR commented that slide 18 is interesting given that royalty has not previously been talked about as being a

regressive feature of the overall tax system. She surmised there are not any alternatives or ways to fix that because the royalty is always going to be a fixed percentage and will be independent of the price per barrel. Royalty has not been discussed as one of the levers in the system that might be adjusted to make changes. She remarked that it is a new overlay to think about this as being a regressive impact.

MR. MAYER responded that during the early days of debating Senate Bill 21 he spent a lot of time talking about this. There were various attempts at proposing some sort of progressive production tax. There had to be some degree of progressivity simply to counteract the regressive nature of the royalty and this has always been part of the design.

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The committee took a brief at-ease.

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REPRESENTATIVE HAWKER remarked that he does not want to leave a misinterpretation on the table. He drew attention to two of the statements on slide 2: "HB 247 is not a tax overhaul but it includes major changes along several key parameters" and "But most companies will see substantial adverse effects". He said he wants to avoid the semantics of coming back later and having it argued that Mr. Mayer said this is not a significant deal.

MR. MAYER agreed.

3:00:37 PM

MR. MAYER resumed his presentation. He moved to slide 12 to discuss four of the changes proposed in HB 247. He qualified that this list is by no means exhaustive, but consists of the proposed changes that enalytica sees as having the biggest impact on the fiscal system overall and on project economics, making them particularly important to focus on and talk about. The first proposed change is the question of the interaction between the Per-Barrel Credit and the Gross Minimum Tax. The status quo is that it is an annual tax system, everything about it is assessed annually. Tax liabilities are assessed annually which provides a smoothing impact of price volatility. This is like a person's federal income tax that is assessed annually: when a whole bunch is earned in one month but not much in another, the person does not pay the top rate in the month for

which a lot was earned. This proposed change in HB 247 would calculate monthly that interaction between the Gross Minimum Tax and the Per-Barrel Credit. Had this proposed change been in place in 2014, the state would have netted about $100 million more. This proposed change is an example of what he meant when he said there is a series of small incremental changes that appear to be about revenue raising rather than anything else and that are the things that give him greatest pause for concern.

MR. MAYER said another change proposed by HB 247 relates to the interaction between the Gross Value Reduction (GVR) and the Net Operating Loss (NOL). He reminded members that the Gross Value Reduction reduces the Production Tax Value by changing the gross and then that flows through to the net. By flowing through to the net, it also flows through to the way the Net Operating Loss is calculated. So, in addition to reducing the effective tax rate, the GVR has the side effect of also increasing the size of the Net Operating Loss Credit, resulting in more than 35 percent support for government spending. This proposed change would make it so that there would always be 35 percent support for government spending. This proposed change is a legitimate point that is worth thinking about very seriously, he advised.

3:03:31 PM

MR. MAYER reviewed the change in HB 247 proposed for the Gross Minimum Tax. He explained that the status quo is a 4 percent floor that is binding for legacy output [if net value is positive], but if net value is negative the Net Operating Loss Credit can reduce a company's taxes below that floor and down to zero. The proposed change would provide that the NOL cannot take a major producer below the floor and the proposed change would also raise the floor from 4 percent to 5 percent. For new producers, the status quo is that GVR-eligible production with the $5 per barrel credit can take the new producer down to zero tax, the idea being minimizing the distorting impact of the gross minimum floor when things are hardest. The proposed change would provide that the Small Producer Credit and the $5 Per-Barrel Credit cannot take a new producer below the proposed hard floor of 5 percent. Thus, the proposed change would raise the hard floor from 4 percent to 5 percent for incumbent producers and for new producers it would raise the hard floor, as a gross floor, from 0 percent to 5 percent.

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MR. MAYER examined the proposed change for the Net Operating Loss Credit. Under the status quo, he said, reimbursement of the Net Operating Loss Credit must be carried forward by those producers with production greater than 50,000 barrels a day, and for those companies with less than 50,000 barrels a day the credit can be reimbursed by the state. This proposed change would put an annual limit of $25 million per company on the reimbursement. It would also require that very large companies with annual revenues greater than $10 billion must carry forward the credit regardless of the amount of their production. He said he understands the desire to limit the state's potential liability through the credit system; however, he continued, when thinking about what a $25 million cap per company would do, both in general and particularly if enforced in July 2016, a company involved in this would be very scared.

REPRESENTATIVE JOSEPHSON thanked and complimented Mr. Mayer for slide 12 being a fantastic slide.

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REPRESENTATIVE HAWKER stated that slide 12 could be made better by including Section 31 that proposes to disallow wellhead value from going below zero. He requested Mr. Mayer to add this change to the slide along with the impacts it would have.

MR. MAYER agreed this change should have been included. He said this issue is one of the incremental pieces in that the Gross Value at the Point of Production would not be able to go below zero. He reiterated that it is not a ring fenced system, taxes are assessed company-wide across the North Slope, which means all of a company's production and costs across the North Slope. Because of how the calculation works and the language in HB 247, this change would mean that if Gross Value at the Point of Production cannot go below zero for some particular piece of production, it would mean that the costs that a company actually incurred at that place could not be written down against production that the company had in other places. That would actually be a substantial change to the tax system because at the moment it is Slope-wide costs and Slope-wide production. A company that has gone ahead with an expensive, loss-making investment for reasons that it wants to see a field developed in the future, did so under the belief that it could write those costs off against all of its production, not simply against the production that came from that one project.

REPRESENTATIVE TARR asked whether now would be the appropriate time for her to ask about her point of changing it to a carry forward for the majors.

MR. MAYER replied he will be coming to that in about two slides.

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MR. MAYER resumed his presentation and began to elaborate on what the impacts would be for each of the aforementioned proposed changes. Drawing attention to slide 13, "MONTHLY GROSS MIN CALCULATION: NEUTRAL OR TAX HIKE," he noted that the impact of this proposed change would be either neutral or a tax hike depending on the price environment and, in particular, depending on volatility. A crude way of expressing it would be to say "heads I win, tails it's a draw." The reason for that is best understood by looking at the price environment in 2014 where for most of the year prices were at or above $100 a barrel, but then prices started to fall in the last quarter. Referring to the chart on slide 13, he pointed out that the Alaska North Slope West Coast (ANS WC) average annual price was about $98. He said the expenses used in the chart are for the fiscal year rather than the calendar year, but are still a decent representation. He calculated that subtracting the average annual cost for transport, opex, capex, 35 percent production tax, and Per-Barrel Credit results in a net tax of $8.71 and a Gross Minimum Tax of $3.49. So, in this case, the net tax of $8.71 is what applies and therefore the gross liability per barrel is $8.71. However, if these calculations are done on a monthly basis for 2014, the net tax would be applied for each of the first 10 months and the Gross Minimum Tax would be applied to each of the last 2 months. In the last two months, the gross tax amount is actually higher than the net tax amount. When the production tax for each of the 12 months is then averaged, the average production tax is $9.31 per barrel and when multiplied by the number of taxable barrels on the North Slope it is roughly $100 million more. The way that $100 million is generated for the state is simply by saying that rather than assessing this annually, the state would assess this monthly and a company would not get the benefit of that revenue smoothing across the year. It would be like being taxed at the top tax rate in the months where a company's income is highest even if on average over the year the company's income was substantially lower than that.

[HB 247 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 3:12 p.m.