

**ALASKA STATE LEGISLATURE  
HOUSE RESOURCES STANDING COMMITTEE**

February 26, 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 & 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)	-- MEETING CANCELED --
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)	-- MEETING CANCELED --
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)	Heard & Held
02/25/16	(H)	MINUTE(RES)
02/25/16	(H)	RES AT 1:00 PM BARNES 124
02/25/16	(H)	Heard & Held
02/25/16	(H)	MINUTE(RES)
02/26/16	(H)	RES AT 1:00 PM BARNES 124

**WITNESS REGISTER**

JANAK MAYER, Chairman & Chief Technologist  
analytica

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 on analytica's analysis of the projected impacts that HB 247 would have on the oil and gas industry in Alaska.

NIKOS TSAFOS, President & Chief Analyst  
analytica

Consultant to the Legislative Budget and Audit Committee  
Washington, DC

**POSITION STATEMENT:** As consultant to the Legislative Budget and Audit Committee, answered a question about data provided in the PowerPoint presentation regarding potential impacts of HB 247.

**ACTION NARRATIVE**

[1:02:12 PM](#)

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

**HB 247-TAX;CREDITS;INTEREST;REFUNDS;O & G**

[1:02:52 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."

[1:03:40 PM](#)

JANAK MAYER, Chairman & Chief Technologist, enalytica, and consultant to the Legislative Budget and Audit Committee, noted he is before the committee to advise on matters relating to oil and gas, particularly commercialization and fiscal systems. Drawing attention to his PowerPoint presentation entitled, "IMPACT OF HB 247: NORTH SLOPE ASSESSMENT," he continued his analysis of the projected impacts of HB 247 on the oil and gas industry in Alaska, which he had begun on 2/25/16, 1:00 p.m.

MR. MAYER turned to slide 13, "MONTHLY GROSS MIN CALCULATION: NEUTRAL OR TAX HIKE." He reminded members that at the close of yesterday's presentation the committee was looking at the impact of the bill's proposed change to move from an annual to a monthly reconciliation of the tax system in terms of the impact of various credits, particularly the Per-Barrel Credit, the Small Producer Credit, the Net Operating Loss (NOL) Credit, and how those credits interact with the hard gross minimum floor. He explained that the top row of the chart on slide 13 depicts this calculation being done on an annual basis [for calendar year 2014]. The calculation begins with the Alaska North Slope West Coast (ANS WC) average annual price [\$97.74] from which is subtracted the transportation cost, the operating expenditures ("opex"), and the capital expenditures ("capex") to arrive at

the production tax value (PTV) per barrel [\$47.73]. The 35 percent net production tax rate is multiplied against the PTV [arriving at \$16.71], from which is subtracted the sliding Per-Barrel Credit, which is \$0-\$8 for an established producer on the North Slope and which was \$8 in the year 2014, to arrive at a net production tax of [\$8.71] per barrel. The \$8.71 is higher than is the 4 percent gross floor [\$3.49], so \$8.71 would be the tax paid per barrel using the annual system of current law.

MR. MAYER explained that if the calculation was to instead be done monthly as proposed in HB 247, then in a year like 2014 when there is a lot of volatility in the oil price, each of the first 10 months would have used the net tax calculation, but the final 2 months of the year when oil prices fell to \$77 and \$60 a barrel would have used the 4 percent binding gross because the 4 percent gross calculation is higher than the net calculation. The net effect of a monthly basis would be to raise the amount of production tax per barrel from [\$8.71] to [\$9.31]. When this tax is multiplied by the number of taxable barrels on the North Slope, it would result in about \$100 million in additional tax that would be taken in by switching from an annual to a monthly calculation. He described this as a tax hike that happens because the proposed change is a situation of "heads I the sovereign win, tails it's a draw". If there is no volatility, the two things are the same; the more there is volatility in the oil price, the more this proposed change would work in the sovereign's favor and the taxpayer's disadvantage.

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MR. MAYER pointed out that because the calculation would be done each month it would mean that each month a taxpayer must really understand what its costs are for that month and do that entire calculation. It would be almost like the taxpayer filing its tax return monthly rather than annually. Some of that would be trued up at the end of the year, but a taxpayer would need to be very certain of not understating its costs for the month. The way the language is written, the sum of the taxpayer's total cannot be higher than the sum of its monthlies. So, if it turns out at the end of the year the taxpayer's costs were higher, those credits would essentially be lost to the taxpayer forever. Mr. Mayer further pointed out that this analysis is focused on the sliding Per-Barrel Credit of \$8 in the world of the large incumbent oil producer. However, the floor hardening in HB 247 would apply to both incumbent and new producers by making the floor binding on oil that is eligible for the Gross Value Reduction (GVR), as well as binding in that the Net Operating

Loss Credit and the Small Producer Credit could not be taken away from the floor, which would be a substantial impact on [new producers].

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REPRESENTATIVE HAWKER understood that the numbers on slide 13 are the actual numbers as reported for the year 2014.

MR. MAYER confirmed that to be correct, broadly speaking. He explained it is a very high level approximation that essentially treats the North Slope as if it were one uniform taxpayer. The cost numbers are also fiscal year (FY) 2014, whereas the tax year is a calendar year; so, it is not a perfect match there. Those are actual numbers to the extent that a reasonably accurate picture can be created through "back of the envelope, high level numbers" versus individual taxpayer numbers.

REPRESENTATIVE HAWKER noted that Mr. Mayer's calculation of an additional \$100 million in liability is basically the same number as presented by Mr. Alper, Director of the Tax Division. He requested Mr. Mayer to explain how and why the operating costs and the capital expense costs somehow managed to be the same number for every single month.

MR. MAYER replied that in this case it is taking the annual 2014 numbers and spreading them in even proportion across the year. In practice as a taxpayer there would be variation and one difficulty as a taxpayer would be the need to understand month by month what those are. The taxpayer would want to be careful to err on the conservative side and overstate them and then deal with that overstatement at true-up rather than be worried about understating them, in which case the credits that the taxpayer potentially forewent because of interaction with the floor would never be able to be gotten back.

REPRESENTATIVE HAWKER said that is not where he was going. He asked whether the state requires in the calculation that the taxpayers use a monthly estimate based on a monthly portion of what the taxpayer estimates its annual expenses to be. Therefore, he surmised, it would be mirroring the way the tax calculation actually works in statute.

MR. MAYER, after confirming that Representative Hawker is saying that the calculation is supposed to take the annual estimate and divide it by 12, answered correct.

REPRESENTATIVE HAWKER concluded, then, that the numbers seen on a monthly basis here do not reflect the amount that was actually being paid by the industry in that month.

MR. MAYER replied that the costs in the chart are simply costs from the Revenue Sources Book spread evenly across the year, and not actual data.

REPRESENTATIVE HAWKER asked whether that is not the way the calculation is done within state statute.

MR. MAYER responded that that is his understanding....

REPRESENTATIVE HAWKER observed that Mr. Alper is nodding, but said he is going to miss his whole point because he cannot validate it here.

[1:11:59 PM](#)

REPRESENTATIVE JOSEPHSON asked whether Representative Hawker is saying that if the opex and capex actually reflected what was really going on in the month, then the tax depicted in the second to right column would be different.

REPRESENTATIVE HAWKER answered that that is exactly his point, it would be substantially different.

REPRESENTATIVE TARR surmised that because the ANS WC price is different on a monthly basis, the chart illustrates some of the variation in the per-barrel price but not a true reflection of opex and capex.

MR. MAYER replied that the point being made is that there are various elements of inter-year volatility in the system, price and costs being two of those elements. He explained that a big part of the reason for doing an annual calculation is to reduce that volatility in the same way a person calculates his or her entire income over the year rather than what was earned in a given month. Rather than having a volatility smoothing of an annual calculation, he advised, this proposed change would assess month by month and that can only work in the sovereign's favor. Essentially it can only ever be a tax hike in the event of price volatility.

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MR. MAYER moved to slide 14, "GVR RAISES NOL CREDIT ABOVE 35% OF ACTUAL LOSS," and specified that HB 247 also raises the question of how the Gross Value Reduction (GVR) for new oil interacts with the Net Operating Loss (NOL) Credit. He advised that the administration has raised an important and valid point that is useful to debate. Alaska's Clear and Equitable Share (ACES) [passed in 2007, House Bill 2001, Twenty-Fifth Alaska State Legislature] had a hugely varying rate of government support, from 45 percent to over 100 percent. It could vary wildly month by month depending on prices and costs and all the rest. During consideration of Senate Bill 21 [passed in 2013, Twenty-Eighth Alaska State Legislature], the thinking was to have a uniform 35 percent support for government spending in all circumstances. The Gross Value Reduction was a way to reduce the effective tax rate that new oil pays by artificially lowering the way the tax systems treats the value at the wellhead. Because everything in the calculation flows on from that, it also affects the way the net operating loss is assessed.

Mr. Mayer demonstrated how the GVR works by drawing attention to the scenario depicted on slide 14 for an oil price of \$30 under Senate Bill 21. From the price of \$30, the transportation cost of \$10 is subtracted to arrive at a \$20 gross value at the point of production (GVPP) before factoring in the GVR. The 20 percent GVR is then subtracted to arrive at a GVPP of \$16 after GVR. The opex [\$18] and capex [\$18] are then subtracted from the \$16 to arrive at a production tax value (PTV) of a loss of \$20. Had there not been a Gross Value Reduction the actual loss at the wellhead would have been \$16. The tax system would recognize the \$20 loss. That is important at higher prices, and at all prices, in reducing the effective tax rate. The purpose of the Net Operating Loss Credit was to say 35 percent support for government spending at all prices. Because it is not looking at the actual loss, but rather is looking at the production tax value per barrel, the effect is to overstate the loss. So in this scenario, instead of a credit of 35 percent of the actual production tax value it is 44 percent of that actual number, because it is based on the number after the GVR has been applied.

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MR. MAYER continued discussing slide 14. He said the aim of the policy direction set under Senate Bill 21 was to have a uniform 35 percent support of government spending in all circumstances. Between passage of Senate Bill 21 and now, a number of investments have been made under the tax regime in place. Any

change such as this would seriously impact those investments. If it is thought that this is a substantive matter of policy that should be addressed, the question of how to address that and the timing and how that applies and when that applies then becomes critical. This is because numerous investments have been made under certain assumptions and spending is actually happening today. Those assumptions included modeling this exactly as it was, and those investments would be impacted by any change like this. It is one thing to look at this and ask whether this was what was intended and should this at some point change. And then another to think about if that should change, how that should be enacted, what the applicable timeframe is, and who is impacted when. Those are all very important considerations since any change will substantially impact the economics of ongoing investment.

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REPRESENTATIVE HERRON inquired whether it could be created where the current credit of 35 percent stays with projects that are in play, and that any future projects would be under a different tax regime such as that under HB 247.

MR. MAYER responded that there are ways of achieving exactly that. For instance, small producers currently on the North Slope could continue to receive the Small Producer Credit and it could be made so that this credit is not open to new entrants.

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REPRESENTATIVE SEATON asked whether Mr. Mayer is aware of anyone who, during the discussion of Senate Bill 21, was planning a project and was counting on being able to somehow leverage more than the 35 percent.

MR. MAYER allowed that this is an excellent question. He said that when he was first made aware of this issue he was shocked and surprised because he thought it was very clear amongst everyone that the intent was 35 percent. When he went back to his own models he found that they produced exactly the regime as it exists, which is in effect a higher level of support for government spending - when the gross value at the point of production is tweaked, the rest of this falls out. This oversight is not the result of legislatively polar or a strange bit of drafting, he said, but rather that it is a complicated system and when a change is made in one place it affects numerous things further below. So, whether it was himself, the

administration's consultants, or anyone else building models at the time, or someone assessing an investment in the meantime, the pieces of the system would be assembled in a model and the settings would be created. The economics that flowed out as a result would then be assessed. In the case of a company assessing a project, the company would assess things based on what it sees. While assessing the economics, a company is not necessarily asking what was the implicit level of government support for spending and whether that was what the legislature intended. He said he firmly believes that anyone assessing their economics on a project on which they took sanction was doing it on the system that existed and not necessarily on the basis of legislative intent.

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REPRESENTATIVE SEATON surmised that none of the consultants who were advising the legislature at the time spotted this and that no one testifying on the projects that were under development spotted this. If someone had spotted this they might have figured that they could not address it or could tweak it in and not understand the legislature's discussions. He said he does not think [industry] would be surprised if the legislature came back and assessed the system that it thought it was passing at the time. He added he is not suggesting that anybody knew about it at the time and that when talking to legislators about the system the companies were being forthright in telling legislators what they thought it did, what the support was, and what the government take was.

MR. MAYER further suggested that when a company is evaluating a project to take final investment decision, a lot of things are being looking at, such as net present value, internal rate of return [IRR], long-term cash flow, and various risk and non-risk scenarios. He said he would be very surprised if among those metrics would be the question of the implicit rate of government support for spending. In that sense he would be very surprised if a company assessing this would think there was something a bit odd here.

[1:24:54 PM](#)

REPRESENTATIVE JOSEPHSON offered his understanding that the prior administration did identify this problem of going under a tax rate of 4 percent as well as under a 0 percent effective tax. Two things strike him, he said, the first being that everyone he has spoken to says that the state is making slightly

more revenue now than under the prior regime. Second, what he is sensing from Mr. Mayer's testimony, and given that the prior administration understood this potential problem, is that no one foresaw this level of [low] price so it was not discussed.

MR. MAYER answered that the point on slide 14 is not about the gross floor and whether one can go below that. He recounted that it was a deliberate policy decision to say that because gross taxes are effectively distorting [the state's] investment, a binding 4 percent floor was not wanted on new production. A deliberate and thought-through decision was made to make it binding on the legacy oil because that is where the revenue for the state needs to be protected, but on new investment it was wanted to minimize the distorting impact and so that floor was not made binding in the same way as on the legacy fields.

REPRESENTATIVE JOSEPHSON concurred.

[1:26:57 PM](#)

MR. MAYER continued his response to Representative Josephson. He noted that in 2013 [as a consultant to the legislature while employed with PFC Energy Oil and Gas Research Acquisition (PFC)], he presented analyses over a range of prices from \$40 per barrel to \$160, the same range he is providing today. The reason for not going below \$40 was because, frankly, the math did not really work below \$40 a barrel. At \$40, he explained, there is no divisible income to split and metrics like government take do not mean anything as they are all infinite. When sitting before the committee three years ago as the initial discussions around Senate Bill 21 were starting, he was asked to prepare several slides around what PFC saw as the short-term and long-term likely floor price for Alaska North Slope West Coast (ANS WC) crude. Seen at that time was unprecedented growth in North American onshore production, as well as the Organization of the Petroleum Exporting Countries (OPEC) and Saudi Arabia being increasingly unable to manage the market in the way they had in the past. There was rising production from Iraq where the question of what happened with Iran was unknown. All of these things, combined with a weak global outlook, meant that [PFC] saw more risks to the downside than the upside. When asked what a reasonable floor price might be, [PFC] said in the short run it could see scenarios of strong oversupply and failure of management by OPEC, which could reduce prices to \$30 a barrel, and that in the long run there would be a strong supply response, particularly from North America, were that to happen. In the long run, [PFC] could see somewhere in the range

of \$50-\$70 for the long-term floor price. A big part of the reason for some of the testimony he gave back then was that much of the debate in those times focused on when the price was \$140-\$150 a barrel, how much would the state be giving away, and should the state be taking more. He recalled advising in his testimony back then, "Remember, the commodity business is cyclical; remember that times are high now but there will be low times as well and more than anything else you need a system that is capable of protecting the state's interests in those times and that if you have to fight about what are you giving away at \$150 a barrel that's a really nice problem to have." Now, while at the bottom of the cycle, he said he offers this advice:

Remember, again, take that long-term view. This is a cyclical business and the problem now is how do you maintain ongoing investment even when times are rough? And yes, one needs to protect the state's interest and, yes, one needs to do what one can to plug a very, very difficult fiscal hole. But if one does that at the expense of changes in fiscal terms that say to investors, "Sorry, this isn't the stable jurisdiction you were hoping for," that potentially has a long-term cost that one needs to think seriously about.

1:30:09 PM

REPRESENTATIVE JOSEPHSON posed a scenario in which there is a defined time for when HB 247's reforms would take effect and asked whether even leasehold investors could say that they expected X regime and now the state is giving them Y regime, even though the lease itself is the birth of the project. He said it strikes him that the adjustment might not be made for a decade or more.

MR. MAYER replied it depends very greatly on the specific nature of the change being made; for example, who it impacts and how, and what the timeframe that works through the system is. If the change is around credits, in many circumstances the capital intensive nature of an investment is in those early years of constructing facilities and drilling wells. That tails off at some point, so the impact is much more important in those early years than it is later on. If the change is around the overall rate of tax, the overall rate of tax in low price environments is a change that hurts no matter when in time it is made. It comes back to the question of changes that are fundamental questions of policy and wanting to set a sustainable fiscal system that is sustainable for all parties across a wide range

of prices versus changes that are related to this year and how does the state get a little bit more revenue. Those are very different questions that have very different impacts on the question of how stable the fiscal system in Alaska is seen as being.

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REPRESENTATIVE HAWKER cited Alaska Statute (AS) 43.55.023(b) regarding the 35 percent Net Operating Loss Credit carried forward. He said this statute very clearly states, as the legislature wrote it, that a producer or explorer may elect to take a tax credit in the amount of 35 percent of a carried-forward annual loss. The statute is very clear even if the intent was not quite that. He asked whether it is reasonable for both [the legislature] and industry to expect that industry will comply with the law as it is written.

MR. MAYER responded, "Absolutely, industry takes the statute and turns that into a model and assesses the performance of any investment they seek to make against what their model says." Although the statute says 35 percent of carried-forward annual loss, when thinking about how that annual loss is defined, it turns out it is defined based on production tax value and that in turn is defined based on the Gross Value Reduction.

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REPRESENTATIVE HAWKER said he understands that at these lower prices there is a problematic value translation between the net operating loss and the value of the credit carry forward. The legislature passed the law, the legislature said go make decisions based on it. He inquired whether it would not still be a tax increase from the standpoint of the people being asked to rely on state statute, even if [the legislature] thinks it is fixing a mistake it made.

MR. MAYER answered, "Absolutely, it is without question." He added that the core of his point [on slide 14] is about the need to balance two things very carefully. The first is the policy point about what one would like the system to be and what one intended the system to be. The second is that industry has made investment decisions based on the system as it is, not as it might be in an ideal world and any changes have substantial impact. This needs to be thought about very carefully.

[1:35:17 PM](#)

REPRESENTATIVE HAWKER stated that HB 247 is a complex approach that essentially restructures the tax system. He suggested that rather than the 35 percent carried-forward, perhaps a more targeted fix - applied prospectively - could simply be taking the value of the net operating loss in a given year and translating it into a carried-forward credit using the marginal tax rate of the taxpayer. This would provide an equal translation of value, he posited, so there is not this circumstance of a tax credit that arguably has a greater value than the deduction was in the year it was incurred.

MR. MAYER replied he will think about Representative Hawker's suggestion and get back to the committee.

[1:36:31 PM](#)

MR. MAYER returned to his presentation. Displaying slide 15, "HARDER, HIGHER FLOOR RAISES TAXES ON LOSSES," he said hardening of the gross floor is one of the biggest of the proposed changes in HB 247. Under ACES, he noted, the Capital Credit calculation was applied after the comparison between the net and the gross systems and therefore was effectively non-binding in most circumstances. Drawing attention to the graph on the left, "EFFECTIVE PRODUCTION TAX RATE," he pointed out that at higher prices the effective tax rate under ACES (yellow line) was substantially higher than it is under Senate Bill 21 (red line). The two rates are relatively close [across a broad range of higher prices], he noted, but under Senate Bill 21 the rate comes to a peak of about 35 percent at around \$150, whereas ACES went up and up to much higher levels at the higher prices. However, in the price range of \$120 down to \$30, the key difference is that the effective tax rate under ACES kept coming down and eventually came down to zero, whereas the hardening of the floor under Senate Bill 21 essentially means that it comes down to about a 10 percent effective tax rate for legacy producers, then it bottoms out and starts rising until about \$60 where it goes up and very quickly asymptotically approaches infinity. That comes back to the point about the nature of gross taxes, which is that as the net value in the barrel gets smaller and smaller, anything that is a fixed amount of the total value takes up a steadily larger portion of the value until it takes up all of the value. Once it takes up all of the value, the measure of an effective tax rate or of effective government take, becomes meaningless since it is all essentially infinite. The chart depicts the price level at which that happens versus the price levels of today and, he stressed, that

is a really important point to be able to understand. Mr. Mayer said he has heard far too many people state that the effective rate of production tax comes down and the producers are only paying a 4 percent rate at the moment. But, he explained, it is 4 percent of gross and as a share of the net it comes down from 35 percent to around 10 percent and then it very quickly skyrockets up towards infinity.

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MR. MAYER continued addressing slide 15, stating that the effect of HB 247 is twofold and particularly on incumbent producers. He said the chart on the right, "PRODUCTION TAX \$/TAXABLE BBL," looks at the absolute dollars per taxable barrel. He pointed out that in the price range of \$40 [and below] there is literally no net value left at all and in fact the producer has a net operating loss. Currently, net operating loss can take a company down below the floor, the statute is very clearly written that these were specific provisions. The aim of the hard floor under the Dollar-Per-Barrel Credit was to protect some of the state's revenue at the lowest prices while also being mindful that gross taxes make life very difficult for the industry when prices are low precisely because gross taxes very quickly take everything and then more than everything. Once in an environment in which a company has a net operating loss there is still the regressive royalty that is taking everything or more than everything. In that environment the state is saying that it is not sure it should be adding to it with 4 percent of the gross and so maybe the Net Operating Loss Credit should be able to take a company down to zero. Whether to change that is a policy question about the balance of protecting the state at the low end versus what the state takes at the high end, and what a sustainable and competitive regime looks like in how it balances those things.

[1:40:45 PM](#)

REPRESENTATIVE TARR, regarding going to zero, posited that there are two different scenarios. One would be just zero within that calendar year. But, she said, the more problematic thing that the state is experiencing is what is carried forward into the next year so that "we're 100 plus." She said she has been researching how Alaska compares to other jurisdictions in competitiveness and trying to find other examples of a situation where it goes 100 percent plus. She inquired whether Mr. Mayer is aware of any other jurisdictions where this has happened or how other jurisdictions control whether they go beyond zero tax.

MR. MAYER responded that there are plenty of tax systems that enable a company to carry forward losses. That is a standard feature of a great many tax systems, with federal income tax being one. Another is Australia's net profit-based, cash flow-based production tax system which provides some protection for the sovereign by saying that outflows, namely the sorts of things that are credits here in Alaska, are carried forward against future liability rather than paid out, but that means that all negative tax items are essentially carried forward. Thus, the carry forward is not unusual in that sense. It must also be remembered that unlike many places, Alaska has the fixed royalty that is already taking a substantial piece of the pie, in fact a zero or negative pie.

REPRESENTATIVE TARR offered her belief that what is problematic for the state is having the actual expenditure for the Net Operating Loss Credits. She posited it would give the state more protection if the credits were only allowed to be used against future tax liability, which is contemplated in HB 247.

MR. MAYER answered that HB 247 does not contemplate ending the cash payout of credits. Currently, cash payout only happens to companies with less than 50,000 barrels a day of production. The bill would put some additional restrictions on the cash payout, including that companies with more than \$10 billion in revenues would not get a payout. The bill would also cap the amount that any given company can claim. He said there is a strong case for a sovereign protecting itself through a cap of some sort at some point. However, whether it should be \$25 million, and what timeframe over which it applies, is a much more difficult question because that has some very serious impacts, including very serious impacts on investments that are being made at the moment.

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REPRESENTATIVE SEATON asked what the state's tax regime looks like on federal or private land from which the state does not receive royalties, but for which the state has a liability.

MR. MAYER replied that Representative Seaton's point is valid, however he has not done much modeling on that specific question. He advised that it merits serious analysis particularly in those instances of new investment projects to which the Gross Value Reduction (GVR) and other things would apply. In a sustained period of low prices the value proposition to the state might be

a lot less than it is in places where the state has the royalty. He said he needs to look at this very legitimate concern before he offers any detailed advice about it.

1:46:05 PM

MR. MAYER resumed his presentation by turning to slide 16, "HOW DO CHANGES IMPACT NEW FIELD DEVELOPMENT?" He explained that the two graphs on the slide, labeled "CASHFLOW AND COMPONENTS" and "PRODUCTION AND DRILLING," depict a hypothetical North Slope project that qualifies for the Gross Value Reduction new oil regime under Senate Bill 21. He outlined the assumptions for this hypothetical project: cumulatively recovers about 80 million barrels of oil; peaks at about 20,000 barrels a day in production; total capital spend of about \$1.3 billion; average annual operating cost of about \$15 a barrel; 30 wells, of which 20 are producers and 10 are injectors; and the wells are drilled over 8 years. He noted that an analysis of this sort is built up from the granular level, starting with what is thought to be a reasonable well cost to well type curve drilling profile and a reasonable cost of facilities. The ability to get down to that level becomes very important in assessing some of the project economics. He said the blue bars on the cash flow chart are the process of facilities development. Before a single well is drilled, about \$400 million will have been spent on a gravel pad, pipelines to facilities, and such. In this model the drilling begins in year three and the drilling expenses ("drillex") continue for several years. A lot of wells are drilled up front to get production up, he explained. Once production is up, drilling occurs at a lower rate for a number of years and sustains a sort of plateau level of production.

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MR. MAYER continued discussing slide 16, pointing out that in the earlier years the investor is substantially cash flow negative. It takes a good many years to get back to zero, he said, and then the project becomes cash flow positive and is generating value. There is a corresponding difference in the profile of government take over the course of time as a result. Government take is effectively negative in the early years and that is the impact of the credits being paid out. In this case it is the Net Operating Loss Credits that are being paid out as cash. In the early years the costs are high and revenues are low and royalty is probably the only thing being paid. In the later years there is some ongoing sustaining drilling and from this point on the main costs are simply operating costs; there

is therefore a lot more value and this is where the bulk of the production tax is actually harvested. When thinking through these debates, he advised, it is useful to remember that under almost any regime there are times when tax is not paid or where it is negative, as in this example, and there are times when tax is paid later in the tail. Thinking through the time profile of that is really important in understanding the impact of all these sorts of things.

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MR. MAYER returned to Representative Tarr's question regarding Net Operating Loss Credits. He pointed out that a cap on the reimbursed Net Operating Loss Credits would have a huge impact on any new investment, particularly any investment that is being made at the moment. He brought attention to the cash flow graph on slide 16 and explained that the [dashed] black line is the after tax cash flow, the cash that the producer receives. The green color within the bars is the gross revenue, the purple and blue are the costs, and the red is government take. Netting out all of these things results in the after tax cash flow.

MR. MAYER moved to slide 17, "CHANGES BOOST CAPITAL NEEDS AND LOWER IRR," and addressed the graph entitled, "CUMULATIVE CASHFLOW." He explained that looking at the cash flow on a cumulative basis tells a company how much it needs to spend before the project becomes self-financing. In this hypothetical scenario the company will spend continuously until about 2018 and production will begin about a year before that. In 2018 the revenue from that production starts to exceed the costs that the company has in its ongoing drilling and the cumulative cash flow curve starts to turn around. When contemplating whether to sanction a project one of the first things a company, the investor, needs to understand is the capital structure that is going to underpin the project - how the project is going to be financed and what the company can afford. In this scenario the company is assessing what is going to be \$1.3 billion in total spend. But, the company does not actually need to have \$1.3 billion ready in the bank to make the project happen. Under current law [solid black line in the graph], the modeling of cumulative cash flow for this hypothetical project shows that the company only needs to be able to recover \$300 million of total outflow before the project becomes self-financing. After the company has spent \$300 million, the remaining \$1 billion will cover itself because from that point forward there will be production and positive cash flow. The company's cumulative cash out will switch around and start to come back up. So, when

a company is looking at how much equity does it need, how much debt does it need, it is not looking at how to finance \$1.3 billion but rather how to finance \$300 million, and that is a very big difference. The credits have a big impact there because they effectively act to reduce that very strongly.

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MR. MAYER then explained that the dashed black line on the graph for cumulative cash flow represents what a cap of \$25 million in reimbursable credits would look like for a company with no other projects. This line shows the company would need a total outlay of \$400-\$425 million, rather than \$300 million, before it becomes cash flow positive, meaning the company would have to come up with this additional capital. It is one thing if a company were to just now be starting a project and could take this into account as it figures out what this investment looks like and how to finance it. However, it is quite another thing if the company is a year or two into its spend and has already told its equity investors how much they would be putting in and what sort of return they would be getting, and the company has been to the bank and knows what line of credit it has, and now suddenly the company needs to come back to all of them and tell them it needs \$100 million more than it previously thought. That would be a very difficult situation to be in.

MR. MAYER stated that the aforementioned situation would be even more difficult for a producer that already has another producing asset that still has substantial costs due to a low price environment, or the ramp-up drilling being unfinished, or drilling needed to maintain the production plateau. It would also be difficult for a producer that may already be claiming a net operating loss. If a \$25 million cap per company were to be implemented, a producer may already be up against that cap on its other producing field, in which case effectively the cap would be zero for a producer's new field. In that case a producer could go from needing \$300 million in capital for making the project work to over \$500 million, a 50 percent increase in the capital base required. It would be a very difficult conversation to have if halfway through the spend a producer must come back to its equity investors asking for more capital. Additionally, a producer would find that its internal rate of return (IRR) is worse because the numbers under the new regime look very different from those under the previous regime. Therefore, concern over capping credits is very valid, he advised, and something that needs to be thought about and addressed. Making a change like this and doing it immediately

could have a potential chilling impact on the ability of investments to occur and on investments that have already been sanctioned or are already ongoing.

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REPRESENTATIVE JOSEPHSON said slide 17 is very meaningful to him. He recounted reading in Petroleum News last year that if everything went well on the North Slope, every project played out just the way it would, and every permit from the federal government was received, that perhaps there was an opportunity for 100,000 barrels collectively. Meanwhile, he opined, the super-giants are less and less super-giants. When he first met with Pioneer Natural Resources Inc. he was told that the company was drilling 6,000 barrels a day at Oooguruk, and what struck him was that he was used to 2.1 million barrels a day. "Our department says by 2022 we're going to have 350,000 barrels," he related. Through no fault of anybody, it is just geology, Alaska is not producing as much oil. So, he said, his question is what is he investing in and how can he measure the net value of that to the people while he measures what is on slide 17.

MR. MAYER responded that more than anything else Representative Josephson is investing in a series of projects. Each one may be small, 6,000 to 20,000 barrels a day in initial production, but each project is a wedge. The Department of Revenue's forecasts for North Slope production over the next four or five years versus what the forecasts were a few years ago, show a striking flattening of the [downward] curve, at least for the next several years. The only way in which that flattening continues to occur is if a series of those projects keeps coming in and each one is another incremental wedge that takes the state from a 6 percent annual decline to a 2 percent annual decline to no decline. In a world of higher prices and higher investment, it might even ideally see things turning the other way. Those things require a coming together of the right price environment, right fiscal regime, and all the rest.

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REPRESENTATIVE HAWKER stated that the refundability of credits is simply a matter of shifting the capital requirement burden from the state providing investment capital to the private sector having to provide its own investment capital. He inquired whether, if applied [prospectively], limiting the refundability of these credits could have a desirable outcome. For example, he recounted, some of the investors in the Cook

Inlet did not succeed, were undercapitalized, left the state, hung bad paper on everybody, and then a bankruptcy court came in and made the paper even worse. Restricting the refundability could potentially have the advantage of resulting in attracting stronger, more capitalized, more qualified investors rather than those that should not be in the state.

MR. MAYER answered that that is an excellent question. There is no question, he said, that the North Slope and in particular Cook Inlet are in the process of evolution that is seen in all mature basins. A series of large established players for whom this becomes a less material region are exiting and new players are coming in. The combination of that basic dynamic with very generous and frequently refunded credits has meant that some of the players coming in have been much more thinly capitalized than they might have been otherwise because the credits so dramatically reduced the capital requirements. There are many cases in which refundable credits have meant that people who otherwise need additional working interest partners have been able to get away without having them.

[CO-CHAIR NAGEAK turned over the gavel to Co-Chair Talerico.]

[2:01:20 PM](#)

MR. MAYER further pointed out that there is also the serious question of the sustainability of the refundable credits in numerous environments. He said the nightmare scenario from the state's perspective is a price environment that is not necessarily as low as today but is back above \$50 and in an environment where prices have come down. Should a new Kuparuk-sized field be discovered, there would be the sheer amount of capital required to develop a resource of that size. It would potentially be a very, very large outflow to the state if the people doing that were all eligible for the 35 percent refundable Net Operating Loss Credit. Everyone should be worried about that scenario, he advised. He further counseled that having clear rules is always essential in any system. The nightmare scenario would be having no clear rules on refundability. As was seen last year, there is a degree of executive discretion to try to limit the outflow and that is the worst possible case because there is this uncertainty of the credit being there under statute and refundable, but in practice it is unknown whether the credit is going to exist. That is the scenario which everyone should want to avoid. It is in absolutely everyone's interest to have clear rules where the state has said it knows that there are constraints on its

ability to fund this program and because there are clear constraints the state wants to set those rules and set them clearly.

MR. MAYER added that he can see lots of reasons why refundable credits provide value in enabling investments that might not otherwise go ahead. There are companies that are not firmly capitalized that have solid backing, but for whom the combination of the lower capital requirements and the higher rate of return that is received make a big difference in enabling a project to be sanctioned. Other than the question of simply protecting people who have already made an investment, he said is a serious question as to whether \$25 million is the right number, whether that could be higher and still protect the state from some of the worst possibilities that could be outcomes. A system that makes it clear what is the limit on the state's exposure is very desirable.

[2:03:54 PM](#)

REPRESENTATIVE HAWKER stated it is important that if a change is made, that it be prospective and not affect decisions that have already been made. He inquired as to how strongly Mr. Mayer would counsel committee members to be careful in that regard. For example, he recalled, last year the legislature passed its budgets and made the commitment for this capital to these entities. The governor introduced three separate budgets that included the reimbursement for those reimbursable credits. So, when they were vetoed without any warning, a significant amount of investment capital that was committed to this state went away. He inquired as to the balance between how to smooth out such a transition so that the rug is not pulled out from under people's feet.

MR. MAYER replied that moving forward it would be quite reasonable to put in place a series of additional restrictions on eligibility for a refunded credit. It would not necessarily have to be purely through a cap per company, or if it were a cap per company it could be higher than \$25 million. Another way could be to require a vetting process by the Department of Revenue (DOR) or the Department of Natural Resources (DNR) in the same way that DNR must now approve plans of development before a development can occur, or in the same way as all the financials and the models are required to be handed over to DNR in the case of royalty modification assessments. Looking at the details of a project and approval would need to occur before any money was spent.

2:06:33 PM

REPRESENTATIVE HAWKER understood Mr. Mayer to be suggesting some kind of a front-end due diligence process.

MR. MAYER responded, "Absolutely."

REPRESENTATIVE HAWKER opined that from industry's perspective, everyone collectively as the state can be held responsible for the veto of the credits last year. He inquired how, if legislation is passed that requires a due diligence process, assurance can be provided that the state is not going to pull out the rug from under the industry with a veto after the legislature apparently has made the commitment.

MR. MAYER answered that the most important thing that can be done in both the North Slope and Cook Inlet is committing to a regime that the state can demonstrate is sustainable and sustainable at the prices that are being seen for the future. That the state has thought through all the potential scenarios of what could happen and has committed to a one-time policy decision to create a sustainable regime for the future, rather than incrementally saying the state is unsure it can afford this and so the credits might be there but not really.

2:08:10 PM

REPRESENTATIVE SEATON stated his appreciation for the discussion and opined that once a project is sanctioned a company has a commitment, not when it is a lease sale and a company is exploring and has not reached that level of investment. In regard to a timeframe as mentioned by Mr. Mayer, he agreed it would be much harder after a project is sanctioned and the investment acquired, and so going forward from there would be much more problematic. He said slide 17 is looking at the economic impact from a producer's standpoint, not the state's standpoint. He requested that Mr. Mayer develop a slide that looks at the state's investment via the credits in the early part of a project and having a reasonable net present value calculation with a reasonable discount rate so the committee can see what the state's value is in the project.

MR. MAYER displayed a slide not in his presentation entitled, "appendix," with two charts: one labeled "NPV 10 to company and government: ACES" and showing a comparison of the old system of ACES; and one labeled "NPV 10 to company and government: SB 21"

and showing Senate Bill 21 with a Gross Value Reduction. The charts are not finished, he qualified, but are for the same project as profiled [in slides 16-17]. He said the charts depict everyone discounted at a 10 percent rate value overall to company, to federal government, and to the state. He related that under the previous system of ACES there was astronomical value to the state as prices went higher. Relatively speaking, things look much more similar at oil prices below \$60 because the effective rate of support for government spending has gone down from 45 percent to 35 percent, and [in the current regime] the state is slightly better protected on the low end than it was under the previous regime. He noted that the charts are looking at the production tax as well as the entire fiscal system and assume a 16.7 percent royalty rate. The point of the charts is to look at the total fiscal system and total value to the state across a really wide range of prices. Under Senate Bill 21 there is a fairly even split of value between the company and the state, and the state is always better off than is the company. A concern under ACES was that when investments were looked at on an incremental basis there were times when investments were value creating for a company and value destroying for the state. [Under Senate Bill 21] the split is relatively even and value for the state is higher in all circumstances, subject to the assumptions he set out, than the value is for the company. While it can be negative for the state, it is only in sustained low prices that it is much, much more value destroying for the company. Overall, Alaska's regime by and large works pretty well.

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REPRESENTATIVE SEATON said the committee is having to look at the investment of the state and the full field development. He questioned whether there are many cases where the state has 16.7 percent royalty and requested Mr. Mayer to look at that. He further requested that Mr. Mayer look at private land where the state does not receive a royalty. He said it would be helpful to know in what circumstances the state is making a good investment and what circumstances the state may be making an investment that is going to be a net loss to the state.

MR. MAYER replied that to the best of his knowledge, most GVR-eligible production is on leases that are either a 16.7 percent lease or a profit-share lease. By and large, the 12.5 percent royalty rate is in legacy fields. However, he allowed, it is a valid point about places where the lease is held by an entity other than the state and this should be looked at further.

2:14:19 PM

MR. MAYER resumed his presentation and continued his discussion of slide 17. He advised that in addition to substantially increasing the capital requirement, the other big impact of HB 247 would be either decreasing the rate of return at any given price or substantially increasing the price level at which a company in assessing its economics reaches a particular hurdle rate of return. Depending on whether that \$25 million credit cap is taken or the effective lower bound of many companies maybe having already claimed their \$25 million on other projects, it would be somewhere between a \$5 and \$15 difference in the price range at which at which a company would meet a 15 percent or 20 percent internal rate of return hurdle. This would have a substantial impact on what projects are sanctioned and what projects are not.

MR. MAYER moved to slide 18, "CHANGES MAKE REGRESSIVE SYSTEM EVEN MORE SO," and noted that both charts depict the same hypothetical new project of 80 million barrels. He specified that when the proposed changes of the capped credits are stacked with the more binding harder floor at low prices, the impact is a series of changes that would make the current system, which is overall neutral across a wide range of prices but still heavily regressive when prices are below \$60 a barrel, into a more regressive system. He said each color on slide 18 is a different component of government take: red = royalty, yellow = property [ad valorem] tax that goes to municipalities and to the state, green = production tax, purple = state corporate income tax, and dark blue = federal corporate income tax. When these components of government take are stacked together, and as long as they are all positive, they add up to the dashed black line, which is the total level of government take. He recounted that the idea behind the Gross Value Reduction in Senate Bill 21 was that for new investments a system was being targeted that was effectively neutral across a wide range of prices at an overall level of about 62 percent government take.

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MR. MAYER pointed out, however, that that starts to change at the lowest prices because of the royalty's regressive nature. He explained that there is no production tax at those prices and at those prices production tax is even effectively negative. Effectively negative does not mean the state is always paying out money. It means that across the cash flow cycle of the

project investment, credits were spent up front and production tax is at the tail. If the price of oil remained at \$40 a barrel for the entire life of this project the value of those credits would always be bigger than the value of the production tax that was generated in the later years. At a price of \$60 and above the value of the production tax is greater than that of the credits that were paid up front. But, even when the effective net impact of the production tax is negative, there is still at least 62 percent government take under the current system due to all of the other components, in particular the highly regressive royalty. Starting at \$50 government take begins curving upward, and once at \$40 government take rises as high as 100 percent. This is because even though the state effectively contributed to the producer through the production tax, the state is taking in net through royalty all of the value that there is at those lower prices. Anyone making an investment is looking at the overall fiscal system, he said. So, the impact of the proposed changes in HB 247 is that at \$40 it would be more like 150 percent government take rather than 100 percent. Thinking about things in that context will paint a different and clearer picture, he advised, than simply thinking about what rate of tax a given taxpayer is paying at a given price, particularly when those rates are quoted on the gross.

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MR. MAYER, in response to Representative Hawker, reiterated that the dark blue within the bars of the graphs on slide 18 is federal corporate income tax and the purple is state corporate income tax.

REPRESENTATIVE HAWKER understood the point of slide 18 is that production tax is positive and then reaches a point at which it becomes negative and falls below [zero]. He observed that at a price between \$60 and \$45 per barrel there is production tax both above and below [zero]. He surmised that what is being shown is the increasing significance of state corporate income tax and particularly the state ad valorem tax.

MR. MAYER responded that even more than those two is the royalty itself - royalty is the big regressive element.

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REPRESENTATIVE SEATON, in regard to comparing systems, noted that private royalty in North Dakota is 27-30 percent and said there are areas in Alaska where the royalty does not go to the

state. He inquired whether who the royalty is paid to would in actuality change a company's decision.

MR. MAYER answered that royalties are incorporated for the perspective of fiscal comparisons. This would also be true in terms of how a company assesses an investment. It is only in the Lower 48 that the royalties go to private landholders rather than to the state. Almost anywhere else in the world royalties go to the sovereign. But, in any of those cases the royalty is effectively treated as if it went to the sovereign even if it goes to a private landholder, because it is all cash that goes to someone else. In terms of a comparison with North Dakota, North Dakota tends to have high fixed royalties which absolutely means that at a given cost level in this sort of price environment a company is bleeding even more there than it is here. The offset to fixed royalties being highly regressive is that when prices are better [the company] is also taking a lot more of the cash. It comes back to the point that in any fiscal system it is all about balance and what the system looks like over a wide range of prices. [A sovereign] can be Norway and take a large share and particularly take a large share when prices are high. [A sovereign] can be North Dakota and whether it is the state or the private landholder really protect itself on the downside by having a very regressive high fixed royalty and give away a lot on the upside. That is all about risk and reward. He elaborated:

The high fixed royalty says we the royalty holder don't want commodity risk or we want as little of it as possible, and because of that we want to push all the risk onto the private sector but we're willing to give away a lot when times are good as a result. Profit-based taxation is about saying we don't want the distorting impacts at low prices on investment. We want to try to enable all resources that should be developed to be developed and not have our taxation system be a barrier to that, and we would like over the course of the commodity cycle to take more. And the net profit tax is a way that enables us to do that, and the tradeoff that we make is in doing that we understand we're going to have more revenue volatility and that we as a state need to have the mechanisms in place to manage that volatility. ... What you can't do is be both at the same time.

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REPRESENTATIVE SEATON said Alaska has both systems, royalty and not royalty. The discussion is looking at government take on these figures and government take is drastically different between the two systems. He stated that it seems there is not a decision point in the analysis that is being presented for changing investment decisions based on government take when they are drastically different between those two kinds of projects. He requested Mr. Mayer to prepare something for the committee in that regard.

MR. MAYER replied he will think about that and do what he can. He said that ultimately he will always come back to the idea of balancing risk and reward. If investing in Norway, a company does it because the company knows it is going to have less upside when times are good and knows that things are not going to look truly ugly when times are bad. If investing in North Dakota, a company does it because the company knows it takes a lot of risk. In terms of the federal offshore, a company might have a huge initial cash bid for a block before it has even so much as drilled a well. All of the risk in that case is on the investor. The investor further knows that if it has a discovery and wants to go through to production it will do it under this regressive fiscal regime. That means a company is spending billions of dollars and when prices are low it is going to really hurt, but the company has run its economics at a really wide range of prices and has done probabilistic modeling and thinks it is going to make enough on the upside that across that balance the project makes sense. In that sense, it is always about balance of risk and reward.

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REPRESENTATIVE SEATON said he realizes the aforementioned, but pointed out that this is again being looked at from the producer's perspective. Whether it is a situation offshore and the state applies the same fiscal terms to it or whether it is a situation of private royalty that the state does not receive, decisions are being made and a lot of cash is being put into credit systems from which the state may never see any basic return even in a wide range of prices. If the state expends tremendous amounts on credits and has a very conservative discount rate, the state may still never recover its investment over the life of the field. He said he is concerned about that and therefore as the committee goes forward he would like to see whether [the legislature's] decision making needs to have a bifurcation for when something has a full economic return to the state or when something does not have economic return to the

state but there is a huge liability to the state if it is extending credits into an area where the state does not get a fiscal return from royalty. He requested Mr. Mayer to do modeling of these two regimes within the state.

MR. MAYER responded that if he understands the crux of Representative Seaton's concern, it is really about the question of, in particular, new oil under Senate Bill 21 and what that looks like in places where there is no state royalty but is either a Native corporation or federal royalty, and what that looks like in terms of net present value to the state across a wide range of prices. He agreed that that is an important concern and said analytica can do such an analysis.

REPRESENTATIVE HAWKER stated that what the aforementioned is really getting to is the significant distinction in the state between private royalty interests, which is privately owned land as opposed to state land. The state's production tax credit system provides this whole systemic structure across the entire spectrum. He pointed out that Alaska has an entirely separate tax structure in statute for private royalty interest. There is an entirely separate levy for the separate landowner, which is 5 percent of the gross value at point of production, and that is the state's sum total production tax.

[Co-Chair Talerico returned the gavel to Co-Chair Nageak.]

[2:29:18 PM](#)

MR. MAYER concluded the North Slope portion of his presentation with slide 19, "KEY QUESTIONS RAISED BY HB 247 RE NORTH SLOPE." He advised that while HB 247 is not a tax overhaul, it includes a series of major changes that would have major impacts. There are some absolutely legitimate concerns, such as: whether the potential liability from credits should be capped and, if so, at what level, and how, and how should that be applied going forward; what the role is of the gross floor; and how to balance protecting the state on the downside versus the upside that the state takes by having a net tax-based system. The bill also has a lot of incremental revenue raising measures that can be understood in a time of strained finances, but which from an investor's perspective get very scary very quickly. A series of things in the bill are incremental revenue raising rather than putting in place a one-time, thoroughly considered piece that addresses the question of the sustainability of the system. The scariest for any investor is when every year the sovereign comes back seeking to take a bit more here and a bit more there. More

than anything else that is what scares analytica when looking at the proposals in HB 247.

[2:31:17 PM](#)

REPRESENTATIVE HERRON requested Mr. Mayer to discuss three examples: something good that Mr. Mayer likes in HB 247; something bad that should not be considered; and something ugly, ugly meaning it is not good and it is not bad but is something that needs a lot of work.

MR. MAYER answered that on the good side he thinks the intention behind Senate Bill 21 was to say everyone gets 35 percent support for government spending, not in some cases substantially higher because of the interplay of the GVR. It needs to be very carefully thought through about how that is implemented, but from point of policy it would be wise to find a way to address in a way that would not disadvantage people who have made investment decisions assuming that to be the case. On the bad side are those things that are easy to see as solely incremental revenue raising measures rather than thought-through pieces of policy. This is chilling from an investor's perspective. On the ugly side is anything having to do with the floor. He said he understands that protecting the state in low prices is always going to be a key consideration, but that balance between protecting the state on the low side versus what the state takes on the high side and the inability to be both Norway and North Dakota, is a key challenge.

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REPRESENTATIVE HAWKER returned to the earlier discussion about private royalty interests. He said the question raised went to credits under AS 43.55.023 and AS 43.55.025 that are available for a producer working on state-owned lands and whether those benefits would be extraordinary and would completely distort the state ever getting a recovery back on the "private royalty interest royalties, which are by statute AS 43.55.011(i), 65 percent." He offered his belief that all of the .023 and all of the .025 credits are specifically restricted to activities that are conducted on state and federal lands and are specifically not applicable to private royalty interest.

REPRESENTATIVE SEATON responded that this is a discussion to find out whether the state has liabilities, not an argument.

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REPRESENTATIVE TARR returned to the chart on slide 13 and recalled that Representative Hawker had brought up questions in regard to the opex and capex having been an average for the year. She requested Mr. Mayer to prepare this same model using a scenario of a major producer on the North Slope that is not doing much capital work and that the model have a modest fluctuation from month to month rather than an average. She said she is requesting this because in running her own numbers it appears that fluctuations would have a dramatic impact on the way that the production tax would work out.

MR. MAYER agreed to do so. He said this is something that clearly requires getting into the details of the actual process of filing tax returns and those things that companies have to get into.

[2:36:57 PM](#)

The committee took an at-ease from 2:37 p.m. to 2:41 p.m.

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MR. MAYER began the second half of his presentation entitled, "IMPACT OF HB 247: COOK INLET ASSESSMENT." Drawing attention to slide 2, "THE COOK INLET OIL AND GAS MARKET: A SCORECARD," he explained that he will start with a high level assessment and will then drill down into the details. He first outlined the recent history of oil and gas production activity in the Cook Inlet and noted that enalytica's analysis is based on data from the Alaska Oil and Gas Conservation Commission (AOGCC) and others. Oil production has risen substantially, he reported, from a low of 7.5 thousand barrels a day (mb/d) in 2009 and now it is as high as 18.0 mb/d. Gas production has not seen the same turnaround as oil, but has stabilized after years of steady decline. In many ways it could be said that gas production has seen the same degree of turnaround because it is a restricted domestic market that is limited to the demand that is available. More than that, the Cook Inlet gas market has seen a major adjustment in recent years. It has gone through a huge transition in the supply side, the demand side, pricing, competition between various players, and expectations. Some of these changes are seen in all mature basins around the world and some of the changes are specific to Cook Inlet.

MR. MAYER reported that DNR has prepared several studies, one released in late 2015 and one to be released in 2016 with

updated numbers on potential resources at the Cosmopolitan and Kitchen Lights fields. According to DNR estimates, just under 1.2 trillion cubic feet (tcf) of proven and probable reserves (2P reserves) are in the existing mature producing fields, plus about 400 billion cubic feet (bcf) from Cosmopolitan and Kitchen Lights. Noting that DNR's estimate is much lower than what the operators of those fields have stated, he said DNR's total estimate of 1.6 tcf of gas in the ground is clearly an intentional conservative estimate. If development occurs at the Cosmopolitan and Kitchen Lights fields, the current market would be well supplied for the next decade at the least. This would be subject to two big provisos: the pace of ongoing drilling and development and what it might require to develop the resources that are not currently developed; and what the role of the credits in all of that is and what impacts that can have.

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MR. MAYER pointed out that at current price levels in the Cook Inlet, brownfield investment in drilling new wells in mature producing fields is pretty economic and that would be the case even under a system with substantially less credits. However, he added, the economics look very different when it comes to developing new resources, especially new resources that require major facilities to be built. Potentially, credits have a strong role to play there, particularly when looking at the difficult constraints that limited demand places on what those developments might look like. The current uncertainty around the future of the fiscal regime exists for numerous reasons. One is that the regime as legislated expires in the early part of the next decade. There is a sort of envisioned review process between now and then to look at what the future would be. This has been made even more uncertain given the governor's line item veto last year. But even without that, the sheer numbers of credits and outflow occurring at the moment raise the question of sustainability of that system. From an investor's perspective there would be concern as to whether the regime that exists on paper today is actually going to be the one that exists when it comes crunch time. In terms of enabling future investment, there are places where credits are important and there are places where they are less so, he advised. But more than anything else, a long-term sustainable system that is well thought through is ultimately going to be paramount to seeing ongoing long-term investment in the Cook Inlet.

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REPRESENTATIVE JOSEPHSON remarked that it sounds as if Mr. Mayer is saying even the investors in Cook Inlet themselves are questioning whether it is sustainable.

MR. MAYER replied that the sheer amount of credit outflows were one thing when the state was bringing in billions of dollars of revenue through the production tax system and there were serious problems with the future of the Southcentral gas supply. Since lots of money was coming in through North Slope taxes the state could afford to incentivize activity that it wanted to spur. But now, much less revenue is coming in from the North Slope. Displaying slide 4, "BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET," he said that anyone looking at the more than \$400 million spent in Cook Inlet credits in 2015 would question how long that could go on in a constrained budget environment.

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CO-CHAIR TALERICO inquired whether he is correct in reading between the lines that Mr. Mayer is telling the committee the clock is ticking and the committee will be far better off if it focuses on this and starts to structure something sooner rather than waiting until the midnight hour. He surmised it is a good idea to begin a focus on what legislators will do when that expires since good decisions are not made while in a panic. A system would be well out in front so that everyone is aware of what system will be in place.

MR. MAYER agreed, but recognized that many factors will make a discussion about the Cook Inlet fiscal system more difficult this year than in subsequent years. Going back to his previous comments about some of the effective dates in HB 247, he said changes that impact July 1, 2016, potentially have very difficult impacts. Drilling programs have been committed to that rely on some of the existing credits and some of those are developments that one would really like to see happen for the pressing interest of the state. When an investor does not see this as a sustainable system, it is really hard to make investment decisions unless the investor runs a range of worst case scenarios rather than the actual existing statute scenario. A conversation needs to start as soon as possible on a really reasoned effort that says not just what happens if a credit or two here is scratched, but what the fiscal system for Cook Inlet should be to be both sustainable and stable for the future. The right balance needs to be struck between incentivizing the activities the state wants to see incentivized while doing so in a sustainable way.

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MR. MAYER addressed slide 3, "REFUNDED CREDITS REACHED NEW HIGH IN FY 2015," and slide 4, "BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET." He explained that all of this discussion stems from the credits having grown substantially. In FY 2015 the bulk of the credits were spent in the Cook Inlet despite Cook Inlet bringing in a bare fraction of the revenues of the North Slope, something that will always be the case. While slide 4 is a snapshot of a point in time and some of those credits may produce additional revenue in the future, the balance is clearly off in a way that is difficult to see as sustainable. He pointed out that in the left bar on the graph the total credit outflow of minus \$628 million was inadvertently omitted (the sum of the credit outflows depicted for the North Slope and Cook Inlet).

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MR. MAYER turned to slide 5, "ACTIVITY HAS RESPONDED IN RECENT YEARS," to provide a basic history of the Cook Inlet. He noted that in 2010 there was real concern about the future of gas supply in the Cook Inlet, the future of overall activity in terms of the oil and gas industry as an economic basis for that region. Key changes related to pricing, storage, and credits were made and resulted in substantial response. Drawing attention to the left-hand chart on slide 5 depicting the number of exploratory wells spudded each year [since 1950], Mr. Mayer explained that the green bars are the actual number of wells and the red line is the three-year rolling average. Bringing attention to the right-hand chart depicting the actual producing wells in the year in which they first came on line, he noted that the three-year rolling average shows a substantial uptick [in recent years] to the level that was seen briefly in the middle of the last decade. Otherwise, he added, the only other time that level of activity was seen was back in the 1970s. That is quite striking and all those things that have happened have had a substantial impact on activity in the basin.

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MR. MAYER moved to slide 6, "COOK INLET OIL AND GAS PRODUCTION: BASIC FACTS," to look at overall oil and gas production in the Cook Inlet using data from the Alaska Oil and Gas Conservation Commission (AOGCC). He stressed the importance of separating oil from gas because what has happened in each is quite

different. Drawing attention to the chart on the left, he pointed out that oil production started in 1960, peaked in 1970 at 226 mb/d, fell to 7.5 mb/d in 2009, and after 2010 turned substantially upward to about 18 mb/d, more than double the production in 2009. Bringing attention to the chart on the right, he noted that gas production has not seen a turnaround, but has seen a stabilization. Explaining that gross production is metered at the wellhead, he said the red line on the chart is gross production, the green line is the gas reinjected into wells, and the orange line is net gas production. Separating things out this way is striking, because gross gas coming out of the fields peaked as early as 1990 and declined precipitously from 1994 to 1998. However, net production plateaued throughout the 1990s, which was a function of one thing alone - the Swanson River Oil Field. Swanson River had a lot of associated gas that was reinjected for many years, and the green reinjection line is all Swanson River. Then in the 1990s, production of Swanson River gas began and reinjection steadily decreased. Instead of a crisis in the mid-1990s there was a temporary plateau of stable production all the way through to 2005. It was not until after 2005 that the declines in gas production began to be seen.

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REPRESENTATIVE OLSON recalled that a lot of onshore and offshore flaring was going on during the 1970s and 1980s. He asked whether flaring was kept track of.

MR. MAYER responded that he will have to look at the numbers to see how flaring is accounted for. He deferred to his colleague at analytica to comment on how flaring is treated historically in the data.

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NIKOS TSAFOS, President & Chief Analyst, analytica, and consultant to the Legislative Budget and Audit Committee, answered he is unsure about how the flaring shows up. He said AOGCC has two data bases, one on well production and one on well reinjection, and he is pretty sure the data is for gross well production and does not take into account whether the gas is marketed, used at the field, or anything else. There may be gas that does not find its way to the market due to flaring, venting, or use at the fields.

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MR. MAYER addressed slide 7, "OIL UP FROM WORKOVERS, NEW WELLS IN EXISTING FIELDS," pointing out that oil production turnaround in Cook Inlet was a function of new wells and, in particular, a function of a lot of well workover activity. Drawing attention to the left-hand chart depicting gross oil production by well vintage, he explained that each colored line represents production from a well that came on line in a particular decade. For example, the green line is production from wells brought on line between 1991 and 2000, and the red line is pre-1970. The green line shows a striking turnaround in production: from about 2,000 barrels a day in 2009 to over 4,000 barrels a day today. Wells that came on line in the 1990s are now producing twice what they produced in 2009 due to the substantial well workovers that were done to make those existing wells much, much more productive.

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CO-CHAIR NAGEAK announced that Mr. Mayer's presentation will be continued on 2/27/16.

[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 3:00 p.m.