

**ALASKA STATE LEGISLATURE**  
**SENATE RESOURCES STANDING COMMITTEE**

March 13, 2006

3:33 p.m.

**MEMBERS PRESENT**

Senator Thomas Wagoner, Chair  
Senator Ralph Seekins, Vice Chair  
Senator Ben Stevens  
Senator Fred Dyson  
Senator Bert Stedman  
Senator Kim Elton

**MEMBERS ABSENT**

Senator Albert Kookesh

**OTHER MEMBERS PRESENT**

Senator Gary Stevens  
Senator Gene Therriault  
Senator Hollis French  
Senator Charlie Huggins  
Senator Wilken

**COMMITTEE CALENDAR**

SENATE BILL NO. 305

"An Act repealing the oil production tax and gas production tax and providing for a production tax on the net value of oil and gas; relating to the relationship of the production tax to other taxes; relating to the dates tax payments and surcharges are due under AS 43.55; relating to interest on overpayments under AS 43.55; relating to the treatment of oil and gas production tax in a producer's settlement with the royalty owner; relating to flared gas, and to oil and gas used in the operation of a lease or property, under AS 43.55; relating to the prevailing value of oil or gas under AS 43.55; providing for tax credits against the tax due under AS 43.55 for certain expenditures, losses, and surcharges; relating to statements or other information required to be filed with or furnished to the Department of Revenue, and relating to the penalty for failure to file certain reports, under AS 43.55; relating to the powers of the Department of Revenue, and to the disclosure of certain information required to be furnished to the Department of Revenue, under AS 43.55; relating to criminal penalties for violating conditions

governing access to and use of confidential information relating to the oil and gas production tax; relating to the deposit of money collected by the Department of Revenue under AS 43.55; relating to the calculation of the gross value at the point of production of oil or gas; relating to the determination of the net value of taxable oil and gas for purposes of a production tax on the net value of oil and gas; relating to the definitions of 'gas,' 'oil,' and certain other terms for purposes of AS 43.55; making conforming amendments; and providing for an effective date."

HEARD AND HELD

#### PREVIOUS COMMITTEE ACTION

BILL: SB 305

SHORT TITLE: OIL AND GAS PRODUCTION TAX

SPONSOR(S): RULES BY REQUEST OF THE GOVERNOR

02/21/06	(S)	READ THE FIRST TIME - REFERRALS
02/21/06	(S)	RES, FIN
02/22/06	(S)	RES AT 3:30 PM BUTROVICH 205
02/22/06	(S)	Heard & Held
02/22/06	(S)	MINUTE(RES)
02/23/06	(S)	RES AT 3:30 PM BUTROVICH 205
02/23/06	(S)	Heard & Held
02/23/06	(S)	MINUTE(RES)
02/24/06	(S)	RES AT 3:30 PM BUTROVICH 205
02/24/06	(S)	Heard & Held
02/24/06	(S)	MINUTE(RES)
02/25/06	(S)	RES AT 9:00 AM BUTROVICH 205
02/25/06	(S)	-- Reconvene from 02/24/06 --
02/25/06	(H)	RES AT 10:00 AM SENATE FINANCE 532
02/25/06	(S)	Heard & Held
02/25/06	(S)	MINUTE(RES)
02/27/06	(S)	RES AT 3:30 PM BUTROVICH 205
02/27/06	(S)	Heard & Held
02/27/06	(S)	MINUTE(RES)
02/28/06	(S)	RES AT 3:30 PM BUTROVICH 205
02/28/06	(S)	Heard & Held
02/28/06	(S)	MINUTE(RES)
03/01/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/01/06	(S)	Heard & Held
03/01/06	(S)	MINUTE(RES)
03/02/06	(S)	RES AT 1:30 PM BUTROVICH 205
03/02/06	(S)	Heard & Held
03/02/06	(S)	MINUTE(RES)
03/02/06	(S)	RES AT 3:30 PM BUTROVICH 205

03/02/06	(S)	Heard & Held
03/02/06	(S)	MINUTE(RES)
03/03/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/03/06	(S)	-- Meeting Canceled --
03/04/06	(S)	RES AT 10:00 AM SENATE FINANCE 532
03/04/06	(S)	Presentation by Legislative Consultants
03/06/06	(S)	RES AT 3:30 PM SENATE FINANCE 532
03/06/06	(S)	Heard & Held
03/06/06	(S)	MINUTE(RES)
03/07/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/07/06	(S)	Heard & Held
03/07/06	(S)	MINUTE(RES)
03/08/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/08/06	(S)	-- Meeting Canceled --
03/09/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/09/06	(S)	-- Meeting Canceled --
03/10/06	(S)	RES AT 3:30 PM BUTROVICH 205
03/10/06	(S)	-- Meeting Canceled --
03/11/06	(H)	RES AT 10:00 AM CAPITOL 106
03/11/06	(H)	-- Meeting Canceled --
03/13/06	(S)	RES AT 3:30 PM BUTROVICH 205

**WITNESS REGISTER**

BARRY PULLIAM, Senior Economist

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**POSITION STATEMENT:** Commented on SB 305.

DR. TONY FINIZZA

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**POSITION STATEMENT:** Commented on SB 305.

**ACTION NARRATIVE**

**CHAIR THOMAS WAGONER** called the Senate Resources Standing Committee meeting to order at [3:33:03 PM](#). Present were Senators, Elton, Dyson, Stedman, Ben Stevens and Chair Thomas Wagoner. Senator Gary Stevens, Senator Hollis French and Senator Wilken were also present. Senators Dyson and Seekins arrived shortly

after the meeting started. Chair Wagoner announced that Econ One would present its comments today.

**SB 305-OIL AND GAS PRODUCTION TAX**

[3:33:54 PM](#)

BARRY PULLIAM, Econ One Research, Inc., presented the company's credentials and its history of working as an energy consultant with the State of Alaska, other oil and gas producing states and government entities. He introduced Dr. Tony Finizza who teaches forecasting at the University of California Irvine and stays current with energy policy and conditions.

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SENATORS DYSON and SEEKINS arrived.

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TONY FINIZZA, PhD, said he helped the State of Alaska with forecasting oil prices and explained that when he worked for ARCO, Alaska was viewed as the crown jewel of the company and he was happy to work here again. At ARCO, he was charged with keeping management honest and he vowed to give them his honest opinion now of how they should think about oil prices. [Dr. Finizza's comments were accompanied by a slide presentation labeled: "Presentation on Alaska PPT to Senate Resources Committee, March 13, 2006, Analysis of PPT, by Barry Pulliam and Dr. Tony Finizza"]

He described a set of 50 or 100 questions that could be answered true or false, called an almanac quiz where the answers could also be found; the point being that there is no debate about the right answer. But, that's not the test; the real test was how sure you are that you have the correct answer. It shows that people, no matter how smart they are, often overstate their ability to know and they are very humbled by the test. He summarized that no one can know for sure where oil prices are going to go.

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He began by putting his conclusions up front. The producers are using \$40 as a planning base case for valuating projects and something like \$30 as a stress price case. They want to protect their downside and look for some upside; they have been burned in the past and have to be prudent.

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CHAIR WAGONER asked if the \$10 difference was a standard spread.

DR. FINIZZA replied that a \$15 spread is a more realistic number to use. He added that he uses some forecasts made by the Department of Energy that are slightly above his number, as well as the range it used in terms of uncertainty.

He advised the committee that what matters most is what people are planning on and the future oil price, he surmised, was the biggest risk of anything they faced in deciding the PPT. He advised that the low he has heard of \$20 and the high he has heard of \$100 were both possible, but not likely to be sustained if they got there. He said that \$20 is not a sustainable low even if it goes there because Asia has a strong oil demand and there is just not enough non-OPEC supply to fill it. This will give OPEC more market power and that will drive the prices up.

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If that were the case, the threats the state faces would be from alternative liquid supply - from tar sands, coal liquids, shale oil - which are all economic at prices well below \$100; although, he advised that people do need to see prices sustained for long periods of time before they will invest hard dollars into the developing those technologies. A number of people have coal liquids technologies on the drawing board that could be produced at around \$30 a barrel in an environmentally friendly manner. He also advised that people would face penetration from alternative transportation when prices are high. Finally, high prices impose a terrific tax on consumers that cannot be sustained.

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MR. FINIZZA guided them to the materials he would be using - "Annual Energy Outlook" by the Department of Energy (DOE) and the International Energy Agency's Outlook, a Paris-based group that was formed to worry about oil disruptions in the 1970s. He also used polls thinking that getting a number of wise people together is better than just thinking about an issue yourself.

The DOE comes out once a year with its long-term base-case view out to 2030 and this year Econ One participated in a Delphi survey of people they know to get a range of uncertainty to use in developing its alternative price cases. He, personally, developed the probability versions, that hadn't been published yet, that say that 60 percent of future prices will be between \$20 and \$80. He considered that an honest range for the committee to consider. On page 5, another graph of 18 analysts

indicated a median price of \$40. Another trend represented on page 6 also indicated that \$40 was a reasonable long-term view.

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DR. FINIZZA explained that producers want to be somewhat conservative because they have been burned by forecasts of high oil prices in the past and they will test their projects against a price path that is below their most likely view - and that is now around \$35 - \$40.

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Repeating that everyone has been humbled in the past, he showed the committee three types of errors that people make using Energy Information Administration (EIA) annual price forecasts with an overlay of actual prices. He pointed out some short term versus long-term forecasting scenarios. Every year the Society of Petroleum Evaluation Engineers takes a poll of experts including bankers, oilmen, and consultants asking them their 10-year view of oil prices. Those have been underestimated most of the last 10 years.

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He emphasized again that high prices have not ever been sustained for a long period and then he turned to looking at how an explorer would look at Alaska, comparing the status quo to the PPT by looking at a sample exploration project with conditions that exist here. He looked at project cash flows and derived some financial metrics that producers would use in the evaluation. The first of those was looking at the net present value of future cash flows, including the money companies would have to put into exploration to get the production. He figured a 10-percent discount rate would be a good candidate for acceptance. The other criteria he used was the internal rate of return (IRR), which is the discount rate in which the net present value equals zero. So it gives one the idea of the rate of return (ROR) with which to compare the hurdle rate. The IRR should be better than the cost of funds and should compare favorably with other projects a company has on the table. He used a threshold of 15 percent and said using less than that would be too risky. He preferred to not use undiscounted cash flow.

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Before getting into the economics of new fields, he mentioned one caveat. He is not an explorer and he gets his gambling kick by going to Las Vegas. He related the story of how ARCO was drilling its very last well before it pulled out in 1967 - when

it found the Prudhoe Bay Discovery Well. He said that is the very exciting part, but it's also the very highest risk.

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One of his conclusions is that without ANWR being opened, the field size distribution of new discoveries on the North Slope is tilted towards smaller fields, which will be tougher to make economic. Oil companies will look at \$30 barrel oil as a stress test. The 25/20-scenario actually helps an explorer more than a 20/20, because of the bigger deduction for the losses early-on.

It also appears from the analysis that incentives will be required to get more exploration than is going on now. He said that approaches other than the \$73 million allowance could work as well. At low prices, 25/20 or 20/20 would incent exploration and are both preferred over the status quo. Under either of the two, it looks like the expected commercial reserves available will be economic.

DR. FINIZZA cautioned that the state may be encouraging exploration when the market isn't. You could get exploration that doesn't pay and the state would hold part of the bill on that. He estimated a seven-year lag from beginning exploration investment to finding oil or finding a dry hole.

He contrasted two studies done by the US Geologic Survey updated in 2005. They showed a probability distribution of oil deposits in ANWR and on the Central North Slope. He took a mean estimate of their undiscovered technically recoverable oil reserve - this doesn't mean they are economic; it means the oil is in place. For the central North Slope, it was 4 BB and for ANWR, it was a little over 10 BB and could go further north. What is remarkable about the difference is that the distribution shows no fields available in excess of 1 BB, whereas it was expecting 22 percent of ANWR oil to be in field sizes of more than 1 BB. The last line of the distribution says that half the oil they expect to be recoverable in the central North Slope is in fields smaller than 64 MB. He explained:

The difference is what you can get to now is small field sizes; what you could get if ANWR opened eventually - with a lag, I'm sure, a litigious lag - you're going to get larger fields. But, I'm going to model just the central North Slope, because that's what you would be able to do tomorrow if the PPT were passed.

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He then proceeded to explain his model that supposed 21 fields would be found in the central North Slope - the average of a spread between 17 and 24. The forecasts also addressed which fields are economically recoverable and commercial at various prices. Looking at the central North Slope, the bar chart indicated volumes of oil at various prices. Another chart indicated the likely size distribution that would be found under alternative prices. Explorers would likely find 20 fields in the central North Slope, 12 of which (60 percent) would be 50 BB, five would be in the hundreds, two would be 150 BB and one - \$500 BB. The other alternative was a dry hole. You get positive cash flow only in the case where you hit oil and develop the field and his example estimated that to be about one in six holes.

Explorers don't drill just one hole; there is an 83 percent chance that it will be a failure. One way they would mitigate the risk of failure is to drill a portfolio of wells and maybe share them with other companies. If the chance of failure of one well is 83 percent, if you had a six well program, you would lower the failure rate to 33 percent. He modeled that one successful well-in-six scenario. There is only a 5 percent chance that it's a real big one, a 60 percent chance it will be a 50 BB, and a 10 percent chance it will be 150 BB. His model graphed the weighted average of all of those cash flows.

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If his \$20 million exploration program failed, under the status quo, it would result in a negative cash flow of \$20 million to the producer. Under a 20/20 scenario, it would be less than that because the state is giving the producer the ability to deduct the capital expenditure with a tax credit for exploration. A 25/20 gives explorers a bigger tax deduction and a better cash flow position. He explained:

You try with the hope of getting someone to explore so that they return when they get profitable and bring on production, you get to tax 25 percent of it. But in the first four years or whatever you assume is the exploration phase, they're going to be better off with a higher tax rate than a lower tax rate. And you are paying the difference.

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SENATOR FRENCH said people were having trouble with this example because the higher tax rate was so counterintuitive. He asked him to explain it another way.

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DR. FINIZZA explained again that the state is subsidizing a loss by allowing companies credits they can sell to someone else and the risk is, at low prices, the state would have to pay the explorers.

Under the six-well exploration program, if a 60 MB field were discovered, in Alaska, it would be high cost and low productivity. Putting those parameters into the model, he looked at the status quo ELF (economic limit factor) system and if oil were \$30 a barrel, the company would lose \$80 million. But, he reasoned if someone thought prices would be \$30, he would not be exploring in that environment. At \$30 oil, none of the scenarios seemed to work. At a \$30 price, under a 20/20 PPT system, finding a 50 MB field would create a negative cash flow of \$37 million and the state would get no revenue. Under a 25/20 scenario, the company would lose less, because it would shelter some of the loss through a higher tax rate, but the state would be out \$2 million because it would have to lower someone's taxes by \$2 million. This phenomenon is the state's risk for the higher tax rate in an exploration environment - that at the high rate, the program doesn't bear enough fruit. With the \$73 million allowance, the producer gets closer to deciding to take a gamble because the numbers get closer to not being negative.

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DR. FINIZZA referred to his six-well example and said under status quo [ELF] conditions it didn't look economic. With the PPT, the internal IRR started to grow and look decent. With an IRR of \$30, it was below the hurdle rate, but probably at about the cost of capital. So the venture was still marginal. He indicated areas where it would be helpful for an explorer to get an incentive of some sort to get over the hurdles. He displayed tables of state revenues using different programs to do that.

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He reviewed his conclusions: that field size distribution of smaller fields would weigh very important on the economics of this program; that at low prices the 25/20 actually helps the explorer (since the state is subsidizing more); that incentives would be required (the \$73 million program would be very helpful); that both the 20/20 and the 25/20 combinations are preferred over the status quo (and that would surely incent

exploration); and that under either of the tax credit schemes, oil should come to market (except at prices under \$30 a barrel).

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SENATOR THERRIAULT went back to Chart 42 and said without the \$73 million allowance, the IRRs looked close for both 20/20 and 25/20, but if you go to Chart 43 with the \$73 million allowance, the net cash flow at 25/20 is higher at the stress price and the rates of return are all higher.

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DR. FINIZZA responded, "I think a lot of this has to do with a particular pattern of oil production than anything else. It does seem that the \$73 million has a bigger impact at the lower prices."

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SENATOR ELTON asked if being far from a gathering line would change the economics also.

DR. FINIZZA replied yes, but he didn't pick a specific spot for his example, rather he used an average of costs for operating and capital expenditures for a typical Alaskan-size field. But he agreed that proximity to a facility would change economics dramatically. Oil price is the biggest variable in the calculations, but the size of the deposit is next important.

SENATOR ELTON asked if it wouldn't change the relationship in his tables between 20/20 and 25/20.

DR. FINIZZA replied that he didn't think it would.

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SENATOR BEN STEVENS asked if Slides 39 through 42 took into account all state revenues or just its severance tax.

DR. FINIZZA replied all revenues - royalties, PPT, income tax, severance - discounted at 10 percent.

SENATOR BEN STEVENS pointed out that the difference between these charts and Dr. Van Meurs charts is that the later only showed production tax.

CHAIR WAGONER announced that the committee would shift to hear Mr. Pulliam's comments.

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BARRY PULLIAM, Senior Economist, Econ One Research, Inc., recapped that Dr. Finizza talked about the exploration side and the potential for enhanced volumes. Mr. Pulliam said he was now going to talk about volumes from fields that were currently known and producing, under development or in consideration for development. While Dr. Finizza talked most about high oil volume scenarios and assumed that ANWR was open, he was now going to talk about the low oil volume scenarios, which looked at not finding any additional oil or gas.

His first chart [Effective Average Tax Rates at Various Price Levels 25/20 PPT plus sliding Scale with \$30 Threshold (FY 2007-2016) - Alaska Department of Revenue] showed the historic and projected effective tax rate (the tax rate based on the value of the oil at the wellhead). [His following charts calculated the same for \$35, \$40, \$45, and \$50 thresholds and another set of the same calculations were prepared for a 20/20 scenario.]

The average effective tax rate on the North Slope from the first flow of oil through the end of 2005 has been 12 percent; that includes the nominal rate, plus the ELF, and includes all fields. This rate has been falling and over the next few years DOR predicts the average tax rate will drop to 6.3 percent and go down to 4.9 percent by 2030 when the department assumed the pipeline would shut down if the state doesn't get a gasline.

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Putting those rates into perspective with North Slope prices, where the average wellhead value has been \$15 a barrel and accounting for inflation, turns that \$15 into \$24 in 2006 terms. That North Slope value of \$24 compares to a \$32 West Texas Intermediate (WTI) price and about a \$30 Alaska North Slope (ANS) West Coast price.

He pointed out that Prudhoe Bay has been on a steady decline and Kuparuk has a tax rate of virtually zero today. Alpine hasn't been in production long; the nominal rate has been 12.25 percent and that will move up to 15 percent this year; the ELF will start to go down; but then it, too, will start to fall quickly.

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MR. PULLIAM went on to the volume charts [Projected Effective Tax Rates with Sliding Scale Tax DOR Forecast Production (FY 2007-2030) by field - numbers taken from DOR 2005 forecast]. According to Dr. Williams, he said, DOR's current view is that over the next five years, production will be about 30,000

barrels per day less than it had previously forecast - half from Prudhoe Bay and half from West Sak.

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It's important to realize, he said, that the 30,000 barrels is not lost, it's still there, but it's just not getting produced as quickly. He inserted here that forecasting is hard to do going out to 2030 as illustrated by the previous 30,000 barrels a day less estimate. Things can change, but that shouldn't keep people from forecasting and giving best estimates. Information about the near term is much more solid than it is about the longer term and he tended to focus his charts on the first five years and what may happen over the next 24 years if the TAPS goes out of service in 2030.

He inserted here that the TAPS would still be producing around 100,000 barrels in 2030, but that volume would not be economic and if Prudhoe Bay shuts down, it might not be economic to operate anything up there. However, he noted that those estimates were done at \$20 a-barrel oil and if you use \$40, as some people are now, 2030 is probably too early to have that scenario happen. People are predicting about 5.6 BB over the next 24 years, 1.3 BB of it from new sources.

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This means that 80 percent of the oil in this timeframe will come from what they already know is there. Prudhoe Bay without satellites will be 36 percent of that 80 percent. Prudhoe Bay and Kuparuk without satellites would be half; adding the satellites for those two fields would bring the total to 65 percent. Adding Alpine brings it to 70 percent. The volume is concentrated in just a few fields and does not include Pt. Thomson. The DOR is not forecasting those volumes to come in unless the state gets a gasline. These numbers assume no gasline, neither do they include Oooguruk, because it was not under development when the forecast was made.

MR. PULLIAM said he prepared another chart for the fall 2005 numbers and added Oooguruk, which comes to about 70 MB. The goal of Econ One's discussions with the DOR, Roger Marks, and Dr. Van Meurs was to be able to tell the legislature whether those analyses were reasonable. His view is that yes, in general, their work is reasonable. Econ One has taken their work and changed some assumptions to make it even more reasonable.

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He remarked that any two analysts presented with the same set of data may well come with two different reasonable assumptions. It's good to get discussion between parties as to why they are different. Ultimately, the adjustments he and Dr. Finizza applied have two effects. One is that they forecast lower increases in taxes under the PPT over the next 10 years and higher increases in taxes under the PPT over the period after that and on net, Econ One is forecasting slightly higher increases in taxes under the PPT than the DOR's. The differences in the two estimates don't change the basic picture, however.

He showed the anticipated increase in severance taxes under the 20/20 PPT versus the status quo - including the \$73 million exemption and the six-year transition period credit, which amounted to about \$1 billion. The transition credit is why the line dips in the first few years and then rises up [Slides 51 - 60]. Slide 53 indicated that over the next 10 years the PPT would be expected to bring in \$15.17 billion if oil prices are equal to the federal government's forecast of \$54.70 WTI. Other slides showed variations on that theme. He said the charts used 2006 dollars and that inflation would be about 2.5 percent per year on average. The 20/20 PPT would bring in \$7.47 billion more for the known fields than the status quo with an average annual difference of \$747 million.

He noted that the two bottom rows on the charts were important to understand. He said that understanding the effective tax rate was key and the PPT effective tax rate would be 12.4 percent and the status quo tax rate is 6.3 percent. He explained that under the current system, the tax is based on a valuation at the wellhead. The nominal tax rate of 15 percent gets adjusted by the ELF and over the next 10 years he thought that would result in 6.3 percent. You multiply that 6.3 percent by the wellhead value.

He explained that when he talks about the PPT effective tax rate, for comparison, he calculated what percentage of the wellhead value the state could anticipate collecting under the PPT. The PPT starts with a nominal rate of 20 percent based on the price downstream (ANS). When the oil is sold, it is shipped out and brought back on tankers. Those operating and capital costs get deducted operating and capital costs. After making those adjustments one is left, at these prices, with about 12.4 percent relative to the value at the wellhead.

He urged the committee to keep in mind that 12 percent has been the average historical tax rate on the North Slope with prices that have averaged in 2006 terms about \$32 WTI a barrel.

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SENATOR FRENCH asked how he estimated industry operating expenses, capital expense and other expenditures.

MR. PULLIAM answered through looking at confidential DOR information from producers, which he couldn't disclose, and from information purchased from companies that do that type of analyses. He is not free to disclose that information because of copyright. His company also has information about the kinds of costs people typically look at for operating and developing fields. For this exercise he started with the estimates the DOR made and, in some cases, after looking at all the available information, Econ One decided they were reasonable and in other cases, upped them a little bit. He would show them a little later what would happen if they were wrong about those costs.

[4:55:18 PM](#)

SENATOR STEDMAN asked him to go back over the \$54.7 estimate.

MR. PULLIAM responded that is what the EIA (Energy Information Administration) was forecasting long-term WTI prices to be in 2006 dollars.

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SENATOR THERRIAULT asked if he could explain the effective tax rate to a constituent using an analogy of his being in the 30 percent tax bracket and taking his mortgage deduction, itemizations, and childcare deductions.

MR. PULLIAM replied that he could use that analogy. The nominal tax is 20 percent of a dollar-per-barrel figure. He explained:

That dollar-per-barrel figure is not a wellhead value. It's a wellhead value minus costs of production. So, what I'm doing is saying, Well...you're getting those costs of production, but in order to think about it - our current system on wellhead value - so in order to think what percent of wellhead value are we going to get, after we've allowed you to deduct all of those costs - what I do is calculate. It's a very simple calculation. You look at the wellhead value of the oil, you look at the total taxes you'll collect and

you divide it by the wellhead value of the oil. It's really very simple.

MR. PULLIAM added that under any of the proposals, that's not the kind of rate the state would get on a wellhead value.

[4:59:06 PM](#)

SENATOR STEDMAN referenced Slides 9 and 10 and asked how sensitive the data is to price ranges.

MR. PULLIAM replied that it is very sensitive and he would show the committee what the tax rate would be at different levels including when it would break even with the status quo system. He showed a graph of what additional revenues would have been collected under the PPT if it had been applied in the first half of 2006. He said the severance taxes are deductible against state income taxes. So, the total impact to the state would be about 4 percent lower than what he is showing them here.

[5:03:11 PM](#)

Slide 54 [Change in Projected Taxes Under a 20/20 Tax DOR Forecast Production (FY 2007-2030)] was requested by Senator Wagoner and looks at the effects of the transition credit in the first six years. It shows the amount of additional tax the state would collect would be about \$1 billion if the 20/20 scenario had no transition credit. Another area of the chart shows an alternative credit scheme that would allow for a 75-percent deduction of 2005 expenditures, a 50-percent of 2004 and a 24-percent of 2003. That turns out to be about 30 percent of the \$1 billion.

[5:04:19 PM](#)

SENATOR SEEKINS asked if the alternative is carried forward six years.

MR. PULLIAM replied that it would be carried forward for the full six-year period. Even low forecasts have the prices of oil above the threshold amount that is there for taking the transition credit (\$40 a barrel ANS West Coast). "So, if we had this scenario where we have \$54.70 WTI, you would be able to take that credit every month over the next six years until it's extinguished."

[5:05:14 PM](#)

SENATOR BEN STEVENS asked if Slide 54 was just a visual.

MR. PULLIAM replied yes. He explained that the proposed credit amounts to about \$1 billion and their alternative transition credit would lower that to \$300 million. So, taxes would increase by \$700 million. He said it would not be prudent to look at the increase under the proposed tax at just \$54 WTI. The impacts of a number of different prices, in particular, lower prices needs to be looked at. The table on Slide 55 shows summary results for what would happen at lower prices and a break-even analysis. He spent a few minutes explaining the slide.

[5:09:47 PM](#)

SENATOR ELTON said they had heard from others that the break even point was in the \$25 to \$27 range. He asked what his numbers were a reflection of.

MR. PULLIAM replied the difference is the timeframe they focus on. Others have talked about through 2030 and he included an analysis for that, which is \$28.80 WTI (ANS is about \$26.50), and he didn't disagree with those numbers. He thought there were enough variables to account for the differences. At \$40, the effective tax rate under the proposal is 10.2 percent and historical rates in earlier charts indicated the effective tax rate was about 12 percent corresponding to today's real WTI price of \$32.

He said he also looked at a sensitivity analysis of costs being 20 percent higher than anticipated. Briefly, he found if costs go up; because they are allowed to be deducted, taxes would go down.

[5:13:27 PM](#)

SENATOR FRENCH said that presumes the 20 percent increase in costs doesn't necessarily come with a 20 percent increase in production.

MR. PULLIAM agreed. He was looking at a down side, but suspected that at higher prices, people would spend more money to find and produce a barrel of oil. The companies would be making more deductions, but the state would be making more revenues and everyone would benefit.

[5:14:36 PM](#)

SENATOR THERRIAULT supposed if the costs of exploration and producing in the administration's model were based on historical data, but if the state has stepped up to a new price paradigm,

companies could afford to look for more expensive oil. He asked if that was what he was trying to capture with the 20 percent.

MR. PULLIAM replied no, he was just looking at development and operating costs for existing oil, not exploration costs. He said that Mr. Marks used a base case of production from existing fields and assumed \$100 million per year for exploration costs as well. He explained that if you're out there exploring and not finding oil, regardless of the incentives, you won't continue to spend that money. You will spend it for a while and then it will taper off pretty quickly. This is one of the assumptions where their analyses did not agree.

[5:18:17 PM](#)

He switched to discussing the other PPT of 25/20 that Dr. Van Meurs recommended using a similar series of charts that he just reviewed and then he said he would compare the two. The effective tax rate at \$54 WTI would be about 16 percent. If the figures were projected back to January 2006, the state would have received about \$782 million in additional revenues. The transition credit would amount to about \$1.25 billion, because of the higher tax rate. Just using the alternative transition credit, that would fall to \$375 million.

[5:19:53 PM](#)

SENATOR THERRIAULT asked if 35 to 40 percent of the additional \$782 million that accrues to the state comes from the feds on Chart 58.

MR. PULLIAM replied yes. He cautioned them to think about fairness and that for every dollar the state collects, the federal government collects 35 cents less. It doesn't all come out of the producers side.

[5:20:42 PM](#)

SENATOR THERRIAULT said the converse is if the state wants to incent things with the dollar, it has to start out by pushing \$1.40 across the table, because the federal government reaches in for its share.

MR. PULLIAM replied that was correct. He clarified:

I'd have to do the math and see if the \$1.40 is right, but to put a net dollar in the pocket of the producers through incentives, you have to provide more than that because the feds are going to take their 35 percent.

SENATOR THERRIAULT said the state has to ultimately keep the federal tax consequence in mind, because it has to dip in deeper to push the incentive dollar across the table.

MR. PULLIAM wrapped up his comments on Slide 59 saying the full transition credit at the 25/20 scenario would be about 10 percent of additional tax collected over the next 10 years. With the alternative, it drops to 3 percent (additional). Under the 20/20 scenario, it would be 13 percent and 4 percent.

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He reminded that committee that he was looking at the potential impacts at different price levels and the break-even point. Slide 60 showed that at \$40, the 25/20 scenario would result in an effective tax rate of about 13.6 percent. He also reminded them that this historical rate under ELF at WTI \$32 was about 12 percent. The breakeven price over the next 10 years drops to the year 2710, about \$1.50 a barrel lower than under the 20/20 scenario. He cautioned again, that at very low prices, the 25/20 would end up costing the state money, relative to a 20/20 situation, because it would be subsidizing operations.

SENATOR STEDMAN asked if exploration would slow down substantially at lower prices.

MR. PULLIAM replied yes, but they were talking about known fields and these projections were built around a fairly low oil price projection.

SENATOR STEDMAN pursued asking at \$25 barrel oil, a lot fewer credits would be created.

MR. PULLIAM replied yes, fewer credits would be generated through exploration activity and development of marginal properties. The projections are based on a fairly low oil price.

[5:26:18 PM](#)

CHAIR WAGONER asked what affects the willingness of a producer to spend money on production - the tax rate or the price of oil.

MR. PULLIAM replied that it's both. The expected return would be a function of the prices. If the system taxes the additional amount away, the producers have no incentive to produce, however.

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He referenced the bottom three lines of Chart 61 which indicated the difference between a 25/20 and a 20/20 is about \$450 million a year - with a 16 percent effective tax rate at 25/20 and 12.4 percent at 20/20.

Looking at the first half of 2006 on Slide 62, a 25/20 versus 20/20, at \$62 WTI (prices they think will prevail), would be a \$305 million difference.

[5:29:43 PM](#)

Slide 63 looks at changes at different price levels. A 25/20 at \$40 would bring in \$290 million more than a 20/20. The effective tax rate would be 13.6 percent as opposed to a 10.2 percent at 20/20.

Slide 64 plots government take at different price levels and different regimes. It shows that total government take is regressive under the status quo and as the price of oil falls, the government gets a bigger percentage. Under the PPT, either the 20/20 or the 25/20, the somewhat progressive nature of the PPT itself offsets the regressiveness in the overall government take creating a fairly flat line across prices.

[5:33:30 PM](#)

SENATOR STEDMAN wondered about the interesting difference in magnitude between the state take on progressive or regressive versus the total government take for the years 2007 to 2016.

MR. PULLIAM responded that the Alaska take used to be more dramatic. The total government take would be less, because in part what the state collects, the federal government does not.

Slide 65 looks at the change the state would get in annual taxes as a result of a dollar per barrel increase in the price of oil and what kind of change it would get as a result of a change in tax rate by 1 percentage point. He didn't include the transition credit.

What you find...for every percentage increase in the tax rate, at \$40, it's an annual change of \$58 million per year in taxes. Instead of, at \$45, it's an annual change of \$71 million a year. It's linear....

If you look at the bolded line at the bottom of that box that says 'Change per dollar increase in WTI price,' it doesn't have to be WTI...what that shows you is for any given tax rate what the additional

revenue collected under the PPT is for a dollar per barrel change in oil prices. So, at a 20 percent tax rate - given a dollar a barrel oil change, given forecasted volumes - results in \$52.1 million a year in addition over the status quo. At a 25/20 level, it would be \$65.2 million.

[5:38:21 PM](#)

SENATOR BEN STEVENS asked if this was a change in the production tax only, not the royalty tax.

MR. PULLIAM replied yes. There wouldn't be a change in the royalties, but the state income tax would drop by about 4 percent. Changing the credit rate 1 percent - from 20 percent to 21 percent - with the same spending level would reduce revenues by \$13.6 million a year.

[5:40:25 PM](#)

MR. PULLIAM went back to Slide 66 and said the reason we are here is because the severance tax rate is falling as a result of the ELF and that fall will accelerate in the future. He went through a series of charts to show how the proposals would change that. The first chart looks at the effective tax rate as a function of price. The 6.3 percent over the next 10 years is not a function of price under the current system. Under the 20/20 proposal, because it allows costs to be deducted, the effective tax rate changes with the price of oil and goes up with the price. At 25/20 it goes up, but gets progressively flatter. He explained that the jog down graphs the transition credit, which kicks in at \$40 ANS West Coast. The 25/20 proposal cuts across the status quo rate at about \$27.50 and crosses the historical average at a little more than \$35 a barrel WTI. The transition credit jog is bigger, because a higher tax rate would mean a higher tax credit.

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SENATOR STEDMAN said that Slide 70 shows clearly that the 20/20 is progressive and 25/20 is a little more progressive, but back on Slide 64, at a price of \$35.40 to \$72, the 20/20 PPT looks like the entire take is a little regressive from \$57.6 to \$57.1. So, he concluded that the 20/20 line wasn't progressive enough to make the entire system progressive.

[5:46:09 PM](#)

Mr. PULLIAM replied that his reasoning was correct and part of the reason was that the \$35.40 and the \$72 are EIA long-term

projections, but the numbers are much closer than that over the next 10 years.

[5:46:42 PM](#)

SENATOR BEN STEVENS asked if the historical effective tax rate he talks about incorporate the ELF.

MR. PULLIAM replied yes.

[5:48:18 PM](#)

He went on to say that he modeled a potential variant with a sliding scale feature that would be progressive to show them how it would work (Slide 71). Others could be used. One of the assumptions he started with was that the sliding scale tax would be .25 percent per dollar and his example used \$45. If the price of WTI went to \$55, the sliding scale severance tax would be a total of 2.5 percent. The \$55 WTI translates into \$47 ANS today and he assumed that this would be added on top of the 20/20 PPT base case. He explained:

The key features of this particular mechanism is that it would be in addition to the PPT; it would also be deductible from the PPT, just as other upstream payments are. Royalty payments are deductible; property tax payments are deductible; this would also be deductible. If WTI is less than or equal to the threshold price, there's no additional tax. If WTI is greater than the threshold price, the additional tax is .25 percent per dollar over the threshold times the gross wellhead value....

If, for instance, the WTI were \$55 and the threshold were \$45, we'd take that \$10 amount, multiply it by .25 percent, which would give us 2.5 percent. We then multiply that by the wellhead value - \$47 - and then finally, since it's deductible against the PPT, which is 20 percent, we multiply that whole thing by 80 percent. That results in 94 cents a barrel in additional tax. The key feature of this is that it would result in a higher effective tax rate at higher prices - anything over \$45.

He illustrated how that would work using the same graph.

[5:52:31 PM](#)

SENATOR STEDMAN said they had heard from many people about how the ELF is broken or is in need of modernization and asked if

legislators should be using something that is broken as a benchmark. He wanted to know if it needs repair or not.

MR. PULLIAM replied that is one of the reasons he has inserted the historical average. At least for 19 years of history, the ELF hasn't been as big problem as it has become. "And so, certainly looking forward, if you're looking at the projected rate, that is [ELF] is clearly broken, broken, broken."

Other countries don't have the same kind of system as the United States - like royalties, severance and income taxes. They have other systems that accomplish the same thing and some of those have progressive features in them.

All producing states have some sort of severance tax. Twelve percent is in line with Louisiana. Some of the Rocky Mountain states are in the 15 percent range; Texas is 4.6 percent. None of them allow deductions and have credits in a way that is being proposed here. This system will put Alaska much more in line with foreign systems as opposed to any other state government in the U.S. "So, when you're thinking about benchmarking in terms of the severance tax rate, itself, I think that's why people get drawn into looking at other foreign systems."

[5:56:59 PM](#)

MR. PULLIAM looked at another alternative. If they decided a .25 percent slope wasn't enough, they could make it higher - say, .35 percent. The effect of that would increase the tax rate; for every \$10 over the threshold \$45 price, you would have a .35 percent tax rate. "So, if WTI were \$55, the sliding scale tax would be 3.5 percent. If WTI jumped to \$65, the sliding scale would jump to 7 percent, et cetera." He said they could also decide to start the threshold at a lower price. The legislature could basically work with the two variables to create the slope it wanted.

[6:03:34 PM](#)

SENATOR STEDMAN observed that going from a regressive system to a flat system, as this one does, and then making it more progressive - at some point the line gets so steep there's virtually no upside for the fellow on the other side of the table.

[6:04:41 PM](#)

MR. PULLIAM responded that analysis was correct, but there are ways to deal with that. He suggested maybe capping it at a certain price level or flattening it out by changing the

increment with price changes. At higher prices, after costs have been recovered, there is more profit to divvy up. You want to leave a healthy amount for people taking the risk. However, he emphasized that the state is taking a big part of the risk by covering the costs of production and giving credits for any capital expenditure.

[6:05:58 PM](#)

SENATOR STEDMAN asked what he thought was fair at the high end of oil prices.

MR. PULLIAM responded by referencing Chart 77 on government take. It indicated that at \$80 a barrel, the state would get 64.5 percent. That would have to be compared to other countries' take at those prices levels.

[6:08:29 PM](#)

SENATOR STEDMAN asked what Alaska had to do to maintain a competitive advantage against other countries at 20/20.

MR. PULLIAM replied that everything he has shown would keep Alaska in the competitive range.

DR. FINIZZA agreed and said it would behoove the state to be better than average so it could attract capital.

CHAIR WAGONER thanked everyone for their comments and adjourned the meeting at [6:11:16 PM](#).