

**ALASKA STATE LEGISLATURE
SENATE JUDICIARY STANDING COMMITTEE**

October 31, 2007
9:09 a.m.

MEMBERS PRESENT

Senator Hollis French, Chair
Senator Charlie Huggins, Vice Chair
Senator Bill Wielechowski
Senator Lesil McGuire
Senator Gene Therriault

MEMBERS ABSENT

All members present

OTHER LEGISLATORS PRESENT

Senator Gary Stevens
Senator Johnny Ellis
Senator Lyman Hoffman
Representative Andrea Doll
Representative Les Gara

COMMITTEE CALENDAR

SENATE BILL NO. 2001

"An Act relating to the production tax on oil and gas and to conservation surcharges on oil; relating to the issuance of advisory bulletins and the disclosure of certain information relating to the production tax and the sharing between agencies of certain information relating to the production tax and to oil and gas or gas only leases; amending the State Personnel Act to place in the exempt service certain state oil and gas auditors and their immediate supervisors; establishing an oil and gas tax credit fund and authorizing payment from that fund; providing for retroactive application of certain statutory and regulatory provisions relating to the production tax on oil and gas and conservation surcharges on oil; making conforming amendments; and providing for an effective date."

HEARD AND HELD

PREVIOUS COMMITTEE ACTION

BILL: SB2001

SHORT TITLE: OIL & GAS TAX AMENDMENTS

SPONSOR(s): RULES BY REQUEST OF THE GOVERNOR

10/18/07 (S) READ THE FIRST TIME - REFERRALS
10/18/07 (S) RES, JUD, FIN
10/19/07 (S) RES AT 9:00 AM BUTROVICH 205
10/19/07 (S) Heard & Held
10/19/07 (S) MINUTE(RES)
10/20/07 (S) RES AT 8:00 AM BUTROVICH 205
10/20/07 (S) Heard & Held
10/20/07 (S) MINUTE(RES)
10/21/07 (S) RES AT 1:00 PM HOUSE FINANCE 519
10/21/07 (S) Heard & Held
10/21/07 (S) MINUTE(RES)
10/22/07 (S) RES AT 11:30 AM BUTROVICH 205
10/22/07 (S) Heard & Held
10/22/07 (S) MINUTE(RES)
10/23/07 (S) RES AT 9:00 AM BUTROVICH 205
10/23/07 (S) Heard & Held
10/23/07 (S) MINUTE(RES)
10/24/07 (S) RES AT 10:00 AM BUTROVICH 205
10/24/07 (S) Heard & Held
10/24/07 (S) MINUTE(RES)
10/25/07 (S) RES AT 10:00 AM BUTROVICH 205
10/25/07 (S) Heard & Held
10/25/07 (S) MINUTE(RES)
10/26/07 (S) RES AT 1:30 PM BUTROVICH 205
10/26/07 (S) Heard & Held
10/26/07 (S) MINUTE(RES)
10/27/07 (S) RES AT 9:00 AM BUTROVICH 205
10/27/07 (S) Moved CSSB2001(RES) Out of Committee
10/27/07 (S) MINUTE(RES)
10/28/07 (S) RES AT 0:00 AM BUTROVICH 205
10/28/07 (S) -- MEETING CANCELED --
10/29/07 (S) RES RPT CS 1NR 6AM NEW TITLE
10/29/07 (S) NR: GREEN
10/29/07 (S) AM: HUGGINS, MCGUIRE, STEVENS, STEDMAN,
WIELECHOWSKI, WAGONER
10/29/07 (S) JUD AT 9:30 AM BUTROVICH 205
10/29/07 (S) Heard & Held
10/29/07 (S) MINUTE(JUD)
10/30/07 (S) JUD AT 9:00 AM BUTROVICH 205
10/30/07 (S) Heard & Held
10/30/07 (S) MINUTE(JUD)
10/31/07 (S) JUD AT 9:00 AM BUTROVICH 205

WITNESS REGISTER

PATRICK GALVIN, Commissioner

Department of Revenue
PO Box 110400
Juneau, AK 99811-0400

POSITION STATEMENT: Gave a presentation on gross-based and net-based production tax systems during hearing on SB 2001.

RICH RUGGIERO
Gaffney, Cline & Associates Inc.

POSITION STATEMENT: Gave presentation on SB 2001 and answered questions.

BOB GEORGE
Gaffney, Cline & Associates Inc.

POSITION STATEMENT: Gave presentation on SB 2001 and answered questions.

STEVE PORTER, Consultant
to the Legislative Budget & Audit Committee

POSITION STATEMENT: Answered questions during hearing on SB 2001.

DAN DICKINSON, Consultant
to the Legislative Budget & Audit Committee

POSITION STATEMENT: Answered questions during hearing on SB 2001.

ACTION NARRATIVE

CHAIR HOLLIS FRENCH called the Senate Judiciary Standing Committee meeting to order at [9:09:07 AM](#). Present at the call to order were Senators Charlie Huggins, Lesil McGuire, Bill Wielechowski, Gene Therriault, and Chair French. Also in attendance were Senators Gary Stevens, Johnny Ellis, and Lyman Hoffman, and Representatives Andrea Doll and Les Gara.

SB 2001-OIL & GAS TAX AMENDMENTS

[9:09:19 AM](#)

CHAIR FRENCH announced the consideration of SB 2001. Today the administration would present the evidence that convinced Governor Palin to use a net-based system in the proposal called Alaska's Clear and Equitable Share (ACES). Chair French acknowledged his skepticism to date about using a net approach.

CHAIR FRENCH welcomed Senator Stevens.

[9:10:03 AM](#)

PATRICK GALVIN, Commissioner, Department of Revenue (DOR), gave a PowerPoint slide presentation comparing gross-based and net-based production tax systems; a hardcopy version was provided. Showing slide 3, the pros and cons, he emphasized that gross versus net is a spectrum. Many variations had been considered.

COMMISSIONER GALVIN told members a gross tax has transparency as its primary advantage. This is the ease of calculating and understanding the tax paid to the state, whether a straight percentage or some variation. Avoiding the consideration of costs minimizes or eliminates the sense of an auditing or litigation burden, as well as the risk that the state won't receive what has been expected. Projections under a gross system are linked to two variables: price and production. When cost is added in, however, there is an additional possibility of erroneous forecasts.

[9:14:20 AM](#)

CHAIR FRENCH requested confirmation that Alaska's royalty for oil is the most purely gross-based tax, being 12 percent of the Alaska North Slope (ANS) oil produced.

COMMISSIONER GALVIN replied it is the grossest Alaska has, but it isn't a purely gross-based calculation because transportation costs are deducted. What costs are appropriate to include are arrived at through extensive negotiation and litigation.

CHAIR FRENCH suggested this carries a warning, since even with the simplest tax system there can be enormously complex and long-running arguments and litigation over a single variable, the transportation costs.

COMMISSIONER GALVIN agreed, noting there would be further discussion of the auditing responsibility and how it compares with what is anticipated under a net-based tax.

SENATOR THERRIAULT requested a chart showing what portion is allocated to each component, including royalty and property tax, which are more gross-based. Mentioning his e-mails from people, he surmised most Alaskans don't understand the oil and gas tax system and its royalty, property tax, and corporate income tax components; rather, they believe the entire system for governmental take is being debated here.

[9:17:33 AM](#)

COMMISSIONER GALVIN agreed to provide an existing chart after his staff brought over an electronic version. He emphasized the importance of limiting the discussion to the production tax when discussing net versus gross. Other revenue sources coming from the oil industry are calculated using different methods.

COMMISSIONER GALVIN returned to slide 3. He said for a gross tax, positive aspects center on certainty and transparency. Negative aspects relate to flexibility and whether it will match the intended economic impact. He highlighted the variety of ANS fields dealt with nowadays, as well as what is anticipated. Right now, 70 percent of oil revenue comes from the two major ANS fields, which have an economic framework related to upfront costs paid years ago. Despite low operating expenses now, new money must be invested to keep their production levels up. In addition, longstanding smaller fields surround those and have different economic drivers, cost structures, and challenges in maximizing future production. And prospects being evaluated and explored for new investment and development have different economic drivers and hurdles as well.

COMMISSIONER GALVIN explained that when setting a tax policy across such a wide range, one must understand its impact on different fields and investment decisions. A gross tax requires setting certain assumptions about expected margins, price versus cost. The tax is "one size fits all" but anticipates impacts based upon the assumptions. It won't allow identifying the economics of a particular field and applying a tailor-made tax, because there is too much change and there are too many new fields; the tax would have to be revisited every year or two, which isn't good for the state or the industry. With a one-size-fits-all tax, erring on one side may stifle investment, but erring on the other side may bring in less revenue than otherwise fairly expected, given the economic opportunity for the company. It must be decided where to draw the line.

[9:22:40 AM](#)

COMMISSIONER GALVIN turned to the net-based tax, noting it has the flip side of the aforementioned pros and cons. There is flexibility with respect to economics, and it is easier to set a number that brings in revenue and yet doesn't negatively impact the investment climate. However, it has more moving parts and a greater burden on the state to audit and challenge the claims of the companies, along with the uncertainty this provides.

COMMISSIONER GALVIN highlighted the balance between these two. He explained that the biggest challenge in the evaluation

process was to weigh not-easy-to-quantify aspects against clearly demonstrated economic impacts. Showing slide 4, "Balancing Act," he noted the remaining slides demonstrate this variety of balancing.

COMMISSIONER GALVIN said the first balancing is between revenue and investment climate. The second is between transparency and flexibility; for the North Slope in particular, this is weighing the impact on incumbents who have existing fields and economics, as well as on potential new entrants who must undertake more risky ventures in more economically challenged fields. Furthermore, if a single line is drawn across the fields, it must be ensured that the expected state revenue comes in from legacy fields, the highly profitable "bread and butter" fields, while ensuring that the rate doesn't swamp the economics of the marginal fields.

CHAIR FRENCH asked which fields are defined as legacy fields.

COMMISSIONER GALVIN answered that he puts "legacy" in quotation marks because the line can be drawn in different ways. For the purpose of the gross-tax floor, DOR's definition relates to economic standing, now and historically. This is Prudhoe Bay and Kuparuk, with 20 to 30 years of clear, longstanding ability to produce oil and thus money. The sense of mature incumbent fields can be expanded, though, to include fields like Milne Point, Duck Island, and various smaller ones such as Northstar and Alpine. In response to Chair French, he said Duck Island and Endicott are different names for the same thing.

COMMISSIONER GALVIN pointed out that although Alpine is probably one of the most profitable fields on the North Slope, it is predicted to decline fairly rapidly, after recently reaching its peak production in its seventh year. Considering it a legacy field in the same context as Prudhoe Bay and Kuparuk - fields with 20 to 30 years of production far above Alpine's - isn't comparing apples to apples.

CHAIR FRENCH asked whether it is fair to say there is no standard definition of legacy field.

COMMISSIONER GALVIN affirmed that.

CHAIR FRENCH asked what guides DOR in making the call.

COMMISSIONER GALVIN answered that DOR must decide the purpose in making the distinction. If the purpose is to indicate the field

has paid off all of its initial investment, for instance, the primary consideration likely will be the length of time and the relationship between production and associated costs; in that context, a number of fields have seen 10 to 15 years of production in the legacy field category.

COMMISSIONER GALVIN noted that if looked at in terms of having a large margin and a tremendous amount of production, however, that narrows it significantly - as done under ACES - to just those two larger fields. Those are wholly distinct from other fields in terms of volume as well as current level of production. If DOR looks strictly at profitability, a different view is taken, and some older fields that have paid off but aren't making much money now would be eliminated.

[9:29:56 AM](#)

COMMISSIONER GALVIN, in response to Chair French, said for Cook Inlet there is a sense of longevity but not margin. With respect to production profiles and costs, soon a point will be reached where expectations of profit and costs will cross over and companies will need to decide at what point to shut these down. Some fields have shut down in the last few years. It isn't just the level of production, length of time, or historic volumes. Rather, current margins need to be looked at in conjunction with these other factors to determine which fields can withstand categorizations, for example, with respect to having higher taxes on certain types of fields.

CHAIR FRENCH welcomed Representative Doll, noting she'd been present for some time.

[9:31:15 AM](#)

COMMISSIONER GALVIN turned to slide 5, which lists three factors when evaluating gross versus net: "Audit Risk," Revenue to the State, and Investment Climate. He explained that he'd used quotation marks for audit risk because it encompasses a wide range of perceived risk associated with a net tax. This includes the perception that taxpayers will be motivated to either 1) incur costs they'd not otherwise incur, simply because of the tax deduction; 2) shift costs that they'd otherwise incur but that aren't directly attributable to Alaskan production, categorizing it as Alaskan production to get a tax write-off; or 3) blatantly misrepresent their costs.

COMMISSIONER GALVIN said audit risk also entails the perceived cost associated with having to audit, administer, litigate, and ultimately defend what the state believes is the appropriate

payment under a tax system that could result in differences of opinion as to whether a deduction is allowed. Also within audit risk is the sense of public confidence when there is a direct line between price and production and the tax bill. If inputs eventually result in something less than what is perceived as the normal calculation, by contrast, the public is left wondering how it happened.

COMMISSIONER GALVIN addressed the second factor, revenue to the state. He highlighted ensuring the revenue matches the state's expectation and also is a reliable source, not subject to factors outside its control or expectations. The third factor, investment climate, relates to how the tax affects companies' economic decisions as well as the state's recognized goal of attracting new investment, both within existing fields and in new fields that there is a desire to see developed.

9:34:00 AM

COMMISSIONER GALVIN turned to slide 6, "Audit Risk," a bar graph showing relative risk, moving through the spectrum of pure gross, gross and exploration credits, gross and capital credits, PPT - net and capital credits, and pure net. He said there is additional audit risk as one includes items like exploration credits for new projects. There must be cost accounting, relying on companies' reporting and checking to ensure accuracy. But exploration credits are for new projects that lack operating expenditures and so forth; DOR must isolate components and approve expenditures if they're associated with the particular project.

COMMISSIONER GALVIN said a gross-based tax with capital credits provides additional complexity and perceived audit risk; capital credits are commingled with operating expenditures and other costs, and the audit must ensure these are kept apart and properly characterized. When operating expenditures are added as a deduction, there is even further risk and complexity.

COMMISSIONER GALVIN pointed out for PPT - the current system called the petroleum production tax or petroleum profits tax - there is extra value for capital expenditures. Thus the distinction of whether something is an operating or capital expense has value. The complexity is higher than either the previous category or a pure net system under which all costs are deductible and treated the same. The purpose of the slide is to show that once one accepts the economic need to include capital credit deductions, one also accepts a tremendous amount of

perceived audit risk. They are fairly equivalent. He emphasized the importance of this in the rest of the balancing.

9:37:41 AM

CHAIR FRENCH gave his understanding that the basic structure of PPT, enacted a year ago, is kept intact by ACES.

COMMISSIONER GALVIN affirmed that.

CHAIR FRENCH observed that of the tax systems presented, this is the most complex to audit.

COMMISSIONER GALVIN concurred.

CHAIR FRENCH asked about DOR's auditors, including their strengths, weaknesses, and numbers.

COMMISSIONER GALVIN indicated the auditors are a subject of this current legislation. He said DOR has a group of auditors who are highly qualified and whose primary experience has been with past state audits.

CHAIR FRENCH surmised that was under the old economic limit factor (ELF) system.

COMMISSIONER GALVIN affirmed that, noting the ELF system was based upon the deduction for transportation costs. Thus there is experience with transportation-cost elements, not just the pipeline tariffs, but also primarily the shipping costs, determining the proper costs to deduct with respect to self-owned tankers as they're repurchased, refurbished, rented, and so forth. That is primarily the auditing experience of the oil and gas auditors. Within the last year, there have been new hires following a nationwide recruitment effort. Targeted were highly experienced oil and gas auditors, the "lieutenants" within their companies' accounting departments who knew how the systems worked, understood reasons and motivations, and had more than day-to-day experience with what came across their desks.

9:40:51 AM

CHAIR FRENCH asked how many auditors were sought.

COMMISSIONER GALVIN estimated eight to ten new auditors within a range of experience, from an Auditor III through and Auditor IV and bringing in some lower-end Auditor Techs. There are perhaps eight to ten existing auditors.

CHAIR FRENCH noted this doubles the number of auditors.

COMMISSIONER GALVIN affirmed that.

CHAIR FRENCH asked how many applications were received.

COMMISSIONER GALVIN said he didn't have that with him, but could provide a report on the recruitment experience. In summary, though, the department didn't get applications from the upper-echelon auditors it sought who could create the system under the new tax, train others, and provide leadership to efficiently direct the audits. Within the auditing world, as elsewhere, there is the opportunity to get sidetracked and not get the biggest bang for the buck. Thus he is looking for folks with the experience and judgment to direct those efforts and achieve efficiency. The state won't be able to match the companies auditor for auditor or dollar for dollar. So it must maximize the return on its auditing investment.

[9:42:25 AM](#)

CHAIR FRENCH asked whether the state has finished auditing all ELF-based tax returns.

COMMISSIONER GALVIN replied there still are a couple of years left. One was for 2003, and there are a few for 2004 and 2005. Then it gets into PPT-based returns. The PPT auditing cycle is in the phase where the companies have reported back to the state as to what they've worked out between the various partners in preparation for their federal tax returns for the last calendar year. With that information, the state can begin to dig into the returns and reports, and then can formulate its auditing strategy and communication with the companies.

COMMISSIONER GALVIN added that there have been continual discussions with the companies in order to acquire information needed to better understand how the system is working, and to get a jumpstart on understanding the nature of the deductions and so forth. That is somewhat a parallel track to the official audit. The state is just now reaching the point of having all the information it can get to begin the process, and is looking at a two-year process, at minimum, to go through the PPT auditing. Then, if there are continuing disputes, it will go through the administrative appeal process.

[9:45:56 AM](#)

SENATOR McGUIRE recalled that promises were made in 2006 about the ability to recruit and retain, but the state isn't that much

closer to its goal. She asked whether this is an achievable goal and whether such professionals will want to leave positions with private companies to work for the state. If not, she suggested it is perhaps a question of looking at the possible and not the perfect for now.

COMMISSIONER GALVIN agreed, but said a year ago, when PPT was being discussed and the state was looking at moving into this whole new venture, he believes the context was different. The previous administration had an overlapping relationship with the producers through negotiation of the gas line contract. It was expected that PPT would be part of the contract, there would be an arbitration process rather than involving the courts, and it would be more of a partnership. He opined that the previous administration undersold the expectation with respect to the department in terms of taking on this responsibility.

COMMISSIONER GALVIN indicated he and Governor Palin initially were skeptical of this tax system, the state's ability to implement it, and whether it would ultimately be in the state's interest. They'd made obtaining the auditors a priority. They'd tried to identify whether the intangibles of working for the state in public service would suffice to overcome the significant gap between what the state could offer and what could be obtained in the private sector. They'd found the answer to be no. And so they'd tried to shrink the gap.

COMMISSIONER GALVIN addressed whether a handful of new auditors can fill this need. Reflecting on his work for the state, particularly on the oil and gas side, he observed that a handful of highly capable, creative, dedicated state employees can do a whole lot. They can use the existing system to accomplish things that would be much more difficult if there were more people, and they can overcome many of these hurdles. He opined that if these lieutenants can be brought in who understand the picture from both sides, they can meet that responsibility, even with a small group of auditors. But first he needs to find them and get the right tools. Citing the value this will create for the state, he emphasized accepting the burden that comes with a net-based system. Unless the department can hire these folks, the system won't work.

[9:53:52 AM](#)

SENATOR WIELECHOWSKI noted there has been one deduction, the tariffs, with costly and time-consuming litigation on that issue for more than a decade. Now there will be a new system with

perhaps hundreds of deductions. He expressed concern based on that past experience.

COMMISSIONER GALVIN replied by showing slide 7, "'Audit Risk,' How Do You Measure It?" He said one way to measure audit risk is to look at Alaska's experience, primarily royalty-related auditing and calculations of the appropriate value to place on oil that is sold, as well as the transportation deductions. The question becomes whether the decades-long arbitrations and litigation over royalty disputes will be replicated or multiplied when dealing with a complex net-based tax. The administration's analysis has indicated the answer is no.

COMMISSIONER GALVIN explained that a royalty dispute is based upon contract law and two parties interpreting a contract that they've mutually agreed to. The stakes increase as it moves through the process, resulting in endless litigation. By contrast, tax law is imposed by the sovereign entity, interpreted by that entity, and ultimately decided by the courts as to whether the agency has properly exercised its discretion.

[9:57:44 AM](#)

CHAIR FRENCH noted Marcia Davis, DOR deputy commissioner, would speak tomorrow about the differences in the litigation outcomes for contrast disputes versus more sovereign-oriented tax disputes. Saying royalty strikes him as the most sovereign and powerful tax on the oil field, he asked: Why were those long-running disputes not more like a tax, where the state has the power and the advantages?

COMMISSIONER GALVIN answered that within the system it was decided that royalty would be established through a lease offered in a competitive sale. The parties that accepted those entered into a contract with the state over development of the resource. Through that mechanism, the state shared the risk associated with the initial investment and, ultimately, who would get the reward if there was success.

CHAIR FRENCH surmised the tax terms aren't set by the lease. The legislature is currently trying to change those terms.

COMMISSIONER GALVIN concurred. He said royalty income primarily relates to leases from the initial wave of leases in the late 1960s and early 1970s. There was a line about how the royalty would be calculated, and that sentence was the seed for all the litigation that followed. It didn't itemize what would be deductible, and it didn't talk about what was in or out, or how

to calculate the value. Rather, it stated what percentage of wellhead value would be paid. The contract dispute arose over how to calculate that.

[10:00:12 AM](#)

COMMISSIONER GALVIN continued, saying taxes are a different world. Spencer Hosie, a San Francisco attorney that the state often uses in disputes, had been asked to provide his sense of the prospect for prolonged tax disputes, particularly given his experience as a litigator in the royalty disputes. Mr. Hosie had provided a short memo that the administration distributed to legislators. It gave his view that tax is not royalty; when looking at a tax dispute, the agency has authority to set the timeframe for the administrative appeal and to demand production of required information. Mr. Hosie had opined that the timeframe to resolve a dispute would be about two years.

SENATOR HUGGINS observed that some, including Governor Palin, Commissioner Irwin, and Commissioner Galvin, no longer believe a gross-based tax is the answer; however, some haven't changed their minds. Highlighting the proposed extension of auditing time from three years to six years, he asked: Is hiring more auditors with the appropriate credentials an alternative, rather than doubling the current auditing timeframe?

[10:03:16 AM](#)

COMMISSIONER GALVIN replied the recommendation to go from three years to six was as much a product of the way the audit process revolves around the clarification of information outside the PPT system. This includes the timeframe for federal income tax discussions and potential disputes among partners to resolve themselves. No matter how many PPT auditors there are, those have their own timelines.

COMMISSIONER GALVIN assured members that the department won't be deadline-driven in structuring audits. The state and the industry will want to settle issues and move on. The change from three years to six clearly is a jump; it recognizes this area that the state cannot control, and it provides time to get the work done. While six years isn't mandatory, he highlighted wanting to avoid the negative implications of having a statute-of-limitations deadline show up while the state is still working on an audit. Providing enough time is beneficial. But would four years be acceptable? He said it is a judgment call.

[10:05:52 AM](#)

SENATOR HUGGINS recalled hearing that the agreement to extend the process was relatively easy to come by and was a common practice; producers wouldn't want to fight a mutual extension because the state has the judgment power within its toolbox. He requested clarification about this.

COMMISSIONER GALVIN noted Jonathan Iversen, director of DOR's Tax Division, had testified about differences among taxpayers. Most view it as mutually beneficial to work on an extension so the issue doesn't have to be brought to a head before the two parties are in a position to resolve it; usually some extension will be worked out. However, some taxpayers won't agree, and then the state must decide how much is at stake and then move to a formal dispute resolution. The balance here is strictly a matter of whether that is an appropriate situation to put the state in or whether time should be allowed to resolve those issues, recognizing the state will be diligent in its efforts.

[10:08:14 AM](#)

SENATOR THERRIAULT remarked that, based on yesterday's discussion and the impact of the transportation expense, he believes part of what has been suffered for the past 20 years is a bad agreement that the state got into with respect to tariffs. Indicating it isn't over yet, he said it was a bad deal.

SENATOR WIELECHOWSKI asked whether DOR has an assumption about litigation costs under a net system versus a gross system.

COMMISSIONER GALVIN answered no, primarily because it is so early in the process. Furthermore, some of the lawyers don't necessarily see it as adding a significantly greater burden. He surmised the Department of Law (DOL) would need some experience with it before determining whether it would result in an additional burden for that department.

SENATOR WIELECHOWSKI asked how the standard of "ordinary and necessary" will be determined across the entire range of possible expenses for all types of companies, fields, and technologies.

COMMISSIONER GALVIN replied that's a good question. It is one reason the language that allows the department, through regulation, to define what is an allowable expense is so valuable for the state, providing a tool to have a public process to identify those cuts. When looking at the types of deductions appropriate for companies to take as an ordinary and necessary expense of production, DOR believes this should be

done through the regulatory process, rather than on an individual taxpayer basis through dispute resolution.

10:11:15 AM

SENATOR McGUIRE remarked this is another area about which people are skeptical. Commissioners change over time. And it isn't known who the future regulation writers will be; they aren't held up for reelection or subject to public scrutiny like legislators are. She requested assurance that the regulation-writing authority would be subject to checks and balances.

COMMISSIONER GALVIN responded that one choice is that the statute lays out a fairly broad definition of what is allowable and has the department make that determination tax return by tax return. The proposed alternative is that those are determined through regulations. While it is perceived as a granting of authority to the department when compared with the first option, he believes it is the opposite.

COMMISSIONER GALVIN explained that if all the decisions occur in the context of a confidential determination between the department and a taxpayer, that grants much greater authority and discretion to the commissioner than if that same distinction is made in a public process and then written into regulations, which the legislature will have every opportunity to review and force changes about. That ability is taken away from the legislature if the decisions are made at a tax-return level.

SENATOR McGUIRE agreed the proposal is an improvement, but clarified that she'd like lease expenditures and operating costs that can be written off to be put into statute. She expressed concern about wiggle room, saying she recognizes the difficulty but wants to be able to tell people, years later, that legislators were aware of the trade-off and felt it was important.

COMMISSIONER GALVIN suggested in a perfect world that could happen. But the department will put in what is allowable as a sort of proxy for the legislature, going through the public process and evaluation. The legislature then will have an opportunity to revisit it within a year or two, as an extension of this process.

10:16:43 AM

SENATOR THERRIAULT recalled past concern that power given to a commissioner may someday pass to a madman who would run amok. He pointed out that legislation passed a couple of years ago

requires that the legislature's legal department receive a copy of proposed regulations earlier in the process so it can raise a red flag for policymakers if something seems off-track. Furthermore, regulations can be enshrined in statute once the proper balance seems to have been struck. While the department might believe it would strip flexibility needed to keep the regulations workable over a long period of time, it is a step the legislature can take.

AN UNIDENTIFIED SPEAKER said that was a good point.

10:18:08 AM

CHAIR FRENCH referred to earlier remarks about the backlog of audits under the ELF system. He asked whether one or two audits remained from 2003.

COMMISSIONER GALVIN replied he believed there was one.

CHAIR FRENCH said that gives some guidance as to how long the statute of limitations needs to be, given it is nearly five years later and that was a simpler form of taxation. He requested an estimate of the time to complete a PPT audit.

COMMISSIONER GALVIN relayed what his staff had told him, saying there is probably a two-year process from this point forward to establish the administrative record of the audit. If there continues to be a dispute, the administrative appeal process begins. First there is an informal appeal process. One of his staff reviews the record, analyzes the state's position, works with the taxpayer to identify areas that can be resolved easily, and tries to negotiate an informal settlement. If that is unsuccessful, it moves to a formal appeal process. An appeal officer is assigned. The equivalent of an administrative law judge holds a proceeding that has the state and the taxpayer provide their respective testimony. Then a decision is made.

CHAIR FRENCH asked whether that takes place in the state office of tax appeals.

COMMISSIONER GALVIN answered that it is one component of the administrative appeals office. If the dispute continues, from there it moves towards a judicial appeal. The timeframe for getting through that process is potentially another two years.

10:22:09 AM

CHAIR FRENCH asked whether it can take two years to complete a full audit of a PPT or ACES tax return, and there can be a two-

year process after that before there is a final conclusion through the department and the administrative law judge, followed by court. Or does the two years include the court time? He recalled that Mr. Hosie had said it takes about two years for a tax dispute.

COMMISSIONER GALVIN said he believed Mr. Hosie meant from the beginning of the administrative appeal through the court process.

CHAIR FRENCH deferred the discussion until tomorrow, when Ms. Davis would review Mr. Hosie's memo.

SENATOR WIELECHOWSKI asked whether the department had decided what its hurdles or triggers would be for auditing.

COMMISSIONER GALVIN replied he hadn't been briefed on it and believed they were still in the process of formulating the audit strategy and gathering information to analyze. Just now they're receiving a full record of what the taxpayers are providing after they've gone through their partnership billing and auditing process and preparation of their federal tax returns.

SENATOR WIELECHOWSKI surmised there are numerous strategies that a commissioner or auditors could take.

COMMISSIONER GALVIN concurred. He said that's why he depends on the expectation of bringing in folks who understand not only the state's need, but also the intricacies of the companies' accounting. They'll need to assess where to target for the biggest bang for the buck in going after the cost structure or identifying a particular report, for instance, that is the meat of what the auditors ultimately will pursue.

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SENATOR WIELECHOWSKI asked what recourse a company would have if it wasn't allowed to deduct an expense when another company was allowed to deduct a similar type of expense.

COMMISSIONER GALVIN answered that given the confidential nature with respect to the taxpayer, they wouldn't necessarily know. It is incumbent upon the agency to apply the rules evenly.

SENATOR THERRIAULT suggested this gets more to the court review of whether the sovereign entity is imposing its powers in a fair and not arbitrary fashion. If there were disparate treatment among taxpayers, that would trigger it.

SENATOR WIELECHOWSKI asked how a company that wants to come to Alaska would find out which are reasonable costs to deduct from its revenue in the next year or so.

COMMISSIONER GALVIN responded that part of it will be getting clear regulations out. Also, ACES authorizes the agency to provide guidance documents that clarify how the department would interpret certain areas where regulations don't go into adequate detail. Beyond that, he opined that in the broader range, companies will understand what is captured and what isn't. The regulations will address finer points not necessarily considered by a company in deciding whether to come to Alaska.

The committee took an at-ease from [10:27:23 AM](#) to [10:44:15 AM](#).

COMMISSIONER GALVIN showed slide 7, the final slide on "Audit Risk." He emphasized that consultants have said there are no other gross-based systems around the world. However, the opposite is true within the United States. In other US states, the resource is primarily privately owned or, in the Gulf of Mexico, federally owned. The resource is taxed as just another commodity produced within those states, and there is a severance tax - as opposed to a property tax - that reflects the historic evolution of US tax policy, which generally has been based upon a gross-value calculation; this is fairly low and generally not a significant part of the states' revenue streams. Also, they are dealing with a resource base generally lower than Alaska's. Thus other states in the US aren't used for comparison purposes.

COMMISSIONER GALVIN referred to testimony in other committees. He pointed out that in order to make an apples-to-apples comparison, oil provinces around the world are looked at which have similar resources and opportunities. They all use a net system. As for how they are dealing with audit risk - the sense of exposure to potential manipulation - he'd been informed that none had gone to a net approach and then ultimately changed to a gross approach because of such concern. The net systems remain, although various consultants have said there is a learning curve for how to implement this properly.

[10:48:33 AM](#)

COMMISSIONER GALVIN recalled that legislative consultant Daniel Johnston, among others, said Alaska could similarly deal with a net system. It is common, standard, and doable. Noting people distrust such a system, however, Commissioner Galvin said this relates to not only the taxes, but also the companies. It is a

big component in the current public preference for having a gross-based tax.

COMMISSIONER GALVIN said the state must ensure that DOR has the necessary tools and must make the system as transparent as possible. What is needed is to get past the current stage, moving to a new relationship with the companies wherein the state has information, can say it knows how the system is working, and can express it to the public. Thus ACES is intended to provide the tools needed to mitigate some of these real and perceived risks.

SENATOR HUGGINS asked Commissioner Galvin to review those tools.

COMMISSIONER GALVIN replied they are in three major categories: people, information, and clear rules. Under people, the change with respect to the auditors is the primary one. Under information, tools are: 1) the requirement in ACES that companies provide current, timely, and useful information and also forward-looking information about expected expenditures, which will help the state understand how the system is working now and what can be expected in the near future; 2) the sharing between the departments so the state has full use of the information; and 3) the public disclosure of some information so there is a sense of transparency and public confidence. Under clear rules, the state will define what costs are deductible and clarify what items are excluded, such as improper maintenance or costs for dismantling, removal and restoration (DR&R).

SENATOR HUGGINS surmised those tools are in the legislation.

COMMISSIONER GALVIN said yes, for the most part.

[10:53:01 AM](#)

COMMISSIONER GALVIN turned to slide 8, "Revenue to the State," noting this relates to expectations based upon known factors. Within DOR there is a fairly extensive model of different building blocks for calculating expected taxes, with assumptions for production levels, prices, and costs. Accurate depiction requires breaking it down by field and taxpayer, separating potential operating expenditures from capital expenditures and so forth. That is built into the model to enable an apples-to-apples comparison. This model is a critical tool for analysis.

COMMISSIONER GALVIN indicated variables can be adjusted to achieve a certain amount of dollars over the next five years, for any type of tax. The goal is to set these "knobs" so

comparisons are calibrated to each other. The other part of the revenue picture is how durable and reliable this revenue stream is if cost assumptions or other assumptions prove inaccurate. If cost assumptions are off by 5 percent, one amount will rise a little while the other will rise a whole lot. Thus one evaluation criterion is the sensitivity that these tax systems will have to being off in some respect.

10:56:37 AM

CHAIR FRENCH requested discussion of cost, another major concern with a net-based system. He surmised DOR's August 2007 PPT implementation report was the first clue to the public that costs were substantially higher in reality than those envisioned a year ago.

COMMISSIONER GALVIN replied it was the second clue. The first was in April, when DOR received the true-up payment, which was less than expected. Reports came back, and DOR was looking at operating expenditures in 2006 that were 50 percent more than anticipated. The effect was dampened, however, because capital expenditures were below what DOR expected. The spring forecast and what ultimately came out in the August report reflected discussions with the companies in terms of what could be expected for those numbers. In further reply, he indicated those discussions were in 2007 following the April payments, before DOR put out its spring forecast, and from the spring forecast until the August report.

CHAIR FRENCH asked how much of the information used to compile the original fiscal notes in 2006 came from the producers.

COMMISSIONER GALVIN answered that, in the end, he believed it was all relying upon information from the producers. The folks who put those together had indicated they had certain cost information provided from the 2004 timeframe, actual reports of costs; those were extrapolated, expanded, and turned into projected draft numbers that were then brought back to the companies for input as to their accuracy. That was what was ultimately used. In further response, he said it was 2004 data moved forward, reflecting what DOR believed the data for 2006 would be, considering rising costs and so forth.

CHAIR FRENCH asked, then, whether DOR was taking the producers' 2004 numbers, updating them for 2006, and building a fiscal note on that basis.

COMMISSIONER GALVIN affirmed that.

11:00:19 AM

COMMISSIONER GALVIN, responding to Senator Therriault as to what went wrong with the predictions, said as far as the fiscal note it was a combination of two factors: 1) the numbers intended to reflect actual 2006 costs were significantly wrong, and 2) as they were used to predict revenue over five or ten years, there wasn't an appropriate escalation included to reflect the experience of rising costs. Combined, these had a multiplying effect, getting worse as the numbers were projected forward.

CHAIR FRENCH remarked that this is why gross versus net is being debated today. He opined that this is an area where a gross-based tax could gain a huge advantage, compared with the 100 percent underestimation of costs a year ago. If one believes a tax should be put in place and then left alone for a long time, it is a great concern with a net-profit system. He suggested Alaska would indeed have an unstable tax regime if yet another set of rules had to be implemented after another year. He requested further discussion about this today.

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COMMISSIONER GALVIN replied the aforementioned is one aspect - focused on the revenue side - of the effect of being off on the assumptions. As the first slide showed, being off on the assumptions affects revenue. A gross tax gives a more predictable revenue stream. The flip side, however, by being so far off on the cost assessment, is a much more significant burden on the investment climate than intended. Mentioning government take versus what the companies get, he said this is used as a tool to see how Alaska compares with other places in the world.

COMMISSIONER GALVIN continued. He said as a reflection of this tradeoff, if a gross tax is pegged at a certain expectation of take - say, 68 or 69 percent - and then costs are double those in the assumption, now the government take is in the mid-70 percent range. But that isn't the intention. In that scenario, prices could go up 20, 30, or 40 percent and yet the tax would be higher than intended. This relates also to durability. Whether one chooses a net or gross system, if costs are poorly projected the tax won't be what is expected. He mentioned balancing revenue versus investment.

CHAIR FRENCH asked, then, whether the state gets the tax it expects under a gross system, but throws the investment climate off, which may have tax implications down the road.

COMMISSIONER GALVIN affirmed that.

CHAIR FRENCH surmised what follows after a year with respect to the expected tax may depend on variables.

11:06:13 AM

SENATOR HUGGINS recalled that data provided by Dan Dickinson indicated the PPT projection for the 2006-2007 timeframe was off by just under 10 percent; he mentioned a minus-8 percent variance. However, other taxes for alcohol and so forth were off by 52 or 53 percent. He suggested the projections are just guesstimates. It isn't a perfect science. No matter how good the people are, there will be some variance. In context, the PPT portion was very accurate. He asked whether Commissioner Galvin disagreed.

COMMISSIONER GALVIN said it is a reflection of how these numbers merge and are then used to make different points. Noting DOR had looked at the perceived difference between what was expected and what came in, with price and production held constant, he said the answer was \$800 million for FY 2008. It is true, however, that when the extra variable of cost is added in, it will affect the outcome if this number proves wrong.

SENATOR HUGGINS, in response to Chair French, clarified that he'd been talking about the track record for 2006 or 2007 or perhaps both in aggregate. His point was that it appears to be a guesstimate.

COMMISSIONER GALVIN responded that Alaska is a resource development state. When commodity prices are high, the state expects to receive more. In FY 2007, commodity prices were high for minerals and for oil and gas. The state got more in mineral taxes and corporate income taxes, but not petroleum taxes. The reason was a wrong cost assumption. Normally, given the dramatic increase in price, the state would expect to receive a lot more than otherwise. The distinction between 2006-2007 and 2007 forward is this: 2006 wasn't a forecast error. It was an error in an assumption about reality, what was happening in that timeframe. With respect to forecasting now, a direct correlation cannot be drawn between the fact that DOR was off by 100 percent then and the future situation.

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COMMISSIONER GALVIN highlighted the learning curve with a new net tax. The companies will be learning as well, making first

reports and making a call as to whether the state will include certain costs. Most likely, they'll maximize potential deductions. Thus DOR will identify where the companies draw the line for what they believe their starting point should be.

COMMISSIONER GALVIN said as the state bases its tax system on these assumptions going forward and goes through the auditing process, most likely DOR will eventually bring in more money than it otherwise would have expected. In the end, the industry can expect that this is the direction the system will move, can respond accordingly in these hearings about where they believe the actual numbers will end up, and then can base their expectations on that.

CHAIR FRENCH welcomed Representative Gara, noting he'd been present for some time. He again acknowledged Senator Stevens.

[11:12:13 AM](#)

SENATOR McGUIRE requested assurance that if ACES passes and regulations are set, at some point the collected data would be revealed, along with whether the state's assumptions themselves were inaccurate. One can look at whether the cost of labor or building materials is increasing statewide, and by what factor. She said the cost of steel has risen, but not more for the oil and gas industry than anyone else. She surmised such basic information went into the cost assumptions in the fiscal note.

SENATOR McGUIRE explained that she didn't want to impugn anyone, but wanted to know if increased costs factored in to companies' deductions were based on gold plating, stockpiling, or otherwise gaming the system. People may think differently in business, and the goal is to minimize the tax. She wanted to know if the assumptions themselves were wrong or whether it was how they were interpreted and applied by the companies and, if so, whether there could be any assurance that this could be changed.

[11:14:33 AM](#)

COMMISSIONER GALVIN agreed the state should know that. He said through the auditing process what will ultimately be identified, after the two-year cycle, is how much of the reported costs the state disputes. That will bring it back to a number the state believes appropriate for reported costs. That then can be compared against the state's assumptions. Until then, it won't be known whether this is a primary factor or a small one.

SENATOR McGUIRE expressed hope that DOR would hire or retain the best economists possible to look at not only what the costs

generally are in Alaska, but also what they are within the industry, including in Alberta, Canada, between 2006 and 2007.

COMMISSIONER GALVIN voiced hope that as the administration evaluates how to deal with the overarching issue of recruitment and retention, a solution will be found. Hiring top folks in the field will come down to competitive advantage and so forth. The state has good economists assisting with this work. While surmising the state could provide a level of what Senator McGuire was asking for, given the current capacity, he said the next level up would require something more.

SENATOR WIELECHOWSKI referred to Senator Huggins' remarks and recalled a chart showing percentages where the revenues were off for cigarettes, alcohol, and the Division of Motor Vehicles (DMV). He suggested the department seriously underestimated how much Alaskans like to smoke, drink, and drive.

[11:17:47 AM](#)

CHAIR FRENCH recalled when the PPT implementation status report came out in August, he was surprised at its frankness. It was a fairly strong warning about struggles the state will have in implementing a profits-based system. At the time he'd debated Representative Samuels on public radio about a net versus gross system, drawing most of his points from this report. Those same difficulties are being discussed today: forecasting, regulations, and auditing. The report said the department lacked future information for capital and operating expenditures. He asked whether DOR now has better information in this regard.

COMMISSIONER GALVIN indicated DOR has some, but not nearly enough. There has been a continual effort to get information from the companies. Without the clear authority to demand particular information, however, it is an ongoing and time-consuming exchange.

CHAIR FRENCH observed that ACES has sections that deal with information and has \$1,000-a-day penalties for not complying with requests. He asked if that will help DOR get the data.

COMMISSIONER GALVIN replied yes, very much so. Those are essential.

[11:20:19 AM](#)

COMMISSIONER GALVIN turned to slide 9, "Revenue vs. Investment." The first of four "pennant" graphs, it had a small band at the

bottom labeled "Low Gross Tax." He explained that when he looks at balancing revenue generation and protecting the investment climate, the hurdle that can't be overcome with a gross-based tax is this: If there is a certain revenue expectation, how can the state ensure the income can be collected without negatively affecting the economics of a particular project? As the administration gleaned information on a variety of different fields, these graphs had come to mind. He asked members to imagine that each field has an economic profile, with a certain exposure and sensitivity. The longer pennants are for fields with more sensitivity to having their economic picture impacted.

CHAIR FRENCH surmised this would be either higher cost or less volume, for instance.

COMMISSIONER GALVIN agreed. He said when one is trying to bring in revenue, some aspect of the lower band on the chart is filled up. With a gross tax, it is a very blunt tool; whether it is cranked up to bring in more money or lowered, that line remains straight across the horizon.

COMMISSIONER GALVIN showed slide 10, with a thicker lower band labeled "Medium Gross Tax," noting it depicts pennant "Y" as no longer being a viable project, since the tax has risen. Showing slide 11, with an even thicker band labeled "High Gross Tax," he said this impacts even more projects; they'd no longer look favorable to a company and thus some projects would be lost. The administration didn't want to make that trade-off.

[11:24:33 AM](#)

SENATOR McGUIRE asked why a system that allows credit deductions wouldn't help compensate for this problem.

COMMISSIONER GALVIN responded with slide 12, the final slide on revenue versus investment. Its lower section was labeled "High Net Tax" and was shown as peaks and valleys correlating to the contours of the pennants, rather than a solid band.

COMMISSIONER GALVIN explained that with a net tax, the effect reflects the economics of the projects themselves. When looking at the economic models, one can set rates to bring in the money, but do it so it buffers and protects the economics of the various projects. He said Senator McGuire had brought up a good point. As shown on a previous slide, a gross tax that includes capital credits would be similar to this type of approach, but wouldn't follow the contours of these pennants.

COMMISSIONER GALVIN suggested thinking of a "root" within these pennants that reflects the capital expenditure portion, separate from ongoing operating expenditures. Those lines that would come about because of the gross would reflect that root, not the actual entire pennant. To the extent that a particular project had a different relationship between capital expenditures and operating expenditures, in terms of economic impact the gross tax would affect it differently than another project with a different capital component. He said this gives a sense of the difference in the ability to raise revenue while not clearly and empirically affecting the economics of particular projects.

[11:27:09 AM](#)

COMMISSIONER GALVIN turned to slide 13, "Investment Climate - Tests," which had two major bullets: "New Fields (7 Field Models)" and "'Legacy' Fields." He said this reflects the type of analysis required for the state to better understand that relationship. When expertise on particular projects is brought in from the Department of Natural Resources (DNR), Division of Oil & Gas, a much clearer picture can be obtained of how different tax options affect those project economics.

COMMISSIONER GALVIN said there are actual project data, projected capital costs and operating costs, and also production profiles such as whether oil will be produced quickly or will slowly rise and then diminish over time. Based upon price assumptions, those are used to view the economic picture for a project under one tax system or another.

COMMISSIONER GALVIN elaborated. From that multiple-field model the state would run the different taxes, looking at revenue and options for protecting these fields; he mentioned investment expectations. Economic analyses including net present value (NPV), internal rates of return, and the probability index would be run at various prices to see the sensitivity to price changes. They'd also be run at different discount rates, reflecting various companies' expectations of their own rates of return and what would generally be used as an investment metric. The different tax systems would be compared against those.

COMMISSIONER GALVIN noted the sensitivity of these taxes to changes in assumptions also would be looked at. Either the projects themselves would experience different costs and different cost assumptions would be built in, or else there would be an analogous project, also on the threshold, that would have a slightly different cost profile. Indicating the

administration isn't wedded to these seven field models, he surmised others would come in.

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COMMISSIONER GALVIN added this took a lot of time, including work between the departments to ensure the seven field models accurately reflected how the tax system would work within a particular field's cash flow. Also, as the different tax types were run and various "knobs" were adjusted over and over, they'd gained insight into which knobs were affecting what and had winnowed down the options.

SENATOR WIELECHOWSKI asked if the three big producers currently are reinvesting in the legacy fields.

COMMISSIONER GALVIN replied yes, through their operator. The operator is making the investments, and they're paying their share of the costs.

SENATOR WIELECHOWSKI recalled reading in the Anchorage Daily News that Exxon hadn't done further exploration on the North Slope since 2000.

COMMISSIONER GALVIN said this relates to two different standards. As to whether the big three are reinvesting, they are putting money in. Exxon is doing it through BP and ConocoPhillips. BP is doing the work at Prudhoe Bay, and ConocoPhillips is doing the work at Kuparuk. Exxon is paying the bills for its percentage of that ownership. But Exxon isn't doing anything outside its ownership of those fields. In further response, he said Exxon hasn't been doing any exploration in Alaska since, to his belief, earlier than 2000.

SENATOR WIELECHOWSKI asked if it is accurate to say the fields Exxon has leased are being explored by ConocoPhillips and BP.

COMMISSIONER GALVIN clarified that he wouldn't characterize the work within Prudhoe Bay or Kuparuk as exploration. They're enhancing development of those fields, not looking for new oil. They know where the oil is. They're just determining how to produce it. And they're putting money into enhancing production of existing pockets of oil that are available and also looking at ways to bring into production other pockets that currently aren't because of primarily technical or economic hurdles.

CHAIR FRENCH summarized that Exxon isn't an explorer, but is an investor.

COMMISSIONER GALVIN agreed. He said of the three, he believes the only explorer is ConocoPhillips right now.

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COMMISSIONER GALVIN returned to slide 13, addressing the bullet on legacy fields that read, "Reinvestment Option analysis 3%, 6%, and 15% decline scenarios." He said in addition to the seven fields looked at, for which there was solid data, they'd also sought a way to evaluate reinvestment opportunities in legacy fields. For those, there isn't data or methodology similar to the seven field models, which allowed looking at reinvestment for decision making. But they took a rough cut and looked at information provided by the companies, both a year ago and as enhanced this year. This allowed looking at companies' investment decision making, relative to the level of investment necessary to stem the decline curve by a certain amount, so it would give a certain amount of production. The question is how the different tax types would relate to that.

[11:34:39 AM](#)

COMMISSIONER GALVIN turned to slide 14, "New Field Tax Analysis - NPV Impact." He said this is one representation of the voluminous data generated during the seven-field analysis. It shows one level of the net present value analysis, how it compares against the different types of net and gross tax types, and the relative impact on the "attractiveness" at these particular variable choices.

CHAIR FRENCH asked Commissioner Galvin to go through the assumptions shown under the net production tax scenarios.

COMMISSIONER GALVIN said it starts with NPV impact. It represents taking the cash flows associated with a certain investment, bringing them all back to today's dollars, and asking whether it is a positive or negative, given a certain expected return. In this particular instance, there is a 10 percent discount rate. If it is assumed one wants to get 10 percent out of one's money, just getting that 10 percent would be an NPV of zero - breaking even at 10 percent.

CHAIR FRENCH asked whether the only field shown that would break even is Field D, at a high net tax of 35 percent.

COMMISSIONER GALVIN said yes. It basically results in a cash-flow return equivalent to a 10 percent rate of return. In further reply, he said most investors in the oil and gas

industry probably want a rate of return higher than 10 percent. This is a fairly conservative discount rate for this evaluation. Most likely, it would be closer to 15 percent. A company looks at the NPV in terms of whether the investment will actually grow the business. With an NPV of zero, the answer is "no" unless other factors will drive them to that. It's treading water. Based on pure economics, the option won't be acted on.

[11:37:41 AM](#)

CHAIR FRENCH referred to Field D, where the chart shows "10" for the "PPT Status Quo" category. He asked what it represents.

COMMISSIONER GALVIN replied it's a \$10 million NPV associated with this project under the status quo, PPT.

CHAIR FRENCH asked whether all the other numbers there represent millions.

COMMISSIONER GALVIN affirmed that. He noted options listed on the left: ACES with a 10 percent floor, ACES without the floor, PPT status quo, and a high net tax. Columns show the rates for mature or legacy fields, as well as other fields. Under progressivity, it shows the trigger and slope. And the capital credit percentage is shown.

[11:38:43 AM](#)

CHAIR FRENCH asked whether any one of the fields, A through G, represents something close to a legacy field like Kuparuk.

COMMISSIONER GALVIN specified that Field A reflects a heavy oil project, Field C a traditional oil project, and Field E an extremely challenged heavy oil project - all within the legacy fields.

CHAIR FRENCH surmised nobody would do Field E.

COMMISSIONER GALVIN said Fields B, D, and F reflect projects by new entrants. This is an important distinction. In the modeling, it affects how much the capital credits are worth to a company immediately, and whether they'll need to be rolled over a year before being enjoyed under PPT. In response to Chair French, he said these are companies without current production - not so much like Anadarko, but Pioneer and others.

[11:40:15 AM](#)

SENATOR WIELECHOWSKI gave his understanding that a higher tax rate on the lower end could encourage investment for some

fields. He noted the chart shows that for Field A, the high net tax is \$150 million NPV at a 35 percent tax rate with higher progressivity. Yet under ACES with no floor there is a 25 percent tax rate, lower progressivity, and \$120 million NPV. He requested an explanation.

COMMISSIONER GALVIN replied:

It's counterintuitive, but if you follow along with the idea that when you make your initial capital investment the state, through the system, is going to pick up a percentage of the cost. And that percentage is going to be a product of primarily two drivers. It's going to be your tax rate - because you're going to deduct it first and then you're going to be able to get basically whatever the tax rate is off of your taxes - and, secondly, what the credit rate is, what the rate is you're allowing as your capital credit amount.

And so with the Field A, it's in an existing unit, by an existing company. So they can immediately write off those capital costs. And so, under the high net tax they're getting a 35 percent deduction and a ... 20 percent credit. They're getting a 55 percent immediate write-off, as opposed to the ACES, where they get the 25 percent and the 20. ... There's a 10 percent increase in what they get to write off right off the bat.

As the production comes in, they're going to pay more to the state. They're going to pay the higher rate. But since we're talking about net present value, the amount that they're going to pay over time has been diminished, diminishing impact to their net present value. But the credit they get right off the bat has immediate and ... whole impact on that.

And so, by allowing them to write that off, right off the bat at that higher rate, even though they're going to pay us more over time, it has a positive impact on the economic profile for them for that project.

[11:43:08 AM](#)

CHAIR FRENCH said it's good to raise taxes, then.

COMMISSIONER GALVIN replied that in certain circumstances, in certain projects, having a higher tax rate is actually beneficial to the project economics.

CHAIR FRENCH asked about a real-life model for Field G, which appears to be the most profitable.

COMMISSIONER GALVIN said Field G is a new project with a new investor in a new area with high prospectivity. Returning to an earlier point, he said:

I was actually going to follow up on Senator Wielechowski's point, just to--I don't want to further confuse it, but just when we talk about the fact that increasing the tax rate could have a positive impact on the economic perspective from the investor's standpoint, because they'll use a potentially relatively high discount rate. And, in fact, what you'll see, if we ran this at NPV 15, that effect is even more dramatic because those future cash flows ... have even less impact to diminish that value from the immediate value of the credit.

When you look at it from the state's perspective and you flip that analysis around, from the state's perspective, our time value of money ... has a lower rate. ... Some would say it's in the neighborhood of 5, maybe 8 percent. Others would even say it's zero. We even had a committee member in another committee say it was negative. But the idea being that, from the state's perspective, getting money in the future - as opposed to getting it now, and the risk that we're going to spend it on something that we don't need to spend it on - diminishes ... for our benefit the value of getting everything now.

And so what that means is, in the cash flow of this project, for the state to give money to the company now - with the expectation that we're going to get more in the future - could actually provide a positive benefit for us as well, and that we gain value by doing that and having this project come on at that higher rate. And ... you can call it the magic of economic theory, the magic of discount rates, but at least from the purely economic analysis in these instances, what we've done is, we've created

additional value to the state and additional value to the investor.

11:46:28 AM

SENATOR WIELECHOWSKI observed, however, that producers may say raising oil taxes will hurt investment.

COMMISSIONER GALVIN indicated the consultants would address that this afternoon. When the oil companies say increasing taxes will diminish their interest in investing, they're talking in terms of having their entire cash flow change, since more money will be taken for the legacy fields as well. They'll weigh this and say Alaska won't be as attractive. If it is isolated to an individual project, however, the companies cannot deny it will potentially make that project look more positive. But they won't say so, given the outcome is a higher tax rate on everything else.

SENATOR WIELECHOWSKI recalled this was discussed in the Senate Resources Standing Committee. He asked: Why not have two separate taxes, then, one for mature legacy fields and one for new exploration?

COMMISSIONER GALVIN replied there are different approaches when looking at options for where the tax will have the greatest impact. One approach is to set the rate for legacy fields at a higher starting point than elsewhere. Another entails basing the progressivity upon the margin of a particular project; those with larger margins - making the most money, primarily the legacy fields - pay a higher rate than other fields. So it gets to the same point, but it's based upon something other than an arbitrary line depicting some as legacy fields. In response to Chair French, he said it is self-policing, self-adjusting, and actually has other impacts as well.

11:49:26 AM

COMMISSIONER GALVIN drew attention to the gross-production tax scenarios on slide 14. He emphasized that this represents a few of the tax combinations evaluated under one particular set of assumptions and criteria; they are in the same ballpark with respect to revenue. However, the administration had looked at a tremendous number of tax combinations under a large number of different criteria. There wasn't any one factor or test that drove the ultimate outcome. Rather, it was a recognition that with the gross-based options, any one of these factors can clearly be identified that will make that gross tax drive a project into the negative.

COMMISSIONER GALVIN briefly highlighted the gross-tax scenarios: a 13 percent base rate with no credit, with the progressivity based upon a gross value, shown as "Low Rate - No Credits"; a higher rate with a credit, shown as "Medium Rate" at 16 percent; one labeled "Former Tax no ELF," also at 16 percent, which has other adjustments made by the modeler that don't show up here; an even higher rate, 19 percent, labeled "High Rate Flat Tax"; and then one labeled "Sliding Scale," with a tax table.

COMMISSIONER GALVIN elaborated on the sliding-scale concept, saying for a while it was believed to be the key. It based the tax rate upon the age of the field, and it slid along the table for progressivity reasons, based upon the price. Every new field had a five-year tax holiday. There was a credit up front, and no taxes would be paid for five years; then they'd pay at some scale that started to go up. Most of the fields became positive under this scenario, along the lines seen with a net system. However, older fields bore all the economic weight, and the rate for legacy fields was above anything shown as close to economic on the other chart, the legacy field analysis.

11:53:14 AM

COMMISSIONER GALVIN turned to slide 15, "Legacy Field Scenarios," a line graph with one axis being barrels per day and the other being the years 2008-2027. He indicated it shows the difference between a 15 percent decline in the amount of investment required in the area depicted as "Harvest Mode" and a 3 percent decline in the area shown as "Reinvestment Mode."

COMMISSIONER GALVIN turned to slide 16, "Legacy Field Reinvestment Comparison @ \$40." He indicated this relates to what would drive that decision making, just looking at the NPV of the production associated with the level of investment needed to equate to 3 percent versus 15 percent. Under the various net-based approaches, a 3 percent decline would be more attractive on an NPV basis than allowing it to go into a 15 percent decline; thus the assumption would be that a company would choose to make more money.

COMMISSIONER GALVIN continued with slide 16. Referring to the gross-tax scenarios shown previously, he said the credit must be brought in to get it close. Cranking the credit up to 30 or 40 percent brings these positive, but a credit this high moves the balance on the other factors associated with audit risks and the benefits intended by going to a gross tax. Thus the relative value associated with a gross tax is diminished, and the fact

that it ends up hindering project economics becomes that much more unacceptable. It wasn't going to work.

[11:55:24 AM](#)

COMMISSIONER GALVIN turned to slide 17, "Investment Climate Summary." He said the industry is more comfortable with a net tax because companies expect the system to reflect their economics as the project moves forward, and to have a take that they consider an appropriate share as the project matures and changes. The tax self-adjusts to changes in variables such as costs. For heavy oil integrated within the existing legacy fields, it is challenging to set a gross tax that balances the desired revenue and the investment. Furthermore, errors in cost assumptions under a gross tax can hamper investment, while overestimating costs will leave money on the table. There is more value to be gained, but it will be missed because the rate is based upon earlier assumptions.

CHAIR FRENCH welcomed Senator Ellis.

[11:57:39 AM](#)

COMMISSIONER GALVIN concluded with slide 18, "Balancing Act." Identical to slide 4, it depicted the following pairs: revenue and investment climate; transparency and economic flexibility; incumbents and new entrants; revenue from "legacy" fields and exploration & new field development; and audit risk and investment challenge. He highlighted the challenges, recognizing that some pairs balance more easily under either a gross system or a net system. The administration found if it wanted to overcome some of those challenges, a gross-based system would have to be changed to such an extent that all intended benefits were lost. Thus ultimately it was realized that a net-based system meets the state's goals better than any gross-based option looked at.

SENATOR HUGGINS returned attention to slide 16. He asked why \$40 was chosen.

COMMISSIONER GALVIN answered that there was a blend of different prices, but \$40 was the one DOR used as its standard for an investment evaluation across both the new fields and the legacy fields. It reflects what its industry consultants and so forth have indicated is probably the current stress price being used.

SENATOR HUGGINS asked whether there was a tipping point when the school of thought changed from gross to net.

COMMISSIONER GALVIN recalled it was an e-mail from Antony Scott, Division of Oil & Gas, DNR, who'd worked closely with DOR on trying to push the economic options to reflect a balanced approach to the analysis. In the end, Mr. Scott sent an e-mail saying it couldn't be twisted enough to make it work, for heavy oil in particular.

COMMISSIONER GALVIN explained that there was a concerted effort by the department, and a clear mandate from the governor, that in the end it must be based on the analysis and not on politics. If another approach was going to be used, it had to withstand a critical evaluation. With each gross-based option looked at, vulnerabilities could be identified that might have impacted production. Thus it was felt that the administration couldn't go forward with such a recommendation.

CHAIR FRENCH thanked Commissioner Galvin, noting members would hear from two international oil consultants next.

The committee took an at-ease from [12:01:57 PM](#) until [1:24:12 PM](#).

CHAIR FRENCH welcomed Rich Ruggiero and Bob George.

RICH RUGGIERO, Gaffney, Cline & Associates Inc., began by explaining the role of Gaffney Cline. When originally engaged, they were to provide industry and worldwide practices with respect to data submission and where capital is spent, and a bit on the pros and cons of net and gross systems; the latter was summarized well in the slides shown earlier today. Since arriving in Juneau a couple of weeks ago, however, they've become much more engaged in the fine-tuning, and last week they began building models to assist legislators in making the tough decisions ahead. They would show a series of snapshots that can be viewed as things change over time, to better understand the repercussions of choosing one tax over another.

MR. RUGGIERO indicated he and Mr. George would show, reference, and discuss information provided recently in companies' presentations to both legislative houses, recognizing a high likelihood that this \$800 million issue wouldn't have led to a special session if there'd been good data transfer earlier and thus better projections. For questions about the data, it would be best to ask the industry representatives who would testify later, who have experience and can suggest whether the numbers being used are too high, too low, or just right.

[1:27:45 PM](#)

MR. RUGGIERO, in response to Senator Therriault, outlined his credentials. He'd spent about 20 years with "big oil," progressing from engineer to engineering manager to district engineering manager. He'd then moved to natural gas and the regulatory arena with respect to Federal Energy Regulatory Commission (FERC) Orders 451, 500, 436, and so on. Then he'd gone into the commercial arena and international business development, working 5 years as a commercial manager with United Kingdom (UK) operations on North Sea issues, and ending as project general manager of Atlantic LNG in Trinidad. Then he'd gone into the "dot.com" world.

MR. RUGGIERO continued with his credentials. For the last 6 years he has been with Gaffney Cline. His assignments predominantly have been work with Saudi Arabia through its natural gas initiative, including helping to write its regulations for midstream and downstream, and working with Mr. George on some fiscal issues. Over the last 4 years they've assisted Timor-Leste, the world's newest country in 2002; along with a couple of other consultants, they've set up and written that country's legislation and model contracts, for instance.

SENATOR THERRIAULT asked about his interactions with respect to "go or no-go" decisions made in company boardrooms.

MR. RUGGIERO replied for 2.5 years he worked for one of the chief executives of the producing arm of Amoco, during which time he was responsible for consolidating aspects of budgets coming up from all the operating regions and districts, and then presenting those budgets to the most senior corporate committee. He saw the process and often sat through discussions of whether A versus B versus C could be done.

MR. RUGGIERO, acknowledging that experience is a bit dated, said he'd also sat on committees that made decisions; for example, the committee in the UK made decisions about investments or how to spend budgeted dollars within that operating area. Although it was 10 years ago, he surmised the overall process hasn't changed that much, though environmental factors have changed and may be causing slight tweaks in the decision-making process.

[1:31:48 PM](#)

BOB GEORGE, Gaffney, Cline & Associates Inc., offered his credentials, saying he has about 35 years with the industry, mostly with Gaffney Cline, but also some years with Getty Oil and others. He was working in the area of exploration and new ventures, with responsibility for looking at new projects,

decision making, budgeting, and so on. With Gaffney Cline he spends about half his time working on government-related activities, including those noted by Mr. Ruggiero in Saudi Arabia. He also spent a lot of time in the 1990s and early 2000s advising governments in Venezuela and Brazil; he mentioned Kuwait and Mexico as well. On the industry side, the other half of his time is spent in acquisition and strategy work with companies looking at property or corporate acquisitions, opportunities to rebalance their portfolios and so forth.

1:33:02 PM

MR. RUGGIERO began Gaffney Cline's PowerPoint presentation by addressing goals. He explained that from discussions he and Mr. George had heard in the House, Senate, and elsewhere, they'd arrived at five goals they believe the legislature is trying to achieve with SB 2001.

MR. RUGGIERO outlined the first goal: Fields with a larger margin and greater profitability, though not necessarily larger profits, should pay higher taxes. The second goal, which he believes is supported by the industry's presentations, is that investment should be encouraged today and in the near term in existing units, which have lots of upside potential to capture; this includes not only new discoveries, but also reinvestment and getting more oil out of reservoirs that are already producing. Part of the challenge for new investment is that there is everything from accumulations of light oil to substantial reserves of very expensive, technically challenged heavy oil.

MR. RUGGIERO told members the third goal is developing the industry beyond Kuparuk and Prudhoe Bay. The overall policy should encourage new investment outside those legacy areas and investment by new entrants. Thus today they'd discuss leveling the playing field a bit between new entrants and incumbents. In many countries incumbents have such an advantage, with such a barrier to entry for new players, that little new gets started.

MR. RUGGIERO said the fourth goal is that the system should be durable, withstanding the test of time. The legislature doesn't want to be back in a year or even in 2011 trying to fix things again. He expressed confidence that there is a way forward that will provide this durability. And the fifth goal they've heard, becoming a strong voice, is to build upon the many months of discussion, compromise, and other work on PPT last year.

1:38:16 PM

MR. RUGGIERO showed a slide that elaborated on the third goal, encouraging new investment for new players. He reminded members that in previous testimony Gaffney Cline had said Alaska is one of the very best in providing incentives for new exploration.

CHAIR FRENCH asked whether that is a worldwide comparison.

MR. RUGGIERO replied if he looks at the structure of what Alaska is doing, yes.

CHAIR FRENCH asked whether that is currently.

MR. RUGGIERO affirmed that. He explained that there are investment credits that can be turned into cash, and there is a net operating loss which, a year after they've had the investment, companies can turn in for cash, a feature only Norway has as well, to his knowledge. Thus a new entrant with no existing tax base to be able to write this off - should that company come to Alaska and spend the millions of dollars required to explore for oil and gas, but not find anything - can get the same type of benefit that an existing player, with an existing taxable base, has in doing the same type of investment.

MR. RUGGIERO opined that PPT has gone a long ways toward leveling the playing field between new entrants and incumbents and also encouraging that investment. He speculated that many of the costs that increased once PPT came in were investments, not operating expenses. As for investments encouraged by the bill, he recalled that one of the "independents" said that due to these credits they are looking to go from a one-well to a four-well program. This type of structure helps new and smaller entrants become players in Alaska, because a lot of companies don't have the financial wherewithal to suffer a 100 percent write-down with no chance of any recovery.

1:40:16 PM

MR. RUGGIERO said he believes overall, so long as there is a net system with some level of progressivity, new developments will be further away from existing infrastructure. Thus even light oil will be more expensive to produce on a unit basis. Having a system with progressivity, so a lower margin results in a lower tax rate, also helps encourage exploration.

MR. RUGGIERO recalled testimony, from Chevron perhaps, about going through an expected monetary value (EMV) evaluation in deciding about investments, looking at the chance of failure and the cost of failure, but also the chance of success and how much

money can be made if successful. He said people will ask how the system benefits them if they're successful, looking at what the fiscal system does and also at the distance and rules relating to infrastructure access. All this must be considered when deciding whether Alaska is a good place to invest.

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MR. RUGGIERO highlighted whether the base rate is low enough, given the high cost of doing business in Alaska. He emphasized that significant new development would extend the life of the Trans-Alaska Pipeline System (TAPS). Some commentary has indicated a minimum rate of 300,000 barrels a day, although that was listed carefully as a mechanical limit, rather than an economic limit. Although existing fields are on a natural decline, a larger number of barrels would have a significant ripple effect into the economics, production, and so forth. He summarized that Alaska is a good place for accomplishing goal three, encouraging investment for new entrants.

[1:43:37 PM](#)

SENATOR HUGGINS asked why gas was included on the slide.

MR. RUGGIERO answered that the main heading of that section is "Lower tax rate for fields with a higher cost structure." Due to the nature of the price received in the marketplace on a barrel-of-oil-equivalent basis and the cost, the margins for gas development will be much less than the current margin for production in units such as Prudhoe Bay or Kuparuk, for instance. Likewise, heavy oil and distant fields have lower margins. The market value comes down and the costs come up on a unit basis. If the system corrects and lowers the tax rate or increases the credit when that type of thing happens, then the system is responsive, regardless of what type of development is brought forward. Gas fits into the thinking of "more expensive to develop," and it nets a lower margin.

SENATOR HUGGINS encouraged thinking about gas, which is on the horizon. He opined that deferring it too long would be counterproductive.

[1:45:43 PM](#)

MR. RUGGIERO showed a slide labeled "The Fiscal Design Challenge." Referring to goals one and two, he said the tug-of-war in the fiscal design is the same here as everywhere else: How to get the take right, the take being however the state receives value for its resources, and also how to get the "give back" right, meaning how the state encourages investment.

MR. RUGGIERO said within existing units this has been the real challenge in the dialogue, since the desire is to find a level of take that either encourages or doesn't discourage further investment in those units, because there is value there. He noted the third section of today's presentation would address the tipping point and so on. He said they'd just put the aforementioned up as a difficult issue.

MR. RUGGIERO added that probably the biggest part - going to the heart of the dialogue with Commissioner Galvin this morning about expected revenues - is that the industry has three moving parts: price, production, and cost. It's like a three-legged stool. The minute one changes from what was expected, it starts to lean quickly. Just as one talks about a net-margin system, that margin can change if only one variable changes, or it may change as all three variables change. It isn't easy to try to predict that.

MR. RUGGIERO emphasized putting together a fiscal system which recognizes that those move, but without losing sight of those two goals: 1) ensuring the state gets its fair take and 2) ensuring there is no discouragement of the reinvestment that needs to occur in those two existing legacy units.

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CHAIR FRENCH welcomed Senator Hoffman and also welcomed Senator Stevens to the afternoon portion of the hearing.

MR. RUGGIERO showed slides emphasizing a key point that is easily misunderstood: Price doesn't equal margin. He said PPT is not about price. Rather, PPT and the whole net structure are about margin. As an example, if there is a \$50 price and a \$10-a-barrel cost, the margin is \$40. If there is a \$20-a-barrel cost, there is a \$30 margin at the same price. For heavy oil or gas or a development distant from existing infrastructure, the price could be \$50 a barrel and yet there'd be no margin at all.

MR. RUGGIERO highlighted ways to get different margins starting with a price: 1) the natural decline over time, 2) new or different development, and 3) oil versus gas. He explained that if there is a certain fixed cost of operation but the barrels decline over time, one's unit cost per barrel rises. Just through being a prudent operator doing the best possible in the field, someone will have a decreasing margin. Thus over time if something is fixed at \$50, a development that has no margin - no profit - may be taxed. Or gas might have a very low margin, for

instance. He again emphasized the need to separate price from margin when talking about taxes.

MR. RUGGIERO showed another slide. He said if he begins with something that has a \$40 margin - meaning the cash flow after costs is \$40 a barrel - and then throws a legacy field onto the curve that shows margin versus the market price, that margin will be achieved when the market hits \$60, since the legacy fields generally have about a \$20 "all in" cost.

MR. RUGGIERO said for new development, however, which requires additional capital expenditures for infrastructure and so on, the \$40 margin won't be achieved until the market gets to \$70; for heavy oil, it might require \$80; and for gas, under the current dynamics, it might require the equivalent of a \$100 oil price before seeing a \$40 margin on a barrel-of-oil-equivalent basis. Again, market price doesn't equal margin. Even if it equals it today, it may not tomorrow or next year. And even if the price doesn't change, the margin will change.

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SENATOR HUGGINS recalled that Dr. Pedro van Meurs had said there isn't a correlation between gas and oil at this particular juncture. Instead, oil is taken off and gas is essentially dormant with respect to price. He asked whether a correlation can be made when looking at it from the perspective of margin.

MR. RUGGIERO responded that there is no fixed relationship between the price of gas and the price of oil; it is moving. As he'd understood it, Dr. van Meurs was talking about Henry Hub relative to West Texas. What didn't come into that dialogue is this: Gas from Alaska currently goes to markets different from the Lower 48. Other markets in the Pacific basin have a very different price relationship between gas and oil. With respect to options and potential actions, however, Mr. Ruggiero said he hadn't looked into details of what it would cost, the options, or why one course would be chosen over another. He suggested this relationship should be added as the fourth moving part.

[1:55:13 PM](#)

MR. RUGGIERO showed the final slide on price and margin, addressing how to pull this into a single mechanism. He said PPT has a base rate, has a degree of progressivity, and then reaches a maximum rate. If everything except market price could actually be fixed, it would have to get to \$170 to \$180 at today's cost structure before maxing out PPT.

MR. RUGGIERO continued. Given that today' cost structure is about \$20 a barrel, he said that is a margin per barrel of \$150 before maxing out PPT. Knowing that costs will move with price, however, who knows where that maximum level would be reached in the legislation. It could be \$180 to as high as \$250 or \$260, depending on the relationship and elasticity between the movement in oil price and the movement in cost. It would likely have to be over \$200 before ever hitting the maximum rate under PPT. Thus he suggested if there starts to be a dialogue about a maximum rate being so high it's penal, people need to look at where that must get to before it ever kicks in.

MR. RUGGIERO continued, noting ACES raises the base rate and has a slightly lower, sloped progressivity. Not shown on the slide was that it flattens out at a maximum rate. This relates to a plus-or-minus \$200 West Texas "price world" before getting anywhere near the maximum rate under ACES. Reminding members of the five goals and that the first and second goals had just been discussed, he said it is possible to choose something that has a base rate but actually make progressivity more of a curve than a straight line or a single rate, capping out at the maximum rate a lot sooner than would happen in a \$200 price world.

[1:58:04 PM](#)

CHAIR FRENCH asked whether each of those three lines on the slide represents different progressivity rates.

MR. RUGGIERO pointed out this is slightly different from what was shown to the House. This is just a suggestion, because they've heard there are different views. He said the commissioner was clear that the administration's position is that they'd be talking about the top ACES line, in red, which starts at a 25 percent base rate. He mentioned goal three.

MR. RUGGIERO further responded that the green lines represent a net tax system. Conceptually, depending on what is chosen as a starting point - for instance, 25 percent, which is the administration's position, 22.5, which is the current percentage, or something lower - there'd be a rate function that climbs as the margin climbs. It is an ever-increasing progressivity factor until a maximum rate is hit.

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SENATOR WIELECHOWSKI asked whether the Palin Administration endorses this new approach.

MR. RUGGIERO replied he couldn't say, but yesterday Commissioner Galvin testified that the administration endorses a system that starts at 25 percent; if they're going to give up the gross minimum floor, a trade-off would be to get more at the top end.

SENATOR HUGGINS remarked, "Balance."

2:00:31 PM

CHAIR FRENCH surmised each green line on the graph shows a progressivity factor.

MR. RUGGIERO replied it starts out at zero progressivity and ends up at 100 percent progressivity at that very last increment before the maximum is hit.

CHAIR FRENCH asked at what level per dollar it rises.

MR. RUGGIERO answered that Gaffney Cline hasn't said where it should start or end. At this point, it is a general concept.

SENATOR McGUIRE mentioned a price of \$200 and asked how the maximum rate was picked.

MR. RUGGIERO replied they hadn't yet picked the rate. This section and the next one, which Mr. George would address, are conceptual. The idea, as Senator Huggins said, is balance. If some protection will be given up on the low end and the state is going to be put in the same position as the oil companies, it will suffer a bit if prices go through the floor, but also should benefit when the prices go through the ceiling.

SENATOR McGUIRE agreed with that concept, but said she was trying to understand the idea of having a maximum rate.

MR. RUGGIERO replied this is based off of margin, not price. When the margin gets huge - whether the price is \$80 or \$200 - that's when the state should be taking its maximum fair share.

SENATOR HUGGINS surmised that, theoretically, at the maximum rate the profit margin would be taken away if the mathematical equation were run all the way through.

MR. RUGGIERO replied that once the margin is large enough that it is on the plateau of that curve, Senator Huggins is right. As the margin moves up or down, there'd be no further percentage change in the state's share of the incremental dollar.

[2:04:35 PM](#)

MR. RUGGIERO continued with the same slide, turning to the ellipse on the lower left, relating to goal three. With a net system, the reason there is a low rate at a large margin is to encourage investment in fields or projects that fall into that range. Whether the oil price is \$10 or \$80, there are expensive projects. For example, a lot of the heavy oil is becoming more economically viable as prices rise. And there will be more things that require a bit more expensive development - when the price is there, there'll be a positive margin or cash flow from operations. That is when those types of investments should be encouraged to continue production, continue the livelihood of existing fields, and continue the state's helping the industry to develop Alaska's natural resources.

[2:05:43 PM](#)

SENATOR WIELECHOWSKI referenced Commissioner Galvin's comments in the last session, asking whether the higher rate at the low end here encourages more investment in certain types of fields like the legacy fields.

MR. RUGGIERO asked him to wait until the second part of the presentation, when Mr. George would address issues and impacts associated with varying rates and progressivity. Returning to the slide, he said the last development on the curve is the ellipse, the existing field issues. He explained:

What you'll see is, when I'm up at the high end of progressivity, one, to the extent that cash from operations is generated, if it exits the state it has to go through a high-priced state-take filter. To the extent it stays in the state, that provides an incentive for them to keep the money here and to reinvest it, because the state becomes a much larger participant in each and every one of those new investments that they make when they're at that point on the curve.

MR. RUGGIERO gave an analogy of shining a light in a room, with dark corners remaining. He said one dark corner of the presentation or philosophy here is that when the maximum rate is approached, there is a question whether the incentive to invest needs the credits additionally. Depending on how the progressivity rate is set and when the maximum is hit, the state may wish to consider modifying how and when credits are earned.

MR. RUGGIERO cautioned against getting into the following mathematically possible position: If 20 percent credits are retained and there is a steep progressivity curve, the point could be reached where investments could be made and with the 20 percent credit the state could actually be handing a check to whoever invested. The government share would be above 100 percent. The state doesn't want to get into that position.

MR. RUGGIERO noted that the state doesn't want to get near 100 percent either. It isn't that the oil companies would make unwise investments, but they might be encouraged to make investments or gold plate things because the state is paying nearly 100 percent of it. Depending on what is done with respect to setting the core aspect of the taxing policy, the legislature will have to look at the other pieces, test the reasonableness of those at various points along the curve, and then make appropriate decisions from that.

2:08:48 PM

SENATOR HUGGINS asked about a progressivity factor that has a gross component.

MR. RUGGIERO returned to the price-versus-margin slide. He said if there is progressivity based on gross, the field or development to the far right has a zero margin at \$50 a barrel. But if some gross progressivity is set up that kicks off at \$30 or \$40, it will have the taxes going up on a gross basis off of gross revenue when it is making no profit.

SENATOR HUGGINS asked what happens if it kicks in at \$70.

MR. RUGGIERO answered that when talking about net systems and net progressivity and gross systems, one of the commissioner's bullet points this morning was perfect. If someone picks an exact situation, he could pick numerous grosses that work, but also numerous ones that don't work. That raises the challenge of goal number four, durability. The question becomes how many "dials" to put on it, and how often the legislature wants to be back tweaking the system.

SENATOR THERRIAULT suggested that's part of the debate the legislature went through before, starting with a gross progressivity trigger and then, through deliberations, coming back to having it based on the net. He recalled thinking it might work for a certain range of prices, but if the desire is to set up something that will have durability, at least 10 or 15 years, who knows what the prices or costs will be.

MR. RUGGIERO turned the presentation over to Bob George.

2:11:17 PM

MR. GEORGE showed slide 29, "The Net Tax Story." He said this past weekend they'd started looking at models on this. Having listened in the first week to what people were saying, he was bothered a bit by some characterizations of how the tax worked and thus had looked "under the hood." He highlighted the perception that this is a tax on net profits with a progressivity feature that increases the tax rate with increasing profitability per barrel. He indicated in a few moments he would try to change that perception slightly with respect to the term "profitability."

MR. GEORGE also highlighted the perception that this is ring-fenced so the stated profitability per barrel reflects a company's portfolio, which is a mix of investments in different fields and isn't the same for everybody. He would try to break out some portfolio components to see how that comes together with the company's decision-making processes, particularly looking at the implications of the tax structure for reinvestment.

2:13:12 PM

MR. GEORGE showed slide 31, noting he was starting with the simple position that is classically portrayed, with an ANS West Coast oil price of \$80 a barrel as an example. It is known that transportation costs and so forth to the North Slope will be about \$10 a barrel. At the point of production there is a value on the order of \$70 a barrel. These numbers are illustrative, with \$18 a barrel in costs. Thus the profit is \$52 a barrel. He would start and end with that premise, but would break it apart first.

MR. GEORGE showed slide 32, saying if he has \$52 a barrel in profit, there is a fairly straightforward mechanism within the definition of PPT such that he'd pay about 25.5 percent. That is 22.5 percent up until the margin gets to \$40 a barrel. In this case, there is a \$52 margin that is the profit per barrel. Some progressivity kicks in, increasing the rate payable by 3 percentage points, which gives the 25.5 percent.

2:15:03 PM

CHAIR FRENCH asked how the kick-off point is picked for progressivity.

MR. GEORGE answered that there is a lot of judgment at the end of the day. In further response as to being able to compute a number, he indicated he didn't know of any such way. The perception is that within a company's portfolio under PPT the net taxes all fields at a single rate. In the way the tax returns are submitted, it is a backed-out number that would indeed be the case. However, he offered the perception that the effective rate can be quite different for different fields in the portfolio, which goes to the heart of a number of issues raised here in terms of the goal of allowing more challenged fields to be taxed at slightly different rates. He would break things out to show why he believes that is how it works.

MR. GEORGE showed slides 34 and 35, saying he would try to build up a portfolio of incremental investments to see how the nature of PPT works to deal with each of these slightly differently. He'd chosen an existing portfolio of investments of about 200,000 barrels a day, with the assumption of a \$65 margin. In that case, the PPT payable on that portfolio would be 28.4 percent; this is straight from the PPT formula.

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MR. GEORGE showed slides 36-39, discussing a company's decision-making processes when considering new investments under a tax structure like PPT. It looks at what happens if it does nothing versus if it makes an investment; running something in isolation won't provide the right answer. The additional layer about an investment would be added, and the return would be viewed. In the example there is similar profitability, \$61 a barrel instead of \$65. It will bring in about another 50,000 barrels a day on top of the 200,000 barrel-a-day portfolio. The average net margin for the two is \$64.20; he mentioned the weighting of the volumes and the different profitability. The combined rate on these fields would be 28.2 percent off a \$64.20 margin.

MR. GEORGE asked if that means paying 28.2 percent on each field; he said no. However, if these were two separate investment decisions, with each field taxed on its own, he'd pay 28.4 percent on the field with a \$65 margin, 27.5 percent on the field with a \$61 margin, and for the blended portfolio 28.2 percent. The effect of PPT is such that he'd pay slightly less on the new field than if it were on a stand-alone basis. It doesn't show in the first example, but shows in later ones.

MR. GEORGE said this impact within the portfolio has important consequences when moving into heavier oil or more challenged fields. The effective rate on new investment is different from

the blended rate. The portfolio together pays 28.2 percent, but actually the 28.4 percent is paid on the original property if nothing is done; if the investment is made, 28.2 overall would be paid, but that is the same as paying 28.4 percent on the existing investment, but only 27.4 on the new investment. Thus the new investment - which isn't quite as profitable as the existing one - gets taxed at a lower rate.

2:21:00 PM

MR. GEORGE moved to a broader portfolio, slide 42. He said this could be done progressively, adding new investment decisions. He'd made up a portfolio of an existing 200,000 barrels a day with a \$65-a-barrel margin. Investment X was at \$61. A more challenged one was added, with a \$50 margin, as well as one at \$37. Those are examples only. Each of those new investments adds 50,000 a day to the portfolio, but has decreasing profitability individually.

MR. GEORGE addressed what happens then. He said each incremental one that is less profitable pays a lower and lower marginal or effective rate within that portfolio. If the portfolio is considered in its entirety, it pays 26.9 percent. One might think existing reservoirs pay 26.9 and the much more challenged one pays 26.9. But this isn't so. The existing one pays the same as if nothing were done, over 28 percent. However, the most challenged investment out of this particular set actually pays an effective rate just under 19 percent because that is its impact within the portfolio. This effect is what companies look at when making investment decisions.

MR. GEORGE showed slide 44, saying if one simply averages the rates in the portfolio, it would be about 27.3 percent between what each property would pay as an investment in its own right. When blended, however, there is a slight decrease, to 26.9 percent. It is how the progressive structure works. The net result is that the more challenged fields pay lower rates. A feature actually provides greater encouragement to the marginal fields relative to the more profitable fields. It works to take the cash from the more profitable ones and put it into less profitable investments in there.

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CHAIR FRENCH asked whether it is oversimplifying to say this basic structure allows future investments in the same jurisdiction to produce a better tax result than if that money were moved to another jurisdiction.

MR. GEORGE replied it does encourage reinvestment. It segregates the rate payable within that, such that it isn't burdening new, less profitable investments on a unit basis, a dollars-a-barrel basis, with the same rate as existing legacy production, which is higher-margin production. This relates to what Mr. Ruggiero showed on the chart with the green bar.

MR. GEORGE explained that within a single system, one can effectively tax more profitable units at a higher rate without necessarily hurting the less profitable units; those aren't burdened by that same rate and are helped by how the progressivity works for the most part. Not only can they be taxed at a lower rate, however. In this case, taking Investment Z on its own within the same portfolio, it would be taxed at 22.5 percent. But the progressivity gives it an extra boost to take the rate below 19 percent on that margin. That movement of the rate, as well as the tax base, gives a reinvestment boost within the system.

[2:26:03 PM](#)

CHAIR FRENCH asked if this is only for an explorer or developer with an existing portfolio within that tax jurisdiction.

MR. GEORGE affirmed that, saying a completely new entrant in this case is helped by the investment tax credits and the ability to monetize the net operating losses (NOLs). But this sort of effect wouldn't occur until there was production and a change came out of that.

MR. RUGGIERO suggested looking at the two numbers for Field Z. Because of its low margin, an independent with no other production in the state who came in to do this project would be looking at an effective tax rate at the floor of PPT, 22.5 percent. But because this is an existing producer with a portfolio, as Mr. George said, there is the "do nothing" scenario and related cash flow, as well as the "do something" scenario, which is to invest in Field Z. When ones looks at the delta, the effective tax rate comes down to 18.9 percent. As progressivity increases, that number comes down.

CHAIR FRENCH surmised that the steeper the progressivity, the lower the effective tax rate would be.

MR. GEORGE and MR. RUGGIERO concurred.

SENATOR WIELECHOWSKI asked whether PPT is advantageous for the producers that are already there, but not as much for new entrants, which legislators want to try to encourage to come in.

MR. GEORGE replied no, he thinks if they both had the same opportunity to invest in the same project, the company that had an existing portfolio at a higher margin than the new investment would actually get a break over and above that for the producer. He noted Mr. Ruggiero had introduced something a bit earlier when talking about the curve with the green line, related to the issue of investment credits and whether and to what extent they'd be needed.

MR. GEORGE went on to say, in part, this issue comes into play here. If there is steeper progressivity and/or payment at higher rates in the existing portfolio, there is a better effect. The desirability of keeping the credits in there requires looking at it because of the effects produced. Someone with a portfolio that pays 35 or 40 percent, for instance, who through the investments would actually get a good reduction, wouldn't need the same credits as the explorer. Some greater evening out would be provided, though whether it could be made perfectly even, he didn't know.

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MR. GEORGE reminded members that he'd voiced concern about how costs are being expressed. Although PPT is commonly said to be based on profit per barrel, it isn't. Rather, it's based on net cash flow per barrel after capital investment. Those two aren't quite the same thing, largely because capital investment relates to future barrels divided by today's barrels.

MR. GEORGE showed slides 46-48, noting the portfolio shown earlier had a blended rate of 26.9 percent, not the 25.5 percent he'd been talking about. There is a reason for this. Using the same portfolio shown before, if he were budgeting for 2008, for example, he'd be asking how much money he'd spend next year. If he were considering spending \$800 million, it would reduce the blended rate of the portfolio from 26.9 percent to 25.5 percent. But the elements within it must be looked at.

MR. GEORGE said if it were producing 350,000 barrels a day, the \$800 million he was considering investing would equate to \$6.26 a barrel in the existing portfolio. That isn't \$6.26 for the barrels he'd necessarily get out, which could be a completely different number. Rather, it is \$6.26 for existing production. If he only had half that portfolio, it would be \$12.52 a barrel.

If he had twice the amount of production today, it would be \$3.13 a barrel.

MR. GEORGE showed slide 51, saying the left side depicts before the capital decision is made. Shown are lifting costs, operating costs upstream of the point of production. To produce 350,000 barrels a day, there'd be \$11 a barrel in costs. For calculating PPT, he could also deduct capital he spends in the year. In this case, he'd evaluate spending \$800 million. That would allow him to add another \$6.26 a barrel. Slightly rounded, the example shows \$18 for the two numbers added together, lowering the blended tax rate to 25.5 percent. But there are other ways still of looking at this.

[2:33:11 PM](#)

MR. GEORGE showed slide 52. He highlighted the portfolio and four separate investments that individually are subject to marginal PPT rates between about 19 and 28 percent; on a blended basis, it is 26.9 percent. If he spent that capital and it brought his overall portfolio PPT rate down to 25.5 percent, the net effect would be that the state would pick up 38.6 percent - not 26.9 percent - of his \$800 million of capital investment.

MR. GEORGE showed slide 53, discussing the reasons for this. He suggested looking at the tax system through the amount of tax payable and how these things change. If he had the four elements to the portfolio, with \$80 a barrel and so forth, he'd be paying a little over \$2 billion in PPT. But that isn't how the tax system works. It blends everything together. One comes up with an average cost per barrel, and as a result there is a small savings of \$32 million by taxing them as one unit rather than four separate items. When he drops the rate to 25.5 percent, the \$2 billion drops to just under \$1.7 billion.

Mr. GEORGE highlighted total savings of \$309 million. The net effect of deciding to go forward with an \$800 million investment is that the tax rate and tax base are both reduced, since the whole \$800 million can be deducted against the tax base as well. Thus while \$800 is spent, \$309 million is saved in taxes - \$215 million from reducing the taxable base by \$800 million, plus \$94 million from reducing the tax rate. This gives a significant boost to the capital investment. It also goes to the question of at what point capital credits are still given or not.

MR. GEORGE concluded by saying the flip side of the state's taking a high sum is giving a high sum back. The question is

how much a boost is needed for already profitable operations. These effects come at the more profitable end.

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MR. RUGGIERO returned to an earlier statement he'd made about the other impact of progressivity: As one goes higher up the progressivity curve because of being overall a higher net-margin operation, the impact seen here grows. The \$309 million will increase. The state's participation in the investment increases as it gets higher up the progressivity rate curve.

CHAIR FRENCH surmised this creates a greater incentive to spend capital in the same tax jurisdiction.

MR. RUGGIERO agreed.

MR. GEORGE concurred, noting in the scenario shown there'd be not only \$309 million through the PPT system, but also a further \$160 million available from tax credits. In this particular example, the \$800 million investment would end up costing the investor a net \$330 million, and it would have a huge effect on the rate of return as well as the investment decisions. At some point, there would be a need to look at the top end of this and what effect it has. Gaffney Cline didn't have a numeric answer today, but it requires some review.

2:38:05 PM

MR. RUGGIERO added that he hoped this tied back to Senator Wielechowski's question about why, if there is a higher tax, the rate of return to the oil company can actually be higher than when there is lower tax. It relates to the impact of being able to get immediate credits or the impact of progressivity in that the "delta rate" is larger than the absolute rate at any one given point.

SENATOR WIELECHOWSKI recalled Gaffney Cline's testimony in the Senate Resources Standing Committee that about \$6-10 billion leaves the state yearly. He surmised if that delta on progressivity were increased at the higher levels, from a financial standpoint the companies would be more likely to reinvest that money in Alaska, rather than taking it to Bolivia or Venezuela.

MR. GEORGE said there is a choice for companies at that point. They either can export their capital back to the corporate treasury and pay a high rate or can reinvest in Alaska and get a good co-investment from the state through the tax system.

MR. RUGGIERO, in response to Senator Huggins, specified that the slides being shown were finished yesterday at 1:30 a.m. and presented yesterday to the House with an October 30 date. Three slides were then modified. The version being presented today carries today's date, October 31.

SENATOR HUGGINS expressed hope that Gaffney Cline would do further work before this goes to the Senate Finance Committee.

[2:40:58 PM](#)

MR. GEORGE showed slides 57 and 58. He said adding the \$160 million in investment tax credits doesn't actually lower the tax rate to 23 percent, but has the same effect. It is worth about another 2.5 points against the profitability. The last slide in this section relates to costs, broken out slightly differently.

MR. GEORGE explained that, to him, PPT is really a tax on the net cash flow per barrel that is exported from the state - not a tax on profits per se. The operating margin in this case is \$58 a barrel, and a company has a choice to export that \$58 a barrel and deploy the investment elsewhere, or to deploy some of that \$58 a barrel back in Alaska and then be taxed on the amount it decides to export after making that capital investment. As it is lowered, the company pays a progressively lower tax rate, and it also lowers the tax base. He said it is better to look at it as a net cash flow per barrel after reinvestment, rather than just a tax on profitability.

The committee took an at-ease from [2:43:37 PM](#) until [2:57:41 PM](#).

MR. GEORGE showed slides describing the House Special Committee on Oil and Gas (HO&G) amendment to the progressivity part of PPT. He explained that currently under PPT the tax rate increases by 0.25 percent for every dollar by which the net cash flow per barrel - profitability, as expressed in there - exceeds \$40. Thus 22.5 percent is paid up to a \$40 margin, and 0.25 percent is paid for every dollar above it.

MR. GEORGE said while the HO&G amendment maintains the basic PPT 22.5 percent rate, the progressivity element adds a separate tax that doesn't affect the base rate. Two calculations are done and then the total tax is added together. It adds 0.225 percent for every dollar that the gross value at the point of production - in simple terms, the same valuation as for royalty purposes - exceeds \$50 a barrel.

MR. RUGGIERO added that the \$40 under PPT is margin, whereas the \$50 under the amendment is price.

MR. GEORGE reiterated that price doesn't equal margin. He referred to an earlier slide relating to the effective rates applied to the lower-margin fields. He indicated the next slide used that, adding a red line drawn through the marginal effective rate paid by each of the investments. It shows that under the gross amendment proposed by the House, the rate payable on the existing fields remains the same, but the rate for less profitable fields starts to go up. Thus the bulk of the increased burden is actually borne by lower-margin fields, not those with higher profitability. For this, he'd assumed the lower margins were caused by a combination of effects: a lower price per barrel, for heavier oil perhaps, as well as higher costs. Thus the margin was being squeezed at both ends.

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CHAIR FRENCH asked what the blue line above the bar graphs represents.

MR. GEORGE replied it is a directional line. In further response, he said the black numbers above the bars are rates payable by that field if it were a development on its own. That company would pay 24.9 percent. The red numbers inside the bar graphs are the effective rate for that particular investment within the overall portfolio. The 27.8 percent, relating to the bar to the right labeled "blended," is the averaged-out rate that would apply to the portfolio as a whole.

SENATOR WIELECHOWSKI asked whether it is the gross progressivity in the HO&G version that makes it this way.

MR. GEORGE answered it's because the progressivity is applied to the value at the point of production, without deducting the actual costs that it takes to produce it. As it works in this example, moving from left to right the fields are increasingly less profitable investments, and yet the structure says it doesn't care how much the production costs. A number had been come up with, \$50 a barrel. Everything above that is the net cash flow per barrel, which would be taxed at some rate. When looked at that way, these less profitable fields pay sort of the same amount, but for a higher proportion of their profits.

MR. GEORGE elaborated on the margin, reiterating that when he'd put this slide together he'd assumed the lower margin was caused

by a squeeze down from the top from receiving less per barrel, as well as a squeeze up from the bottom, since it costs more. The House PPT progressivity amendment does recognize that because it's the value at the point of production, it starts off with the value at the ultimate point of sale.

MR. GEORGE explained that if there is heavier oil, it generally means receiving less per barrel. So that translates back up through the shipping, the pipeline, and the point of production as a lower price there. It brings down the average price being received by the company. The effect is that it's higher than it would be under the net system; it still recognizes some part of the reduction in profitability, but not the whole.

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SENATOR HUGGINS requested clarification about this slide versus the previous one.

MR. GEORGE said this is what happens under PPT. Under the House amendment, the progressivity portion of PPT is replaced by a separate component that works off the gross. It works off that amount by which the average cash flow per barrel in the portfolio exceeds \$50. The \$50 is a hard number in there. The effect is that a company's existing, more profitable reservoirs don't actually pay any more; rather, it's borne by the less profitable ones because the company pays on the gross value overall, not on the net margin that those less profitable ones are subject to.

MR. RUGGIERO added that this is saying the House proposed amendment isn't taking any more money from high-profitability fields. Instead, it creates a bigger hurdle or barrier to development of low-margin projects that are out there such as the significant reserves for heavy oil development.

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MR. GEORGE said if he takes a further step, saying his lower-margin fields aren't caused by a lower price but just by higher cost of extraction, his lower-margin fields actually pay a higher effective tax rate than those with higher profitability. This is because none of those additional costs are recognized in the system. Chances are that as one moves into heavy oil developments and so on, there will be some effect caused by a lower market price. This slide illustrates the regressive nature of the gross system in there, not recognizing profitability. A company would end up paying a similar amount of tax for less profit, which translates into a higher rate.

MR. GEORGE showed a slide depicting numbers reflecting that. He said under PPT, the portfolio would pay just over \$1.5 billion on the \$80 West Coast price, \$2 billion before capital investment and about \$1.5 after capital investment. Noting the illustration doesn't relate to all numbers, he said under the House amendment there'd be a slight rise in the amount of take before capital investment, but after capital investment it would rise a couple of hundred million. Hence capital investment wouldn't get as much effect with respect to tax as it would under the more progressive system. It essentially raises the cost of investment to companies going forward.

MR. RUGGIERO added that a lot of the snapshots shown depict fields on the same date, using the same assumptions. These slides attempt to show why, depending on the fiscal system chosen, certain investments might not be made. As Mr. George just showed, the marginal \$800 million investment just got a lot more expensive. Furthermore, Field Z might not have ever been developed if it would actually raise the average tax paid; it would be at a much higher rate than the existing production just because of the nature of the tax.

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SENATOR THERRIAULT observed that whereas elsewhere the red arrow comes down because the tax rate comes down, here the red arrow comes down but the rates have gone up.

MR. GEORGE replied the red arrow was the top of the effective-rate bars under the net PPT system; he'd kept it in place to show where that was. He apologized that it wasn't well labeled. He said the point was to show that the lower-margin fields can effectively have a higher tax rate.

MR. GEORGE wrapped up by saying the PPT net-tax system taxes the cash flow that a company decides to retain; it isn't just a tax on simple profitability. As structured with a sort of corporate ring-fence taxation on a companywide basis for investments in Alaska, it allows the effective rate to vary so more profitable fields pay a higher effective rate and less profitable fields a lower one. More aggressive net progressivity provides a greater differentiation between higher- and lower-profitability fields than a simple gross progressivity is capable of doing.

MR. GEORGE said the progressivity feature itself, the progressivity based on net manifested in PPT or ACES - which basically have the same structure but different rates - is more

responsive to individual field profitability than under any gross structure Gaffney Cline has seen for this. He also said that if one is able to put greater progressivity into the system, such that higher-profitability fields are taxed at lower margins and perhaps lower-profitability ones are taxed at lower margins, this can be done by changing the slope and the progressivity.

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MR. RUGGIERO turned attention to slides at the beginning of the handout, noting the slides had been presented out of order. He said for slide 2, "Topics," they'd already discussed the bottom two points: the goals or drivers for putting a system together; and how a net progressive structure, from a 50,000-foot view, adapts and meets those goals, as well as how the House's recommended structure fits in to meeting those goals as Gaffney Cline had listed them. The remaining topic on slide 2 was: "What is the risk of raising state revenue share on the existing producing reservoirs?"

MR. RUGGIERO noted although they didn't have a great computer to stuff all the numbers in and provide the correct answer, they'd address questions asked in the previous Senate and House committees about where the tipping point is. How far is too far? How far is not enough?

MR. RUGGIERO explained that he didn't want to leave money on the table, but also didn't want to wake up tomorrow and notice that during the night the bags had been packed and the oil companies had left. This would be discussed. And Gaffney Cline would do what it was invited to do: Read the lines and read between the lines, taking the data presented by the industry and providing a representation of that data.

MR. RUGGIERO addressed the first point, that there is no simple answer as to how an oil company makes a decision. He noted the debate was always about the tax rate until Chevron made its presentation, drawing an analogy to the "rock, paper, scissors" game; Chevron had indicated scissors - in this case, the fiscal system, which takes a cut out of their potential profits - is trumped by rock. Chevron goes places with marginal rates of 78, 82, 85, or 90 percent because those places have the rock: a high expectation of producing billions of barrels of product.

MR. RUGGIERO suggested looking further, noting scissors would cut paper if paper were the profit. He said there was also discussion by one company that there are times when it doesn't

come down to rocks or tax rate. If the company believes it can buy barrels cheaper than it can drill for barrels, it will buy. That is acquisitions. It can buy back its own stock, which he said he believes this company has done on the upside. Thus there is a game such that, at any point in time, any one of those items can trump the other item in making a decision. It isn't a simple A, B, C. It depends on what all the factors are at the time, going forward.

MR. RUGGIERO noted he would speak about numbers and metrics specific to Alaska that go into some decision making. As for testing the tripping point, they would read between the lines, looking at the data presented to see what they could glean from it. Looked at would be everything from what the Alaska Oil and Gas Association (AOGA) put forward to what the oil companies had put forward.

MR. RUGGIERO said to the extent possible, Gaffney Cline had looked at annual reports, 10(k) filings, other federal Securities and Exchange Commission (SEC) filings, analysts' presentations, and other publicly available information, to determine whether the data presented passed the "smell test" and looked reasonable. To that extent, they'd done some modifications and moved some items around in their analyses.

MR. RUGGIERO offered the overall observation from the industry presentation that for the near term most of the potential is out of the existing reservoirs - arresting the decline from its natural 15 or 16 percent and instead making it a 6 percent or 3 percent decline. Gaffney Cline would present some related numbers. They'd also show that the economics, seen from the economics presented, are extremely profitable. This has been tested against some stress points, and Gaffney Cline would show legislators this testing. Instead of one stress point, they would stress it six different ways, showing what it does to profitability six different ways.

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SENATOR THERRIAULT asked whether it is Gaffney Cline's contention that the investment in staving off the decline is a very wise and profitable investment.

MR. RUGGIERO said yes; he'd show some numbers relating to this. He noted everything put up by AOGA had the full consensus of all the oil companies; they were saying there is a significant upside in the existing reservoirs. Agreeing with this, he noted Gaffney Cline was also saying the fiscal system should recognize

that as well. He reminded members that the first goal is to get a fair share from highly profitable scenarios. The second, at the same time, is to cause the reinvestment being talked about.

MR. RUGGIERO continued with the slide on AOGA, noting they'd said the 2006 Prudhoe Bay drilling program generated an additional 70,000 barrels a day. That equates to the fourth-largest stand-alone field, behind Alpine, Kuparuk, and Prudhoe Bay. The upside, the potential additional barrels, is significant from this program. If the decline can be arrested, 25-plus years can be added to the life of those fields, if they are encouraged to make the investments and get the additional oil out of the ground that they believe they can today, based on developments and technology.

SENATOR THERRIAULT remarked that a standard for both oil and gas production is ramping up to the peak and then tapering. He asked whether, with the 2006 investment, it was like putting a 70,000 barrel field on. He asked: If you were to treat that like a new field, would that production profile look about the same as the norm? Or does it have a quicker peaking and a more rapid decline, for instance?

MR. RUGGIERO replied that when he got to the light model demonstration he would show exactly the impact being asked about. Showing the next slide, he indicated this data came from two slides presented by BP to the House and Senate committees earlier. On the upper left was a statement showing that from 2002 to 2006 BP had a drilling program. The upper left plot shows the production BP claims results from that field reinvestment within Prudhoe Bay; the lower right shows the program from each of those years, plotting total dollars spent on the drilling program relative to the reserves BP believes it generated, or the additional production BP can generate as a result of that drilling program.

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MR. RUGGIERO said the next slide relates to a general statement by all the companies: Reinvestment is not only important, but is getting a bit more expensive. From the diagram in the lower right-hand portion of the previous slide, it can be seen that in 2002 they spent about \$255 million and generated 120 million barrels, for a per-barrel finding-and-developing cost of \$2.13. Using that same plot, the numbers can be pulled off for 2003-2006. With roughly the same amount of capital being spent in each annual drilling program, the number of barrels found as a result is declining. Therefore, the cost per barrel to find and

develop is rising. That number rises from \$2.13 to \$4.90 as a result of the 2006 drilling program.

MR. RUGGIERO addressed how that compares. He said some other numbers were put forward. It depends on what numbers are looked at, but it was stated that from the beginning until today \$19 billion in capital has been spent in Prudhoe Bay. That was to produce between 9.5 billion and 11.5 billion barrels. Hence the finding and development to date cost \$2.00 a barrel. That's an average for the period. It is climbing, now being almost \$5.00 a barrel. He indicated the company had put up another slide estimating it may go as high as \$12.00 a barrel.

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SENATOR WIELECHOWSKI asked whether it's fair to say costs haven't gone up as dramatically, when one factors in the time value of money, since \$255 million in 2002 won't be the same amount of money in 2006. He indicated he'd asked BP, and it was the actual dollars presented.

MR. RUGGIERO agreed there'd be a time-value impact, which Gaffney Cline hadn't considered in this analysis. He recalled that Pioneer had mentioned that the Lower 48 was plus or minus \$14 per barrel for finding and development. He added that today in the House, BP presented a figure of \$10 a barrel average for the United States, but he didn't know whether that just applied to oil or was for oil and gas. He noted with a lot of gas there can be much lower finding-and-development transportation costs in the Lower 48, where someone with a drilling rig on the back of a truck can go out and put a well into production for just tens of thousands of dollars per well.

MR. RUGGIERO concluded that while there are various numbers, it is getting more expensive with time. The barrels will be more technically challenged to get out of the ground, and the cost per barrel to do that will continue to rise. He emphasized that whether it is at \$4.90 for 2006 or \$12.00 later, this isn't being discussed in terms of a \$90 market.

[3:26:46 PM](#)

MR. RUGGIERO showed the next slide, a snapshot related to the economics of BP's infill drilling program. A plot shows the actual capital spent. Between BP's testimony in the House and then the Senate, he said they'd mentioned - quite fairly so - that one cannot just look at the cost to drill the wells. Instead, there is a three-times multiplier because of: the cost of the producing well, whether it is a vertical or multilateral

well; a cost associated with injection because of the secondary recovery; and an impact on facilities that would have to be modified, or else new facilities would be needed.

MR. RUGGIERO continued, indicating BP had said the real capital associated with each producing well, as shown on the right of the slide, is a 300 percent capital expenditures (CAPEX) figure. Hence the plot on the right has the same numbers on the left, but at 300 percent. As a result, it isn't a drilling program at plus or minus \$250 million a year. Rather, it is a program with all the capital required to actually get those barrels to market - \$750 million to \$800 million a year.

MR. RUGGIERO showed the next slide, explaining that Gaffney Cline had digitized that plot to determine what sort of production it yields. Shown is the combination of each year's program, stacked up. They'd said by the start of 2007 this drilling program was producing 50 percent of the barrels produced daily out there. Referring to an earlier question, he said the House version of this has production in 2002 instead of starting at zero.

MR. RUGGIERO noted the assumption he'd made was that each year's drilling program doesn't start production until the next year; thus he'd had to move something on the spreadsheet, but hadn't changed any of the underlying financials or the economic answer. But it's a different picture than shown to the House.

MR. RUGGIERO continued, saying that was stacked up until 2007 was reached. The big rise between 2006 and 2007 is the AOGA presentation that said the 2006 program generated an extra 70,000 barrels a day, to start in 2007. Shown on the slide is a decline. To Senator Therriault's earlier question, he said they talk about the field being on a natural 15 percent decline. However, he'd show in a few minutes that if this type of production were run from that point - assuming no further spending - on a 15 percent decline, it would create more barrels than they say they developed as part of that drilling program.

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CHAIR FRENCH said he thought the discussion was about the extra 70,000 barrels of oil a day from the 2006 drilling program.

MR. RUGGIERO returned attention to the plot, noting they'd said for each of these years' drilling programs an associated amount of production results.

CHAIR FRENCH surmised that is per year.

MR. RUGGIERO concurred.

CHAIR FRENCH asked whether that totals up to the incremental production just shown.

MR. RUGGIERO affirmed that. If he takes 2003, for example, that flows through. Although declining, it still exists in 2007.

CHAIR FRENCH surmised the 70,000 was just for 2006.

MR. RUGGIERO said the 2006 program, because the year had just been started, was shown on the slide as a small sliver. There was no way to pull into the economics the results of the 2006 program. Thus they'd relied on the statement in the AOGA presentation that the 2006 drilling program in Prudhoe Bay produced an additional 70,000 barrels a day. If he were to take each of the colored parts shown and then go forward, he'd just be adding the colored parts from each of those. When he gets to the end of 2006, there is a big jump. He'd put in the 70,000 barrels a day that AOGA had said BP, as the operator, was able to develop with its 2006 drilling program.

MR. RUGGIERO asked: Why might those results be a little better than previously? He indicated this is where the company started its multilateral or horizontal-completion drilling program. As they stated, those wells produce more per overall well than the traditional vertical well. So it's conceivable that the 2006 results are a little better than they were for a couple of the previous years.

MR. RUGGIERO further explained that to do the economic analysis, Gaffney Cline had then made an assumption about what those rates would be over time, beyond the extent of the actual production; they'd forecast what each well would do in the drilling program. He indicated although the company had talked about a 16 percent decline per year in that rate - which would have been a line that he depicted on the slide - Gaffney Cline had actually used a 25 percent decline.

CHAIR FRENCH asked why.

MR. RUGGIERO answered he'd not wanted to be accused that the economics were inflated because there were more barrels in there than the barrels the company said it was able to produce as part of those drilling programs.

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MR. RUGGIERO continued, saying the decline rate used here was to ensure that, in each individual year, Gaffney Cline didn't show more barrels in the system than those shown by the company itself. He emphasized wanting to ensure that the economics shown can be tested, reproduced, stressed, and challenged.

CHAIR FRENCH asked whether the red graph depicts a 25 percent decline curve, assuming no future investment or production from that investment.

MR. RUGGIERO affirmed that. He added that Gaffney Cline looked at this infill or incremental drilling as a stand-alone project, year by year. With that capital and that production curve, they looked at the company's after-tax rate of return on that investment. As this produces through time, Gaffney Cline estimated - based on this 300 percent CAPEX - that the company gets more than a 60 percent rate of return on the investment in those infill drilling programs.

MR. RUGGIERO, in response to Senator Therriault, said the price assumptions were based on what they actually reported as realized in 2003-2006. Starting with 2007, he believed \$80 was used; he'd have to look at the model. That would be tested in a number of areas. He'd make sure he'd matched the right price.

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MR. RUGGIERO showed the next slide, "BP Prudhoe Bay: Oil Company NPV." It plotted the net present value (NPV) discounted at 15 percent, which he said is more representative of the hurdle rate used to run economics within a lot of oil companies. If he takes five years of investment between \$750 million and \$800 million a year, this is about \$3.7 billion to \$3.8 billion they've invested. This says that through 2011, on a discounted basis, they'll generate another \$3.7 billion above their costs.

MR. RUGGIERO emphasized that this is a fully after-tax number. Gaffney Cline has run this through PPT, property tax, royalty, income tax, tax credits, and so forth, but didn't try to run all the early years under ELF. Rather, everything was run under PPT. He said he didn't want to get ELF wrong, but since everyone says PPT generates more tax than ELF did, by running the prior years under PPT instead of ELF, it says the government take would have been higher and the economics would have come down from what they'd have been under ELF. This still says it's a highly profitable project, he concluded.

SENATOR THERRIAULT asked why the 15 percent discount rate was used.

MR. RUGGIERO replied it was just a choice, what he believed to be a more traditional discount rate, looked at on an NPV basis by the oil companies. In order to come to the conclusion that this is extremely profitable, this would be stressed in many directions. He'd put in the 300 percent CAPEX, for instance, and had doubled the "point forward" operating expenditures (OPEX). Because Alaska is 99 out of 103 and thus has a higher hurdle rate, he'd put in a 25 percent discount rate. He'd also dropped the price to \$50.

CHAIR FRENCH surmised this is a gross price, not net.

MR. RUGGIERO agreed, saying it means their net margin comes down. In going from his starting price down to this price, the only thing he was taking out was margin. He hadn't taken out any costs, for example. Still, under this scenario, it remains highly profitable.

MR. RUGGIERO showed a slide labeled "Overly Stressed Case." He noted it shows the CAPEX is up to three times and the production is exactly what they reported it to be, with the 25 percent decline. Still, overall it ends up being plus or minus a 50 percent rate of return project, although it's on an NPV basis, remembering this is at 25 percent discounting. But this is still at a billion-dollar NPV, even with a hurdle rate of a 25 percent discount on those cash flows. He'd stressed it multiple directions. It is highly economic.

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SENATOR WIELECHOWSKI asked: If we implement ACES or something higher, will the investment leave Alaska? Do some places commonly have rates of return of 50 to 60 percent?

MR. RUGGIERO replied he believes this infill drilling program would rank very high in the portfolio of many companies. The benefit of being able to develop many billions of barrels ultimately - continuing this program over time - is significant and people would invest in it.

[3:40:05 PM](#)

MR. RUGGIERO noted he'd just provided some printouts from a live model. He'd taken the important parameters in this drilling program such as CAPEX, OPEX, production, discount rate, royalty

rate, base rate on the net tax, progressivity factor on the net tax, and price. Based on questions yesterday, he'd added that in for the same situation - in this case, an NPV of around \$3 billion for the oil company - the undiscounted take for the State of Alaska is just shy of \$11 billion. Running the state and company cash flows will give a sense of the split after costs are recovered.

SENATOR THERRIAULT asked what the progressivity trigger is.

MR. RUGGIERO replied the progressivity trigger is PPT, a \$40 margin. The control sheet shows actual production off the digitized plot provided by BP. For 2007 and beyond, he'd stressed that to a decline rate of 25 percent to make sure he wasn't showing more barrels produced than what BP said it developed. A typical cash-flow model was run to see the economics of this investment. It starts with CAPEX. The prices are actual prices in the system realized during those years; the price going forward could be manipulated as he went back to the control page. As a surrogate, it uses costs ConocoPhillips reported in its annual report; this is because ConocoPhillips reports Alaska separately and thus Gaffney Cline was able to glean some data from that.

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MR. RUGGIERO indicated all the normal steps of calculating revenues, royalties, costs per barrel, CAPEX, and so forth were done. He apologized that it says "ACES" instead of "PPT," since it was run as PPT. It could be run as anything that is a net system, he noted. He indicated this shows progressivity impacts and corporate income tax impacts. The NPVs and internal rates of return (IRRs) are then calculated. He said this is the technical mumbo-jumbo that goes into an economic model. He emphasized that all the pieces were put in there.

CHAIR FRENCH asked how the credit aspects of capital investments are estimated.

MR. RUGGIERO replied Gaffney Cline put it in as 20 percent in the year spent. For each of these drilling programs, the investment occurs in year one, but production doesn't start until year two. In reality, they'll start producing things as fast as they drill, because drilling program is multiple wells. Gaffney Cline didn't do that, however, but stressed the model, putting all the production into year two before it started. He explained that Gaffney Cline has the ability to change any of the parameters shown in response to a question from legislators.

MR. RUGGIERO said furthermore, each program shown from 2002-2006 has a checkbox. Removing the checkbox from a particular year removes that year's drilling program. This allows looking at it on an aggregated basis and also by individual year. For instance, in 2003 they hadn't drilled thinking it would be an \$80 or \$90 world, but thought the price might be closer to \$40. One can go back and see that even in 2002, with rapidly declining production, at a 15 percent discount rate it still generates an NPV of \$500 million. That's above their costs. He asked the committee to stress this drilling program with any parameters they chose.

SENATOR THERRIAULT suggested isolating a particular year, running the price down to what the company might have made its investment decision on, as far as a forward-looking price.

MR. RUGGIERO indicated he was running this scenario. If in 2002 the company thought there'd be \$40 oil, that still generates a plus or minus \$300 million NPV at 15 percent discounting. This is at the prices they actually realized, because Gaffney Cline had put in actual prices through 2006. It's only the data from 2007 that they'd have changed back down to \$40. On a rate-of-return basis, that's roughly a 28 percent return on the investment, even at the expected price of \$40.

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SENATOR WIELECHOWSKI requested a real-life projection with realistic variables with respect to CAPEX, OPEX, discount rate, and an oil price of perhaps \$50 or \$60. He said a CAPEX multiplier of 300 percent seems high, for example, and asked what would be a reasonable projection.

MR. RUGGIERO replied he'd stick with the 300 percent, which he believes is realistic because he thinks the numbers generated are plus or minus the total capital program spent in that area. He said this is burdening these individual drilling programs with all the CAPEX that they're spending out there.

SENATOR WIELECHOWSKI asked whether Mr. Ruggiero believes the CAPEX, OPEX, discount rate, and multiplier are realistic, as well as the royalties. He then suggested doing a net tax rate of 25. He asked how to get the progressivity to where Mr. Ruggiero was suggesting, but he acknowledged that Mr. Ruggiero wasn't suggesting specific numbers.

MR. RUGGIERO responded that this program doesn't generate a progressivity curve that's ever-changing. This generates just a straight line. What could be done, however, is to increase the progressivity slope, which would get it to the maximum rate faster. It still would give an example of the impact of the progressivity, for example, looking at the entire program, using a \$60 price and a starting base tax rate of 25 percent, even taking it up and saying costs will be 200 percent of what's predicted.

MR. RUGGIERO continued, saying he was working off the reported data from 2006. Not only would he have a 10 percent annual escalator on costs, but now he'd have doubled the total costs. If he now raised the progressivity factor to 0.6, they'd still make a substantial return on their investment. The rate of return would have come down a little, but not much.

SENATOR WIELECHOWSKI asked where the progressivity starts in this scenario.

MR. RUGGIERO replied it all kicks off at the same PPT, \$40.

SENATOR WIELECHOWSKI asked about lowering it to \$30.

MR. RUGGIERO said he had nine things up there that he could change, but this was asking for a tenth. He wasn't sure he could do it quickly.

SENATOR WIELECHOWSKI asked whether Mr. Ruggiero believed lowering it to \$30 would have a big impact. He offered his understanding that ACES lowers it to \$30.

AN UNIDENTIFIED SPEAKER said, "The margin."

[3:50:41 PM](#)

MR. GEORGE replied on this particular one, probably not. On a broader range of things, it would have a greater impact.

CHAIR FRENCH asked: Can't you achieve the same result by lowering the price \$10 roughly?

MR. RUGGIERO answered that roughly, yes, because that would change the margin. Following a brief back-and-forth discussion, he said this is calculating the net margin per barrel. When it's below \$30 or less, no progressivity comes into play. In response to Chair French, he said at this price there is no progressivity.

CHAIR FRENCH noted it was at a net rate of 25 percent, looking forward five years to 2012.

MR. RUGGIERO concurred.

CHAIR FRENCH surmised the state would get \$6 billion and the industry \$2.5 billion.

MR. RUGGIERO indicated the industry would get about \$1.7 billion "NPV 15." Pointing to an unspecified number, he said this is the state take, also discounted at 15 percent. That means, considering the time value of money, that \$6 billion the state would take over the entire period, reducing it to the same terms as the oil companies, is worth \$2.5 billion. Roughly, what is shown is that of the total amount available as profit, the state would take plus or minus 60 percent.

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SENATOR THERRIAULT offered his understanding that the CAPEX multiplier was at 300 percent not because Gaffney Cline expected costs to rise that much, but because it captured both the drilling costs and all of the capital infrastructure.

MR. RUGGIERO clarified that he'd wanted to be fair and to use BP's testimony that there actually are injectors and other facilities associated with it, and that it would be improper to take just the drilling costs. Thus he was using the 300 percent as his base case on the CAPEX.

SENATOR THERRIAULT acknowledged it isn't an exact enough science to pin down every dollar, but he wanted to know what the industry representatives might say about this tomorrow.

MR. RUGGIERO replied he'd been hoping BP would respond in its presentation to the House today. However, there was no discussion of BP's infill drilling program in the paperwork provided today. He said while sitting in the audience he'd done some quick "back of the envelope" numbers. The reason he'd done the analysis and built the model is it appeared to be a lot more productive than it was. He'd had some numbers that indicated this to be more economic than here, with a two-month payout, and after some negative feedback about that he'd tweaked it.

MR. RUGGIERO added that if he has it wrong, then the very people who can provide the right numbers will come before the committee. Members can ask BP. If the program isn't this

profitable, if Gaffney Cline has missed some base costs that need to be absorbed, then BP can come forward with real numbers. He noted this was floated to a few people within the government to ensure that nothing major or glaring was absent from the model and that no numbers appeared to be far outside what they believed to be reasonable for costs, investment, and the like.

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SENATOR WIELECHOWSKI asked whether this was shown to the legislative consultants and whether they had any comments.

STEVE PORTER, Consultant to the Legislative Budget & Audit Committee, told members that a lot of time had been spent on this model recently. One question that needs to be asked, to add context, relates to what this model addresses. Does it address infill for legacy fields? Does it address heavy oil differently from legacy fields? Does it address exploration? He opined that this is an excellent model for understanding what is going on.

MR. RUGGIERO indicated Gaffney Cline had spent several hours with the two legislative consultants going over it because they have a lot more experience in Alaska and have seen the numbers going back and forth. Gaffney Cline also had used many people as a sounding board. He reiterated that the infill drilling program is extremely economical. Even if there is a highly progressive tax structure put in place, he doesn't believe the investment in the infill drilling will fall off. If it does, they've got to have some barn-burner projects around the world.

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MR. PORTER noted he was present during the vast majority of Gaffney Cline's previous testimony, and had talked a lot with them about the details. He said he wouldn't talk for Dan Dickinson, but personally agreed with almost everything they'd said on the net issues. He added that this is an infill drilling program analysis. It isn't as clean for heavy oil because the numbers are slightly different, and for exploration the risk factors are different. However, the "net world" really does help out the heavy oils, and it helps exploration in terms of how CAPEX is placed in the overall tax scheme.

CHAIR FRENCH requested a definition of net world analysis.

MR. PORTER responded that taxing on the net helps put the West Saks of the world in competition with the legacy field investments of the world. In terms of net versus gross, when

taking the net cash flow relationship, West Sak is being taxed at \$30 cash flow; if its lifting cost is \$40, it doesn't pay a windfall profits tax until it gets to \$70. At Prudhoe Bay, however, if the lifting cost is \$20, that point is substantially less.

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CHAIR FRENCH said this raises the issue of whether there can be two tax systems: a more aggressive tax system on legacy fields that will be going through an infill drilling program, and a lighter tax system on West Sak. It strikes him that the biggest complication is that they're both located in the same place. They'll likely be produced using the same flow lines and production facilities, if not through the exact same well bore.

MR. RUGGIERO noted that legislators would hear all sorts of complexities to be able to separate these and allocate facility costs and investment. He expressed hope that from Mr. George's presentation they'd glean the following: With a single, highly progressive system the state could get such differentiation - which is desired for investment in something like West Sak - without needing two separate systems.

CHAIR FRENCH surmised, "Because it nets it all out against itself."

MR. GEORGE said it takes account of that in the way the margin works and the way companies will look at incremental further investments in the future.

MR. PORTER added one more piece, indicating a Gaffney Cline slide had talked about base tax versus progressivity, how actually keeping the base tax low and progressivity higher helps the West Saks of the world and makes more sense than raising the base tax. He suggested this be addressed when "moving knobs around."

[4:02:27 PM](#)

MR. RUGGIERO noted this is part of what he and Mr. George wanted to address at the end.

SENATOR THERRIAULT asked: Do you think this system is sensitive and adjustable enough to not require a differential tax system with respect to the legacy fields?

MR. RUGGIERO opined that a single system can be designed to address the goals discussed earlier: getting high marginal tax

rates when there are high-profitability fields; at the same time, encouraging reinvestment in those same legacy areas; and encouraging new investments by new entrants in new areas. Every system will have some shortcomings. But based on the goals that he believes Alaska is trying to achieve today and in the near term, and possibly in the long term, he believes a system can be put together that works well and meets all those goals.

SENATOR THERRIAULT noted the presentation had discussed infill drilling in legacy fields, which he said is where the real money is for the state. However, he also wanted to be sensitive to new entrants and new exploration, away from the infrastructure, and thus he'd have to think about how it works for them.

MR. GEORGE replied he believes within the general structure discussed for PPT, even changing the progressivity, that system does differentiate between investments of different profitability. Thus the decision may be more about how much to tax the more highly profitable end or the less profitable end. As for new entrants, there is the capital credits issue to help them in the initial period before production. If they're going into production with their investments, then the taxation levels will be commensurate with the profitability of that development. This is all within a single system.

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DAN DICKINSON, Consultant to the Legislative Budget & Audit Committee, followed up on Mr. Porter's comments. He clarified that although they'd spent several hours with this model and earlier data presented by Mr. George, they weren't specifically doing a technical run-through of the model to make sure the nuts and bolts were working.

SENATOR HUGGINS said he had no reason to doubt the model, but didn't know the probability of error. He urged caution with respect to investment strategies.

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CHAIR FRENCH concurred, noting this is the first he'd seen the inner workings of the system. He asked for a run-through involving a tax rate of 25 percent, with progressivity at 0.5 on \$40 net, going forward at a price of \$60.

MR. RUGGIERO replied they were looking at the entirety of the five-year drilling program, in aggregate, running CAPEX at three times the reported drilling amount spent; OPEX at 200 percent of past projections; royalty unchanged; a base rate of 25 percent;

and progressivity at 0.5 percent at a \$60 price. What was shown here, with the oil company NPV at a 15 percent discount rate, was that the company's return on this investment would be over \$2 billion. The internal rate of return for the whole project would be 56 percent.

MR. RUGGIERO, in response to Senator Therriault, showed the higher overall government share, noting the federal income tax share had then been subtracted, leaving the Alaska share.

SENATOR THERRIAULT offered a general rule of thumb: If there is an additional take of \$100 for the State of Alaska, \$33 came out of the federal treasury, not the corporate treasury.

MR. RUGGIERO agreed.

SENATOR WIELECHOWSKI said there'd been a little bit of concern from the legislative consultants about the model as far as the exploration and heavy oil development. He asked whether that can be adjusted by adjusting the CAPEX and OPEX multipliers.

MR. RUGGIERO replied that he wouldn't even want to start to use this model to predict heavy oil development, gas development, and so on. This is specifically a model of the infill drilling program in the existing fields. He wouldn't even know what cost structure would be best, for instance, and there are other parameters including the rate of success and so forth. All those would change. It would be speculation at this point.

MR. RUGGIERO added that the reason he thinks this model is important is that AOGA, BP, ConocoPhillips, and Chevron all said the significant value - over 70 percent of the value to the state - is infill drilling in the existing units. This model represents the economics for 70 percent of the potential they say exists. Thus he believes the model is valid to look at and is a very helpful tool for legislators in making decisions.

CHAIR FRENCH characterized it as the center of the target.

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SENATOR WIELECHOWSKI recalled discussion about 20 billion barrels of heavy oil and encouraging exploration to try to hit other big fields outside. He said if the effort is to make one-size-fits-all legislation, at some point there should be a narrower scope as to how it impacts those other fields. He suggested that may be an issue for the Senate Finance Committee.

MR. RUGGIERO replied that's why Mr. George had presented the portion he had. Although it took a one-year snapshot, it shows how on a purely net system - using the progressivity that exists now - the more the progressivity goes up, the more incentivized existing operators will be to spend dollars back into those fields, into this type of very economical investment.

CHAIR FRENCH asked Mr. Ruggiero to run a scenario with a 30 percent tax rate.

MR. RUGGIERO did so and then said it was roughly \$1.85 billion. The state, undiscounted, was at \$8.1 billion. He suggested looking at just one number and changing back and forth. At a 25 percent starting rate, looking at the state on an undiscounted basis, he said its take would be \$7.5 billion. If they start with that \$7.5 billion and go up to 30 percent, it increases to \$8.1 billion - about \$600 million. He then returned to the 25 percent starting point, remarked, "There's my twenty twenty-five," and said at 30 percent it is "eighteen fifty-five." Thus he said \$200 million was lost in NPV, the state went up \$600 million, and the federal government was "plus or minus the net loser in this."

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CHAIR FRENCH suggested it was closer to \$170 million. He noted some would say this is an enormous tax increase. However, it's a 10 percent change in their total take.

MR. RUGGIERO specified that on a discounted basis, it made less than a 10 percent change in their net present value.

CHAIR FRENCH, in response to Senator Therriault, asked that Gaffney Cline bring the model back tomorrow morning so AOGA representatives could see it and perhaps comment.

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SENATOR McGUIRE asked: If we end up with this kind of tax rate and this amount of money coming into the state coffers, are we going to have a whole section on how we're going to save that money and not spend it all in the next five years on our drilling program, so to speak?

CHAIR FRENCH replied, "Funny you should ask." He inquired whether Gaffney Cline had further information for the committee.

MR. RUGGIERO said yes. He referred back to the information from BP's slide and its discussion of the overall North Slope natural

decline of 15 percent, with 1.3 billion barrels that could be produced for roughly a \$5 billion investment. If the decline were reduced to 6 percent, they could generate an additional 3.9 barrels for \$25 billion total spent. A 3 percent decline would generate an additional 7.5 billion barrels for \$70 billion spent. He surmised this was presented to show that a significant potential still exists in the existing fields, urging legislators, whatever system they devise, to incentivize investment in the existing fields.

MR. RUGGIERO explained that Gaffney Cline had built a generic North Slope model using these costs and barrels that BP said could be generated. The assumption used was that BP's barrel figures would be produced barrels. The effort was to figure out the economics of BP's investment in this program.

MR. RUGGIERO highlighted one correction in the slides BP presented to the House today: a footnote disavowing any knowledge that those are its cost numbers, instead saying those come from DOR. He said legislators would have an opportunity to ask BP why it isn't providing what it will really cost. He mentioned BP's expectation to "develop these significant barrels from the existing assets that they're operating on your behalf."

MR. RUGGIERO noted it was run at \$80 a barrel. The numbers would be small if it went lower, but this wasn't going to be run live because the numbers were very high. Presented would be "NPV 10" because a lot of numbers in the work seen have been presented on this basis. Thus he'd switched from a discount of 15 in the previous model to 10 here. It was run on an undiscounted basis, and then the NPV was generated on a per-barrel basis. This is the after-tax profit, run under PPT, not ACES; it is for the existing PPT, with a "base rate trigger point progressivity."

MR. RUGGIERO said for the 15 percent decline case, there is "15 billion to 20 billion NPV 10." This has a lot of room for costs to go up and market price to come down, and there is a lot of margin in the existing fields. There is a \$22 billion to \$27 billion take on cash flow after all taxes on an undiscounted basis. On a per-barrel basis, it's \$15-20 a barrel.

MR. RUGGIERO turned to the 6 percent decline case, noting it jumps from the \$15-20 billion to \$30-40 billion on a discounted basis and to \$55-75 billion on an undiscounted basis. However, the range per barrel doesn't change much, staying in the \$14-19 range, close to the previous \$15-20 range on a per-barrel basis.

MR. RUGGIERO presented the final set of numbers, noting on a discounted basis it doesn't go up that much, rising from the \$30-40 billion up to roughly \$35-45 billion. This is because the additional barrels produced under the 3 percent decline are far in the future. Thus the discounting doesn't add much value to those barrels when looking at 8-10 percent discounting. However, if it is undiscounted, those barrels do come into play because the oil company take is between \$90 billion and \$125 billion if they actually operate the North Slope fields on a 3 percent decline.

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CHAIR FRENCH asked about the 6 percent decline. He asked whether that means 3.9 billion barrels will be produced, costing the industry \$25 billion according to their numbers, although now they're saying they've switched back to DOR numbers.

MR. RUGGIERO specified that they're saying this \$25 billion is a DOR number.

CHAIR FRENCH said, assuming that's right, it discounts back to a \$30 billion to \$40 billion take for them at a 10 percent discount rate. He asked whether Gaffney Cline had run an internal rate of return on that, and what was arrived at.

MR. GEORGE answered that in the simple model they'd done, it can't really be calculated because it starts with the fact that they're already producing 750,000 a day.

The committee took an at-ease from [4:24:31 PM](#) to [4:42:41 PM](#).

MR. RUGGIERO indicated two slides ago there was a 250,000-barrel-a-day abandonment shown. Gaffney Cline had tried to fit all the barrels BP said could be produced with the additional investment, and had cut it off at 250,000 barrels a day. Thus the rates over time and how they'd gotten there relate to trying to match the number of barrels BP presented as being able to be produced at those different decline rates for that incremental investment. Gaffney Cline had then asked what happens if there is additional development out there, additional barrels that keep the pipeline going to the extent that these fields could actually be run down to a lower abandonment rate. Instead of 250,000 barrels a day, therefore, they could take it down to 200,000 or 150,000 or 100,000.

MR. RUGGIERO explained that by taking the top-end number, the 3 percent decline rate, and changing the abandonment rate to 200,000 barrels a day, one gets another 1.2 billion barrels. By changing it from 250,000 to 150,000, one gets 2.3 billion additional barrels. At the extreme, by changing it from 250,000 to 100,000, almost another 4 billion barrels can be produced from those fields.

SENATOR THERRIAULT asked what the abandonment rate number across the bottom of the slide means.

MR. GEORGE answered that plus or minus 750,000 barrels a day are being produced. If there is a 15 percent, 6 percent, or 3 percent decline, producing out the volumes on the BP slide - 1.3 billion, 3.9 billion, and 7.5 billion - and retaining the decline rate, those volumes are still producing at plus or minus 250,000 barrels a day.

MR. GEORGE said that isn't out of line with what was advised with respect to mechanical issues associated with keeping TAPS running, under current consideration at least. Thus Gaffney Cline had cut it off at that point. That said, under current oil price and operating cost conditions, they're doing what in reality wouldn't occur: abandoning with a cash flow each year of \$1 billion to \$2 billion. Thus there is a circularity in the argument that isn't very clear.

MR. GEORGE added that Gaffney Cline did say, however, that they'd continue the production profile declining away. If they were able to keep that lower production profile flowing through the pipeline, if the abandonment could be gotten down to 200,000 barrels a day or 150,000 or 100,000, there'd be 2-3 billion barrels more produced out of there. He said there is a significant prize in the abandonment issue, which is really the message from it.

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CHAIR FRENCH surmised that this doesn't take into account the capital costs necessary to resize the pipe, insert choke points, go to a different form of pumping, and so forth.

MR. GEORGE replied no, they hadn't done economics. He'd used the word "prize" because there'd be a lot of barrels still in there. Obviously, the true economics would have to be figured, including what capital would have to be spent or how to get around it via other means. As Mr. Ruggiero had said, if one were able to produce enough things outside the conceived

portfolio that gives a 3 percent decline, which would also keep the rate up, then the portfolio that gives the decline would continue to produce some extra barrels.

MR. RUGGIERO showed the summary slide on this point, noting Gaffney Cline agrees there is a significant upside for the State of Alaska out of the existing North Slope fields. Based on their analysis, both on the infill drilling program and the representation of what BP put forth as arresting the decline rate, they believe considerable positive economics are associated with that investment. They'd also taken a quick look at something important to oil companies and their stock price: the number of barrels they're able to book as proved reserves.

MR. RUGGIERO explained that if the production volumes associated between the 15 percent natural field decline and either the 6 percent or 3 percent curve have already been booked as proved reserves, then to not do the investments - to not produce those barrels - could result in a significant write-down of reserves.

MR. RUGGIERO noted Gaffney Cline had looked at ConocoPhillips's annual report. There are some 1.5 billion barrels of reserves listed for Alaska. If the percentage ownership of Kuparuk and Prudhoe Bay is compared with the 1.5 billion, Gaffney Cline doesn't know exactly, but it appears the number of barrels associated with the 6 percent decline rate have been booked as proved reserves, at least in the case of one of the companies operating there. He said that is something that can be asked as to what decline rate is represented by the number of reserves they've booked and shown in the annual report.

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MR. GEORGE added that for reporting reserves to the SEC, the only category SEC recognizes is "proved." The standard that must be applied in booking reserves is "reasonable certainty." Although Gaffney Cline doesn't audit ConocoPhillips's reserves, it audits a number of companies and is familiar with those standards. Inherent in the standard of "reasonable certainty" is having a high degree of confidence that the investments will continue in order to produce the barrels that are being added up and put in there as a reserves statement.

MR. GEORGE said the implication is this: With ConocoPhillips booking about 1.5 billion barrels of oil and natural gas liquids, it is reasonably certain it will be producing them. This means the company is reasonably certain it'll be making the capital investments necessary to produce them.

MR. GEORGE went on to say that's a plus-or-minus 6 percent decline rate, if Gaffney Cline has interpreted everything correctly, and will be a minimum level of expectation. The standard of reasonable certainty is actually below the level companies typically expect to get. Every year, companies write down reserves and add new ones, for instance. But the trend is that proved reserves will, on a portfolio basis, generally rise over a period of time as one starts producing. Thus the expectation Gaffney Cline has for this is, in fact, that there's a reasonable standard of certainty around the 6 percent, and probably an expectation that is some number higher than that.

CHAIR FRENCH thanked the testifiers, saying the presentation was illuminating, some of the numbers were eye-popping, and it went a long way towards debunking many of the myths seen in media advertisements about the devastating effects of modest tax increases on the oil industry. He said he would be encouraging the commissioner to make Gaffney Cline's model available to the public in order that folks can see for themselves just what's at stake for the future of at least the legacy fields, Prudhoe Bay and Kuparuk.

[4:52:47 PM](#)

SENATOR THERRIAULT requested discussion about a suggestion that has been heard, that companies will base part of their investment decisions on the fiscal stability of the governmental regime they operate in. He noted he'd told the press today that he doesn't personally believe it is a make-or-break situation, but it could be one thing that gets factored in. He said he wasn't sure how that would be built into a model, but asked for comments from boardroom experience, for example.

MR. RUGGIERO replied that going back a decade or so, looking at investments in different places around the world, he'd found a number of times that risks were translated into higher discount rates as one means of evaluating an investment in one area versus another. He recalled that ConocoPhillips, or perhaps Chevron, had put up a list of seven projects, not revealing the discount rate but saying there was a hurdle rate that would have to be overcome in order to make an investment. If it were below that line, likely the investment wouldn't be made, but serious consideration would be given to something above that line.

MR. RUGGIERO noted one way a company might choose to do its evaluation is to just change the discount rate. That's why Gaffney Cline put into its model the ability to run it up to a

20-25 percent discount rate, this being a severe hurdle for a place that a company believes has some risk associated with it.

SENATOR THERRIAULT recalled one thing Dr. Pedro van Meurs had suggested, which he does with other areas. When they change their system or believe they aren't getting the level of investment they should, they try to "rebrand" it, getting the message out to additional players about what advantage one's system offers to an investor, for example.

SENATOR THERRIAULT asked: If we modify PPT, getting in place what the legislature believes is workable and a robust system that can survive the ups and downs of prices, do you think that is enough of a departure that the State of Alaska needs to figure out a way to get the word out? He said this should be an attractive system.

MR. RUGGIERO answered that he believes once legislation is passed that defines the fiscal policy for Alaska, it will be important to get out a clear message that shows the benefits, both for new entrants and new investment as well as for existing players. Otherwise, there's an opportunity for others to not fully understand the process, not fully understand the climate in Alaska, and make observations from afar. The state needs to get something out that really explains how the Alaska system works and why companies should be interested in coming to Alaska to invest.

MR. GEORGE concurred. He said making things easy for people in the investment-decision process is part and parcel of the overall resource-management program for any state or country. This includes making sure people don't have misunderstandings and making information and examples readily available. When Gaffney Cline works with countries on new license rounds, typically they're starting with a country that has a major change because of opening up the industry, for example. In that case, Gaffney Cline does "road shows" with them.

MR. GEORGE said while he wasn't suggesting Alaska needs to do this, part of the process is educating the industry as to what is really there, how it is seen, how it works, and so forth. The philosophy is that within the companies, they have a selling process to do. They must sell management on the fact that Alaska is a good place to make investments. If that is made easy for the companies, it is easy for them to sell it to management. Just doing something with the fiscal system is an

important component, but it's only one component of an overall resource-management policy.

The committee took an at-ease from [4:58:26 PM](#) to [4:58:47 PM](#).

CHAIR FRENCH noted tomorrow the committee would hear from legislative consultants about gross versus net systems, and then would hear from the industry in response to today's presentation. Some legal issues as well as an issue related to information sharing also would be addressed. He expressed hope that the information-gathering portion of the committee process would conclude tomorrow.

There being no further business to come before the committee, Chair French adjourned the Senate Judiciary Standing Committee meeting at [4:59:17 PM](#).