

Alaska Oil and Gas Association



121 W. Fireweed Lane, Suite 207
Anchorage, Alaska 99503-2035
Phone: (907) 272-1481 Fax: (907) 279-8114

TESTIMONY OF THE
ALASKA OIL AND GAS ASSOCIATION
TO THE HOUSE FINANCE COMMITTEE
REGARDING CSHB 2001(RES)

November 8, 2007

Mr. Chairman and Members of the Committee:

My name is Marilyn Crockett and I am the Executive Director of the Alaska Oil and Gas Association (“AOGA”). AOGA is the trade association for the oil and gas industry in Alaska. Our 17 members account for the majority of oil and gas exploration, development, production, transportation, refining and marketing activities in the state. Our membership includes Agrium, Alyeska Pipeline Service Co., and Alaska’s instate refiners. It includes companies new to this state, hoping for the opportunity to explore. It includes companies that are active today and do not yet have production (but hope to in the future). And it includes companies that are producing today and have been producing here for years.

As one of its important functions, AOGA provides a forum for its members to consider regulatory and legislative proposals, and to reach agreement about industry positions on those proposals. Normally, to establish an AOGA position, a 5/6 vote is required. This ensures that, when AOGA voices a position, regulators and legislators can be assured that that position is the position of the overwhelming majority of Alaska’s oil and gas industry.

But on tax issues, AOGA takes this approval process to the highest level. We take positions about taxes only if there is complete consensus in our Tax Committee about what is to be said. Every member receives a copy of each proposed statement on taxes while it is still only in draft form, and if any of them objects to something in a proposed statement, either that portion of the statement is rewritten to satisfy the objection, or else it is deleted. My testimony today has been developed and approved under this principle, with no dissent.

Throughout this special legislative session, individual companies have presented their views based on their operations and the impact of the proposed legislation to their individual companies. The role for AOGA is obviously different, and we have focused our testimony on two key areas.

First, we've strived to put into perspective the critical importance of continued and future industry investment needed to address the most significant issue facing Alaska's future—declining production to the State of Alaska.

Second, through AOGA's Tax Committee, we've provided very specific comments on the numerous technical components of the versions of the legislation before each committee. We've relied heavily on the expertise and experience of our Tax Committee members who have years of experience operating within the state's tax structure. Given the release of the House Resources Committee version of HB2001 just 1½ days ago, there simply hasn't been time for us to develop the quantitative assessment of the technical components in time for this morning's hearing. We are continuing our work in this area and will submit that analysis into the record as quickly as we can for your consideration.

We've heard it said repeatedly that our industry will “game the system” to take unfair advantage of the State — even to the point, some have asserted, of improperly claiming costs for lobbying, advertising or donations to Alaskan charities, despite assurances by the Administration that those costs are not allowed under the present law and will not be tolerated on audit. Accusations of “gaming the system” implies the companies will cheat on their taxes and cheat on the way they do business, if they think they can get away with it. Not only is that against the law, it is an insult to the integrity of the thousands of honest Alaskans who work in our industry.

Second, we all probably know, or know of, individuals who “game the system” a little bit when they report and pay their own income taxes to the IRS. They might pad a deduction, or fail to include cash income they got, or fudge their tax a little in some other way. To the extent someone might do this, it is because he or she feels the odds of being audited and caught by the IRS are small enough to make it worth taking that chance. But do you know anyone who would “game the system” if the chances of being audited by the IRS were 100 percent? Of course not. Well, oil companies are audited twice. First, by each other to ensure no unnecessary or inflated costs are charged to one another when they jointly operate a field. And these audits are every bit as aggressive as the IRS in making sure no costs are improperly included in the bills they have to pay. Second, oil company returns are audited for every state tax they report and pay to the State, for every tax period. The State's present oil and gas tax auditors are smart, experienced and professionally qualified, and we expect the new ones to be hired will be equally good.

Most recently, we hear it being said that the Gaffney Kline economic model shows Alaska can safely raise the production tax far beyond PPT's current levels without jeopardizing investments for the North Slope. I'm no expert, so I left their Capex Multiplier, Opex Multiplier and Production Multiplier at 100% so I wouldn't exaggerate the model's outputs. Then, when I plugged zero in as the value of the oil, the model came up with the totally unexpected result that the producer's internal rate of return is 156 percent. This was so incredible when I saw it, let me repeat it: the model shows an internal rate of return of 156% for the producer when you set oil prices at zero. Try it yourself. And, just as amazing, it shows the State's net present value to be \$1 billion at a price of zero. So this made me wonder what the model shows if I plugged zero in as the volume of oil being produced, instead of plugging it in as the price. The model still

calculated the same wonderful internal rate of return of 156% for the producer, and the State's net present value had actually increased to \$1.3 billion. If all activity on the North Slope were so spectacularly profitable even with no production or with oil prices of zero, then the whole world would be beating a path to Alaska's door to get a piece of that action. But the whole world is not on its way here, and this plain fact proves there must be something wrong.

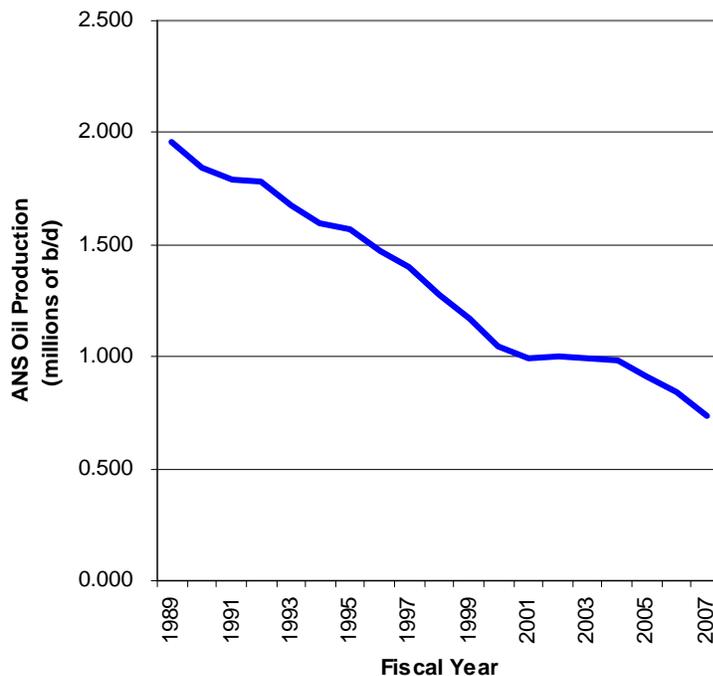
I'm not saying these surprising results prove the model is wrong. Instead, I'm saying that, if it is correct, then these results show there must be some very significant limitations as to the proper use of the model and the meaningfulness of its results. In the time since it was first demonstrated, we have repeatedly heard legislators and members of the public alike citing the model as proof that Alaska could raise its production tax rate to 50% or more of the "net value" without affecting investment. Such statements are not correct, and they reflect a serious misimpression about how the model can properly be used and about what it actually shows. In addition, the model appears to have inflated production volumes and has conveniently left out future operating and capital expenditures necessary to keep the well flowing, facility tie-in and operating costs from the rest of the infrastructure, future abandonment costs, etc. We find it very troubling that a model that is so narrow in its focus, and that considers only one type of investment opportunity in Alaska, is perpetuated to represent the total investment suite of opportunities available in Alaska.

If Alaska oil and gas opportunities are so profitable, according to the Gaffney Kline model, then why is production less than one third of its peak, and why have we only produced less than one quarter of the oil potential in Alaska? Even Pioneer and ENI have recently requested royalty relief for their developments. Doesn't that send a message on the challenges facing new explorers and future development of Alaska's resources? We believe that the focus needs to be on how to encourage the increasing investment needed to develop Alaska's resource potential. Increasing taxes will not help.

The realities that confront Alaska are these: First, nearly 90% of the discretionary money that the State is spending this fiscal year is coming from oil production, and the Department of Revenue ("DOR") predicts that oil revenues will account for over 80% of the State's unrestricted discretionary revenues through Fiscal Year 2013, and 70% or more of those revenues from FY 2014 to the end of its forecast period, FY 2017.¹ These percentages are before factoring in state revenues from a natural gas pipeline and from its associated natural gas production. Oil production has been, is today, and promises to remain the cornerstone of the finances of state government.

Second, production decline is eroding this cornerstone. On the next page is a graph showing how the average daily production rate for North Slope oil has become less and less since FY 1989. It is a historical fact that, on average from FY 1997 to FY 2007, North Slope production each year has been 6.2% less than the year before, while Cook Inlet oil production declined at an average of 8.0% a year.²

Third, it is going to cost billions and billions of dollars to slow this decline down. The North Slope's historical decline of 6% a year has occurred despite industry's investment of over

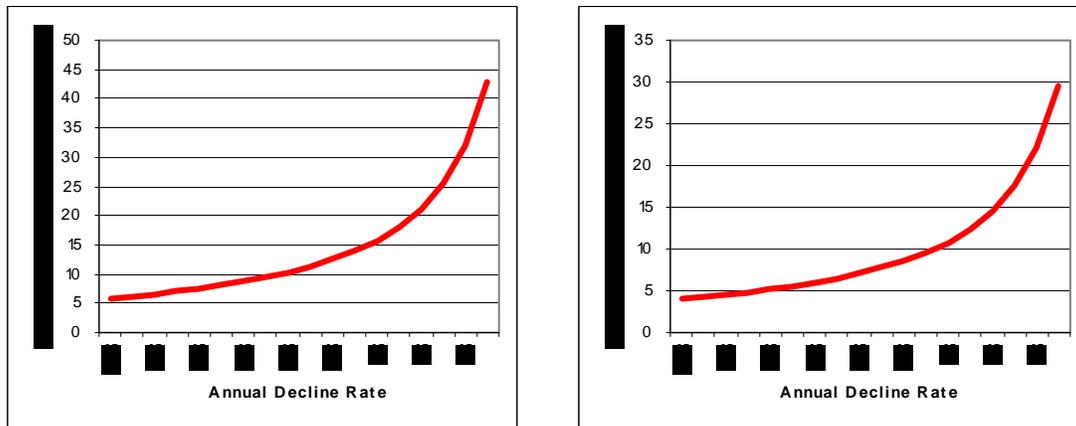


two billion dollars a year to produce more oil. Slowing the rate of decline below 6% will require each year massive increases beyond industry's already substantial, historic level of investment. We believe the investment level needs to increase to be over \$3 to \$4 billion to mitigate production decline. That is almost double the current level of investment being undertaken. Even the DOR's production forecast shows what increasing level of investment is needed. How do you attract the significant increase in investment needed? We don't believe increasing taxes will attract more investment, we believe it will slow down the investment levels needed. Increasing taxes will reduce the attractiveness of new projects and opportunities.

The difference between an ongoing decline of 6% a year and, for instance, 3% may not sound like much, but the difference for Alaska's future is profound. At present it seems the ultimate limit for North Slope oil production may be determined by the minimum capacity of TAPS to pump oil through the pipeline. The new pumps that Alyeska Pipeline Service Company is installing along the pipeline have a rated minimum capacity of 200,000 barrels a day, according to testimony cited during the House Resources Committee's hearings last week on HB 2001. However, the president of Alyeska earlier this year said publicly that the pipeline's minimum capacity with the new pumps will be about 300,000 barrels a day.*

* Whatever the mechanical threshold may actually prove to be for the new pumps being installed, it is generally expected that some new way will be found to operate TAPS at throughputs below that threshold.

Whether the new pumps' operating threshold is 200- or 300,000 barrels a day, the point is the same: There is a big difference between a 6% decline and 3% in terms of how long it would take to get to either threshold from this fiscal year's projected level of 740,000 barrels a day.³ Below are two graphs that show how big this difference is. I should emphasize that these charts are not predictions. They show only the purely mathematical results that flow from the decline rate one chooses.⁴



The chart of the left shows the time to decline from 740,000 barrels a day in FY 2007 to a 200,000-barrel-a-day threshold, the one on the right shows the time to get to 300,000 barrels a day. At a 6% rate of decline the 200,000-barrel threshold is hit in 21 years, but at a 3% decline it would take 43. If the threshold is 300,000 barrels a day, it would be hit after 15 years at 6% and 30 years at 3 percent. For either threshold, the difference between 3% decline and 6% decline gives enough additional time for almost an entire new generation of Alaskans to grow up. When AOGA says the choices facing this Legislature can affect the next generation, we mean it literally.

Fortunately for Alaska, the opportunities exist that should allow the rate of decline to be slowed below 6 percent. These opportunities are in oil and gas exploration, in the development of the huge resources of heavy and viscous oil that are already known to exist, and in the renewal and continued development of the existing fields. In our testimony before the committees previously considering this legislation, we have explained how all three kinds of investment in production will be needed if Alaska is to meet the challenge of production decline. The pattern and timing of the cash flows are different between one kind of investment and another, as is the amount of risk that each entails. But one thing is certain, they are all needed to maximize the resource recovery for Alaska.

One point that bears repeating is that the heavy and viscous oil resource lies within the areas of the so-called "legacy fields," as does the preponderance of the remaining opportunities for squeezing more "conventional" oil out of currently producing fields. The renewal of the existing fields will become increasingly important, as the existing production facilities need to be adapted, retrofitted or perhaps even replaced in order to be fit for service for the coming decades.

At the same time, in-fill drilling to drain the spaces between the existing wells, or develop new oil, offers the best promise of slowing decline in the short term. The pattern and timing of the cash flows are very different between in-fill drilling and renewal of major production facilities on the surface. So even within a classic “legacy field” without considering its resource of heavy and viscous oil, there is significant variation among the investments to be made, the economics for those investments, and the incentives for them. It would be a serious mistake to treat the “legacy fields” as economic monoliths, impervious to how they are taxed and unaffected by the incentives that may be granted them or withheld.

The last point I would like to make today is about destabilizing the investment climate here. In 2005 Governor Murkowski disregarded procedures established by regulation (15 AAC 55.027) and ordered DOR to aggregate certain fields within the Prudhoe Bay Unit, including fields with heavy oil in the West Sak formation, with the main field for ELF purposes. The result was an administratively created change in the tax law of over \$120 million a year. Last year the Legislature enacted the PPT, further increasing the production tax by over \$800 million during the last nine months of 2006 alone. And it did this retroactively back to April first of last year.

Now the Resources CS before you proposes to increase the production tax yet again, and even more massively — on the order of \$1.5 billion over even the PPT each year at \$80 real oil prices, according to DOR’s fiscal note for the Resources CS. And, once again, it being proposed to make this change retroactive, this time to the first of this year.

As I have explained, you have been allowed to have serious misimpressions about what the Gaffney Kline model really shows and about how limited its proper use actually is. These misimpressions have, in turn, led to a serious underestimating of the effects of this newest change on future investment decisions about exploration, heavy and viscous oil development, and the renewal and ongoing development of existing “conventional” fields. The laws of economics say there will be adverse impacts on investment decisions here if the House CS becomes law.

It is unfortunate that so many in the public, and even in the halls here, do not believe the warnings being given by the explorers and producers here. Perhaps even this AOGA testimony will change no one’s mind. But I have to hope it will. The future of Alaska is at stake, and we urge this Legislature to pull back to safer ground.

Thank you for giving AOGA this opportunity to testify.

ENDNOTES

¹ DOR, *Revenue Sources Book Spring 2007*, p. 17, Figure 2-13 (“Total Unrestricted General Purpose Revenue, FY 2006 and Forecasted FY 2007-2017”), column captioned “Percent From Oil”.

² When production declines at $X\%$ a year, this means the production rate after one year (P_1) is $(1 - X\%)$ of the initial production rate (P_0), or $P_1 = P_0 \times (1 - X\%)$. After the second year the production rate (P_2) is $(1 - X\%)$ of the rate after one year of production, or $P_2 = P_1 \times (1 - X\%) = [P_0 \times (1 - X\%)] \times (1 - X\%)$, which can be simplified as $P_2 = P_0 \times (1 - X\%)^2$. After 10 years of decline, the rate P_{10} is $P_0 \times (1 - X\%)^{10}$. North Slope production was 1.404 million barrels a day in FY 1997 and 740 thousand barrels a day in FY 2007, while Cook Inlet produced 37 thousand barrels a day in '97 and 16 thousand barrels a day in '07. See DOR, *Revenue Sources Book Spring 2007*, pp. 97-98. So for the last 10 years of North Slope production decline,

$$1,404,000 \times (1 - X\%)^{10} = 740,000.$$

Dividing both sides of this equation by 1,404,000 gives:

$$(1 - X\%)^{10} = 740,000/1,404,000 = 0.5271.$$

One can solve for $(1 - X\%)$ by taking the 10th root of both sides of this latter equation:

$$\sqrt[10]{(1 - X\%)^{10}} = \sqrt[10]{0.5271}, \text{ or}$$

$$(1 - X\%) = 0.9380.$$

Since $(1 - X\%)$ is the same as $1 - X\%$, one can subtract 1 from each side of the equation to get:

$$-X\% = -0.0620,$$

and then dividing both sides by -1 yields:

$$X\% = 6.20.$$

In other words, the rate of decline averaged 6.20% a year for the North Slope. The same calculations for Cook Inlet, using beginning and ending production of 37,000 and 16,000 barrels a day respectively instead of 1,404,000 and 740,000, yields an average annual decline rate of 8.0 percent.

³ DOR, *Revenue Sources Book Spring 2007*, p.

⁴ Here is the math for the 300,000-barrel-a-day threshold shown in the right-hand graph: From the analysis in Endnote 1 above, we know that for a given decline rate R , the volume of production after N years of decline is $P \times (1 - R)^N$. So for each decline rate in the table, you use that as the value of R in the formula, and then you solve for X as the value of N that gives 300,000 barrels a day as the rate. The equation for this is:

$$740,000 \times (1 - R)^X = 300,000.$$

When you take the logarithm of both sides of this equation, you get the following equation:

$$\log[740,000 \times (1 - R)^X] = \log[300,000].$$

The reason for using logarithms is that they have the property that the logarithm of two numbers being multiplied together equals the sum of the logarithms for each of them, while the logarithm of a number raised to an exponent X equals X times the logarithm of that number. Using this gives the following restatement of the prior equation:

$$\log[740,000] + X \times \log[(1 - R)] = \log[300,000].$$

Subtracting $\log[740,000]$ from both sides of the last equation yields the following:

[continued on next page]

$$X \times \log[(1 - R)] = \log[300,000] - \log[740,000].$$

Now you can solve for X by dividing both sides of the last equation by $\log[(1 - R)]$, which yields:

$$X = \frac{\log[300,000] - \log[740,000]}{\log[(1 - R)]}.$$

By plugging the decline rate of your choice into this last equation as the value of R , the value of X can be calculated by simple arithmetic and a set of logarithm tables, or with a calculator or computer that can compute logarithms. This straightforward calculation has been done for each of the decline rates shown in the right-hand graph. The equations and arithmetic are the same for the left-hand graph, except that 200,000 replaces 300,000 in the equations.