SENATE FINANCE COMMITTEE
February 16, 2010
9:01 a.m.

9:01:13 AM

CALL TO ORDER

Co-Chair Stedman called the Senate Finance Committee meeting to order at 9:13 AM.

MEMBERS PRESENT

Senator Lyman Hoffman, Co-Chair
Senator Bert Stedman, Co-Chair
Senator Charlie Huggins, Vice-Chair
Senator Johnny Ellis
Senator Dennis Egan
Senator Donny Olson
Senator Joe Thomas

MEMBERS ABSENT

None

ALSO PRESENT

Jennifer Duval, Petroleum Economist, Tax Division, Department of Revenue; Marcia Davis, Deputy Commissioner, Department of Revenue; Frank Mollie, Petroleum Engineer, Department of Revenue.

PRESENT VIA TELECONFERENCE

Kevin Banks, Director, Division of Oil and Gas, Department of Natural Resources.

SUMMARY

^Oil and Gas Production Forecast

JENNIFER DUVAL, PETROLEUM ECONOMIST, TAX DIVISION, DEPARTMENT OF REVENUE, explained that her job was to coordinate the publication of the revenue sources book. Her specific responsibility is the production forecast. She introduced the PowerPoint presentation "Oil and Gas Production Forecasting" (Copy on File). She introduced an outline for the Presentation.

- What do we forecast and why?
- Factors that affect forecast
- Review of Alaska North Slope production profiles
- Fall 2009 forecast methodology
    - Decline Curve Analysis

- Demonstration

9:06:27 AM

Ms. Duval explained that the department must forecast for revenue and budgetary purposes. She referred to Slide 3, which categorizes reserves versus resources. Reserves are categorized as proved, probable, and possible. She pointed out that the Department of Revenue (DOR) uses similar categorization with terminologies such as currently producing, under development and under evaluation.

Ms. Duval pointed out that the department did consider the forecast to be conservative. Undiscovered resources, prospects, leads are not considered in the forecast.

Ms. Duval addressed Slide 4: "Three Categories of Forecasted Production"

1. Currently Producing- Includes base production and enhanced recovery production from investment in rate enhancing activities (perforations, stimulations, well workovers, gas and water injection support).
2. Currently under Development- New projects that are currently funded or awaiting project sanction in near future.
3. Currently under Evaluation- Includes technically viable projects in the "pencil sharpening" stage where engineering, cost, risk and reward are being actively evaluated. Unfunded but are considered to have a high chance of being brought to fruition.

Ms. Duval detailed Slide 6: "Factors That Affect Production Forecasting"

1. Geology
    a. Rock type and formation characteristics
    b. Depth, thickness, pressure
    c. Oil and gas characteristics (oil gravity, viscosity, water content, etc.)
2. Development Plan
    a. Well density and development rate
    b. Well bore size and completion technique
    c. Artificial lift and enhanced oil recovery
    d. Facilities and surface operations
3. Commercial
    a. Project economics
    b. Oil price and market conditions
    c. Government Policy: access, regulation, taxation
4. Production Profile
    a. History, stage of depletion
    b. Use production profile to extrapolate trends
5. Timing

9:09:19 AM

Senator Huggins asked about permitting activity. He asked how the lack of permitting activity affects the forecast. Ms. Duval responded that the type of permit makes the difference. An exploratory permit will not be included in the forecast. Developmental permits are categorized in the "under development" plan. She noted that the department meets with the operators each year to review plans. A change in the permitting activity such as adjusting the plan of development will be reflected in the forecast.

9:12:16 AM

Ms. Duval pointed out that while the government has control over some of the factors, there is no control over geology, oil price, and market conditions. Areas of government policy can impact the development plan and can be controlled.

Ms. Duval described Slide 7: "Typical Production Profile." She explained that production increases at first, reaches a peak then declines. The decline rate typically levels off in later years. The field's geology, operator's development plan, and commercial factors, all influence the shape of the curve.

Ms. Duval compared the North Slope to the graphs on Slide 7. She detailed the graph on Slide 8 "Production Profile of a Prudhoe Well." She noted that the graph fits the production profile of a single well shown on Slide 7. The sum of all the wells that have produced for Prudhoe and Kuparuk are summarized on Slide 9. She noted points in time where the rate has changed slightly.

9:15:25 AM

Co-Chair Stedman asked for a definition of the Y axis. Ms. Duval stated that the Y axis indicates millions of barrels per day.

Ms. Duval continued with Slide 10: "Alaska North Slope History." The addition of new fields has mitigated this decline. In 2009, Prudhoe Bay and Kuparuk alone represented only 57 percent of total North Slope production. The addition of new fields has been important in mitigating the decline. Infill drilling, facility capacity expansion, and enhanced oil recovery projects have also helped stem decline.

Co-Chair Stedman asked about the history chart and whether the data was typical of oil basins around the world. Ms. Duval responded in the affirmative. He asked if the expectation for the industry to return to $2 million barrels per day was realistic. Ms. Duval stated that she would not expect so. Co-Chair Stedman commented on the normal decay of an oil field. Ms. Duval concurred. She noted that the sections of the graph indicating Alpine and North Star had a large impact on reducing the production decline. Because Prudhoe Bay and Kuparuk account for so much production, a very large field would be needed to return to historic rates.

9:18:15 AM

Senator Thomas asked about the Alpine field and the fact that it does not fit into the curve on the graphs. He asked if it indicated a longer period of development. Ms. Duval noted that if Alpine was graphed alone, one could see that it fits the profile well. She supposed that the aggregation of the chart as an area curve combined with layering the fields in the graph increases the ambiguity. She offered to provide individual field profiles for Senator Thomas and the committee. Senator Thomas stated that he wanted to understand the lifetime of the fields.

Co-Chair Stedman requested a focus on the last five and the next five years in production.

9:21:04 AM

Ms. Duval referred to Slide 11: "North Slope Production Decline"

- FY 1988: production peak- 2.01 million barrels per day (bpd).
- FY 2009: production-693,000 bpd, a 66% decline since peak.
- FY 1988 to date: production decline rate= 4.8% per year, on average *Excluding 2007, 4.0% decline on average.
- We expect the decline rate to flatten out to 3.6% per year, on average, through FY 2030.

Ms. Duval detailed Slide 12: "ANS Production History and Forecast." She explained that through FY2050, the expectation is to recover an additional 5.3 billion barrels of oil. The forecast does not include projections from the outer continental shelf, heavy oil productions from UGNU as well as most of the heavy oil production from West Sak and Shrader Bluff or the Umiat field. The forecast does include some production from the National Petroleum Reserve Alaska (NPRA).

9:24:08 AM

Co-Chair Stedman asked for production profiles for heavy oil in Alaska and its potential impact. One tax credit was to incentivize heavy oil. Ms. Duval stated that she did not have specific slides prepared on profiles for heavy oil. She offered to pull profiles for West Sak and Shrader bluff. She noted that pools in the Prudhoe Bay unit are considered heavy oil. She offered to provide the profiles for heavy oil for Co-Chair Stedman. The resource contains approximately 20 and 35 billion barrels of oil. The recovery for the pools is much lower than some of the lighter oil pools that are currently producing. Co-Chair Stedman concurred and asked that the information be added to the presentation on tax credits.

Co-Chair Hoffman stated that the forecast indicates that the state could potentially see something in 2012. He asked how many are currently under development. Ms. Duval stated that offshore is referring to Oooguruk and Nikaitchuq. Co-Chair Hoffman asked if they would be under category three as currently under evaluation. Ms. Duval stated that the reference is not included under the three layers.

9:27:00 AM

Co-Chair Stedman asked about the difference between federal and state waters. Ms. Duval responded that federal waters are beyond the six mile limit. Between zero and three miles is considered state waters and between three and six miles is federal. Co-Chair Stedman explained that from three to two hundred miles is federal and the state is unable to share resources with the industry.

MARCIA DAVIS, DEPUTY COMMISSIONER, DEPARTMENT OF REVENUE, added that the state authority to tax production stops at the three mile line. The state authority to receive royalty generally expands to three miles for state leased land. An arrangement for some royalty sharing exists in the zone between three and six mile where the state receives a share of federal royalty.

Co-Chair Hoffman explained the reason for addressing off shore is that although the three mile and six mile does not directly impact us, offshore oil through the pipeline would lead to lower tariffs on the Trans Alaska pipeline for the remainder of the oil travelling through the pipeline that benefits Alaska. Ms. Duval agreed that although the state may not receive tax revenue from offshore federal waters, Alaska can receive benefit through the shipment of oil down the Trans Alaska pipeline. The impacts would show up as an increased well head price because the tariff would be reduced. An additional benefit would be seen in petroleum corporate income tax.

9:30:17 AM

Senator Thomas asked about heavy oil. He asked if the confirmation of data occurs with the industry as well. Ms. Duval remarked that the number quoted is from a Department of Energy (DOE) study that was recently released from the National Energy Technology Laboratories. The study was originally released in 2007 with an addendum in October 2009. The resource potential of the Alaska North Slope is reported upon, which includes potential from other sources not included in the department's forecast.

Ms. Duval examined Slide 10: "Alaska North Slope History." She explained that the slide depicts the forecast. She noted that the grey shaded area indicates the production profile to look like in the decline rate. She noted that the decline rate is approximately seven percent per year. The expectation is for new projects for new fields and additional development at currently producing fields as well.

Ms. Duval discussed Slide 14: "Timing is Important!"

DOR's FY 2010 forecasted total NS production:
Spring 1989- 104,000 bpd
Spring 1994- 583,000 bpd
Fall 2009- 659,000 bpd

Plans of Development and discussions with the operators help us forecast the timing.

*However, operators are not bound to what they provide to us. Budgets can change; partners may not approve projects.

9:34:00 AM

Senator Huggins agreed that timing is important. He expressed concern about the developmental certifications. He asked if Ms. Duval wanted the new production to come online in good timing based on economic perspective and credentials. He asked what three things might be done to incentivize new development and new production. Ms. Duval responded that her role was not to discuss policy issues, but she referred to Slide 6: "Factors that Affect Production Forecasting." She noted that factors that the department has control over are access, regulation, and taxation. Factors that would help speed up developmental certifications would include increase of access, reducing inefficiencies and regulations, and making permanent process easier and providing for tax incentives.

Co-Chair Stedman stated that the intent of the upcoming meetings is to address the concerns expressed. He agreed that Ms. Duval and other scheduled presenters are not in the policy making business.

9:37:01 AM

FRANK MOLLIE, PETROLEUM ENGINEER, DEPARTMENT OF REVENUE, explained how the forecast was generated. He noted that the Alaska Oil and Gas Conservation Commission (AOGCC) maintain monthly production data for every well in the state. The data is gathered from the state and used in a decline curve. A decline curve plots production data on a linear graph; it appears as depicted in Slide 17: "Data Plotted on a Linear Scale." The scale on the left side of the graph is called a linear scale. Engineers plot on a log scale. A log scale is depicted on Slide 19: "Decline Curve Extrapolates Trend" where the left side of the graph begins at 100 Barrels of Oil Per Day (BBLS/DAY) and moves up to 1000 BBLS/DAY and up to 10,000 BBLS/DAY. If oil production is plotted on a log scale regions appear fairly linear. The decline curve simply includes a line drawn through the linear section of data, which is then used to project the oil and gas production. He stated the decline curve is done for every producing well in Alaska. This data can be moved to a linear scale as depicted on Slide 20: "Trend (linear scale)."

Co-Chair Stedman explained that one issue is transitioning between a tax and royalties system to a production sharing arrangement, which includes capital credit incentives to increase production. He opined that there is any increase in production. Mr. Mollie responded that the graph depicts a single well production, which will not include the entire field.

Mr. Mollie described Slide 22: "KRU Well Decline Curve at the End of 2002." The slide depicts the Kuparuk River Well. He admitted that the decline method is not perfect. The Kuparuk well if viewed in 2002 would

show a decline curve similar to that shown in Slide 22. The projection would be a bit low in this case.

9:41:22 AM

Senator Egan asked which rate would necessitate that the well is shut down. Mr. Mollie responded that he did not know the answer. He stated that other producing wells might feed into the same facility. Senator Egan asked for a specific figure that indicates that shut down is prudent. Mr. Mollie stated no.

Mr. Mollie described Slide 24: "To Generate a Field Forecast:"

1. Upload production history form AOGCC into database
2. Apply a decline curve to every well with recent production history data
3. Sum all of the production history and forecasts

Mr. Mollie moved on to Slide 25: "Prudhoe Bay Currently Producing Wells." He explained that the graph depicts the Prudhoe Bay decline curve generated from summing the individual well of the field. The red line represents the projection of the currently producing wells. For all of the equipment and facilities, this is the production we expect for the currently producing equipment production. The decline rate on this particular graph is six percent.

Co-Chair Stedman asked if the analysis shows any change in the data for the last three years. He asked if the forecast predicted any fiscal regime change. Mr. Mollie answered that the last three years of production from Prudhoe Bay does show a change in slope. He noted the change in slope shown in the last three years, which flattens out. He did not know if the flattening slope was a result of a tax regime, but it is a result of the gas cap water injection that the company proceeded with during the time.

Co-Chair Stedman asked for a brief explanation of gas cap water injection. Mr. Mollie responded that an oil reservoir contains an oil layer and a gas layer above it. In order to maintain pressure in the reservoir to maintain the production profile, water is injected into the gas cap which adds pressure to the reservoir that maintains the production rates for the oil well.

Co-Chair Stedman asked about the down spike in the fifth or sixth year. Mr. Mollie believed that it was a pipeline issue for Prudhoe Bay. Ms. Duval added that in 2006 the drop indicates the shutting of the well.

9:45:19 AM

Mr. Mollie moved on to Slide 27: "Prudhoe Bay Currently Producing + Under Development." He explained that the red line represents the currently producing wells and the green line represents the currently producing wells plus any production forecasted from the projects under development. The added investment of the projects will significantly increase the production rates and maintain them longer.

Mr. Mollie continued with Slide 28: "Kuparuk Currently Producing + Under Development." The slide shows the decline rate at seven percent. The projection is the same. With decline curves, a straight line indicates a constant percentage decline.

Co-Chair Stedman requested that Mr. Mollie return to the committee with charts beginning in the year 2000 through 2015 including Prudhoe, Kuparuk, and Alpine. Mr. Mollie agreed to produce the chart for the committee.

Co-Chair Stedman asked if Prudhoe, Kuparuk, and Alpine wells could be separated. Mr. Mollie pointed out that he had a chart that contains the entire North Slope.

Mr. Mollie referred to the map on Slide 29: "North Slope and Beaufort Sea Alaska Overview of Oil and Gas Activity January 2005" He reminded that areas such as the Arctic National Wildlife Refuge (ANWR) were not forecasted. Co-Chair Stedman asked if the map might be revised to include dollars where the revenue generation is located. Ms. Duval offered to review the data to determine the best way to graphically display the request. Co-Chair Stedman stated his point is to display the revenue to the treasury. Ms. Duval responded Prudhoe Bay, Kuparuk, Alpine, Northstar.

9:49:28 AM

Mr. Mollie continued with Slide 30: "Total North Slope." He pointed out the log scale and the area between 1995-2000 where the decline rate was six percent. The area following 2004 until the current time is again six percent. From 2000 to 2004, the decline rate stopped. He explained that during that time the state had seven fields begin production. The fields included Polaris, Alpine, Aurora, Meltwater, Northstar, and Orion. New production can mitigate the decline somewhat.

Mr. Mollie moved on to Slide 31: "Total North Slope Currently Producing + Under Development." He explained that the red line indicates the currently producing and the green line indicates the currently producing plus the under development projects. The decline rates are historically six percent. Future prediction is a four percent decline rate. Co-Chair Stedman asked if Point Thompson is included. Mr. Mollie answered that Point Thompson is in the under evaluation category as depicted by the blue line in Slide 32: "Total North Slope." The projects under evaluation are not viewed with the same confidence in the forecast as the under development and currently producing categories. If all investment were to stop tomorrow, production rates would include the currently producing data only. If the price of oil plummeted investment would be lost. With the current plans and development, the green line is predicted for the North Slope Production. The bump seen in the blue line around the year 2023 is the effect of Point Thompson. In Point Thompson, there is the assumption that a gas sales pipeline exists to reach the level of production predicted. If the gas sales line is not created, the blue line would follow the green line closely without the increase in production.

Co-Chair Stedman asked about the first gas production under the assumption. Mr. Mollie answered that the prediction is for two wells in 2014. Ms. Duval added that the department assumes a ten year development lead time for Point Thompson and a gasline. Co-Chair Stedman asked if the prediction was the historic norm. Ms. Duval answered yes.

9:53:24 AM

Mr. Mollie described the graph on Slide 33: "Fall 2009 Forecast: Log Scale." The graph shows Prudhoe Bay with the vast majority of production. Unless another large field comparable to Prudhoe Bay is found, similar production rates will never be seen again.

Ms. Duval described Slide 34: "Conclusion"

- Production forecasting requires consideration of each project's geology, development plans, commerciality, production profiles, decline curves and timing.
- Department uses extensive well and field specific data acquired from producers, AOGCC and DNR
- Forecast is a roll up of fields that have been discovered that are currently producing, under development, and under evaluation.

Co-Chair Stedman reminded that the department will return with additional information on a more focused area of 2000 through 2020.

Senator Thomas realized that finding another field like Prudhoe Bay was highly unlikely. The existence of the heavy oil at Prudhoe Bay is more than double the amount extracted. He believed that innovation is a result of desire and need. He opined that continuing the development at Prudhoe Bay was desirable as there is not a need for infrastructure. He mentioned new heavy oil discoveries in the state. Ms. Duval agreed that the state is producing some heavy oil in the Orion, Polaris, and Schrader Bluff pools. She pointed out that the Ugnu deposit is much shallower and includes stores of heavy oil.

9:57:48 AM AT EASE
10:03:02 AM RECONVENED

KEVIN BANKS, DIRECTOR, DIVISION OF OIL AND GAS, DEPARTMENT OF NATURAL RESOURCES (via teleconference), explained that his presentation "Oil and Gas Activity in Alaska 2009-2010" (Copy on File) includes the exploration aspect of oil production. He pointed out the map "North Slope Oil and Gas Activity 2009-2010." He noted that the bright blue line shown on Slide 2 represents the three mile limit from the coast. Everything south of the line is state submerged waters. North of the blue line is the outer continental shelf is managed by the federal government. Production from those lands is not subject to state taxes, however, between the three and six mile limit, the state shares in the federal royalties at the rate of 27 percent.

Mr. Banks discussed the activities addressed in the provided text boxes. He observed that wells drilled in 2008 are indicated in black, orange are drilled in 2009, and red indicate wells that are permitted or planned for 2009 and 2010. These wells are exploration activities, some of which are subject to tax credits as exploration wells.

10:07:00 AM

Mr. Banks addressed Brooks Range petroleum. The unit was formed recently. Brooks Range is a new entrant on the North Slope. UltraStar has begun drilling a second well east of the unit. He noted that Liberty will begin drilling an explorer well to begin testing their new ultra extended reach drilling equipment. He anticipated drilling to begin on a satellite drilling unit from the state lands.

Co-Chair Stedman asked if the normal tax activity is received under Liberty. Mr. Banks answered that there is no tax coming in for Liberty. The oil and gas liquids from Liberty will be processed at Endecott and production will be allocated to the Liberty production.

Senator Olson asked if a tax was collected by the North Slope borough. Mr. Banks answered no. The property tax to the North Slope Borough will be collected because of the Endecott facilities and the addition of the well heads and the equipment placed on the satellite drilling island. There are physical improvements that occur within the borough that are subject to property tax, but the well's bottom hole location is outside of the borough.

10:11:20 AM

Co-Chair Stedman noted that employment issues will be discussed later in the presentation and he requested that Liberty be factored out. Mr. Banks pointed out that he did not know how to estimate the difference for Liberty, but he knew that the majority of employment will occur in the drilling of the well. Once fluids begin to reach the surface, the local employees manage both state and federal oil and gas. Employment is enhanced with the increased activity at the Endecott facility.

Mr. Banks pointed out the eastern part of the map and Badami, where production is anticipated to begin in September 2010. He addressed the Point Thompson text box. He pointed out that Exxon struck a total depth of PT 15 and would enter the PT 16 well. When DOR refers to Point Thompson production and timing, the administration is not a monolith. He explained that DOR relies on public information with respect to Point Thompson. Gas sales from Point Thompson rely on the public pronouncement from Exxon both in discussions with the public and hearings with the Department of Natural Resources (DNR).

10:15:46 AM

Mr. Banks continued that Chevron drilled five wells into the White Hills Program. Chevron originally permitted 16 wells. Discussion occurred about unitizing the area. Co-Chair Stedman requested a definition of unitizing.

Mr. Banks explained that unitization occurs where there is a need to consolidate land ownership intending to preserve the best management of the resource and to assure that ownership of the resources is correctly allocated to our lessees. Leases are offered for 50-100 acres each. In order to develop a region, DNR combines leases into a single unit to be managed as a single lease and everyone's rights are taken care of and production is efficient.

Mr. Banks noted that the Department of Transportation and Public Facilities (DOT) considered routes from the Hall Road to the Gubik and Umiat area. The division has contributed some information to DOT to indicate the most attractive potential along the routes. He continued with the west end of the North Slope. The National Petroleum Reserve-Alaska (NPRA) includes three new wells from Anadarko, Petro Canada, and BG. The NPRA was established in 1910 as part of the naval oil reserves. The intention was to find areas under federal management that would serve the nation's needs for oil and gas. The Department of Interior took NPRA over in the 1920s. Now NPRA is federal land managed by the Bureau of Land Management (BLM) and has adopted strong multiuse provisions involved in its management. The area has been offered for considerable drilling in the 1950s. The gas fields near Barrow were discovered in NPRA. The BLM leased quadrants in the 1990s.

10:24:55 AM

Co-Chair Stedman asked about the tax difference between Liberty and NPRA. Mr. Banks replied that the taxes on NPRA are subject to state production taxes and the state enjoys a 50 percent share of the royalties collected by the federal government. Co-Chair Stedman asked if it was more profitable for the state's treasury to develop NPRA. Mr. Banks concurred. He added that more oil may exist offshore than has been discovered in the NPRA.

Senator Olson asked about ownership of subsurface rights for the Arctic Slope Regional Corporation (ASRC) land. Mr. Banks replied that ASRC owns the subsurface rights.

Mr. Banks continued with the area known as the Greater Moose's Tooth Unit conducted by ConocoPhillips. He expected a scout well to be reentered by 2012 as an obligation by the Bear Tooth Unit. ConocoPhillips had drilled the Grandview and Pioneer wells. Some of the wells are subject to state tax credits even though they occur on federal land. He noted the challenge in developing these areas and testing the exploration wells. Some of the most expensive wells drilled are in the NPRA.

10:29:03 AM

Mr. Banks pointed out the Alpine West satellite known as (CD-5) which is on hold for activity. The reason development was ahead of the exploration activities is because it is already part of the Colville River Unit, which is owned by the ASRC. The surface is run by the federal government and a private owner will benefit. Through the unitization and unit agreements that apply at Colville River, the development of the Colville River unit

is preceded with shared ownership between the state and the ASRC. Much of the Alpine west development will have a greater effect on royalty revenues for ASRC than the state. The department's concern about the Corp of Engineer's decision is an indication that the federal government believed that leasing the land would assure development although they failed to allow oil companies to access their leases.

Co-Chair Stedman requested data about wells drilled in 2004 and 2005 along with the "feet per year drill." Mr. Banks pointed out that he had provided similar information to the House Finance Subcommittee. He prepared charts for the last five or ten years. He pointed out that the oil companies are reluctant to discuss plans for fear that the state will mistake a plan for a commitment.

10:33:40 AM

Mr. Banks continued with the northern area of the map and the region around the Kuparuk River. Brooks Range Petroleum Corporation plans to drill North Tarn on a lease shared with the Italian Oil Company (ENI). Pioneer has moved forward with development at the Oooguruk project, which was challenged initially, but is now successful. He concluded with the Nikaitchuq unit with expectation that first oil will be developed by the end of 2010.

Senator Egan asked about multi phased metering. Mr. Banks explained that multi phased metering occurs where water gas and oil are mixed together and flowing through a device that distinguishes the amount of the various components. Normally oil production is metered for the purposes of royalties or allocations for the oil or gas that is subject to royalties or sold. The accuracy of the meters is high. At the Oooguruk well, fluids are mixed together with a machine that meters all three fluids and parse out the different components. The precision of a multi phase meter is less than the traditional lease acquisition custody transfer meters seen on the North Slope. With appropriate checking and testing against other kinds of devices of the state, the companies, AOGCC are gaining additional confidence and are willing to use multiphase metering in situations where the fluids are blended for processing in already built facilities.

10:37:57 AM

Mr. Banks added that continued year-round development drilling occurs at the Prudhoe, Kuparuk, Colville and Milne Point units. He hoped that DOR could provide a forecast. He commended Ms. Duval on her presentation about the potential for heavy oil on the North Slope. He agreed that heavy oil is a challenged resource, but once the wells are drilled, production tends to flatten out.

Mr. Banks clarified that Alaska heavy oil is not like California heavy oil, it is better quality and is assigned the nickname "heavy oil" because it is heavier than the oil produced today. He stated that heavy oil is the next phase of development in the existing oil fields on the North Slope.

Co-Chair Stedman requested information about in-field drilling in Prudhoe, Kuparuk and Alpine.

10:41:30 AM

Mr. Banks moved on to the map "Cook Inlet Oil and Gas Activity 2009-2010" (Copy on File). He pointed out that the activities in the Cook Inlet include the geothermal projects submitted as part of the exploration plans for the coming season. The potential exists to develop a large power plant which would represent a quarter of the electric demand.

Mr. Banks discussed the Rampart Energy Company well at Nunivak 1 in the Nanana Basin which involves an exploration license. The well was drilled last summer and was one of the most "wildcat" wells drilled. Activities in the Cook Inlet that Mr. Banks found most interesting were the Sunrise and Shadura prospects near Swanson River. The Marathon has begun drilling the Sunrise well. Shadura is another potential gas well to the west of the Swanson River drilled by an independent company called Nordik Energy Partners. Pioneer is working on the Hansen 1A-L1 well in 2010. The testing for the well began approximately two weeks ago.

Mr. Banks mentioned the North Fork project sponsored by Armstrong which is the company that initiated the prospect of Oooguruk and Nikaitchuq and flipped it to ENI. Armstrong is a capable explorer who can put together a prospect and find appropriate investors to development. The consequence of the development is a pipeline that will flow from Anchor Point to Ninilchik. Armstrong will construct a pipeline from North Fork to Anchor Point to connect. Infrastructure is reaching an area of the Kenai as yet undeveloped. He anticipated potential growth in gas plays.

Mr. Banks addressed the Kitchen Lights Unit with Escapada who will bring a jack up rig into the Cook Inlet to drill for an oil target in the Kitchen Lights unit as a preliminary exploration program. The department is waiting to see if Escapada will be affected by critical habitat issues.

Co-Chair Stedman requested further information on the drilling done in Prudhoe Bay, Kuparuk, and Alpine.

10:41:30 AM AT EASE
10:50:08 AM RECONVENED

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ADJOURNMENT The meeting was adjourned at 10:50 AM.