SENATE FINANCE COMMITTEE
January 18, 2023
9:00 a.m.

9:00:24 AM

CALL TO ORDER

Co-Chair Stedman called the Senate Finance Committee meeting to order at 9:00 a.m.

MEMBERS PRESENT

Senator Lyman Hoffman, Co-Chair
Senator Donny Olson, Co-Chair
Senator Bert Stedman, Co-Chair
Senator Click Bishop
Senator Jesse Kiehl
Senator Kelly Merrick
Senator David Wilson

MEMBERS ABSENT

None

ALSO PRESENT

John Boyle, Commissioner Designee, Department of Natural Resources; Travis Peltier, Petroleum Engineer, Division of Oil and Gas, Department of Natural Resources; Derek Nottingham, Director, Division of Oil and Gas, Department of Natural Resources.

SUMMARY

PRODUCTION FORECAST - DEPARTMENT OF NATURAL RESOURCES

Co-Chair Stedman introduced the committee members and discussed roles. He commented on the level of experience of the members. He discussed committee process and informed that the committee would consider overviews for the next several days to set the stage for upcoming meetings as the committee worked through the revenue and expenditures of the state.

Co-Chair Stedman introduced Senate Finance Committee staff. He explained that staff would sit behind the members.

9:03:34 AM

Co-Chair Stedman introduced his staff, including Mr. Pete Ecklund, the operating budget coordinator. Mr. Ecklund would also lead the weekly operating budget staff meetings. He introduced additional staff. He commented on the experience of the staff.

Senator Hoffman introduced his staff.

Senator Olson introduced his staff.

Co-Chair Bishop introduced his staff.

9:07:00 AM

Senator Wilson introduced his staff.

Senator Merrick introduced her staff.

Senator Kiehl introduced his staff.

Co-Chair Stedman introduced the committee staff and staff from the Legislative Information Office.

9:09:26 AM

Co-Chair Stedman discussed committee process, schedules, and decorum. He conveyed that there might be morning and afternoon meetings on occasion. He emphasized the importance of a good and fair exchange of information and commented on the magnitude of information received by the members. He asserted that all members would have equal time to express concerns and ask questions. He discussed presenters providing information to the committee when questions were not answered during meetings.

Co-Chair Stedman continued that the co-chairs would prefer no eating in the room. He discussed the use of technology. He emphasized treating presenters with respect. He discussed protocol for presenters and the general public. He noted that further information on decorum would be sent to members. He expressed the desire to run timely meetings.

^PRODUCTION FORECAST - DEPARTMENT OF NATURAL RESOURCES

9:13:51 AM

Co-Chair Stedman relayed that the committee would consider a production forecast from the Department of Natural Resources (DNR). He noted that the commissioner-designee would introduce himself and his staff. He noted that the standard presentation process was to take questions after each slide. He asked the presenter to offer information on his background.

9:15:20 AM

JOHN BOYLE, COMMISSIONER DESIGNEE, DEPARTMENT OF NATURAL RESOURCES, discussed his background. He had worked as a clerk for a number of judges in Fairbanks and had worked with the North Slope Borough as an assistant attorney and as chief advisor to the mayor as well as director of the borough's government affairs department. He had gained insight into the oil industry while working in the North Slope Region. He had worked for three years as the Director of Government Affairs at BP Alaska. He had most recently worked with a new entrant to the state. The experience had provided information about the challenges of bringing an oilfield into development.

Commissioner Boyle commented that his work experience had shaped his perspective on resources. He used the metaphor of a firehose to describe his learning curve at DNR. He commented on the quality of professionals working at DNR. He explained that the staff took pride in compiling the information in the report in an effort to assist the legislature to better understand the outlook for the coming years in order to make budgeting decisions for the state.

9:19:19 AM

Commissioner Boyle wanted to offer highlights of the presentation. He commented that generally production on the North Slope was stable. He considered deeper legacy fields that were near to 50 years old and required more energy to keep a steady production level. He thought the legacy field progress was a commentary on the major accomplishment of producers. He noted that DNR had forecast a steady trend of production that increased towards new development. He thought the legislators should have confidence that the state had a resource base that looked to be steady and

would bridge into the future when there could be opportunity to monetize other state resources.

Commissioner Boyle introduced his team and discussed their experience in the field of oil and gas.

9:22:26 AM

TRAVIS PELTIER, PETROLEUM ENGINEER, DIVISION OF OIL AND GAS, DEPARTMENT OF NATURAL RESOURCES, discussed a presentation entitled "FALL 2022 PRODUCTION FORECAST" (copy on file). He commented that the department had been performing the production forecast analysis since 2016. The goal of the presentation was to share the oil production results of FY 22 and share the oil forecast for the following ten years. The discussion would include information on methodology and background, as well as how the forecast was generated.

Mr. Peltier discussed his background. He had graduated with a mechanical engineering degree from the University of Alaska Fairbanks (UAF) in 2006. He had worked with BP Alaska, working predominantly in Prudhoe Bay. He had spent time away from the industry and in 2021 he obtained a position with the Division of Oil and Gas at DNR. He was recently given the opportunity to lead the production forecast. He had spent the majority of his life in the state.

Mr. Peltier looked at slide 2, "AGENDA":

- Introduction
- Background:
    - FY 2022 in Review
    - DNR Production Forecasting Approach
- Fall 2022 Forecast Results
- Summary

9:25:06 AM

Mr. Peltier showed slide 3, "FY 2022 IN REVIEW." He commented that the following three slides would focus on the North Slope and Cook Inlet.

Mr. Peltier referenced slide 4, "FY 2022 SUMMARY: NORTH SLOPE":

Highlights (FY 2022 vs FY 2021)

- All production areas are generally expected to see a year-on-year decline

- Compared to FY 2021, in FY 2022 North Slope production decreased by ~2% (~9,570 bopd)

- Decreases
  - Alpine: Natural decline from flush production after extended shut-ins from 2020. Limited development drilling in FY 2022
  - Kuparuk and Kuparuk Satellites: Natural decline due to cessation of NGL imports and associated EOR, as the OPL was converted to fuel gas in early FY 2022
  - Offshore: Natural reservoir decline

- Increases
  - NPRA: GMT2 pad brought online, performing well
  - PBU Satellites: 10% production growth due to consistent drilling efforts
  - Point Thomson: 8% growth from improved facility reliability

Mr. Peltier wanted to highlight how FY 22 compared to FY 21. He noted that the information was based on data and involved no forecasting. He noted that instead of showing fields separately, DNR wanted to address production areas to be consistent with the Department of Revenue (DOR). Additionally, the numbers were consistent with the numbers in the Revenue Sources Book (RSB).

Co-Chair Stedman cautioned against using acronyms.

Mr. Peltier explained that the RSB was the official forecast for revenue and oil production. He continued to address slide 4. He reported that DNR expected to see a year-on-year decline across all production areas. He expounded that oil fields naturally declined over time. He shared that North Slope production in FY 22 decreased by approximately 2 percent or approximately 9,570 barrels per day from FY 21. He reminded that the forecast followed the fiscal year rather than the calendar year.

Mr. Peltier pointed to the top chart on slide 4 showing North Slope daily production. The Y axis showed the fiscal

year annual average daily oil production in barrels of oil per day and the X axis showed the fiscal year from FY 16 through FY 22. He relayed the peak oil production rate in FY 17 was just over 526,000 barrels of oil per day and had declined until about FY 20, which was expected with natural decline. He added that FY 20 was the start of the COVID-19 pandemic and several oil fields had been shut-in for economic reasons resulting in an artificially high decline. The issue resolved in FY 21 when oil prices rebounded after COVID era lows. The normal decline rate resumed in FY 22. He reported that FY 22 gross North Slope production averaged about 476,490 barrels of oil per day.

9:28:42 AM

Mr. Peltier addressed individual production area changes from FY 21 to FY 22 in the lower chart on slide 4. The chart began at a zero line. He cited flat production for Prudhoe Bay and satellites to increasing production, which had to do with operators' continued development of the Prudhoe Bay field. He reminded that in 2019, BP Alaska had decided to sell the asset to Hilcorp, which was the predominant operator in the fields. There was continued drilling in places such as Milne Point, which was by definition part of the Prudhoe Bay Unit (PDU) satellites for the RSB. He noted that GPMA had normal reservoir decline year over year and was also a satellite for Prudhoe Bay.

Mr. Peltier highlighted a decrease in Kuparuk and Kuparuk satellites of around 10,000 barrels per day from FY 21 to FY 22. He elaborated there was natural decline due to the cessation of natural gas liquid (NGL) imports, which were used for enhanced oil recovery (EOR) within the Kuparuk reservoir unit. The NGL imports and EOR had ceased because of the need to convert the Oliktok pipeline (running from PDU to the Kuparuk River Unit) to fuel gas in order to maintain the base production from the Kuparuk River Unit. The next production area was Endicott, which showed a small decline attributed to natural reservoir decline.

Mr. Peltier addressed the Alpine area, which included the Colville River area, and noted the area was closed during the pandemic era and brought back online during FY 21. There was a relatively large production increase after the short period, followed by a reservoir decline in FY 22. There was limited drilling for FY 22 compared to previous

years, which led to a relatively large production decline out of the Alpine area. He mentioned there were a number of offshore fields, and there was nothing of note to point out. He mentioned there were increases in the Natural Petroleum Reserve-Alaska (NPRA), which included the Greater Moose's Tooth Unit. He recalled there was a project the previous year to bring a new pad online (GMT2) at the unit. The unit was doing well and was one of the predominant reasons for the production increase in the NPRA area.

Mr. Peltier addressed the Point Thomson unit shown on the graph on slide 4. He highlighted that the unit was predominantly driven by its initial production system that started in April of 2016, and was a new facility to the slope. There had been many production issues for the initial years of operation. He informed that ExxonMobil was the operator two years previously and had resolved many of the issues to increase production before Hilcorp took over and had continued the positive trend. He cited a total North Slope decrease of about 9,570 barrels.

9:33:17 AM

Co-Chair Stedman recalled that several years previously the production facilities were all running at the maximum handling gas or water and thought Alpine had been the only field with extra capacity. He asked for the status of the facilities and the handling of gas and water. He asked for Mr. Peltier to address the topic and location of the facilities.

Mr. Peltier asked if Co-Chair Stedman was curious about Alpine specifically or about all facilities on the North Slope.

Co-Chair Stedman stated that he was asking a broad general question, and offered that Mr. Peltier get back to the committee with the information. He noted that a facility could only process so much water or gas, which limited the amount of production that was possible. He queried about the background of the issue and the current status.

Mr. Peltier affirmed that Co-Chair Stedman was correct and offered to send the more detailed information at a later time. He explained that in Prudhoe Bay, the majority of the time the aging assets would be limited by water-handling capacity. He discussed the process of separating the gas

and water from oil that came out of the ground in order to get saleable oil. He qualified that in many facilities, there was a water handling limitation or a gas handling limitation, which would limit through-put. He noted that Point Thomson was a good example that the ability to produce additional condensate came with the gas limit. Prudhoe Bay had various facilities, some of which were water-limited, some of which were gas-limited, and some were both.

9:35:33 AM

Co-Chair Stedman acknowledged the limiting factors. He suggested that DNR's presentation could try and address processing facilities and potential increases.

Co-Chair Kiehl asked for more detail on the chart on the bottom right of slide 4. He thought the narration matched the color of the bars, but he wanted more detail on the increase or decrease in production shown.

Mr. Peltier noted that the increases were shown in blue and reviewed the relative increases and decreases shown on the chart.

Co-Chair Stedman thought the negative amount was the difference between FY 21 and FY 22 shown on the chart above.

Senator Olson asked about GMT2, which was thought to produce about 7,000 barrels per day. He asked if production was on track.

Mr. Peltier reminded that the data was cut off from June 30, 2022. He affirmed that GMT2 was performing to expectations.

Senator Olson asked about the expectation for the coming years and if the production would increase or decrease.

Mr. Peltier relayed that there was very little production history for the GMT2, so the department used the previous year's data of consistently forecast production. He explained that the next ten years of the forecast would be consistent with previous years.

9:38:40 AM

Mr. Peltier turned to slide 5, "FY 2022 AS FORECASTED BY DNR IN FALL 2021: HOW DID WE DO?":

- Actual FY 2022 production came in within DNR's forecasted range
- DNR mean forecast was ~2% higher than actual FY 2022 production
- Factors to watch for that are currently shaping the forecast horizon
  - Strong ESG influences continue to challenge capital allocation decisions in the Arctic, especially for early-stage oil projects under development/evaluation
  - Industry interest continues in Nanushuk leases and projects on State and Federal lands

Mr. Peltier referenced the bar graph on slide. He explained that the striped, blue bars showed the high and low forecast from the RSB. He commented that the range from the previous year was about 524,000 barrels per day on the high to just under 450,000 barrels per day on the low. The official forecast for the previous year was just under 487,000 barrels of oil per day, but actual production came in at 476,490 barrels of oil per day. He noted that the department also received confidential information from operators that was aggregated. For the previous year, operators forecast that the Alaska North Slope (ANS) oil made just under 500,000 barrels per day.

Co-Chair Bishop asked for the department to provide more information defining the acronyms on the slide, such as Environmental Social Governance (ESG).

9:41:36 AM

Mr. Peltier considered slide 6, "FY 2022 SUMMARY: COOK INLET":

Highlights (FY 2022 vs FY 2021)

- All fields are generally expected to see a year-on-year decline
- Compared to FY 2021, in FY 2022 Cook Inlet production decreased by ~11% (~1200 bopd)
- Oil from the Cook Inlet basin critical to the supply of in-state refineries

- Decreases
  - Middle Ground Shoal: Field taken offline due to fuel gas pipeline leak discovered in April 2021. Production is currently suspended.

- Increases
  - Beaver Creek increase due to rate-adding well work.
  - Redoubt Shoal and West McArthur River fields brought back online in September and October 2021 respectively after being offline since May 2020.

Mr. Peltier addressed the top bar graph on the slide, which showed a decline in production after the highest oil production year for Cook Inlet in FY 16. The most recent production level in FY 22 was 9,400 barrels per day. He summarized that the majority of the fields in Cook Inlet saw natural declines, there were large decreases and large increases listed on the slide. He discussed the production decrease in Middle Ground Shoal and relayed that the field was taken offline due to a fuel gas pipeline leak discovered in 2021. He pointed out an increase in Beaver Creek due to well-work.

Co-Chair Stedman asked Mr. Peltier to touch on gas in Cook Inlet, and assumed the charts showed only oil.

Mr. Peltier affirmed that the charts only showed oil production.

Co-Chair Stedman suggested that the department start considering a presentation about the Cook Inlet gas field. He informed that the committee would be having forthcoming discussions around energy and reminded that gas was a big source of energy for heating. He suggested including the history and trajectory of gas production.

9:45:12 AM

DEREK NOTTINGHAM, DIRECTOR, DIVISION OF OIL AND GAS, DEPARTMENT OF NATURAL RESOURCES, shared that DNR Division of Oil and Gas had recently completed a production forecast for the Cook Inlet gas, and would share it with the committee.

Co-Chair Stedman relayed that he would work with the chairs from the House and Senate Resources Committee on how to handle the information.

9:45:50 AM

Mr. Peltier displayed slide 7, "STATUS UPDATE OF KEY FUTURE PROJECTS: NORTH SLOPE," which showed a table of projects. The slide addressed some of the groundwork for future production on the North Slope. He noted that there were 17 projects, while the table highlighted 5 projects. He thought the committee had most likely heard about the Pikka and Willow projects in the news, which were new fields brough online on the North Slope. The other three projects constituted either new pads or pad expansions within existing units on the North Slope.

Mr. Peltier reminded of discussion the previous year regarding the Pikka project, and whether it would get approved for final investment decision (FID). The project FID came through in August 2022, and project first oil was anticipated in 2026. He cited a peak design capacity rate of 80,000 barrels per day, which had been publicly shared by operators.

Co-Chair Stedman asked for a reminder as to who owned the subsurface rights of the different projects, which should have a significant impact on revenue. He noted that all oil production increases helped with the throughput of the Trans-Alaska Pipeline System (TAPS) as well as with an impact on the treasury.

Mr. Peltier relayed that the Pikka project was on state land and listed other projects on state land. The Willow project was on federal land.

Co-Chair Stedman asked Mr. Peltier to briefly touch on why there were tax differences between the projects.

Mr. Peltier deferred the question to Mr. Nottingham.

Co-Chair Stedman mentioned severance tax and royalties. He commented that the state received royalties on federal land but there was no state tax per se.

Mr. Nottingham relayed that on state land, the state royalty ranged between 12.5 percent to 16.67 percent. The

percentage was applied to the overall value or volume of the barrels produced off the land and would be revenue into the state from royalties. He explained that the royalty on federal land went to the federal government, with a portion going to local communities.

Co-Chair Stedman relayed that the committee would revisit the topic with more detail at a later time when the committee considered the revenue forecast. He made the point that all barrels of oil were not equal in terms of paying the state's bills.

Senator Olson thought Mr. Nottingham was trying to say that the impact aid that came to some communities on the North Slope was the way that the state benefitted from the federal royalties it did not receive.

Mr. Nottingham agreed with Co-Chair Olson's assessment.

Co-Chair Stedman reiterated that there would be more detail on the subject when the committee considered the revenue forecast.

9:50:24 AM

Mr. Peltier addressed the Willow project listed on the table on slide 7. He recalled that the project was remanded by the Alaska District Court with a record of decision, and at the time construction was expected to start in 2023 with first oil in 2025 or 2026. In the year since, the Bureau of Land Management (BLM) was awaiting a record of decision on the supplemental environmental impact statement (EIS) that was released in July 2022. ConocoPhilips, the operator of the Willow project, could not make its FID prior to the record of decision being made. The first oil was expected to be six years after FID if the project was approved and moved forward. The publicly stated estimates from the supplemental EIS indicated 180,000 barrels per day at peak two years after first oil.

Mr. Peltier addressed the CRU Narwhal CD8 project listed on slide 7. He noted that there was discussion the previous year about a Narwhal project. He cited that there were project uncertainties. He noted that the vision for the project was quite large. He discussed the most recent plan of development submitted by ConocoPhilips, with production possibly commencing as early as 2028. Production was

dependent upon alignment with stakeholders, permitting, internal studies, and ultimate project approval. He cited that the department estimated that about 3,200 barrels per day could come from the project, which was on state lands.

Mr. Peltier spoke to the MPU Raven Pad project. He relayed that Hilcorp had formally applied for approval to construct a new drilling construction pad in November 2022. The pad would be very analogous to a recently developed pad called Moose Pad from 2018. The department estimated roughly 10,000 barrels per day on state land could come from the project. He discussed the KRU Nuna-Tork project, which was operated by ConocoPhilips. The most recent plan indicated a plan to drill additional injector and producer wells to apprise of future developments. The project had much uncertainty but could turn out to be a large producer for the North Slope on state lands.

Senator Kiehl commented that the state had often looked at peak production design for a potential field, while peak production did not last particularly long. He asked how to look at the numbers when considering the longer-term production of the wells in relation to the peak production numbers.

Mr. Peltier commented that the numbers shown were peak rates and used the Willow project as an example. He explained that one would see a peak rate shared in a supplemental EIS document two years after first oil production then declining. He noted that most of the fields on the North Slope were supported with water flooding or other enhanced oil recovery activities. He mentioned cumulative volume. He suggested taking the peak number, and then computing a decline rate of 10 percent to 15 percent, knowing that operators would be working to minimize the decline.

9:56:08 AM

Mr. Peltier highlighted slide 8, "DNR FALL 2022 PRODUCTION FORECASTING APPROACH":

> Recap: Minor changes in methodology from last year's forecast. Changes are:
>
> 1) To more explicitly capture drilling activity into Under Development and Under Evaluation, and

2) To have DOR and DNR forecasts be the same in the first 5 months of the forecast period due to treatment of actual production. [Fall 2022 Forecast]

Mr. Peltier relayed that the presentation would transition to the production forecasting approach. He reminded that DNR had been performing the analysis since 2016 and tried to be as consistent as possible. He remarked on recent improvements, including project definition. He explained that the "currently producing" category had no future drilling included. He noted that the definitions for the production categories were listed in the RSB and were now more accurate.

Co-Chair Stedman asked Mr. Peltier to remind the committee about how the department received information from producers in the fields dealing with expectations in the future on a calendar basis. He thought producers reported to the department twice a year. He thought there was a lot of communication between the two groups.

Mr. Peltier noted that the next slide would address Co-Chair Stedman's question.

Mr. Peltier advanced to slide 9, "DNR FORECAST PROCESS: PROJECTS/POOLS INCLUDED IN FORECAST":

- DOG performed ground-up Decline Curve forecasts for all producing pools (Public)
  - Forecast of Current Production uses AOGCC publicly available data
  - ~37 pools (ANS and CI), producing as of 6/30/2022
- DOG engaged with operators through DOR-arranged in-person and written interviews
- 17 projects under development/under evaluation were considered/researched/reviewed (Confidential)
  - Forecast for these projects use confidential information from operators
  - Future production from these projects were adjusted and risked for scope of contribution, chance of occurrence and start date

- Minor modifications in forecast approach between Fall 2021 and Fall 2022 forecasts
    1. To more explicitly capture drilling activity into Under Development and Under Evaluation, and
    2. To have DOR and DNR forecasts be the same in the first 5 months of the forecast period due to treatment of actual production

Mr. Peltier explained that the slide was meant to discuss the projects and the Division of Oil and Gas and DOR's engagement with operators. He addressed Co-Chair Stedman's question and relayed that the department had conversations with operators throughout the year. Within the fall production forecast timeframe there were many in-depth conversations with operators that were confidential and helped build the forecasts. The meetings were both in person and via written responses. There was an update in the spring wherein the department would meet with operators and ask for updates to prior inflation that could be material to forecasting efforts. He mentioned plans of development, which had an aspect of confidentiality, and were submitted every one to two years.

10:01:20 AM

Mr. Peltier addressed slide 10, "CATEGORIES OF PRODUCTION: ONGOING/CURRENT VS FUTURE PRODUCTION":

Ongoing/Current production
- Current Production (CP)
    - Features and considerations:
        - Well and facility uptime
        - Operator spending to maintain base production
        - Reservoir management

Future production
- Projects Under Development (UD) and Under Evaluation (UE):
    - Rate contribution:
        - Uncertainty in future well performance
        - Uncertainty in project scope
    - Project occurrence and timing:
        - Uncertainty in timing (incl. outright project cancellation/deferral)

- Commerciality risk (economic, regulatory etc)

Mr. Peltier discussed the production categories. He referenced 17 major projects and discussed infill drilling. Within existing units, there was continued drilling activity (with additional capital expenditures and investment) where new wells were put into existing fields. The contributions from the new wells came under "under development" and "under evaluation" categories, which were within the next 12 months and 12 months to the 120th month respectively. He commented on the uncertainty of future well performance and project scope, which were factored into high and low parts of the forecast.

Mr. Peltier mentioned Pikka and Willow, which were not currently producing and did not have infill opportunities. He discussed project startup and timing, and noted that there was additional risking included in production profiles regarding when the projects would start up. He mentioned commerciality risk, as the economic hurdles that might need to be overcome for a project to progress.

Senator Hoffman referenced Mr. Peltier's comments about an upcoming slide addressing capital expenditures. He asked if Mr. Peltier would also address increases or decrease of capital expenditures in the past, and projections for the future. He thought the information was a single indicator as to what policymakers would look for in projections regarding future development on the North Slope.

Mr. Peltier relayed that DNR would not be sharing any capital expenditure information in the slide, but would be sharing information on expected production from future capital investment.

Senator Hoffman requested that Mr. Peltier provide his office with capital expenditure information, which had been a major discussion for the previous decade. He thought the information was critical to what the public policy makers could expect on what was happening on the North Slope.

Co-Chair Stedman asked for Mr. Peltier to send the data to the co-chair's offices to distribute and asked for him to include delineation of deductible and non-deductible expenses. He asked for any information about future predictions of capital expenditures.

10:06:22 AM

Mr. Peltier advanced to slide 11, "MAJOR PROJECTS [UNDEREVALUATION/DEVELOPMENT] CONSIDERED IN FALL 2022 FORECAST":

Generalized characteristics

- Projects that were not online as at end ofFY2022 (data cut-off date of 6/2022)
- Higher risk factors than currently producing fields
- Known discoveries with identifiable operators
- Require major investments

North Slope Major Projects List (West to East)

- Smith Bay
- Willow
- Umiat
- CRU Narwhal CD8
- Horseshoe Stirrup
- Pikka Unit
- Quokka/Mitquq
- Mustang
- Nuna-Torok
- Ugnu
- MPU –Raven Pad
- Theta West
- Talitha
- Alkaid
- Liberty Unit
- PTU Expansion
- Sourdough Project

Mr. Peltier commented that the risk associated with the projects listed was higher than the currently producing fields, such as Prudhoe Bay. The fields listed were all known discoveries with identifiable operators, which all required major investments over the following ten years. He reviewed projects from west to east on the map on slide 11. He began with the Smith Bay development shown in top left corner of the map. He pointed to the Willow and Umiat projects and noted a red square on the map indicated the developments were located on federal lands. The CRU Narwhal CD8 project was to the east of the Willow development. He

listed the remaining projects and their locations on the map including Pikka, Quokka/Mitquq, Mustang, Nuna-Torok, Ugnu (located across PDU, KRU, and MPU), MPU Raven Pad, Theta West, Talitha, Alkaid, Liberty, PTU expansion, and Sourdough project.

Senator Olson considered the Smith Bay project and asked if Mr. Peltier had an update on the development.

Mr. Peltier thought much of the information could be confidential and offered to get back to the committee with what information could and could not be shared.

Mr. Nottingham generally stated that the operator was actively looking at options to explore and delineate the reservoir further.

Co-Chair Stedman asked the department to get back to the committee with the information that was accessible. He suggested that the committee could discuss the matter with the operator, who may be inclined to provide further information.

10:10:22 AM

Co-Chair Bishop asked if the information was only embargoed for 10 years.

Mr. Nottingham offered to get back to the committee with the answer to Senator Bishop's question.

Senator Kiehl referenced higher risk projects mentioned by Mr. Peltier. He asked how the risks were put in the forecast. He looked at projects that were far from infrastructure and mentioned the Liberty project, which was supposed to be "coming soon" twenty years previously.

Mr. Peltier agreed that all the projects listed had uncertainty or risk. There were a few of major components to the risk, including the chance of the project coming online, the start date of the project, and whether it would achieve the expected return rate. He explained that multiple people with information on various aspects of the projects would collaborate to discuss the pieces of uncertainty related to projects. He compared the Liberty and Raven projects and the types of risk considered. He emphasized the importance of aggregating risk information

for all the projects. The same process was used to evaluate all the projects before aggregating the results.

Senator Kiehl did not have a sense of exactly what the process was.

Mr. Peltier noted that the group that aggregated the information included engineers, geo-scientists, permitting individuals, and commercial analysist. The process was democratic and included about 24 individuals.

10:13:59 AM

Mr. Peltier showed slide 12, "FALL 2022 PRODUCTION FORECAST RESULTS."

Mr. Peltier discussed slide 13, "FALL 2022: NORTH SLOPE ANNUALIZED FORECAST":

- Short Term:
  - DNR forecasts FY2023 annualized average daily statewide production at 501 MBOPD, and North Slope production at 492 MBOPD, with a range of 448 MBOPD and 535 MBOPD

- Long term:
  - Long term forecast reliability is gauged by general ballpark comparison between DNR and operators' aggregate forecasts. Operators' long-term outlook falls within DNR's long term forecast range

  - Specific differences are expected and do highlight DNR's ground-up uncertainty analysis on all included projects

- Outlook on production assumes that operators' plans and other project drivers stay unchanged

Mr. Peltier addressed the chart on slide 13, which showed the fall 2022 North Slope Forecast, with an axis with fiscal year annual average daily oil production. There were four components including the high forecast case, low forecast case, and the two middle cases. The official forecast case from the RSB and summation of the confidential operator forecast showed the aggregated picture for the following ten years. He noted that the

total official forecast included future projects, which did not include the information from operators. For FY 23, the DNR forecast showed an annualized average of daily production of 501,000 barrels of oil per day, which was 492,000 barrels from the North Slope per day. He discussed low-end and high-end numbers.

Mr. Peltier explained that MBOPD signified thousands of barrels per day, while MM signified millions.

Co-Chair Stedman reminded that one decade previously there had been oil forecast predictions that showed a parabolic curve with a flat tail that would go on for several decades. He thought the forecast had assumed that the industry in the state would work to extend the life of fields rather than let the natural decay happen. The forecast from a decade previously had been very near to what happened in reality. He commented that it would be nice to get Willow and a few other larger projects moving forward.

Mr. Peltier addressed the last bullet on slide 13 pertaining to the production forecast. He noted that there were certain assumptions that had to be made in order to make the production forecast be valid, although the assumptions could change. He expanded that the process started with data ending from June 30, 2022. He mentioned the spring forecast update that would include any observed changes. He noted that the forecasts did assume that operator's plans and other drivers remained unchanged during the forecast period.

10:19:24 AM

Mr. Peltier reviewed slide 14, "ALASKA STATEWIDE OIL PRODUCTION FORECAST – FALL 2022 EXPECTED CASE and CATEGORIES OF PRODUCTION," which showed two charts. He highlighted that the chart on the left of the slide showed the fiscal year average daily oil production ranging from zero to 700,000 barrels of oil per day. The blue showed current producing fields declining over time, the orange showed future development drilling within producing fields, and the gray section reflected a combination of in-field drilling and the 17 major projects under exploration (growing over time through FY 32).

Mr. Peltier addressed the right-hand chart on slide 14, which reflected projects under exploration only. He cited production growth ramping up until the late 2020's, and then another small peak at the end of the forecast period in 2032. The trajectory had to do with how DNR did its uncertainty analysis on future projects. He discussed the risking process and how the forecast handled increases over time.

Co-Chair Stedman commented on changing federal administrations and asked how risking analysis was dealt with when going from one administration to the next. He commented that the previous administration had been helpful to the state by moving the resource extraction industry forward versus what appeared to be a "less-than-enthusiastic" current administration.

Mr. Peltier relayed that the matter was addressed in to two components of risking. He mentioned the two major components of uncertainty for projects including the chance of occurrence and the project start date. He mentioned the Willow project. He noted that the production profiles were spread out over time based on what the group decided.

Co-Chair Stedman thought the risking was balanced out each year with consideration of current conditions.

Mr. Peltier answered affirmatively.

10:23:54 AM

Mr. Peltier referenced slide 15, "FALL 2022 PRODUCTION FORECAST - SUMMARY":

- DNR Forecast continues to use the best information available to DNR/DOR, to generate production outlook for oil fields within the state, with a focus on generating accurate near-term, and realistic long-term, forecasts.

- Fall 2022 Forecast is a static view on production; DNR's outlook is updated annually (Fall and Spring) to incorporate latest operator plans and the State's official updated price outlook.

- DNR's Fall 2022 outlook shows mean annual production of approximately 500 MBOPD across much of the

outlook period, based on the current snap-shot of operators' plans.

- Production from projects under evaluation reflects uncertainty in operators' plans towards return to pre-pandemic activity levels, specific project uncertainties, as well as project scope and timing risks.

Mr. Peltier thanked the committee. He commented on the effort expended to put together each year. He thanked the forecasting team and those available online for questions.

Co-Chair Stedman thanked Mr. Peltier and the support staff and acknowledged the preparation necessary for the presentation. He discussed the upcoming schedule. He commented that the price of oil was much more sensitive to the state's revenue than the production variable. He commented that the following week would include presentations on the budget.

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ADJOURNMENT
10:27:13 AM

The meeting was adjourned at 10:27 a.m.