



# FALL 2021 PRODUCTION FORECAST

House Finance Committee

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January 19, 2022



# AGENDA

- **Introduction**
- **Background:**
  - FY2021 in Review
  - DNR Production Forecasting Approach
- **Fall 2021 Forecast Results**
- **Summary**

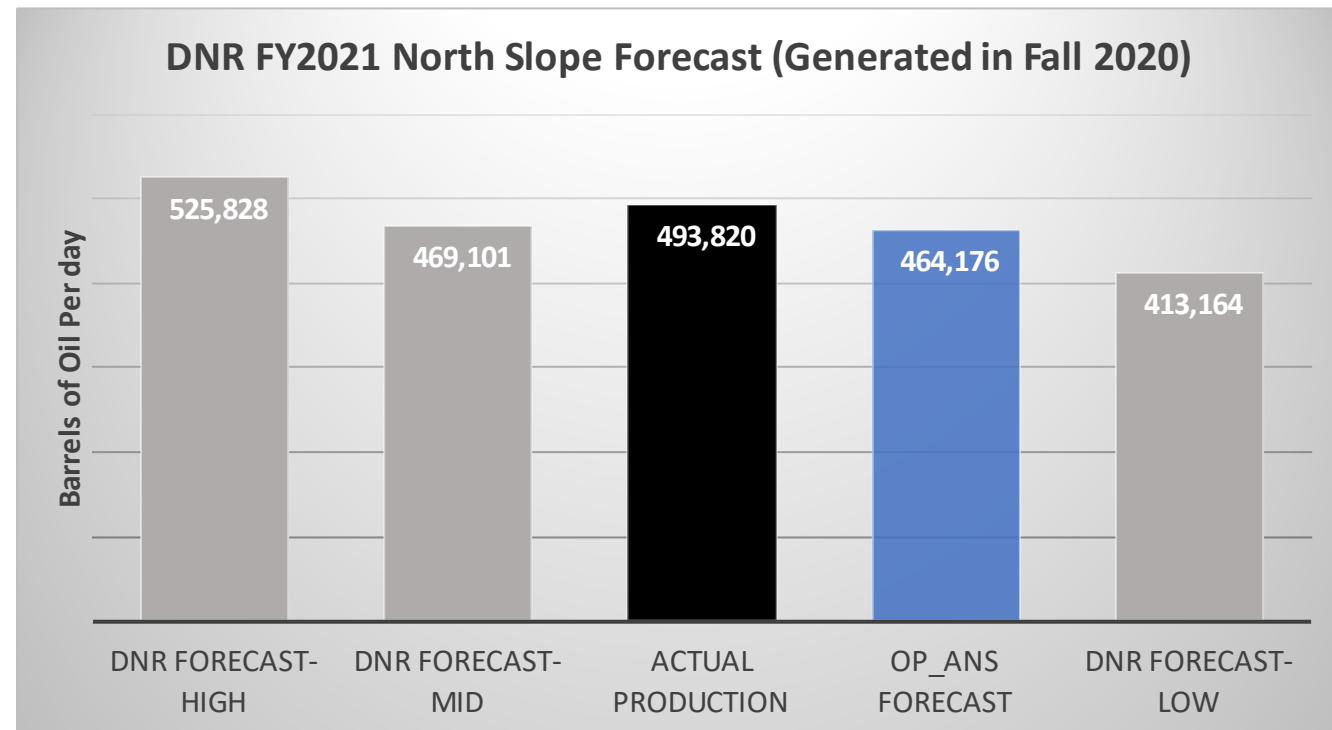
# BACKGROUND: FY2021 IN REVIEW

**Background: FY2021 in Review**

# FY 2021 AS FORECASTED BY DNR IN FALL 2020: HOW DID WE DO?

- **DNR forecast proved reliable for State revenue planning, as actual FY 2021 production came in within DNR's forecasted range.**
  - DNR expected case forecast was ~5% under actual FY 2021 production
- **New factors to watch for that are currently shaping the forecast horizon**
  - Strong Environmental Social and Governance (ESG) influences introduce a new terrain for capital allocation decisions in the Arctic, especially for early-stage oil projects under development/evaluation
  - Current Production: Varied operator responses to the many phases of the covid-19 pandemic influencing several aspects of field management and redevelopment efforts

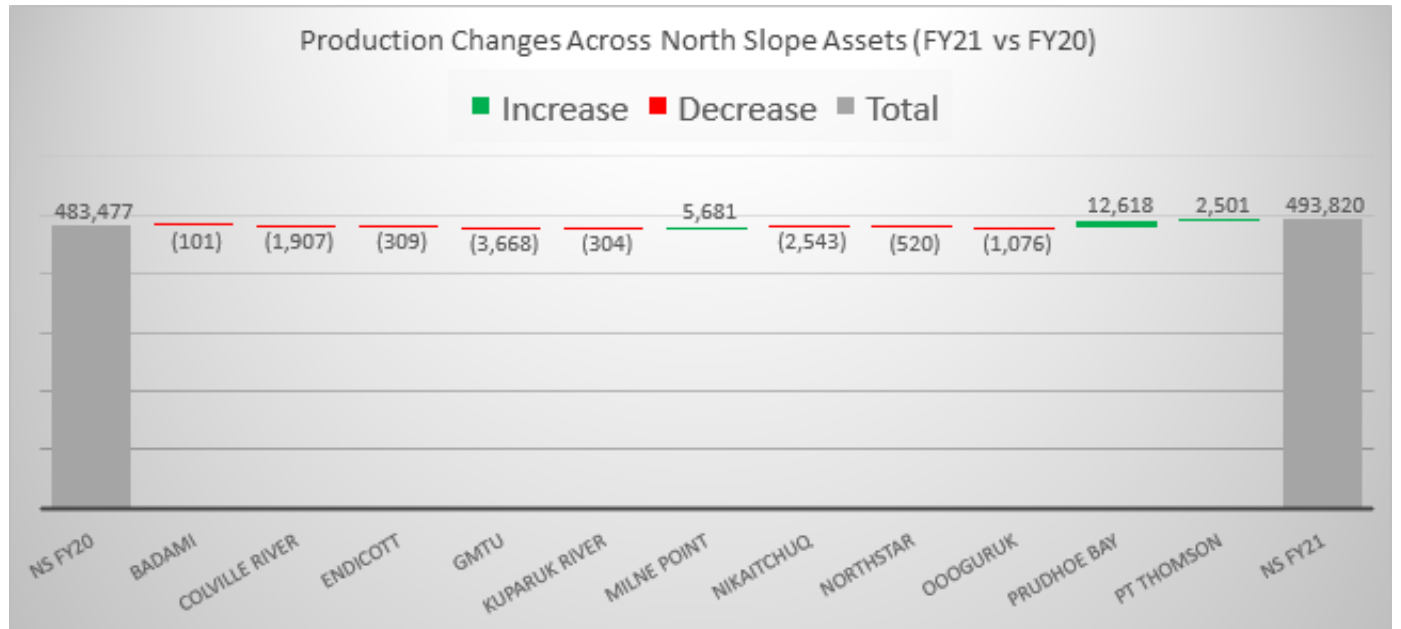
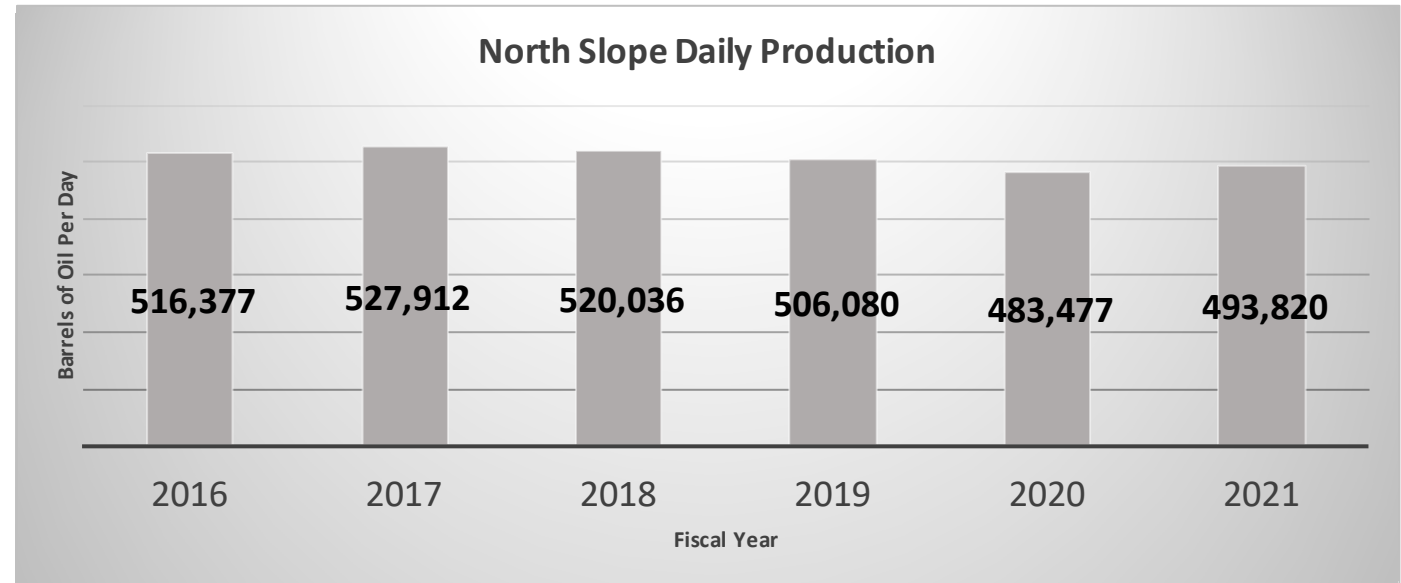
- North Slope Outlook for FY 2021 (July 2020 through June 2021)
- Actual production falls within DNR's forecast range



# FY 2021 SUMMARY: NORTH SLOPE

## Highlights (FY2021 vs FY2020)

- All fields are generally expected to see a year-on-year decline
- Compared to FY2020, in FY 2021 North Slope production increased by ~2% (~10,000 bopd)
- **Increases**
  - GPBU: 5% production growth due to well/facility optimization efforts
  - MPU: 20% production growth due to consistent drilling efforts
  - PTU: Over 40% growth; improved facility reliability
- **Decreases**
  - KRU: Production essentially held flat at FY20 levels
  - GMT1: Over ~50% drop. Reservoir challenges persist
  - Oooguruk: Absence of drilling since 2016



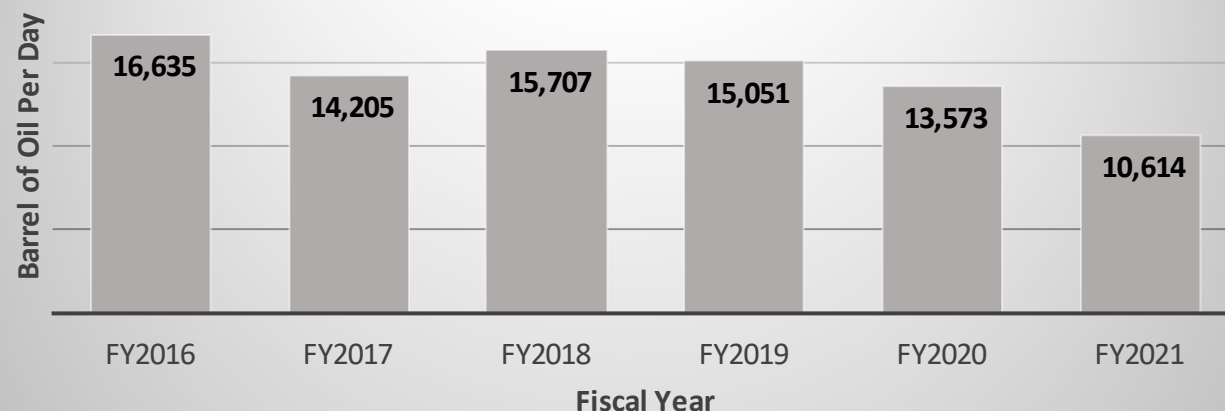


# FY 2021 SUMMARY: COOK INLET

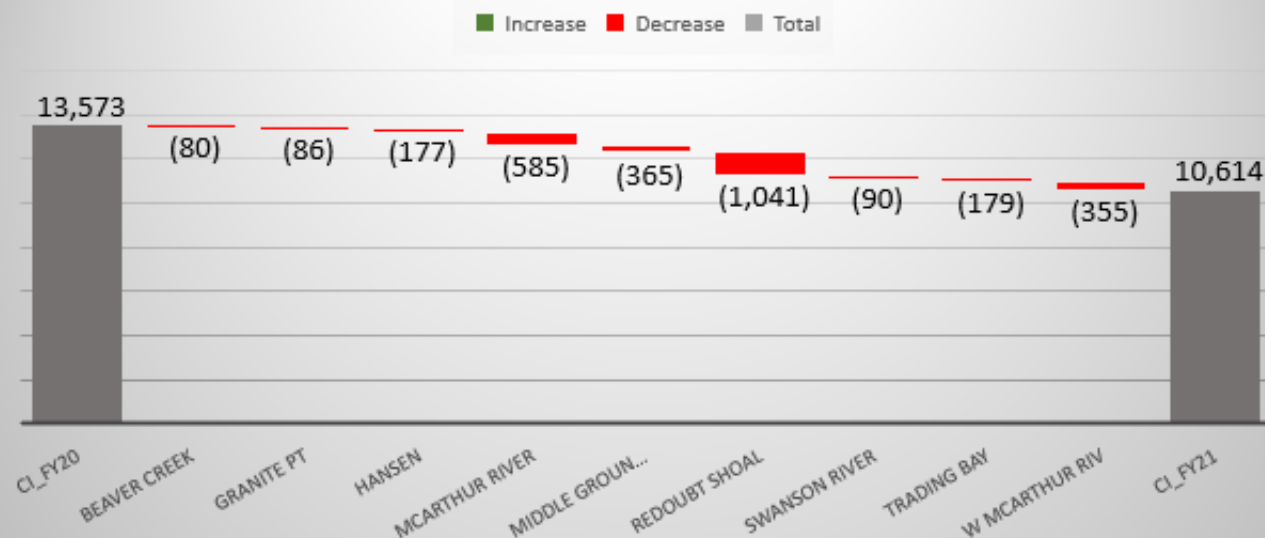
## Highlights (FY2021 vs FY2020)

- Oil from the Cook Inlet basin critical to the supply of in-state refineries, as well as yielding revenues from Royalty-in-Kind sales
- Compared to FY2020, in FY2021 Cook Inlet production decreased by ~22% (~3000 bopd)
- All fields are generally expected to see a year-on-year decline
- **Decreases**
  - Redoubt Shoal & McArthur River: Fields were taken offline in June 2020 due to pandemic-related price crash. Fields brought back online in September/October 2021.

Cook Inlet Historical Production



Production Changes Across Cook Inlet Assets (FY21 vs FY20)



# STATUS UPDATE OF KEY FUTURE PROJECTS: NORTH SLOPE

	Status: January 2021	Status: January 2022	Production Rate Estimates
<b>CRU – Fiord West Kuparuk</b>	6 wells planned	Extended reach drilling (Doyon 26 “The Beast”)	Reaching ~20,000 BOPD
<b>CRU - CD5 2<sup>nd</sup> Expansion</b>	Ongoing drilling by YE 2020 after Covid-related interruption	Ongoing; 3 injectors drilled so far by Nov 2021	Reaching over 10,000 BOPD
<b>CRU – Narwhal</b>	NA	<b>First oil</b> Dec 2021. Produced ~1600 BOPD. More drilling expected from CD4 to total ~12 wells and full dev’t of 20 to 40 wells from CD8 in ~2028.	Initial peak from single start-up well: 1,000 to 5,000 BOPD; full peak DNR estimates >32,000 BOPD
<b>GMT2</b>	GMT2 First oil YE 2021	<b>First oil</b> , Nov 2021 (1,326 BOPD); 4 wells drilled by Nov 2021	Peak rate: 35,000 to 40,000 BOPD; 2022 update: 30,000 BOPD.
<b>Pikka</b>	-Now planned for 2-phases; start of production (Phase 1: 2025); -To move to FEED 2021; FID & 15% AK divestment YE2021 through 2022	-Ongoing FEED; start of production (Phase 1: 2025; Phase 2 FID expected by ~2024/2025); Santos/Oil Search Merger completed	Peak design capacity rate, Phase 1: 80,000 BOPD
<b>Willow</b>	Plan to submit Supplemental EIS. Record of decision achieved, FEED FID expected YE 2021 Announced first oil: 2025-2026	Addressing AK District Court remand; likely to target a new BLM Record of Decision anticipated by YE 2022. Construction expected to start Q12023. First oil post 2025/2026	Peak rate: 130,000 BOPD

# DNR FALL 2021 PRODUCTION FORECASTING APPROACH

**Recap: No Change in methodology from last year's forecast [Fall 2020 Forecast]**



# 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 6/30/2021
- **DOG engaged with operators through DOR-arranged in-person and written interviews**
- **20 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
- **No modifications in forecast approach between Fall 2020 and Fall 2021 forecasts**

# 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**

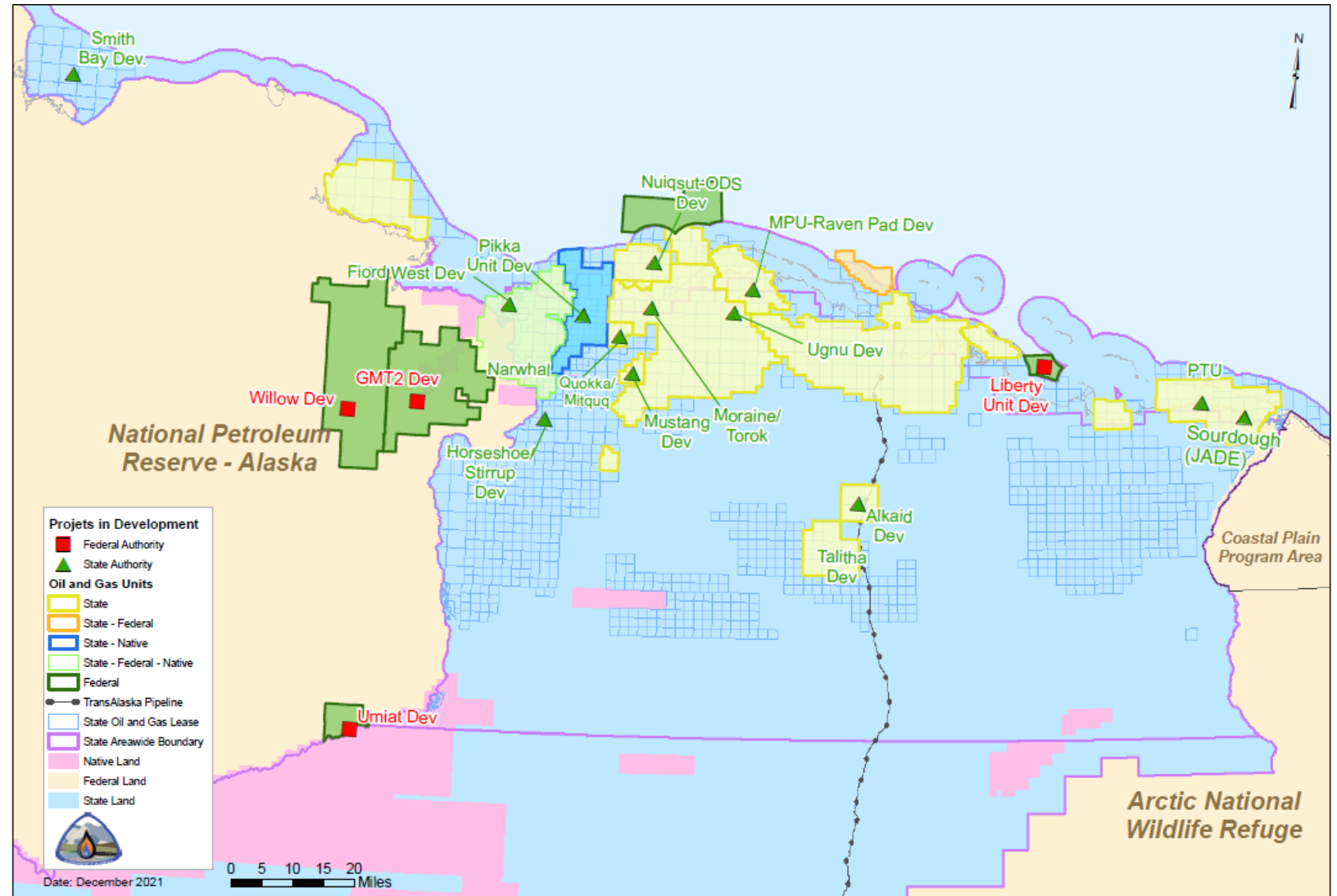
- **Projects Under Development (UD) and Under Evaluation (UE):**

- 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)

# MAJOR PROJECTS [UNDER EVALUATION/DEVELOPMENT] CONSIDERED IN FALL 2021 FORECAST

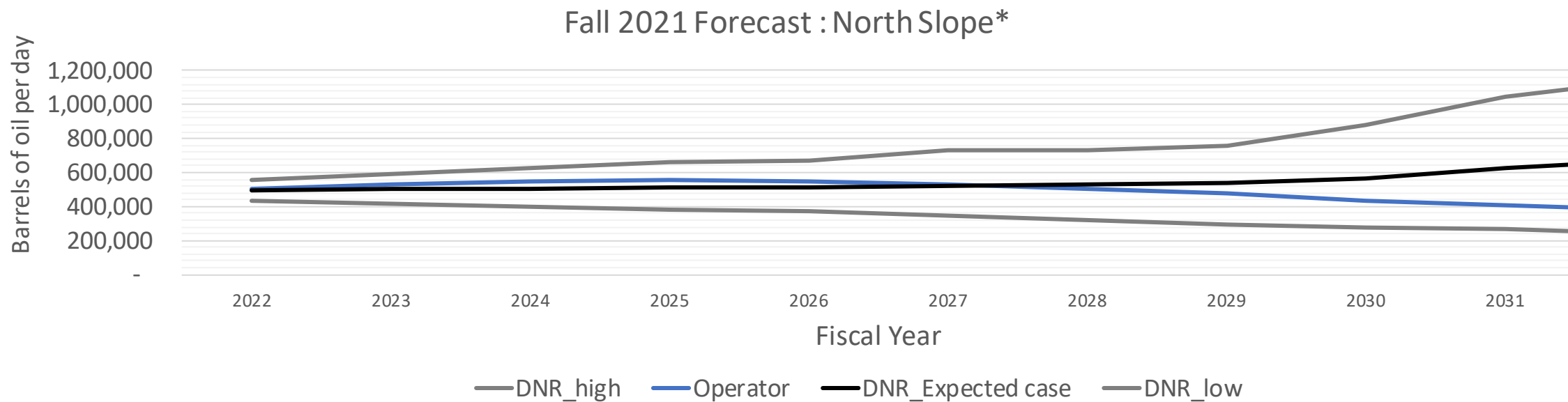
## Generalized characteristics

- Projects that were not online as at end of FY2021 (data cut-off date of 6/2021)
- Higher risk factors than currently producing fields
- Known discoveries with identifiable operators
- Require major investments



# FALL 2021 PRODUCTION FORECAST RESULTS

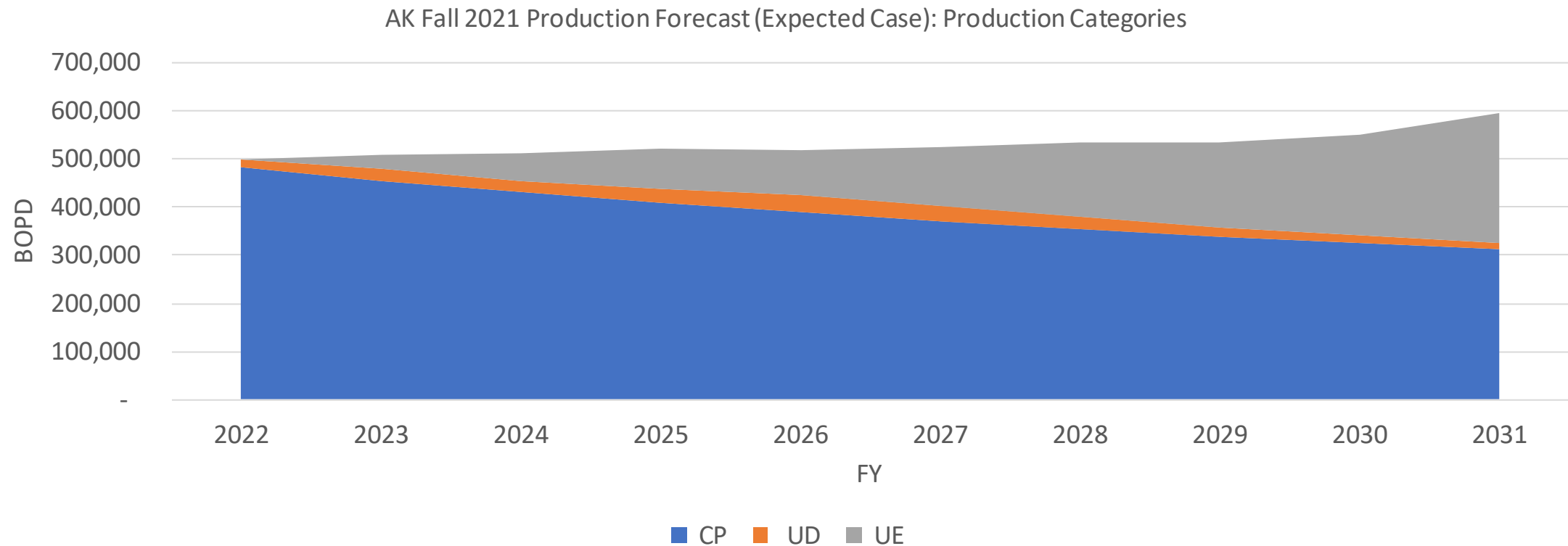
# FALL 2021: NORTH SLOPE ANNUALIZED FORECAST



- Short Term:
  - DNR forecasts FY2022 annualized average daily statewide production at 500 MBOPD, and North Slope production at 492 MBOPD, with a range of 430 MBOPD and 555 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

- Comparison of DNR vs Operator Forecasts across the same group of NS fields.
- Excludes DNR's forecasts for non-producing units; operators' numbers in charts also excludes not-yet producing fields

# ALASKA STATEWIDE OIL PRODUCTION FORECAST – FALL 2021 EXPECTED CASE AND CATEGORIES OF PRODUCTION



- *Current Production (CP) remains backbone of state production in near and medium term*
- *Under Development (UD) segment represents production expected from wells drilled in FY2022*
- *Under Evaluation (UE) begins to play a more significant role in production in the next 5-10 years*
- *Production outlook depends on several factors including operators' plans, oil price, fiscal system*



# FALL 2021 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 2021 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 2021 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.

# THANK YOU

**Thank you on behalf of the DOG Fall 2021**

**Production Forecasting Core Team:**

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