



# COVID-19/Low Oil Prices: An Evolving Outlook for Production

*House Resources Committee*

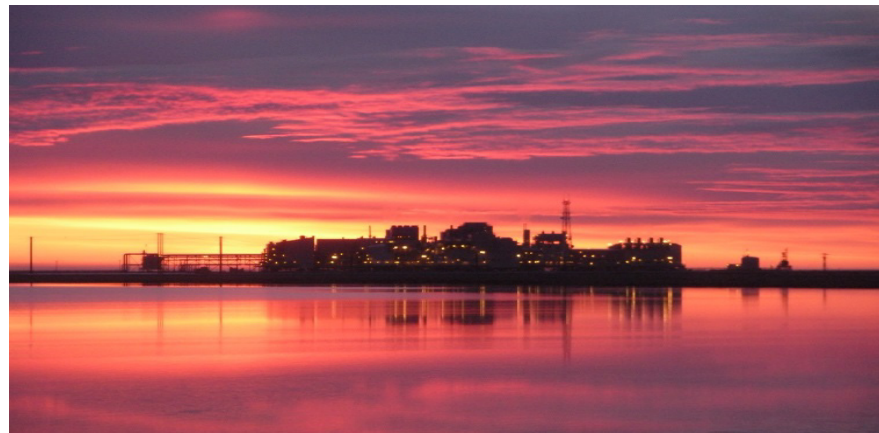
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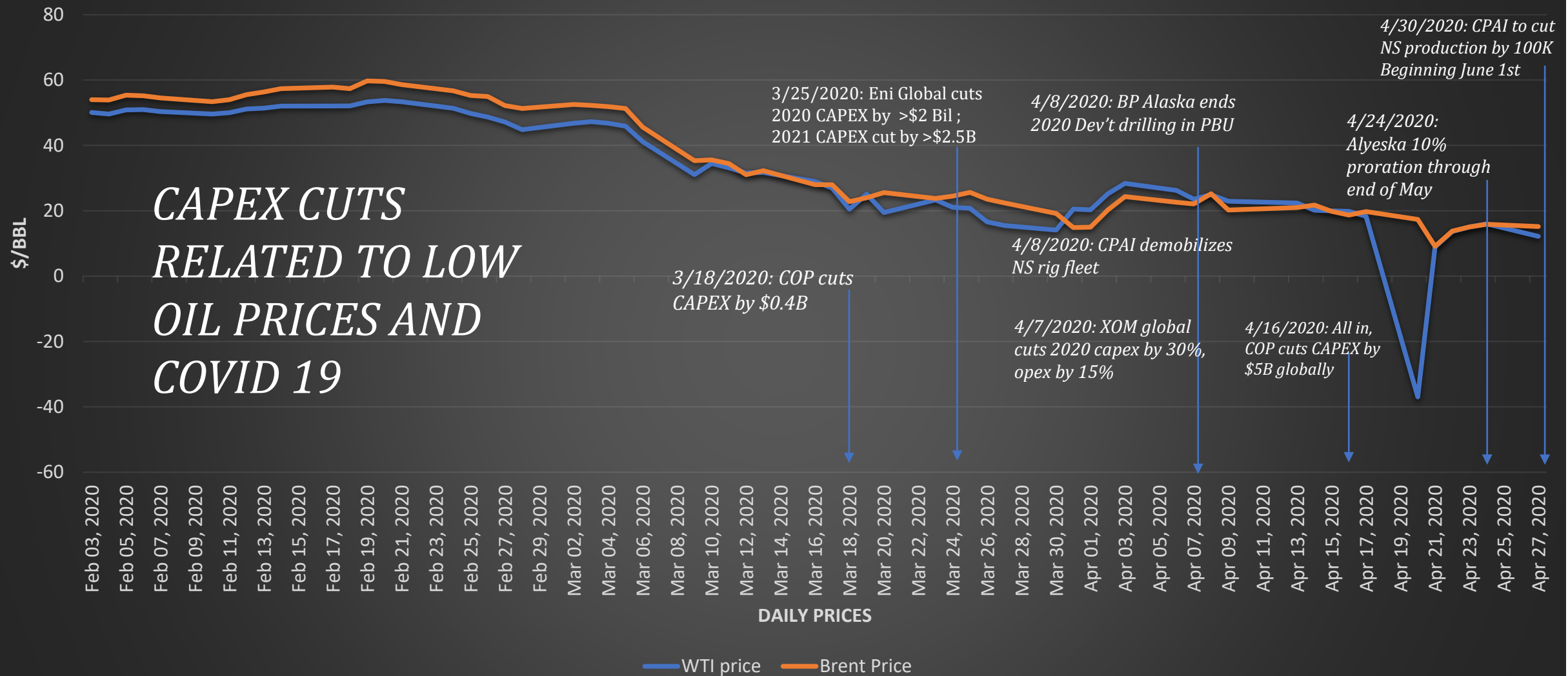


# OUTLINE

- Background
  - Oil price and recent operator announcements
  - Steady state assumptions
- Production outlook due to Covid-19/Low Oil Price
  - Modelling Assumptions
  - Historical Perspective on 'stop-work' impact
- Summary
  - Spring 2020 Official Forecast vs Actuals: FY2020
  - General uncertainties in outlook

# BACKGROUND: OIL PRICE AND RECENT OPERATOR ANNOUNCEMENTS

## CAPEX CUTS RELATED TO LOW OIL PRICES AND COVID 19



# BACKGROUND: STEADY-STATE FORECAST ASSUMPTIONS ON PRODUCING FIELDS (CURRENTLY PRODUCING FIELDS)

- Explicit/Implicit assumptions in base decline forecasting
  - Background drilling levels
  - Well work levels
    - Rate adding
    - Non-rate adding [rate protection]
  - Field operational practices
  - Facility maintenance:
    - Frequency of Turn-Around facility maintenance
- How could these assumptions hold in a Covid-19/Low oil price world?
  - Background drilling Levels
    - Rigs demobilized/stacked
  - Well work levels:
    - Non-essential work is put off
    - Rig/Non-rig wellwork: Cancelled/deferred
  - Field operational practices
  - Facility maintenance:
    - Non-critical work deferrals



# DNR ILLUSTRATIVE OUTLOOK: COVID-19/LOW OIL PRICE PRODUCTION SCENARIO [SPRING 2020\_APRIL]

## Some Modeling Assumptions

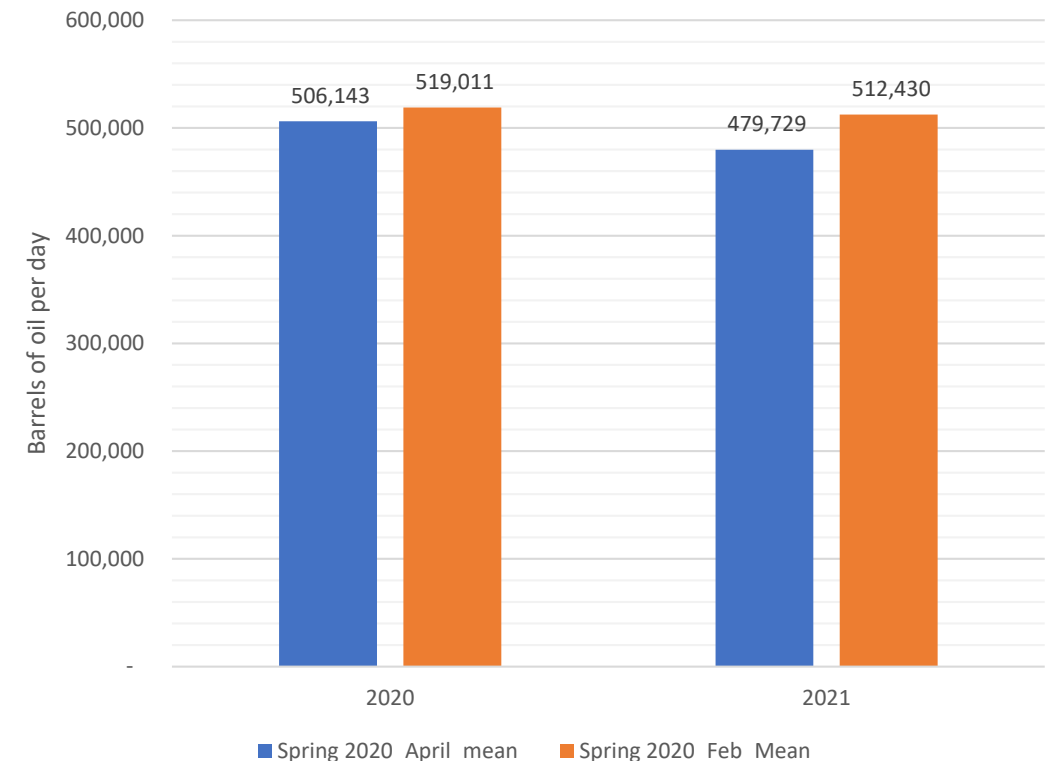
Following the recent rig-laydown announcements by operators here are some assumptions used in generating this low oil price scenario for the Spring 2020 Forecast:

- No new wells will be drilled through YE 2020 (April 2020 through Dec 2020)
- Oil price forecast uses the state's official Spring 2020 price
- All assumptions used in Feb 2020 forecast for the period beyond Dec 2020 unchanged

## Exclusions: These exclusions might make estimated production impact due to Covid-19 optimistic

- **Proration assumptions or production cut decisions excluded (will be examined by DOR)**
- Impact of planned or unplanned wellwork or Turn-around facility maintenance work
- Impact of base production management activities (e.g rate-protection wellwork and rig workovers)

Statewide Production Forecast- Comparison for fiscal years 2020 and 2021

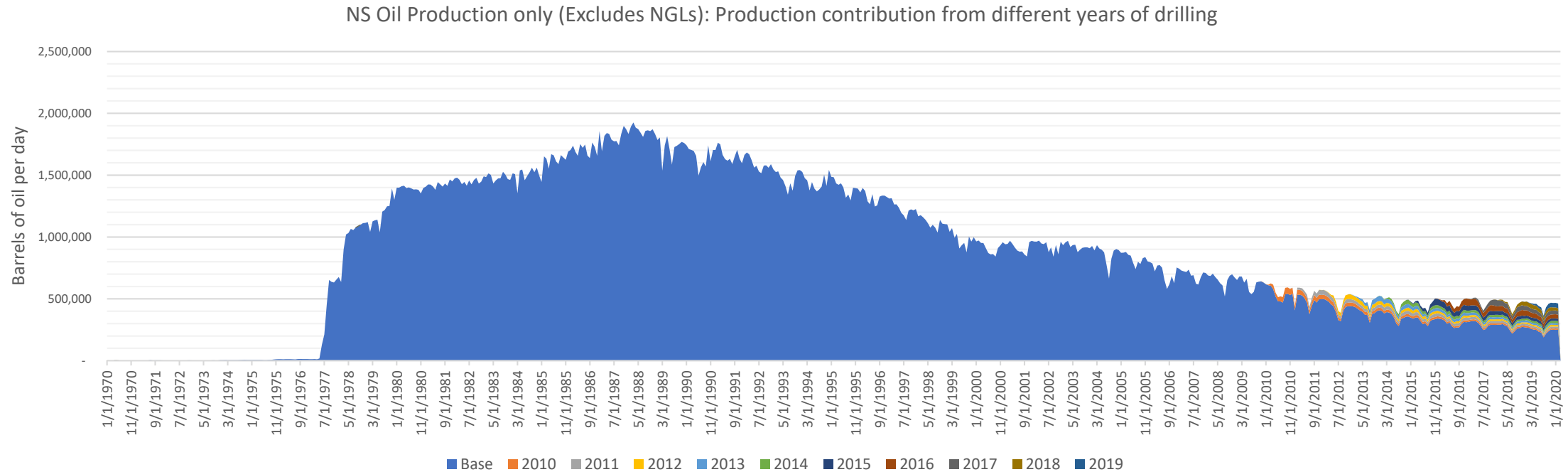


- Rig laydowns are the main drivers for expected short term production decline
- Estimate of ~5.2% decline from FY2020 to FY2021

# OTHER RELATED FACTORS THAT COULD IMPACT PRODUCTION OUTLOOK

- Prior to suspension in active development activities, some operators had drilled ~50% of their planned wells for the FY2020
- Rig laydown suggests that no new rig workovers will be executed through YE 2020.
  - Without this and other base management work, Covid-19-impacted production outlook could be optimistic
- Deferrals on all rate-impacting, discretionary (none safety-related or regulatory-mandated) work and potentially planned TARs and some unplanned work.
- Cost-cutting efficiency gains; much of this already achieved in the last 3 years of price volatility
- The pace of ramp-up on base management activities and development activities after YE 2020

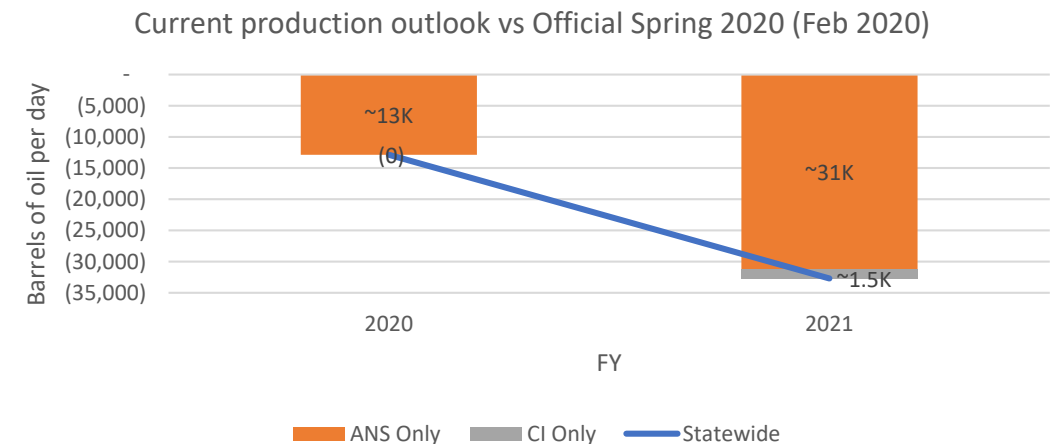
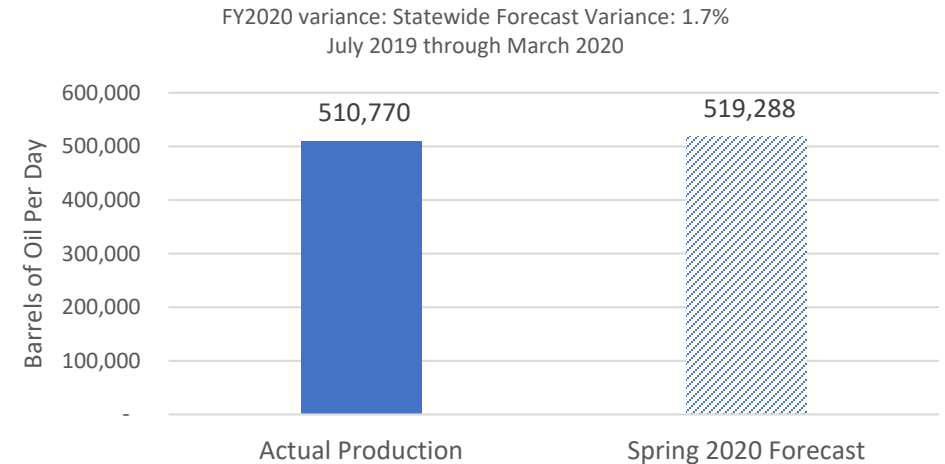
# HISTORICAL PERSPECTIVE: GENERAL IMPACT OF NEW DRILLING ON NEAR-TERM NS PRODUCTION DECLINE



- Production from new wells mitigates overall NS production decline
- Laydown of drilling rigs will exacerbate NS legacy field production decline
- It is uncertain how much higher decline will be
- Historically, on average, one year of drilling has mitigated first year decline by ~5% points.
- DNR's illustrative outlook on production due to reduction in rig activities estimates ~5.2% decline for FY2020 through FY2021.
- DNR's estimated decline includes high levels of uncertainty.

# PRODUCTION IMPACT SUMMARY

- **Key Considerations:**
  - Analysis excludes any non-public information by operators and uses public announcements (as at April 28), alongside other modeling assumptions.
  - Analysis assumes that drilling for 2020 will not exceed baseline development drilling in the recent past for all NS operators
- **Production impact (Short term):**
  - The main driver for production drop in the near-term is *stop-work* initiative by operators, due to Covid-19 and low oil prices.
    - For FY2020, estimate of ~13000 bopd drop in production due to rig layoffs/stop work, compared to Spring 2020 forecast developed in February 2020.
    - For FY2021, estimate of ~32000 BOPD decline against Official Spring 2020.
- **Production impact (Long term)**
  - Downward adjustment of long-term oil prices is expected to affect economic viability of projects planned to come online in the medium to long term. Results from this analysis only show production impact through YE 2021.
- **Proration/production cuts:**
  - Results shown exclude proration on production, or production cuts resulting from any midstream or downstream activities.
- **Key take-away:**
  - **Current production outlook includes very high levels of uncertainty, due to dynamic changes in operator decisions, in response to overarching macroeconomic uncertainties.**





# QUESTIONS

## *Presenters*

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Thank you on behalf of the DOG Spring 2020

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