Improving the Production Forecast

State of Alaska

Department of Revenue

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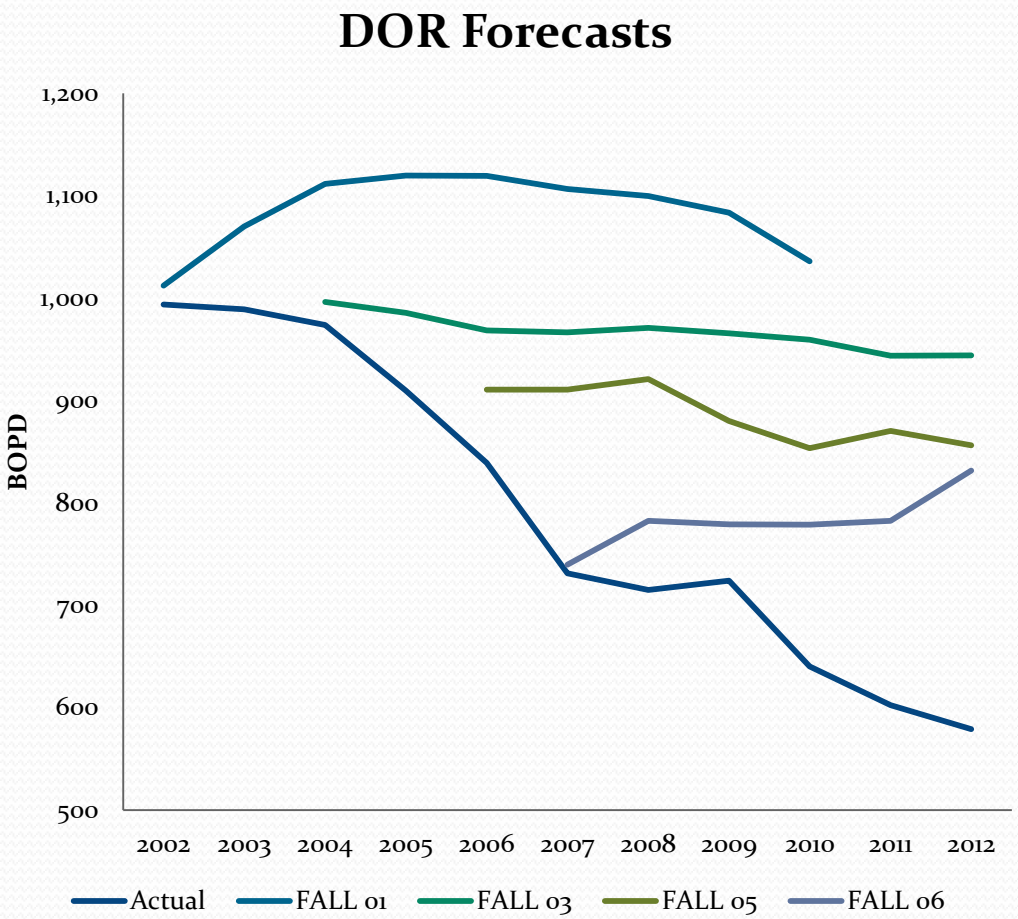
What is the problem?

In developing the forecast the Department & its consultant rely on input from industry to forecast production.

While this method works relatively well in the near term it has consistently been optimistic in the long-term.

The average forecast error for six to ten years in the future has been 40%-60%.



The Department's Approach

The Production Forecast has been based on three tranches of future production:

Currently Producing:

Oil from wells that are in production and following typical reservoir engineering optimization without major investment.

Under Development (UD):

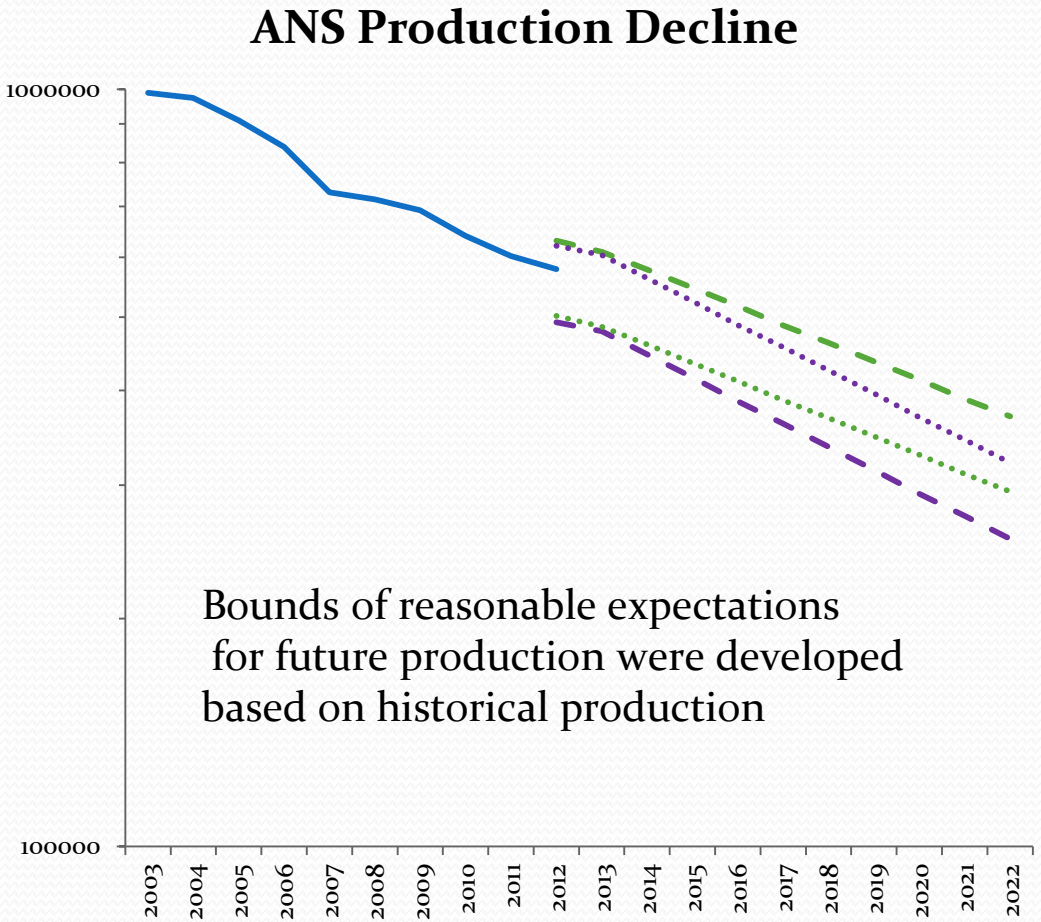
- Oil from projects that will add incremental oil to existing fields or will bring new fields into production.
- Project must have senior management approval and be allocated funds in the companies budget.

Under Evaluation (UE):

- Oil from projects that are likely to occur in the future, but have not meet the requirements of the previous category.
- Requires that oil reserves are known and recovery is technically possible with current technology.

Under Development + Under Evaluation = "New Oil"

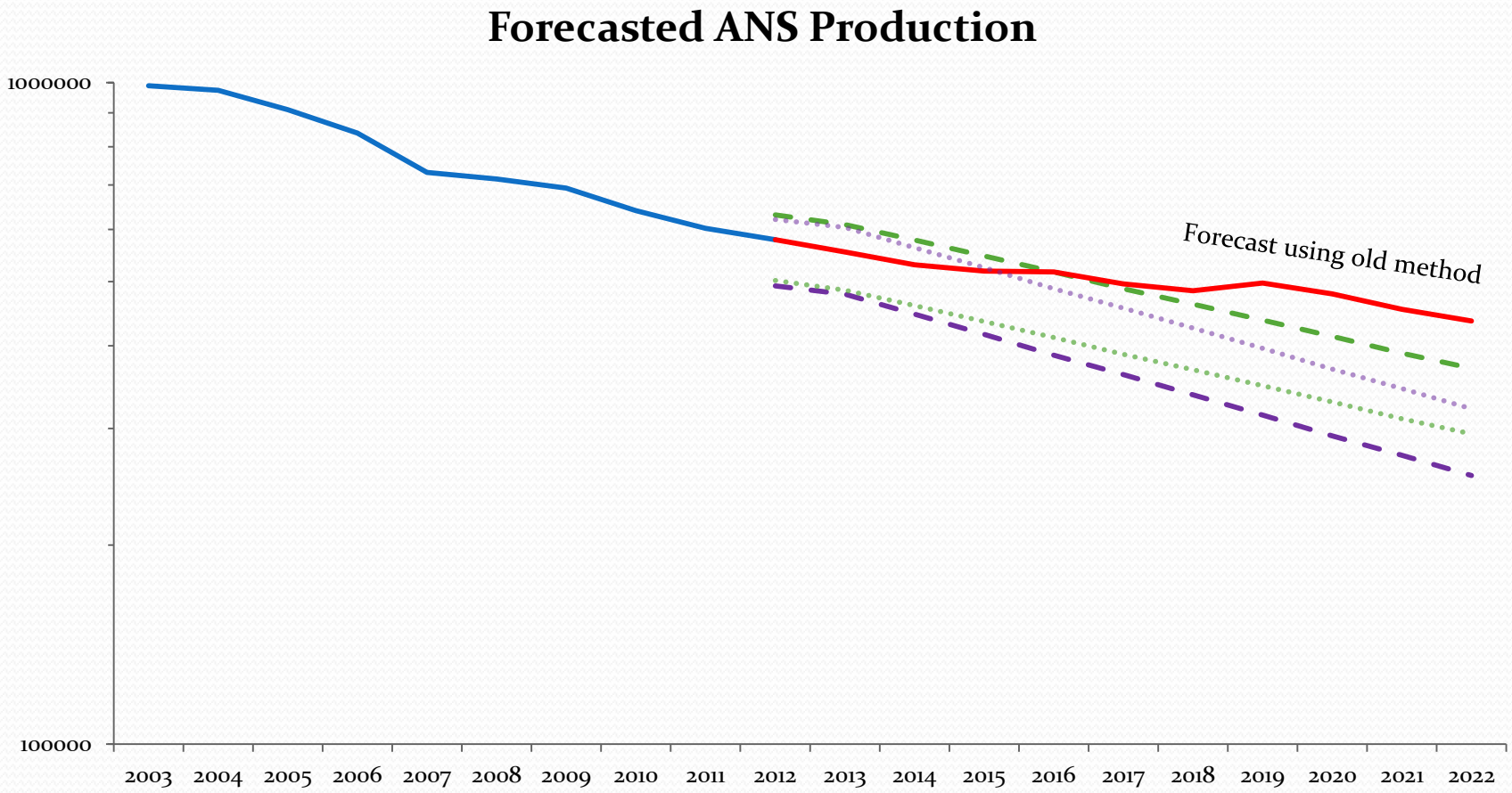
****These definitions are not equivalent to those used by the Society of Petroleum Engineers (SPE) or Securities & Exchange Commission (SEC) and should not be used as such****



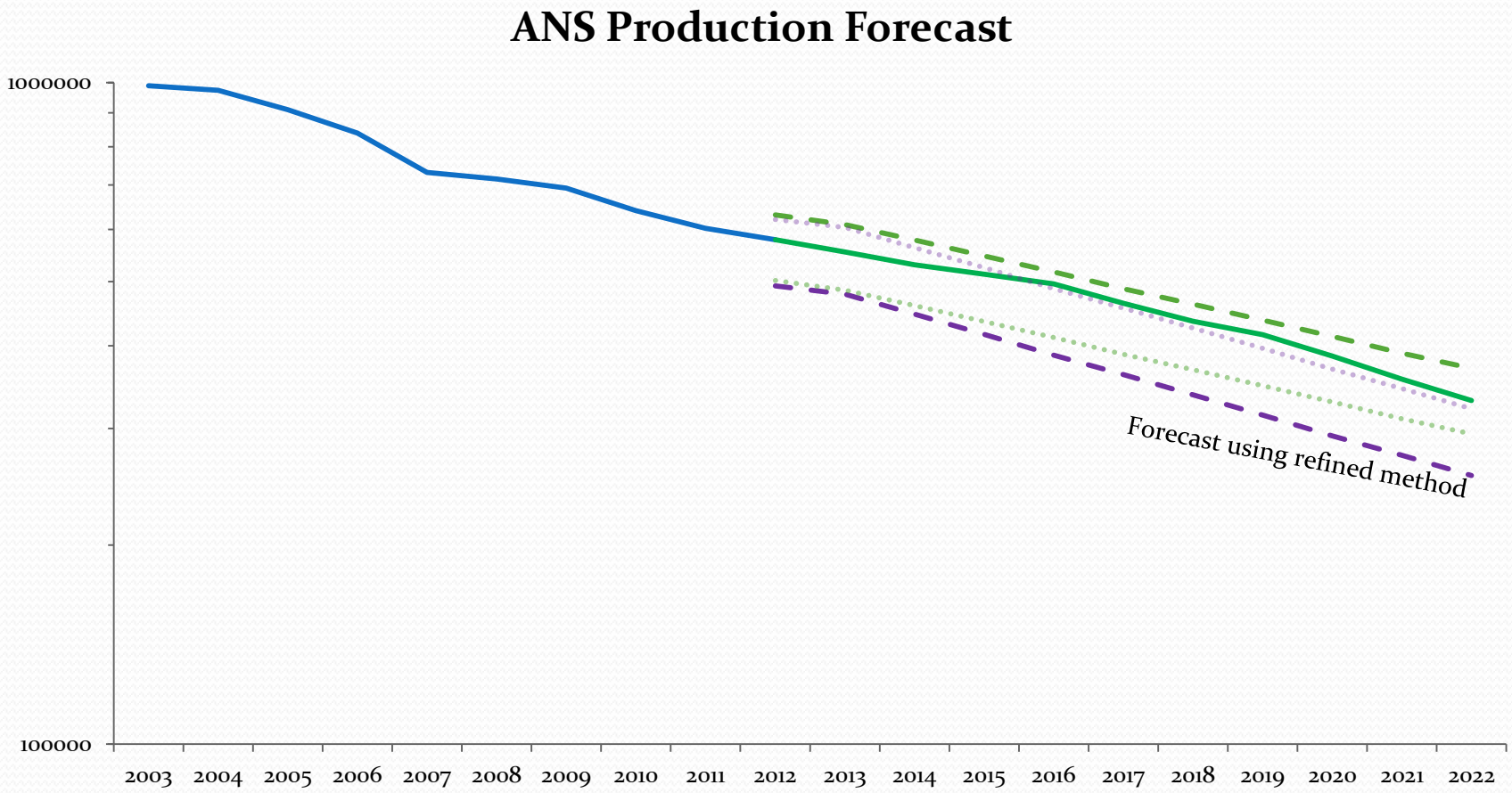
Accounting for the Risks Appropriately

- Currently Producing oil **was not** risked because it is grounded in engineering principles.
- The New Oil portion of the Forecast was adjusted using a scenario modeling method.
  - Categories
    - Budgetary
    - Technical
  - Confidence decreasing with time
    - Higher confidence with near term, 1-3 years, than in out-year plans.
  - Reasonable to expect greater uncertainty in both under-development and under-evaluation tranches.
    - Recognizing the impact of the *known-knowns, known-unknowns and unknown-unknowns*.

Testing the Traditional Forecast



Applying the Refined Methodology



Summary

- Prior forecasts have over-estimated long-term (6 years out) production by significant margins (40-60%).
- The refined methodology is based on statistical analysis and tested against past performance.
  - **Reasonable and Prudent**
- The refined methodology **does not** impact near term revenues**.**
- Provides a more **prudent** and **reasonable forecast** for the purposes on **long-term planning**.
- Alaska still holds substantial discovered and undiscovered resources that may provide additional production in the future.
  - Example – heavy and shale oil are not included in the forecast.