

# POINT THOMSON

## SETTLEMENT OVERVIEW

**Senate  
Judiciary  
Committee**

**Joe Balash  
Deputy  
Commissioner**  
*Alaska Department of  
Natural Resources*

April 27, 2012



# OUTLINE

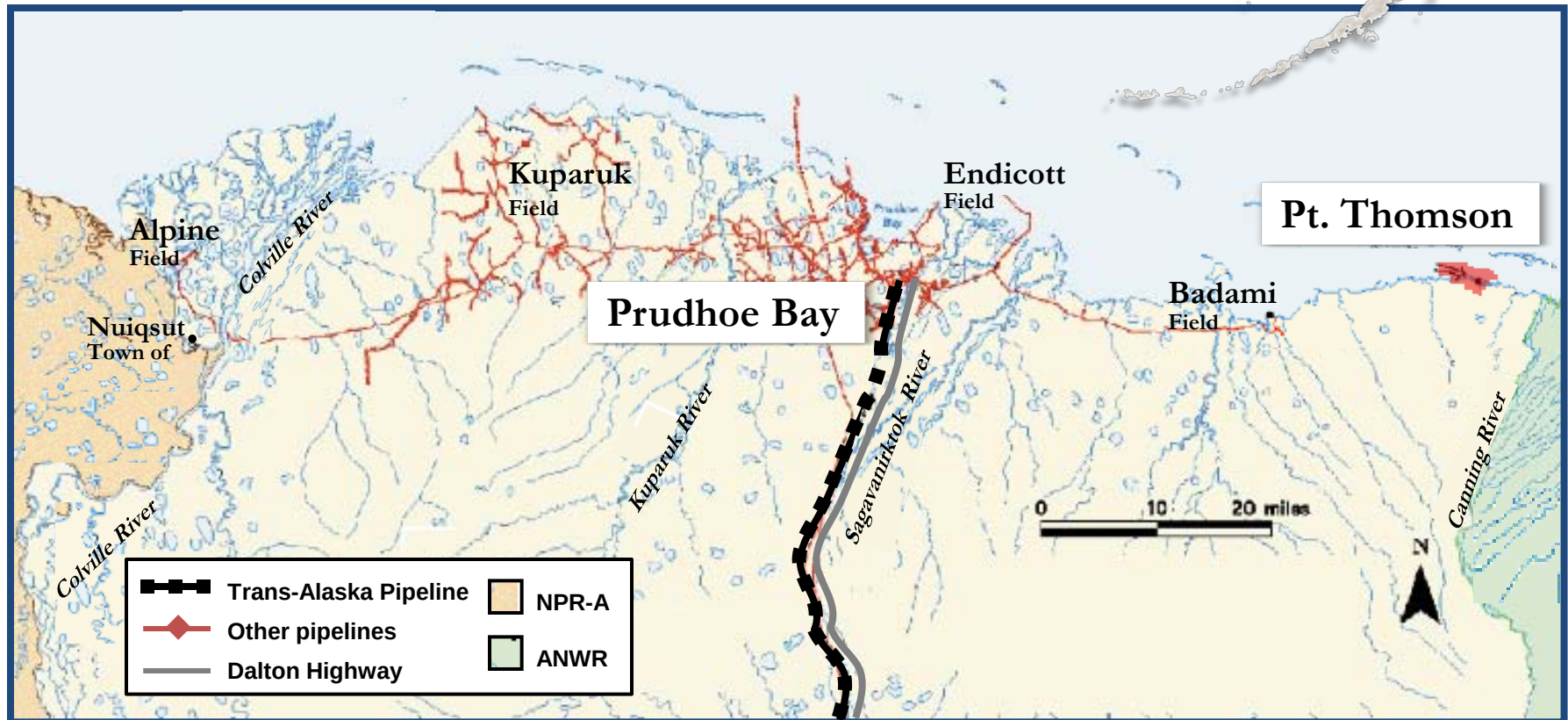


- I. BACKGROUND
- II. LONG-STANDING GOALS RELATED  
TO POINT THOMSON
- III. HOW *the* SETTLEMENT ADVANCES  
ALASKA'S INTERESTS
- IV. COMPONENTS *of the* AGREEMENT

PT

# BACKGROUND

Area of  
Detail



## About Point Thomson

- Point Thomson (PT) is located approximately 60 miles east of Prudhoe Bay and is adjacent to the Arctic National Wildlife Refuge (ANWR)
- The first leases were acquired in 1965; oil discovered in 1975; gas discovered in 1977
- The PT unit formed in 1977
- The PT unit contains 38 state leases on approximately 93,000 acres of state land
- PT contains about 8TCF of gas and hundreds of millions of barrels of oil
- PT has ~ 25% of known North Slope gas reserves
- PT unit has a massive Thomson Sands reservoir, a thin oil rim, and smaller Brookian oil accumulations
- The PT reservoir is a high-pressure retrograde condensate and natural gas reservoir that presents development challenges

## About the Litigation

- In 2005, DNR defaulted the PT unit for lack of development
- In November 2006, DNR terminated the unit when the Producers failed to cure the default
- The Producers appealed to superior court; in December 2007, the court remanded the unit termination decision to DNR
- In April 2008, DNR rejected a new plan of development and again terminated the unit
- The Producers appealed to superior court, which ruled that DNR erred in terminating the unit
- The Alaska Supreme Court granted the State's Petition for Review, which halted the current superior court litigation – final court resolution is years away

# LONG-STANDING GOALS RELATED to POINT THOMSON

State of Alaska's Goal for Point Thomson:  
*Advance the State of Alaska's Strategic Interests*

For years the State of Alaska has focused on these common goals related to PT:

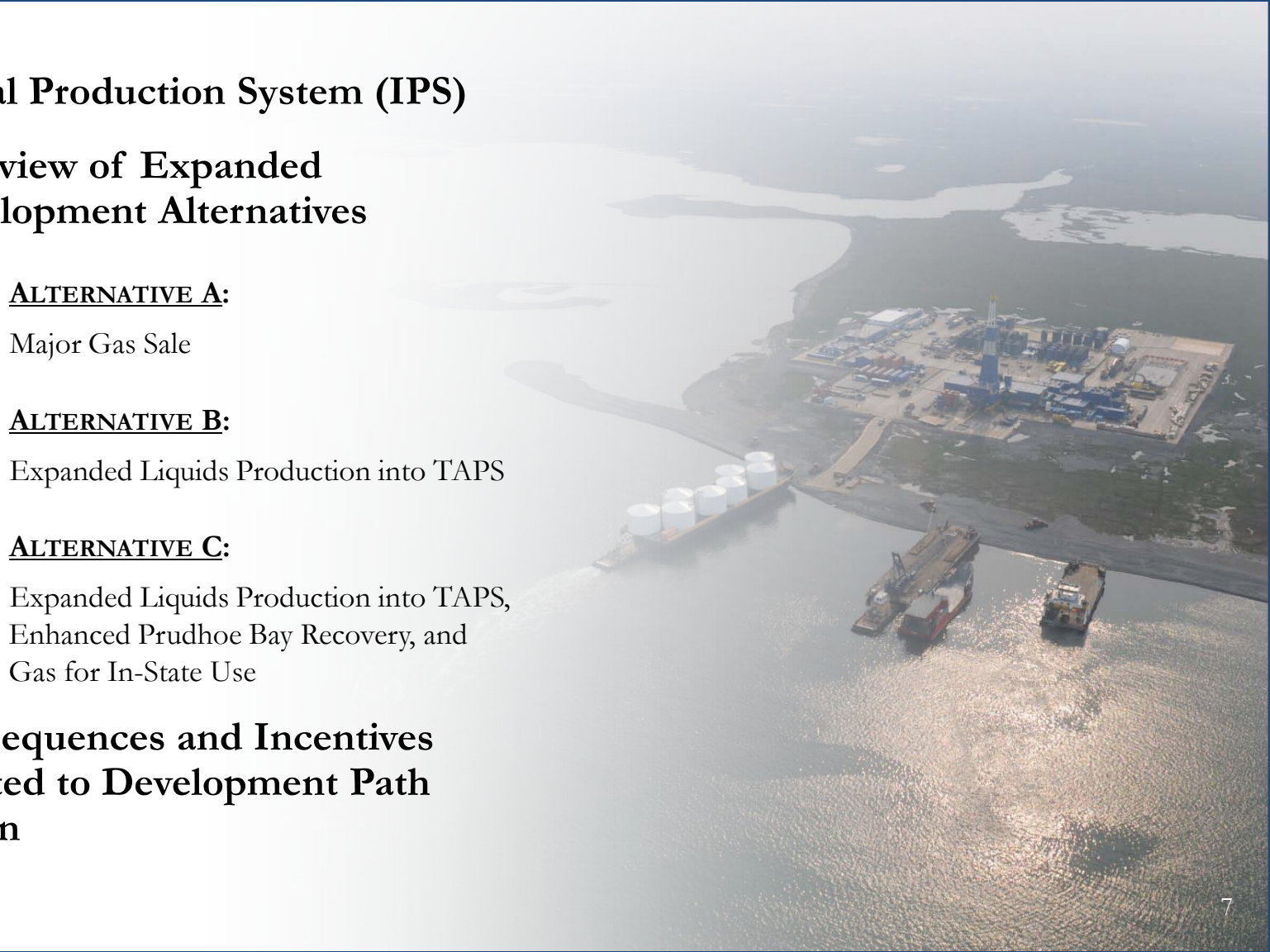
- Begin producing PT hydrocarbons into TAPS—*no more warehousing*
- Keep development and production moving forward
- Incentivize and lay out clear path for full-field development
- Ensure significant consequences if the Producers fail to meet commitments
- Encourage commercialization of North Slope gas
- Create increased employment and economic opportunities for Alaskans





# HOW *the* SETTLEMENT ADVANCES ALASKA'S INTERESTS

- Creates momentum on production and development
- Creates a near-term commitment of production into TAPS and increasing TAPS throughput
- Ends the warehousing of state resources
- Provides the quickest way to move PT into production by a certain date
- Opens the Eastern North Slope to new development opportunities by adding infrastructure and a 70,000 bpd common carrier pipeline connecting to TAPS
- Incentivizes and lays out a clear path and alternatives for full-field development, each of which will require billions of dollars in investment if pursued
- Generates significant investment in Alaska, which will create increased employment and economic activity for Alaskans: strong Alaska hire provision
- Establishes significant consequences if near-term or longer-term development is not pursued
- Increases competition on the North Slope
- Provides potential for significant gas volumes for in-state use no later than 2019
- Positions North Slope gas for a large-scale gas pipeline project
  - Near term work on liquids production undertaken simultaneously with gas commercialization efforts
  - Liquids production work commitments are a pre-investment for North Slope gas commercialization
  - Ends the cloud of litigation over PT
  - Catalyst for alignment among the Producers and TransCanada
- Requires a commitment to develop a separate oil reservoir within PT
- Improves technical and geologic understanding of the complicated PT reservoir to help determine the best way to maximize state resources
- Animating principle: “earn your acreage” – the more work, more commitment, more investment, and more production that occur, the more PT acreage companies will retain

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- I. Initial Production System (IPS)
  - II. Overview of Expanded Development Alternatives
    - A. ALTERNATIVE A:  
Major Gas Sale
    - B. ALTERNATIVE B:  
Expanded Liquids Production into TAPS
    - C. ALTERNATIVE C:  
Expanded Liquids Production into TAPS,  
Enhanced Prudhoe Bay Recovery, and  
Gas for In-State Use
  - III. Consequences and Incentives  
Related to Development Path  
Taken

# INITIAL PRODUCTION SYSTEM

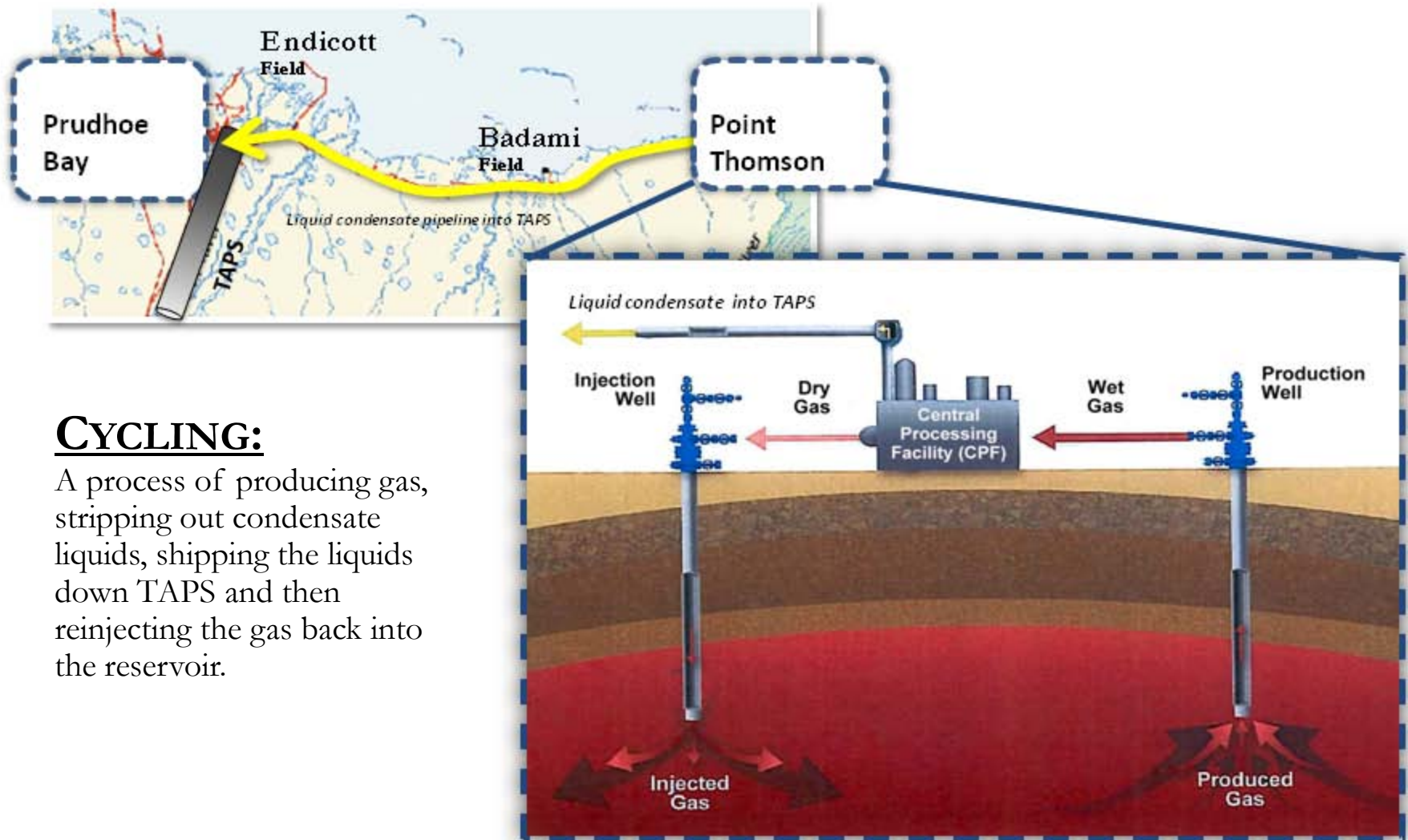
## - COMMITMENTS *and* TIMELINES -

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- Producers will work together to complete the Initial Production System (IPS), will produce ~10k BPD of liquid gas condensates and cycle ~200 mm CFD
  - To install the IPS, the Producers will complete the following work commitments:
    - Drill PT 15 & 16 wells from the central pad (completed); world-class wells in a remote location
    - Construct facilities and install 70k BPD liquids, common carrier pipeline to TAPS
    - Put PT 15 & 16 on production by end of 2015-16 winter season utilizing IPS
      - Original, agreed-upon timeline was pushed back one year because of federal permitting delays
    - Drill west pad well by end of 2016-17 winter season
    - Permit two additional wells and the east pad
  - IPS installs infrastructure necessary for full-field development and will provide critical information for the next phase of development
  - Detailed work schedule incorporated into the agreement (see slide 11)
  - DNR technical review confirmed reservoir complexity
  - If the IPS is abandoned, acreage automatically contracts from the unit and is returned to the state
  - Unfavorable economics/ROI of IPS cannot serve as an excuse for non-performance
  - Once production starts, limited acreage is secured consistent with state law
  - IPS development proceeds in parallel with gas commercialization work



# INITIAL PRODUCTION SYSTEM

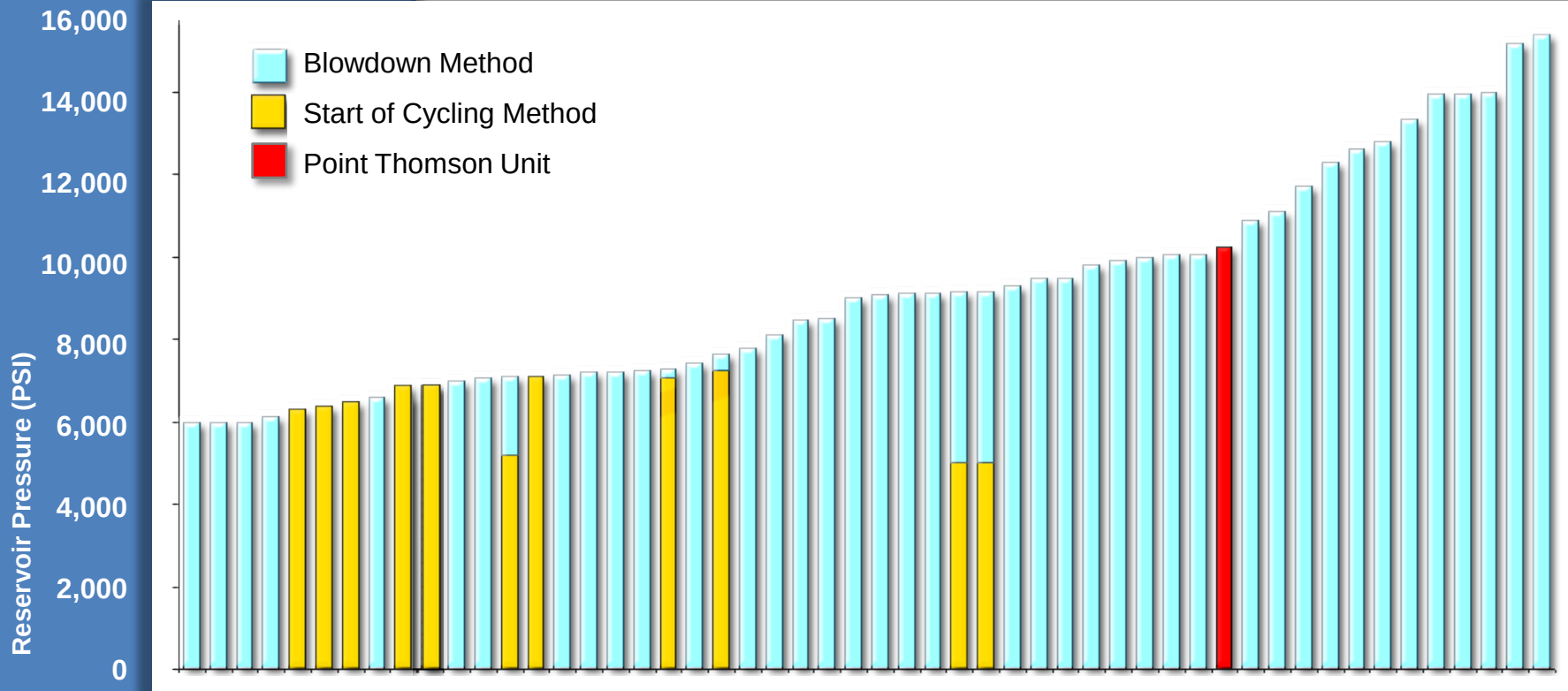
- OVERVIEW of CYCLING -



# INITIAL PRODUCTION SYSTEM

## - CYCLING *at* HIGH-PRESSURE -

## Comparison of World-Wide Gas-Condensate Reservoirs

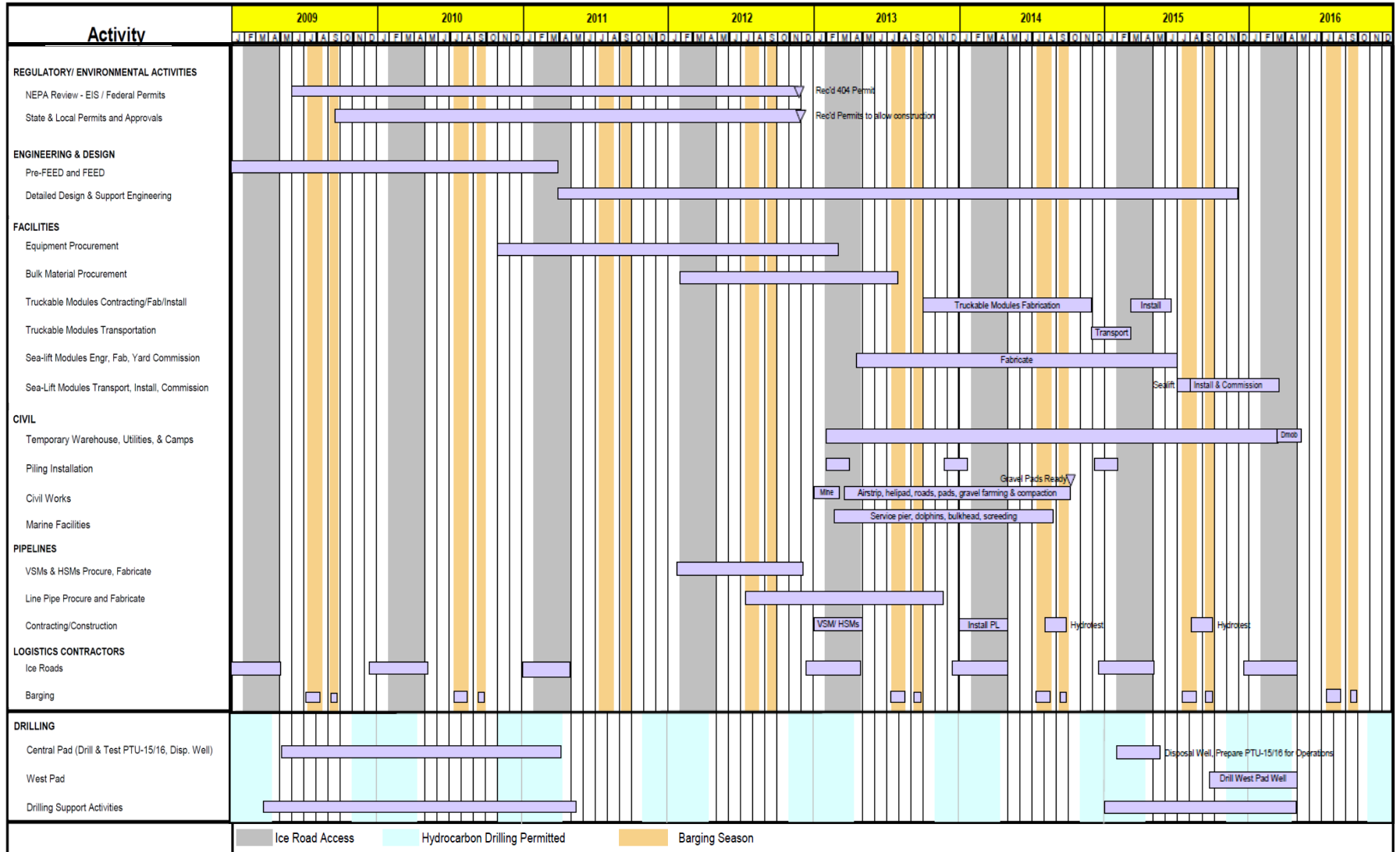


## World-wide gas condensate fields

- There are no retrograde gas condensate reservoir cycling projects similar to Point Thomson (~10,200 psi), although there are a few oil and gas reservoirs in the world that are in production at a higher pressure
- For comparison, Prudhoe Bay gas is at ~3500 PSI, although this is not a condensate reservoir

PT

# IPS WORK SCHEDULE



# OVERVIEW of EXPANDED DEVELOPMENT ALTERNATIVES

- In addition to the IPS production commitments and timeline, the settlement creates pathways, incentives, and benchmarks for full-field development of the PT reservoir – *critical component of the settlement*
- Once the IPS is on production, there are three alternatives to full-field development:
  - A. Major Gas Sale
  - B. Expanded Liquid Production into TAPS
  - C. Expanded Liquid Production into TAPS, Enhanced Prudhoe Bay Recovery, and Gas for In-State Use
- All three alternatives:
  - Can be pursued individually or simultaneously
  - Will require billions of dollars of additional investment to complete
  - Can only fully secure additional PT acreage once expanded production of hydrocarbons begins
- If none of the three expanded development alternatives are sanctioned or committed to, then the Producers automatically lose significant PT acreage
- Producers must also commit to Brookian oil formation production by 2018 or lose Brookian acreage
- A primary goal of the expanded development alternatives is commercializing North Slope gas
- But other full-field development scenarios—Alternatives B and C—are also available
  - Provides flexibility for the future: markets are hard to predict
  - State's resources can be maximized depending on market conditions



# ALTERNATIVE A:

## - MAJOR GAS SALE -

### A. ALTERNATIVE A: Major Gas Sale

### B. ALTERNATIVE B:

Expanded Liquids  
Production into TAPS

### C. ALTERNATIVE C:

Expanded Liquids  
Production into TAPS,  
Enhanced Prudhoe Bay  
Recovery, and Gas for In-  
State Use

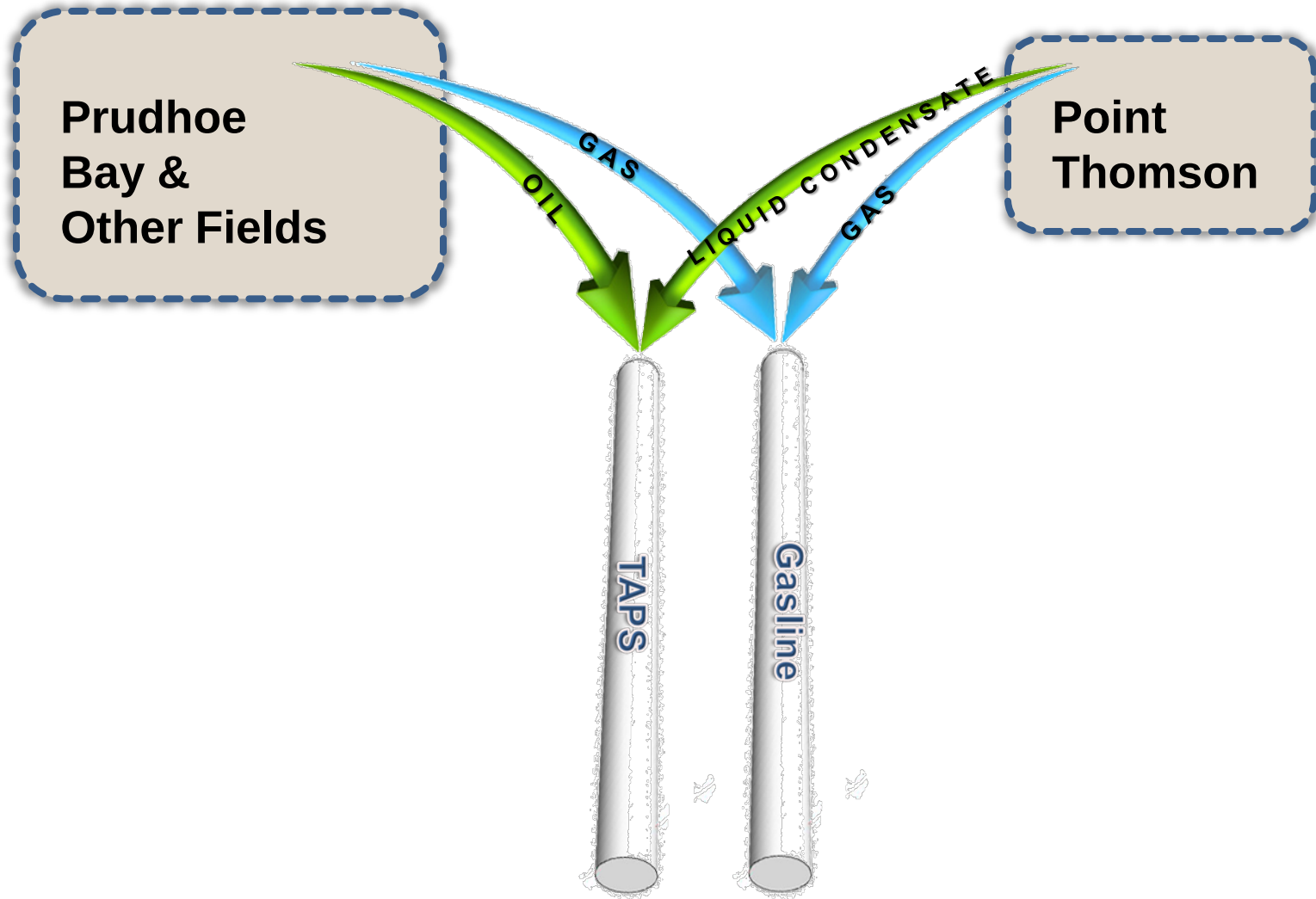
- A primary goal of this settlement is to incentivize commercialization of North Slope gas/Major Gas Sale (MGS)
  - MGS must exceed 500 million cubic feet/d on the North Slope
  - Provides flexibility to allow different MGS scenarios
- Work begins immediately on dual spending for IPS and MGS/LNG
- There are two windows to “sanction” a MGS: (1) from present to 2016 and (2) from 2016 to 2019
  - “Sanction” means that all required state and federal gas line permits have been issued and the pipeline sponsors have secured all necessary financing and received full corporate approval to proceed with pipeline construction
  - Getting to a sanctioned decision will likely require investing hundreds of millions/billions of dollars
- MGS production makes gas available for in-state use
- If a MGS is not sanctioned by June 2016, the Producers must begin engineering & permitting to expand PT production either through Alternative B or C
- Once MGS is sanctioned, the Producers will temporarily retain most of the PT unit; but the PT unit will only be fully secured once gas is flowing into a gas pipeline
- If a MGS is not sanctioned by 2019, the Producers will have had to commit to Alternative B or Alternative C or lose significant acreage



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# ALTERNATIVE A:

- GENERAL DEPICTION -



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# ALTERNATIVE B:

## - EXPANDED LIQUID PRODUCTION INTO TAPS -

A. ALTERNATIVE A:

Major Gas Sale

B. ALTERNATIVE B:

Expanded Liquids  
Production into  
TAPS

C. ALTERNATIVE C:

Expanded Liquids  
Production into TAPS,  
Enhanced Prudhoe Bay  
Recovery, and Gas for In-  
State Use

- Producers can expand the IPS cycling capacity and increase production to a minimum of approximately 30,000 bpd of liquids into TAPS
- Producers must commit to expanded cycling by 2019
- Production will likely exceed 30,000 bpd of liquids into TAPS—*lip of the funnel*
- Any expansion less than 30,000 bpd of liquids will result in certain acreage automatically contracting from the unit
- This alternative will likely result in the greatest long-term recovery of liquids from PT into TAPS, but PT gas will remain in the reservoir
- The enhanced understanding of the PT reservoir, gained from the IPS, will help determine the feasibility of this option
  - Will be influenced by factors such as condensate yield, reservoir connectivity and oil price forecasts
- Will require additional wells and larger gas processing and production facilities
- Once the Producers begin producing under this option, they will retain most of the unit acreage
- Producers can also pursue other alternatives simultaneously

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# ALTERNATIVE C:

- EXPANDED LIQUID PRODUCTION INTO TAPS, ENHANCED PRUDHOE BAY RECOVERY, AND GAS FOR IN-STATE USE -

**A. ALTERNATIVE A:**

Major Gas Sale

**B. ALTERNATIVE B:**

Expanded Liquids  
Production into TAPS

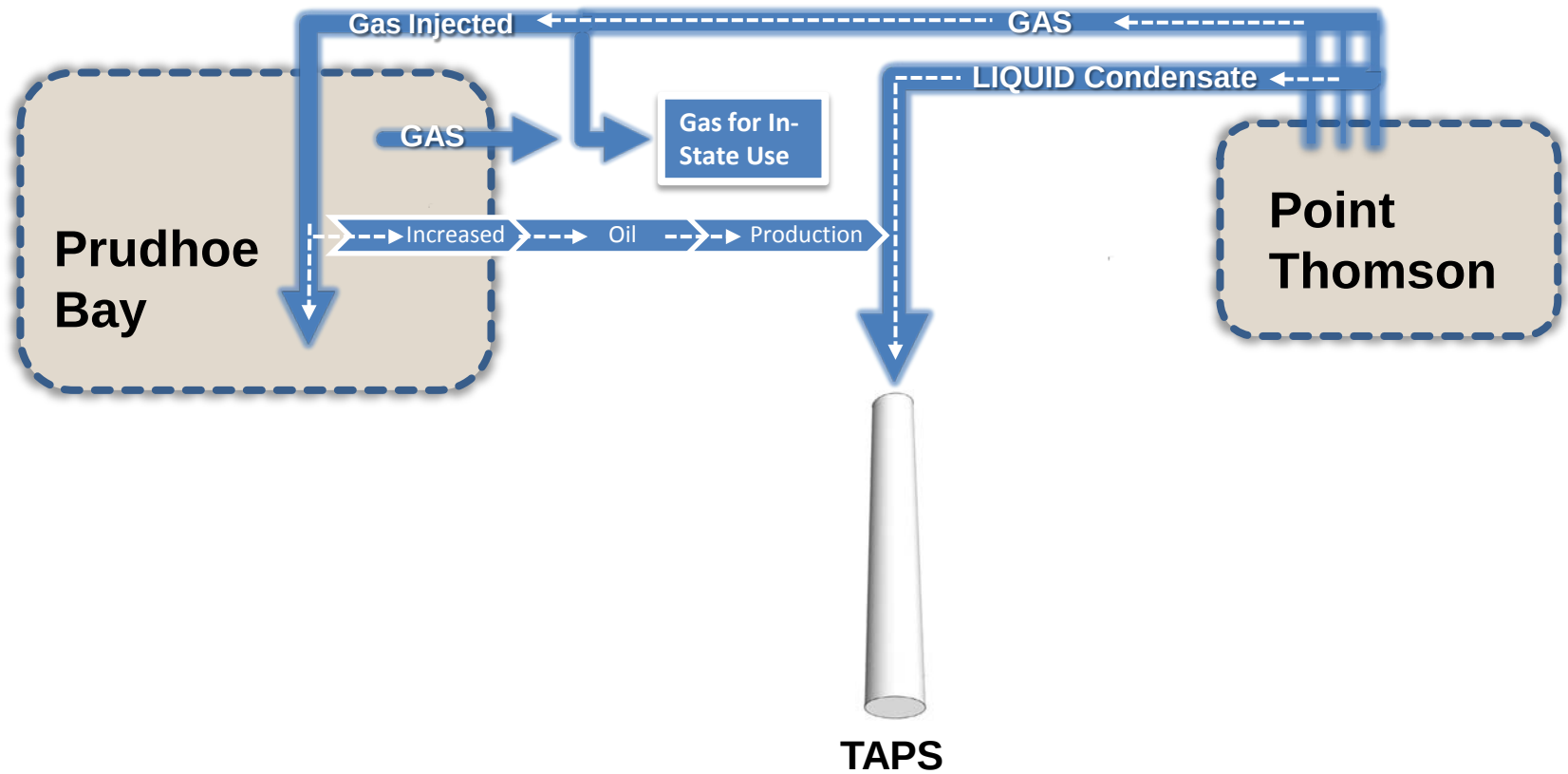
**C. ALTERNATIVE C:**

Expanded Liquids  
Production into  
TAPS, Enhanced  
Prudhoe Bay  
Recovery, and Gas  
for In-State Use

- Requires complex reservoir integration between Prudhoe Bay and PT
  - PT dry gas produced, transported and injected into Prudhoe Bay
  - This will significantly increase oil production and enhanced oil recovery at Prudhoe Bay into TAPS
  - Includes significant liquids production from PT into TAPS
- Essentially a hybrid between Alternative A: MGS and Alternative B: Expanded Liquid Production
- Significantly increases TAPS throughput
- Major investment, infrastructure and hydrocarbon pre-positioning required for this alternative will facilitate North Slope gas commercialization
  - Completes installation of infrastructure, including PT gas pipeline to Prudhoe Bay and additional wells and production facilities
  - Prudhoe Bay becomes a central collection point for critical North Slope gas
- Alternative C also requires that significant volumes of gas be available for in-state use from Prudhoe Bay no later than 2019
- Once PT gas is transmitted to Prudhoe Bay, state Royalty-in-Kind (RIK) gas is made available for in-state use
- This provides the state with an opportunity to plan for large-scale, in-state gas-use projects, e.g. GTL, methanol, gas sales, etc.
- This alternative could take place prior to or in conjunction with Alternative A or B

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# OVERVIEW of ALTERNATIVE C



# CONSEQUENCES & INCENTIVES RELATED *to* DEVELOPMENT PATH

- The settlement centers on one animating principle: Producers must *earn* acreage – more work, more commitments, more production secures more state acreage
- Key Goal: Keep parties focused on near-term production (IPS) and longer-term hydrocarbon production expansion (full-field development)
  - Settlement seeks to anticipate contingencies
  - Provides incentives for work completed
  - Provides for fair and expeditious dispute resolution
- The settlement also has severe consequences if the Producers fail to develop or expand development
- If Producers abandon the IPS/fail to keep the provisional work schedule, there will be a significant contraction of PT acreage by 2015
- If there is no IPS production and a MGS is not sanctioned by 2019, then the unit terminates and all acreage automatically returns to the state *without appeal*
  - This includes leases with capable wells
- If the Producers do not commit to expand production beyond the IPS, or do not sanction a MGS, then significant acreage contracts from the unit and automatically returns to the state *without appeal*
- If the Producers commit to expanded development, or sanction a MGS by 2019, but do not follow through, the unit will contract to the area in production
- If there is no commitment to Brookian oil formation production, then Brookian acreage automatically contracts in 2018 and returns to the state *without appeal*
- “*Without appeal*” is used throughout the agreement—it means that the Producers waive their right to appeal automatic termination of their leases to any tribunal in Alaska or the United States





# POINT THOMSON UNIT

