

Trans-Alaska Pipeline System

*the challenges and opportunities
ahead*



Alyeska background

- Incorporated August 14, 1970 to design, build, operate and maintain the pipeline, pump stations and the Valdez Marine Terminal.
- Currently owned by five oil pipeline companies.
- Alyeska personnel and contractors continually monitor and operate TAPS so oil flows safely, efficiently and in an environmentally sound manner.

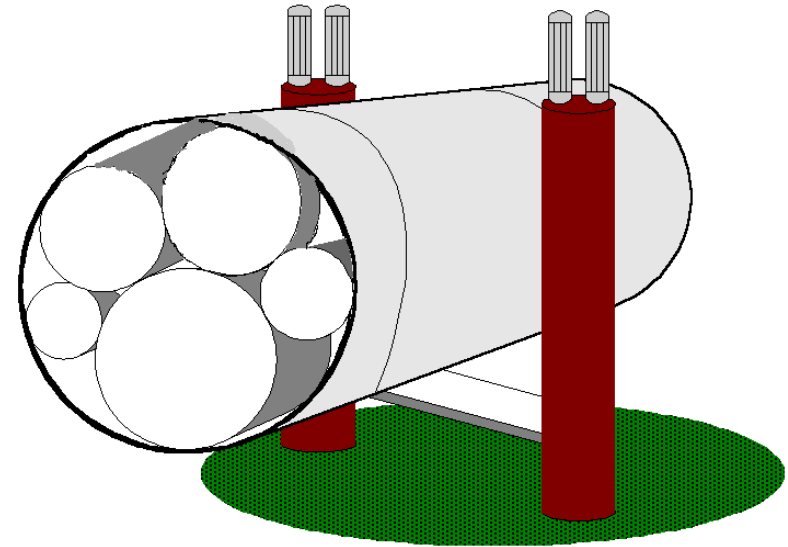


Background

- Approximately 14 percent of the nation's domestic oil production carried on TAPS.
- 16 billion barrels+ of crude oil transported.
- 20,000+ tankers loaded.
- 640,000 barrels throughput per day.



TAPS owners



TAPS Owners & Percentages

BP Pipelines (Alaska), Inc.	46.9263%
ConocoPhillips Transportation Alaska Inc.	28.2953%
ExxonMobil Pipeline Company	20.3378%
Koch Alaska Pipeline Company, L.L.C.	3.0845%
Unocal Pipeline Company	1.3561%



“We didn’t know it couldn’t be done.”

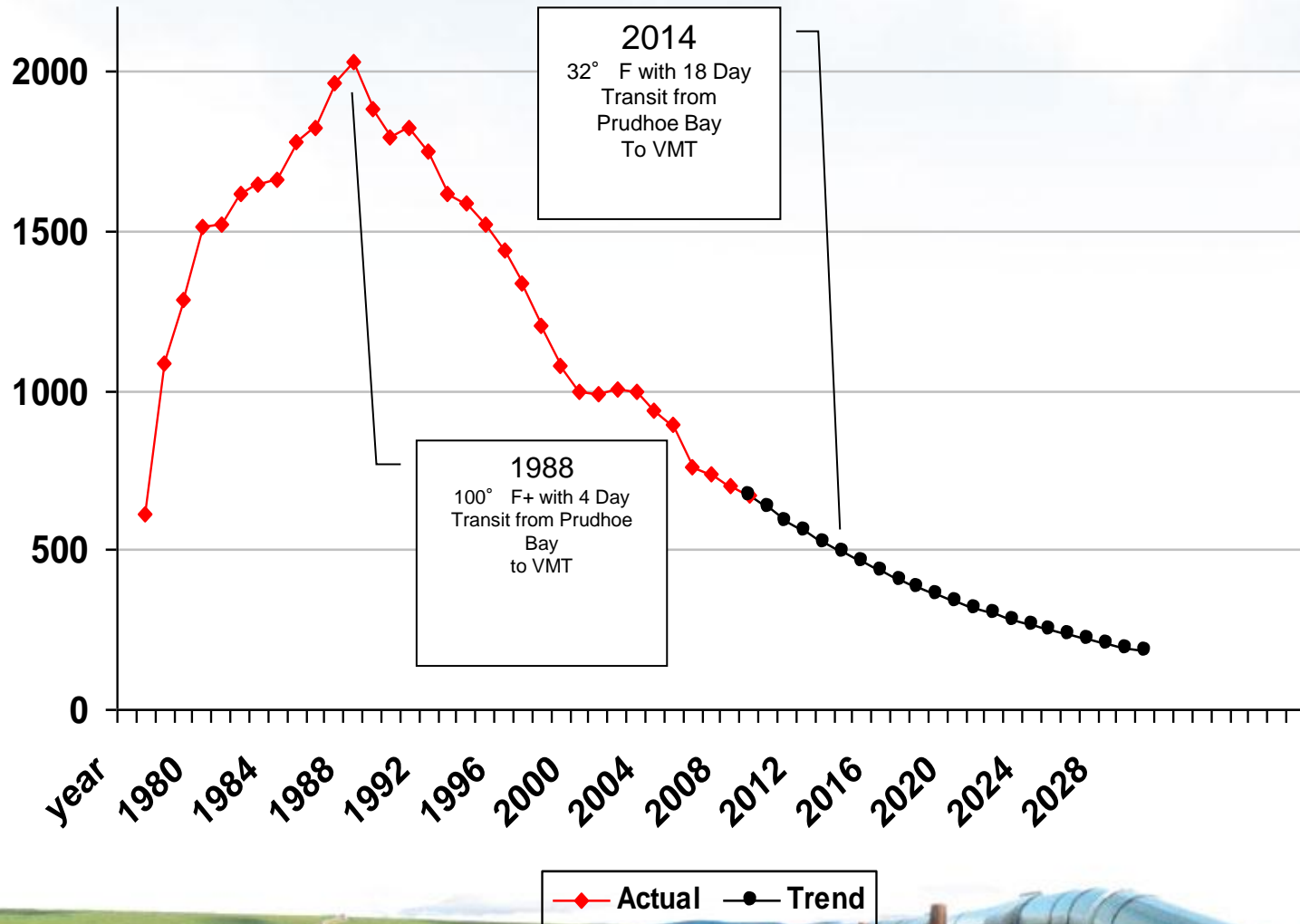


Ramp up & peak production

- Designed to move 1.5 million barrels per day
- Peak Production, 1988 2.1 million barrels per day



Declining throughput



Declining flows

- TAPS was designed as a warm oil pipeline
- Circumstances have changed:
 - Throughputs and temperatures continue to decline
 - At 550k barrels/day, portions of the pipeline will be at 32° F during the winter months



Low flow study

- Testing program
 - Laboratory testing
 - Field tests
 - Flow loop testing
- Model development
- Mitigation studies



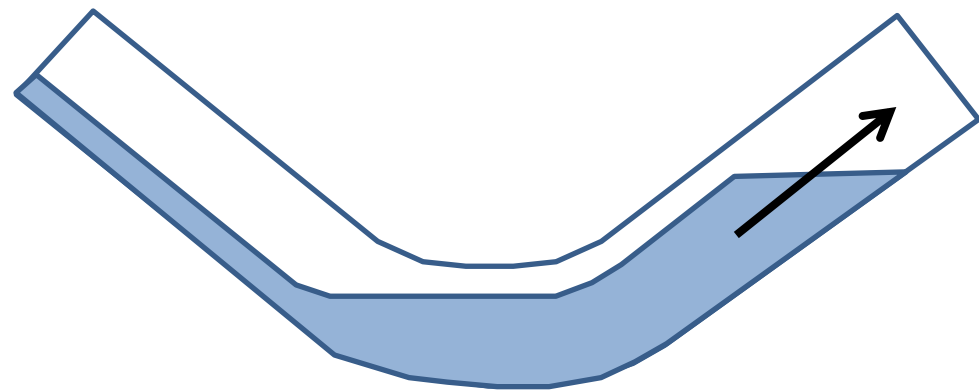
Low flow issues

- Water dropout
- Ice formation
- Wax deposition
- Frost heaves



Low flow issues –water/ice

- Water separation and accumulation at low points during flowing conditions
- Ice formation in flowing conditions



Wax received with scraper pig



Low flow scenario

- Poor weather
- Cold temperatures
- Boom challenges
- Inventory builds
- Producers prorate (scale back production)
- Potential shut-down



Potential low flow solutions



Determination, ingenuity, partnership



