Alaska Senate and House Resources

Railbelt Energy Supply/Demand Challenge

The gas is in the ground, waiting to be produced

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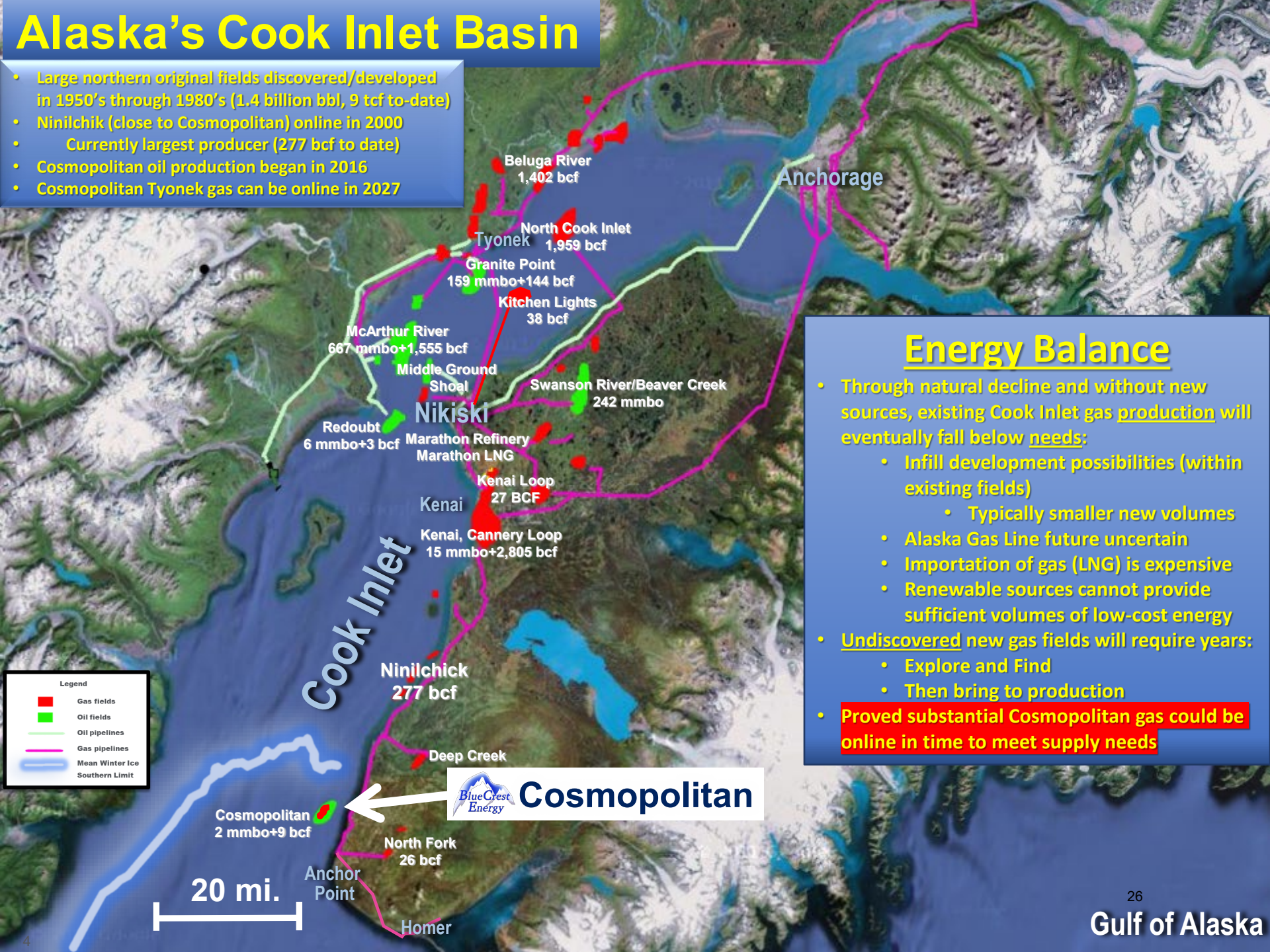
Cosmopolitan Tyonek Gas Supply:

- Already discovered, tested and Proved
  - Structure shape and size is well defined
    - 3D seismic and >25 drilled penetrations
  - Productive volume and productivity confirmed
    - Logs, cores, rock and gas samples from multiple wells in the gas sands
    - Flow tests indicate productivity levels
    - Independent engineering analysis: Proved 235 BCF + Probable 65 BCF
  - Preliminary permitting, engineering and design now mostly complete
  - Conventional offshore production platform development
  - Construction schedule: gas could be online by Q1/Q2 2027
  - Known Cosmopolitan volumes could supply up to 25% of total market
  - Development is ready to begin - pending investment funding

Alaska's Cook Inlet Basin

- Large northern original fields discovered/developed in 1950's through 1980's (1.4 billion bbl, 9 tcf to-date)
- Ninilchik (close to Cosmopolitan) online in 2000
- Currently largest producer (277 bcf to date)
- Cosmopolitan oil production began in 2016
- Cosmopolitan Tyonek gas can be online in 2027



Energy Balance

- Through natural decline and without new sources, existing Cook Inlet gas production will eventually fall below needs:
  - Infill development possibilities (within existing fields)
    - Typically smaller new volumes
  - Alaska Gas Line future uncertain
  - Importation of gas (LNG) is expensive
  - Renewable sources cannot provide sufficient volumes of low-cost energy
- Undiscovered new gas fields will require years:
  - Explore and Find
  - Then bring to production
- Proved substantial Cosmopolitan gas could be online in time to meet supply needs

Cosmopolitan Unit Development Concept: Separate Gas Field and Oil Field

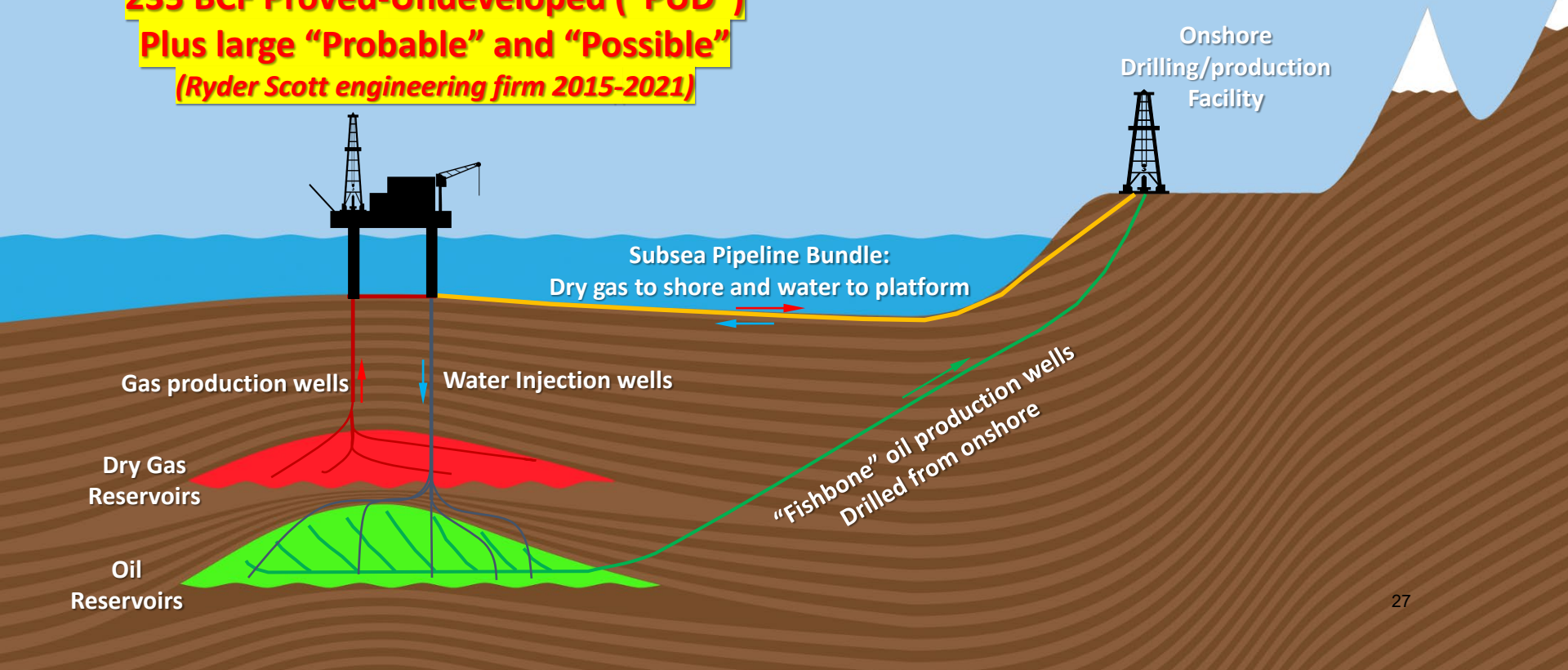
Future Offshore:

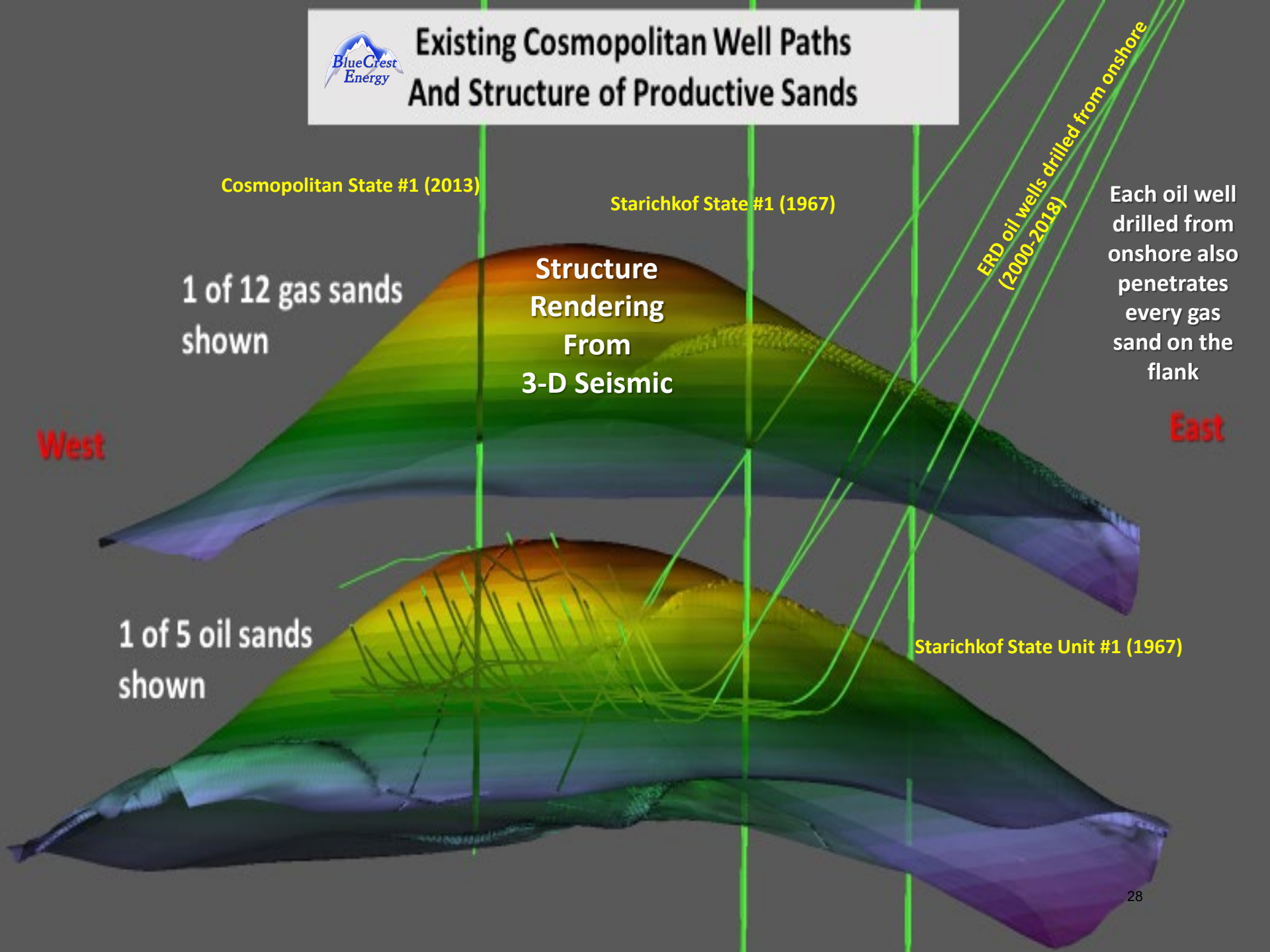
Tyonek gas sands are too shallow to be reached by onshore wells.
Dry gas producing wells drilled into gas reservoirs and water injection wells into oil reservoirs to improve oil recovery.
No offshore oil production.

Additional Tyonek Gas Reserves:
235 BCF Proved-Undeveloped ("PUD")
Plus large "Probable" and "Possible"
(Ryder Scott engineering firm 2015-2021)

Ongoing Oil:

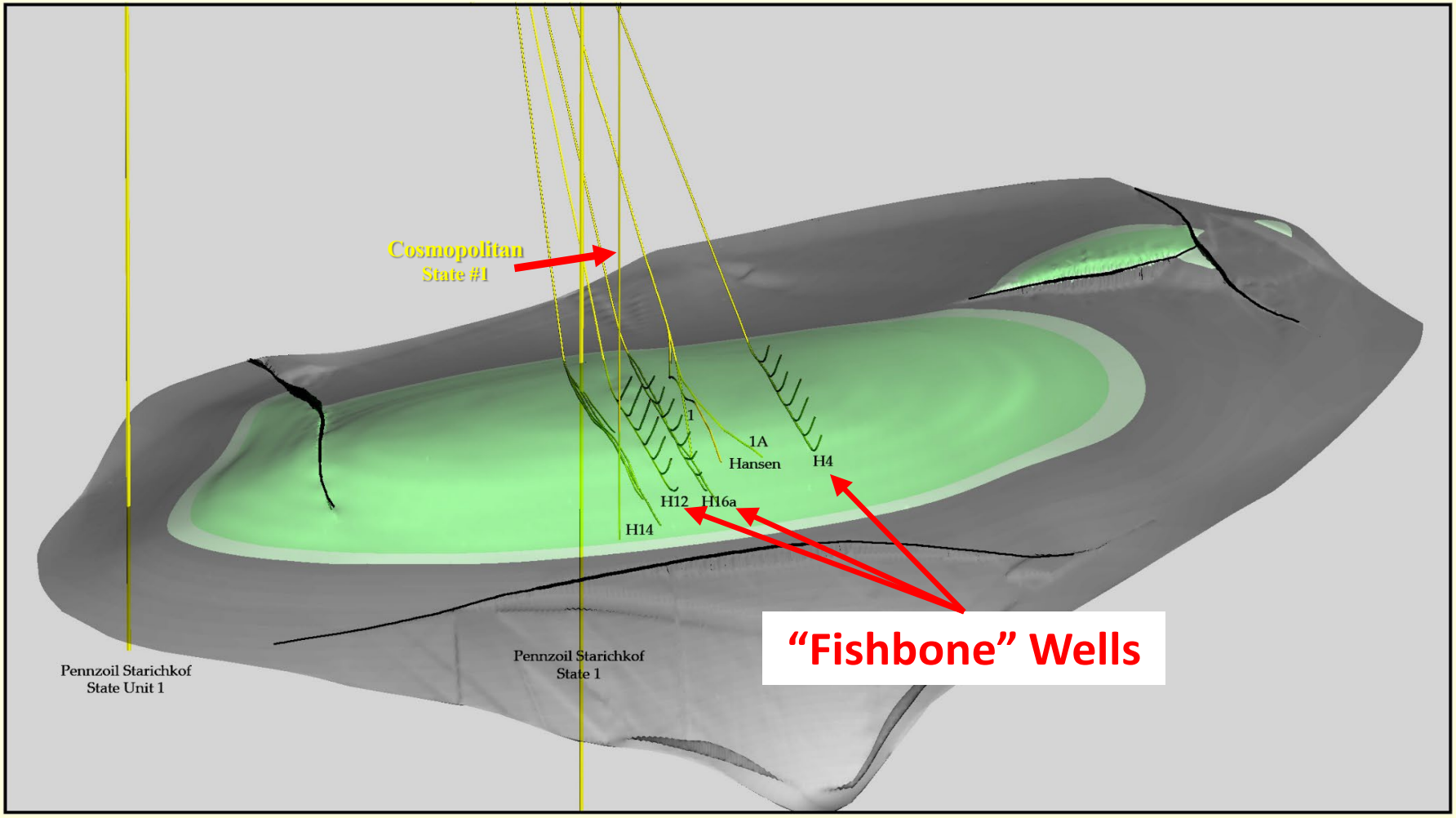
"Proved" - Partially Developed.
"Extended-Reach" oil wells drilled safely from onshore produce the deeper offshore oil with no danger of an offshore oil spill.



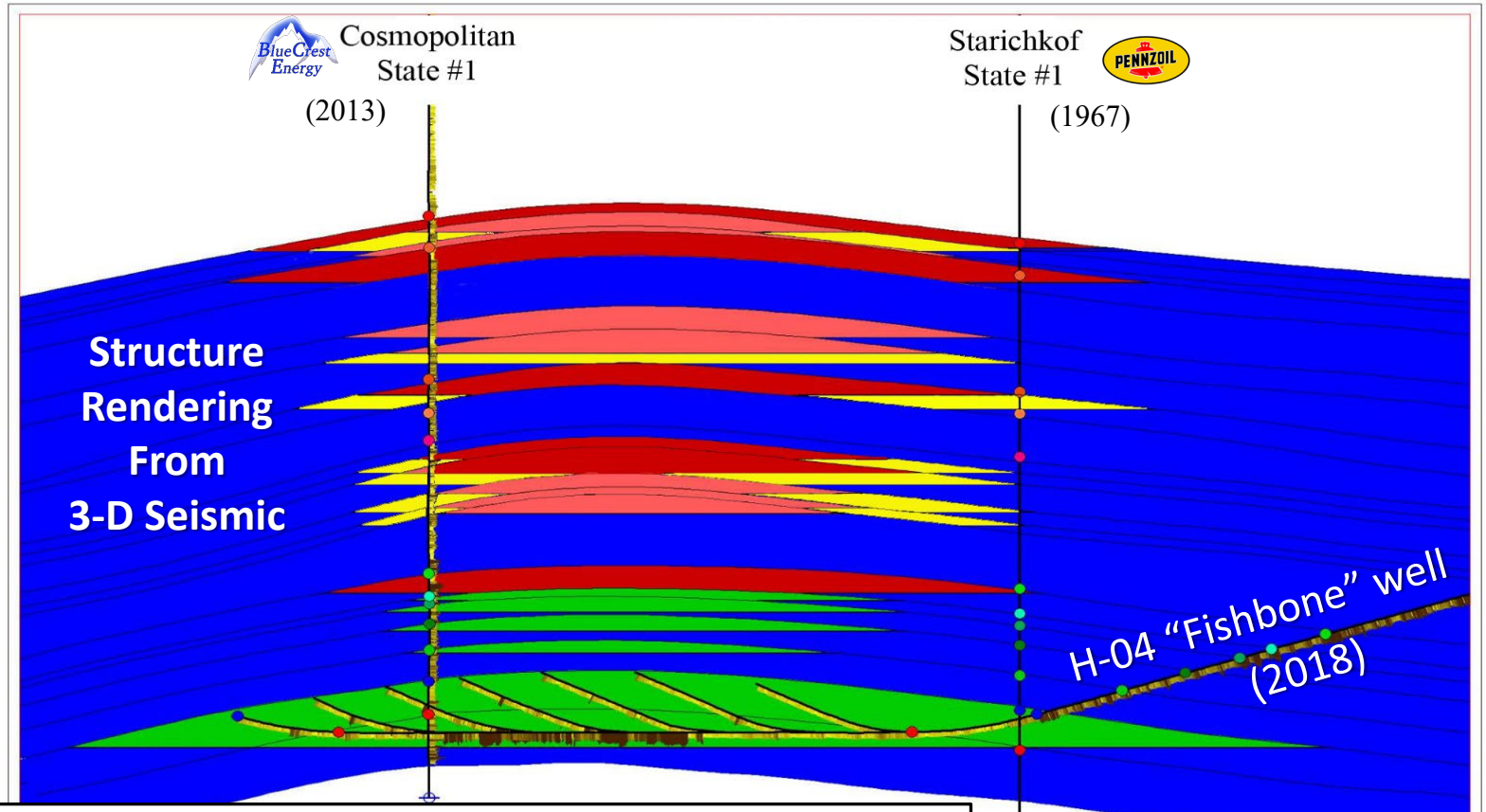

Existing Cosmopolitan Well Paths
And Structure of Productive Sands
Cosmopolitan State #1 (2013)
Starichkof State #1 (1967)
ERD oil wells drilled from onshore (2000-2018)
Each oil well drilled from onshore also penetrates every gas sand on the flank
1 of 12 gas sands shown
Structure Rendering From 3-D Seismic
West
East
1 of 5 oil sands shown
Starichkof State Unit #1 (1967)

Current Cosmopolitan Well Paths (October 2021)

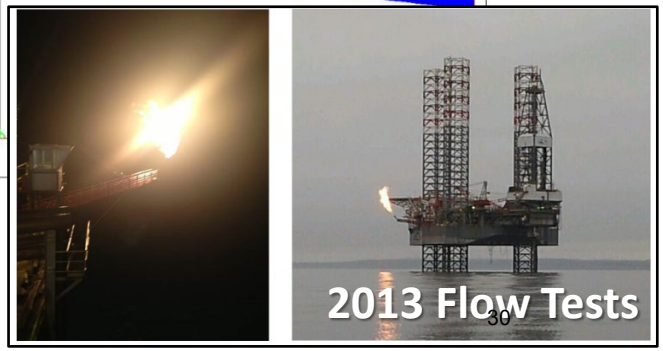
(view from west to east, shown with top of Starichkof formation)



Cosmopolitan Tyonek Gas is Proved but Undeveloped



- Multiple wells have been drilled through the gas sands
- Multiple flow tests of the gas zones confirm high productivity
- Size and shape of the "trap" structure is clearly documented
  - 3-D seismic data, hazard and walkaway seismic surveys, more than 25 vertical well penetrations above/below/through the gas zones
- Gas zones are similar to nearby Ninilchik field (15 miles north)
  - Ninilchik is currently the largest Cook Inlet gas producer and has already produced more than 277 BCF



Cosmopolitan Gas Field Summary:

- Reservoir shape, size, and productivity now well-defined
- Gas production will require a small offshore platform
  - Dry gas only – *no liquid hydrocarbons: (no chance of oil spill)*
  - Subsea pipeline: 3 miles to existing onshore facility
    - Recent sea floor surveys confirm safe pipeline route
    - Onshore facility is already connected into Enstar gas pipeline system
  - Platform/facilities design and cost projections
    - Preliminary design completed
    - Final construction design pending funding
  - Platform gas wells – standard Cook Inlet drilling/completions
  - Time to first-gas: approximately 30-40 months from funding
- Production Design Volume ***(268 MMSCFD 1/31/2024)***
  - Current total Railbelt average daily demand is ~200 MMSCFD
  - Cosmopolitan production design capacity is ~50 MMSCFD
- Critical path: Investor participation in new Cook Inlet project