

# Anchorage Mayor's Producers Panel



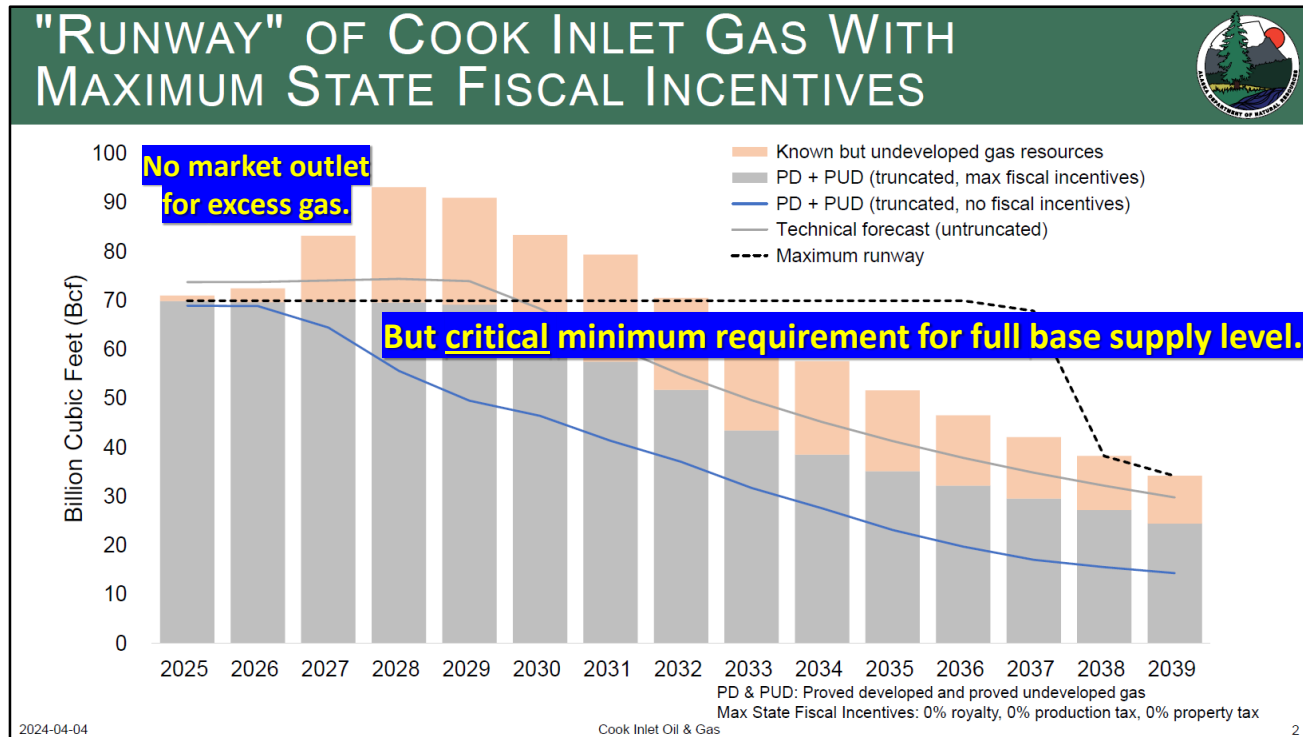
## Railbelt Energy Supply Challenge

BlueCrest Energy - Benjamin Johnson April 18, 2024

### Cosmopolitan Tyonek Gas Supply:

- BlueCrest has spent ~\$400 million to date on oil and gas exploration and development
  - Initial investment funding was based on State law (early 2010's - tax credit program)
    - Private investors with significant (but limited) funding ability
  - Purchased from Pioneer, drilled highly successful offshore exploratory well (2013)
  - Built onshore production facility and gas sales pipeline (1<sup>st</sup> oil and associated gas 2016)
- Separate Oil and Gas Reservoirs are now discovered, tested, and Proved
  - Structure shape and size is well defined
    - 3D seismic and >25 well penetrations
  - Productive Tyonek gas volume and productivity confirmed
    - Logs, cores, rock and gas samples from multiple wells in the gas sands
    - Flow tests confirmed productivity
    - Independent engineering: Proved 235 BCF + Probable 65 BCF + Possible (++)
      - Enough to supply 25% of total Railbelt demand for ~4-5 years (50 MMSCFD)
  - Conventional offshore gas production platform development (no offshore oil)
  - Construction schedule: new gas could be online in time to avert shortages
- New investment was halted with cessation of tax credit program
  - Oil: 10% of oil development wells were completed prior to investment halt
  - Gas: currently completed engineering design and permitting work
    - Has shortened time to new gas production
- Gas development is now ready to resume - pending further investment funding

# Unique Cook Inlet Gas Supply/Demand Challenge: DOG Director Nottingham (04-04-2024)

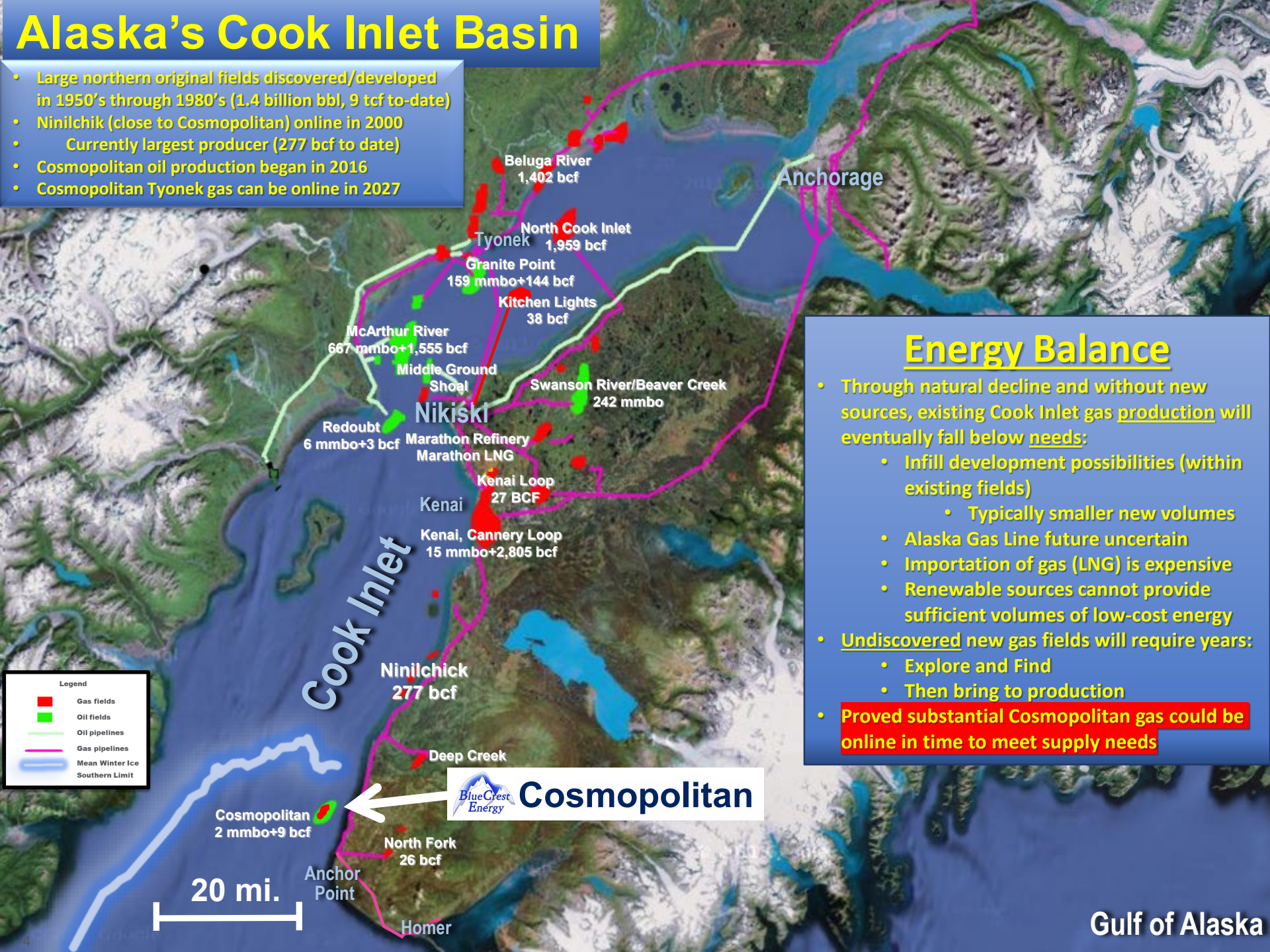


- **Demand: Inelastic with huge negative societal impacts for under-supply**
- **Supply: Gas supply from Cosmopolitan is certain but has not yet been developed (no market)**
  - High confidence in supply of new Cosmopolitan reserves
  - Long lead time (3-4 years) and large up-front investments (~\$350 million) required
  - If alternative energy supplies are utilized (ex: LNG, at higher locked-in cost),
    - The incentive for lower-cost CI gas development is essentially erased
  - Fear of changes in laws if utilizing fiscal incentives (i.e. tax credit program)
    - Outside investors have so-far decided against new Cook Inlet gas investments
  - Financial returns on CI gas are not high enough to compete with alternative opportunities
    - Other locations around the world offer low governmental risk
  - New CI programs (royalty, tax, loans) could offer major incentives for new investors

**Additional Information**  
**(Previously presented to Joint House and Senate Resources)**  
**2024-02-07**

# 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**



# Cosmopolitan Unit Development Concept: Separate Gas Field and Oil Field

## Future Offshore:

Tyonek gas sands are too shallow to be reached by onshore wells.

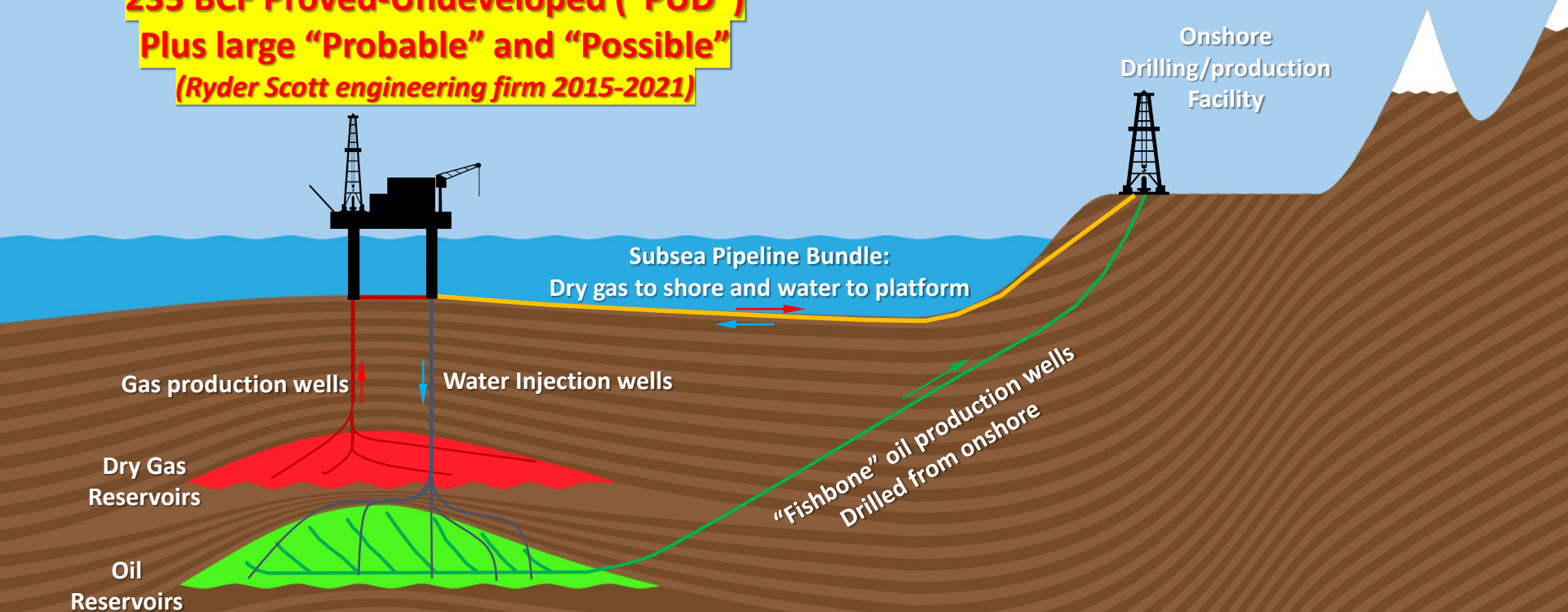
Dry gas producing wells drilled into gas reservoirs and water injection wells into oil reservoirs to improve oil recovery.

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)

1 of 12 gas sands  
shown

Structure  
Rendering  
From  
3-D Seismic

ERD oil wells drilled from onshore  
(2000-2018)

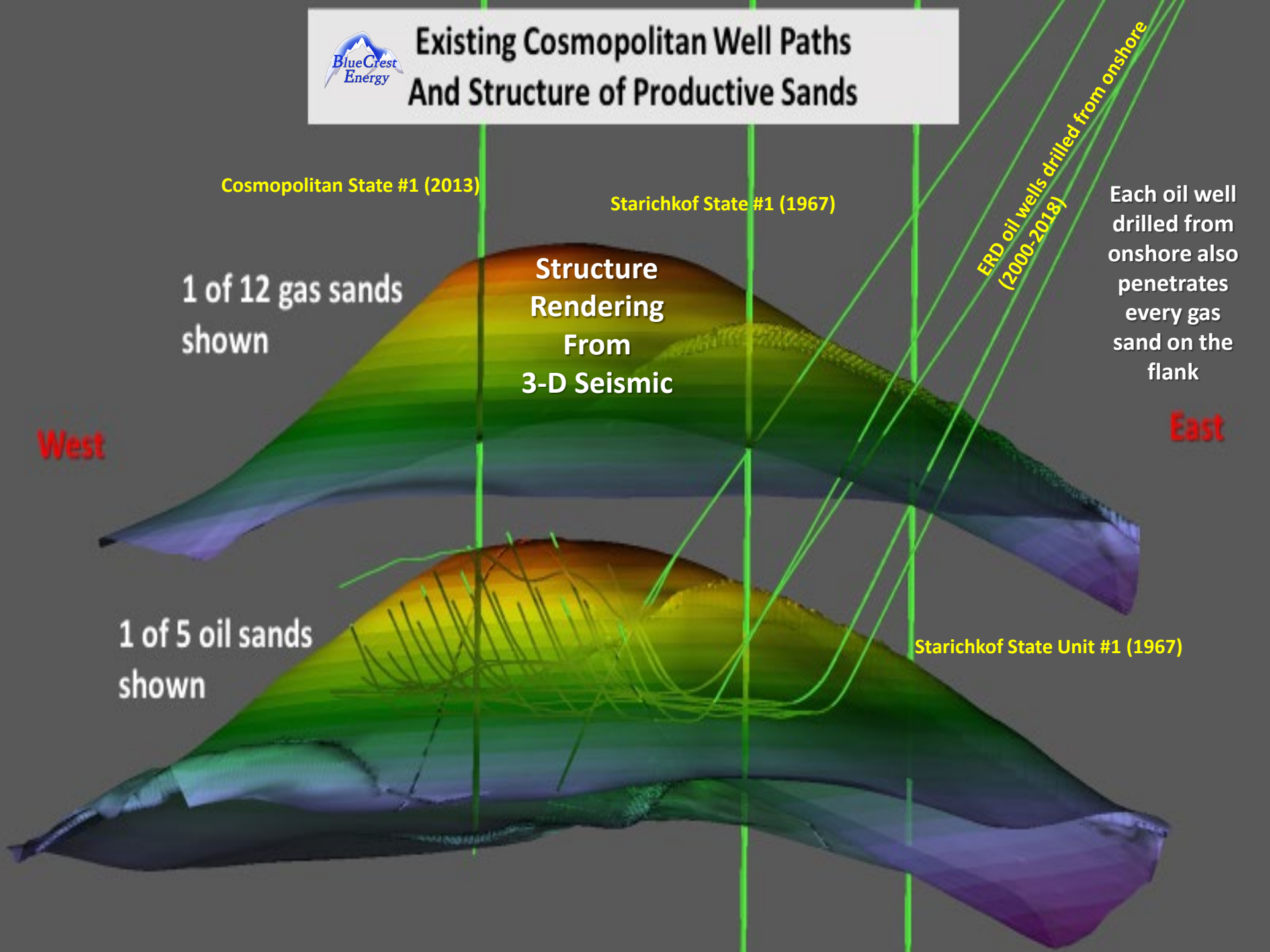
Each oil well  
drilled from  
onshore also  
penetrates  
every gas  
sand on the  
flank

West

East

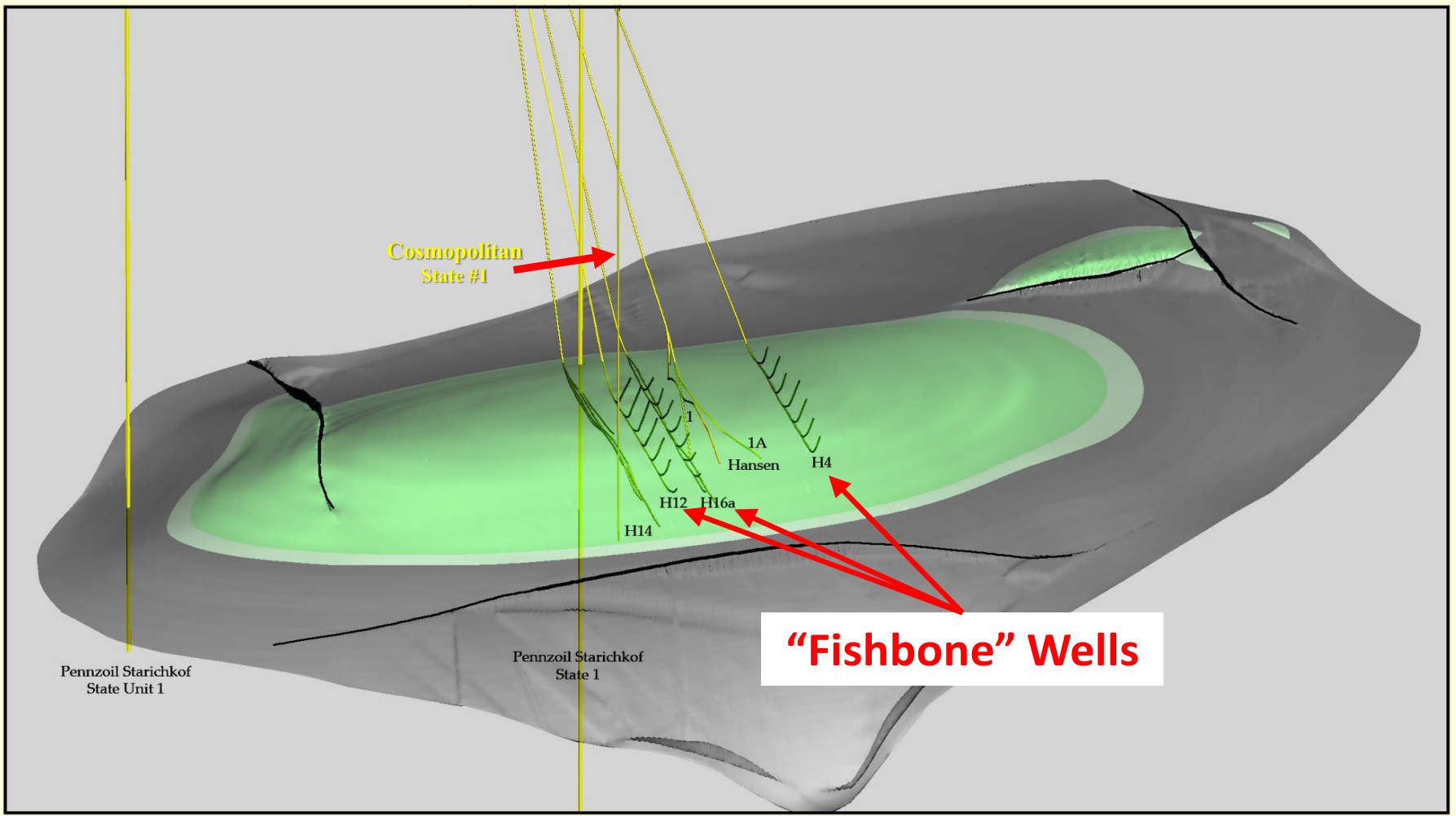
1 of 5 oil sands  
shown

Starichkof State Unit #1 (1967)

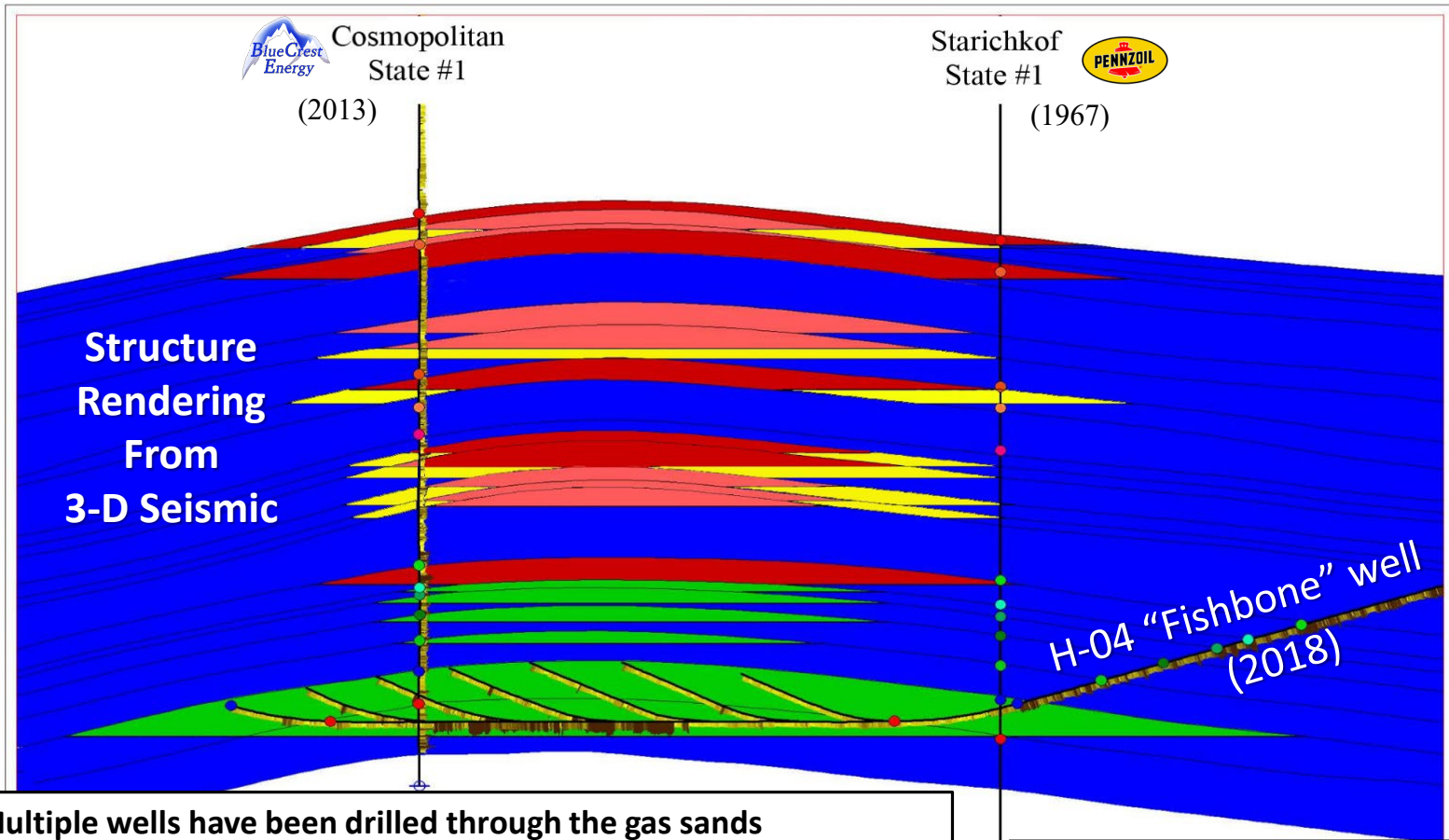


# Current Cosmopolitan Well Paths (October 2021)

*(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
  - Current total Railbelt average daily demand is ~200 MMSCFD (70 BCF/Yr)
  - Cosmopolitan production design capacity is ~50 MMSCFD (18 BCF/Yr)
- Critical path: Investor participation in new Cook Inlet project