SB 194 Reduce Royalty On Cook Inlet Oil & Gas

Senate Resources

Presented by: Commissioner John Boyle, DC John Crowther, Director Derek Nottingham, and Commercial Manager Jhonny Meza
Department of Natural Resources
February 23, 2024




Why is Cook Inlet Gas Important?

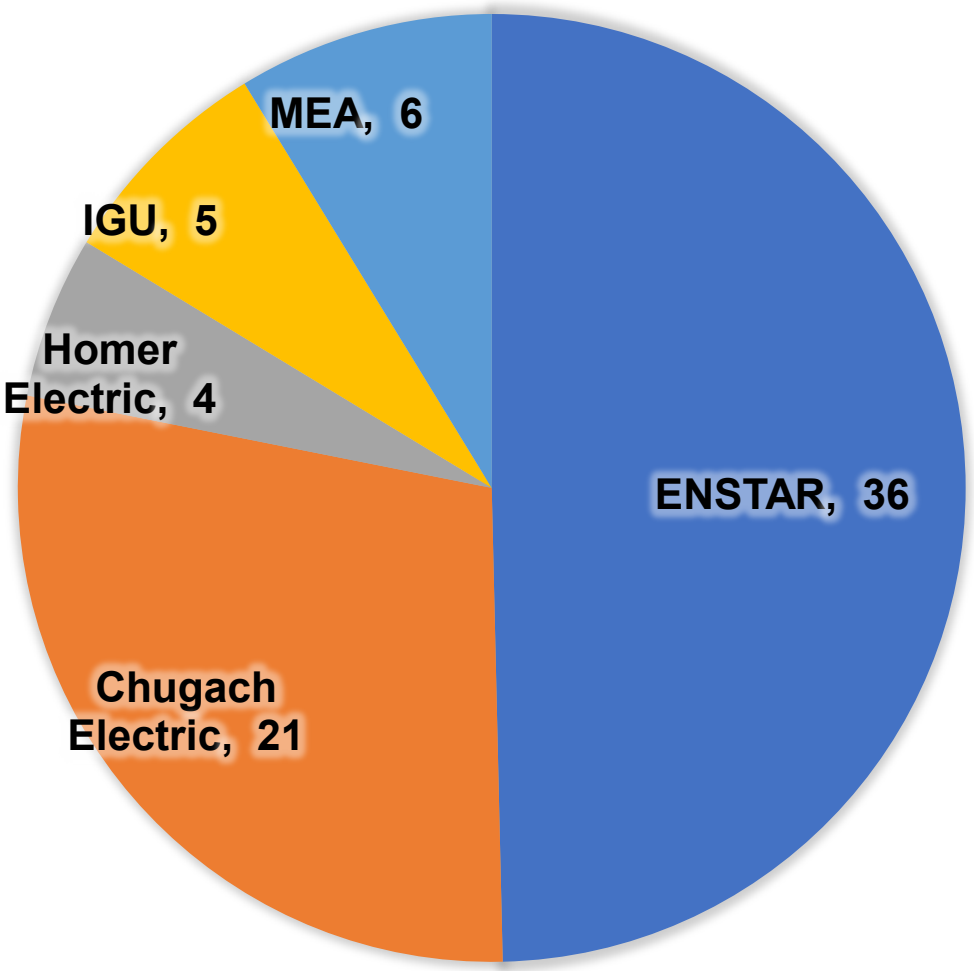
Natural Gas Utilities

- **Enstar** serves over 440,000 people and operates in over 25 communities throughout Southcentral Alaska
- **Interior Gas Utility (IGU)** serves over 2,400 people

Electric Utilities

- **Chugach Electric** serves over 302,000 people in Anchorage, Whittier, Girdwood, and Fairbanks
- **Matanuska Electric (MEA)** serves the Mat-Su Borough and Chugach and Eagle River, over 180,000 people
- **Homer Electric** serves nearly 36,000 people

2023 Cook Inlet Utility Gas Under Contract (billion cubic feet)



Cook Inlet Overview

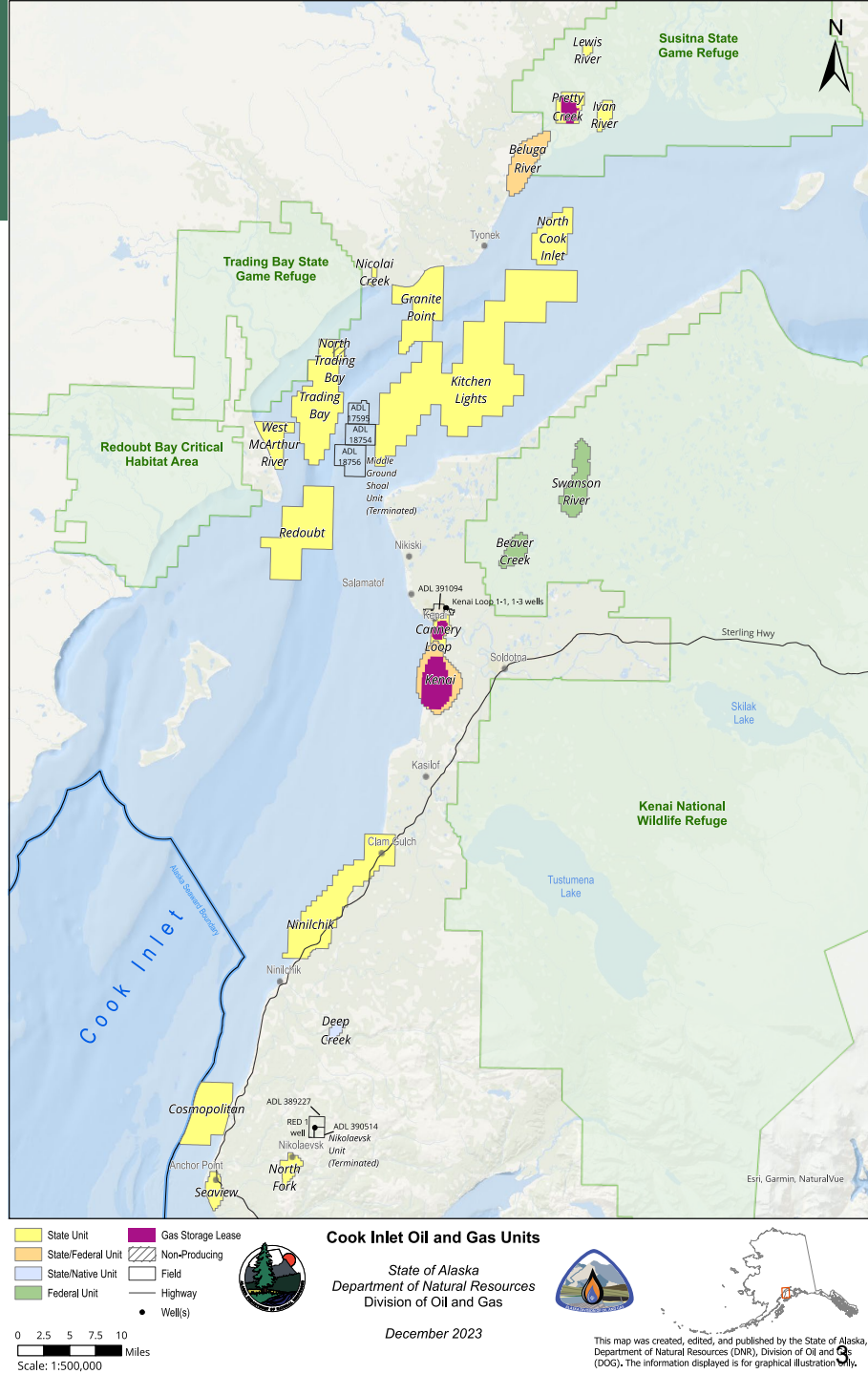
Cook Inlet is a large mature oil and gas basin

- Has produced over 1.4 billion barrels of oil and 12 trillion cubic feet of gas
- 26 producing fields operated by 8 different companies
- There are over 200 oil and gas leases in Cook inlet

Gas production has been declining since 1990

- Peak gas production in 1990 was over 850,000 thousand cubic feet per day
- Current production is just over 200,000 thousand cubic feet per day

Cook Inlet gas provides heat and electricity to 70% of Alaskans



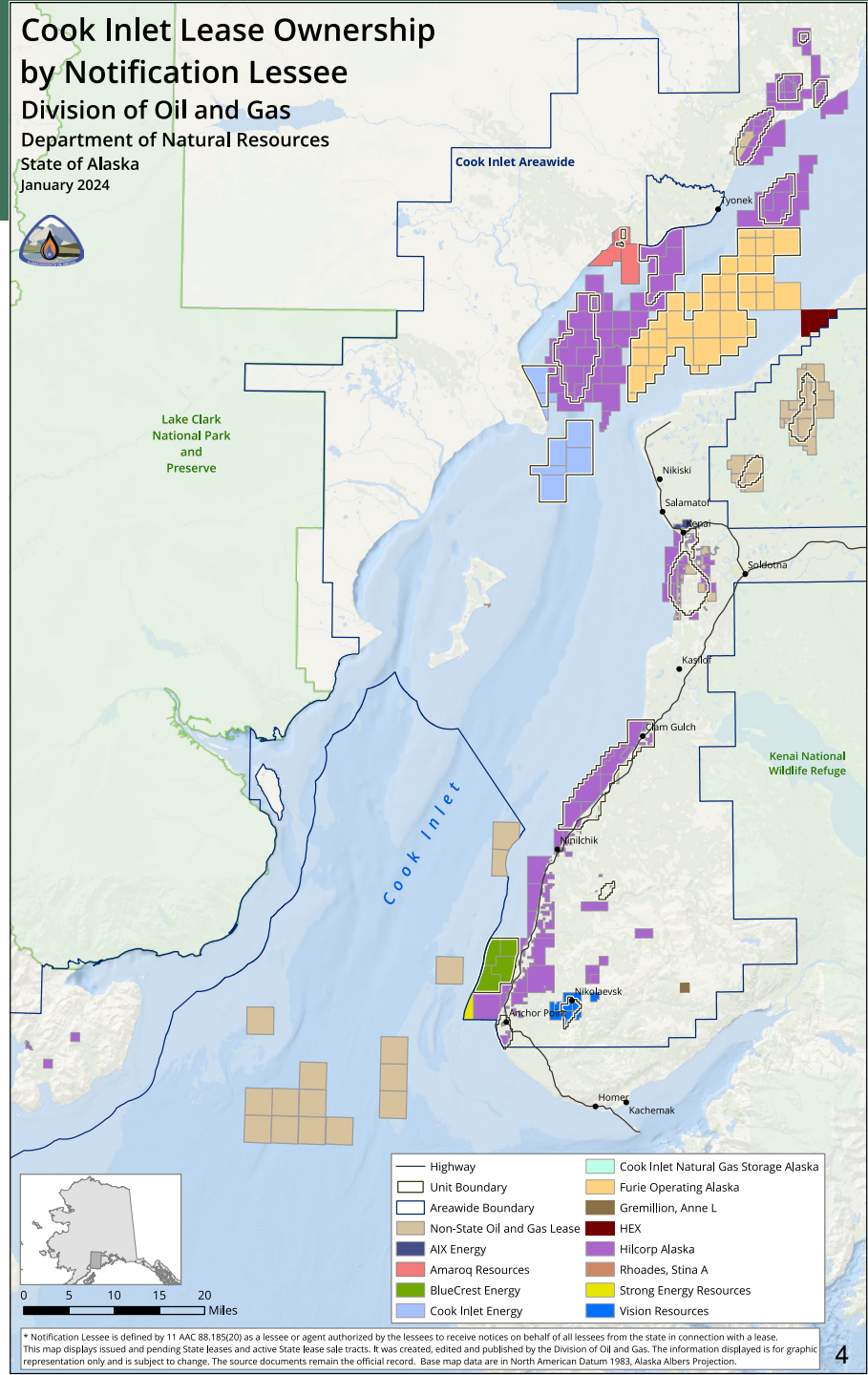
Cook Inlet Leases

What is a State of Alaska Oil and Gas Lease?

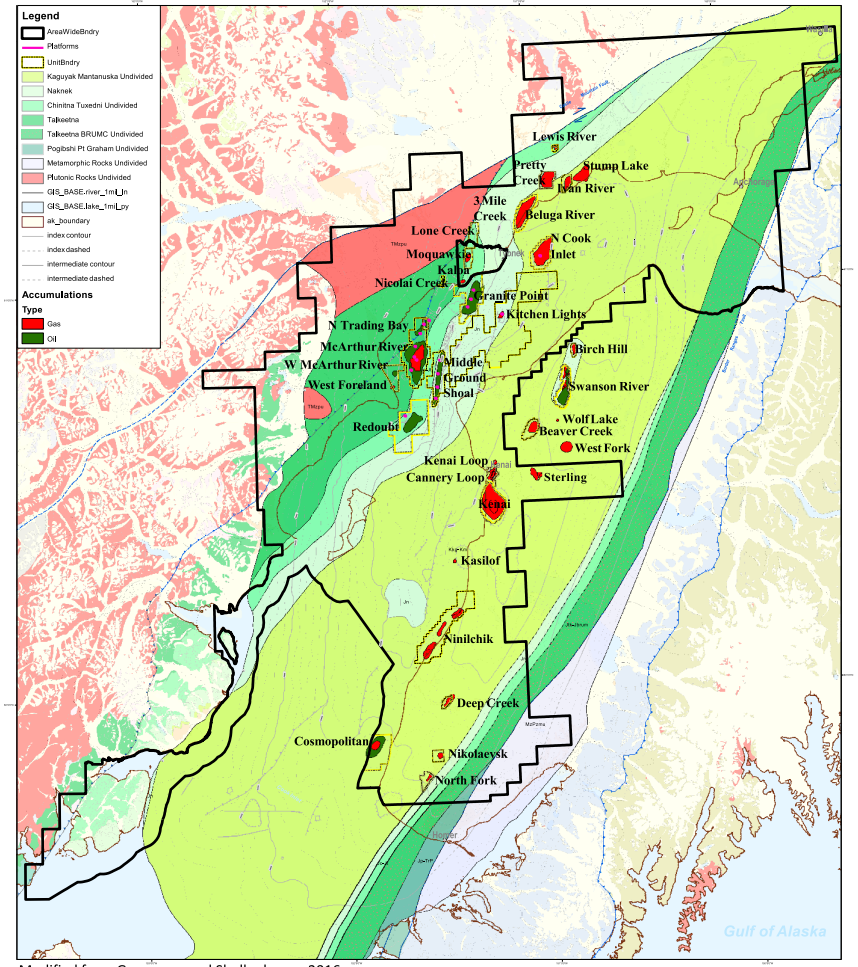
- A lease is a tract of land designated for oil and gas exploration
- Leases are offered at lease sales or through exploration licenses
- Primary lease terms are between five and ten years
- Commercial production extends the lease beyond the primary term

What is an Oil and Gas Unit?

- Leases are combined to form a ***unit*** for the protection of all parties
- Facilitates joint development, conserve natural resources, and avoid waste
- Unit agreement is developed between the lessees and the State
  - Requires the development of a plan of development/exploration (POD/POE) along with other reporting requirements
  - Requires the operator to act as a prudent operator while developing the unit



Cook Inlet Geology



Modified from Gregersen and Shellenbaum, 2016

Top Mesozoic Subcrop Map with Oil and Gas Accumulations, Cook Inlet Basin, Alaska

Two Sources of Gas In Cook Inlet Basin

1. Biogenic gas from coals
2. Oil migrated from source rocks, creating associated gas

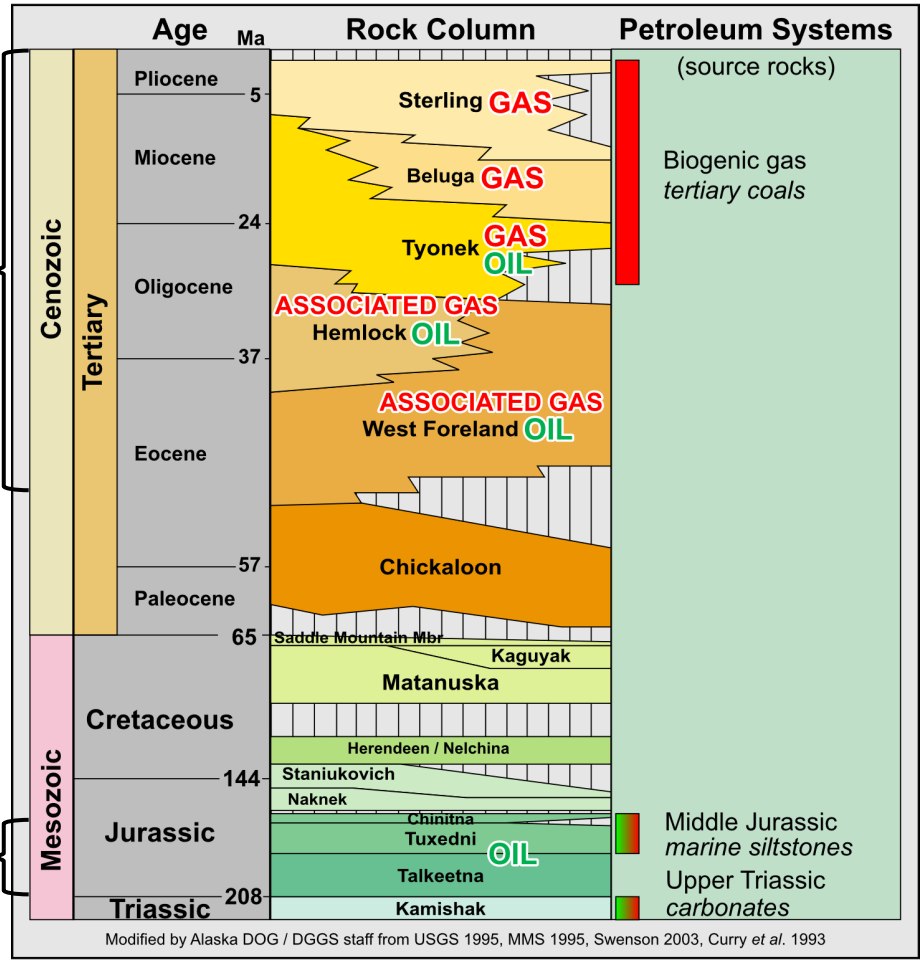
Majority of oil and gas production is from Tertiary reservoirs

Oil seeps; TBU M-28 produced oil

More resources from the Department of Geological & Geophysical Surveys (DGGS)

- **Cook Inlet geology and hydrocarbon potential (project link)**
- **Seismic and well data (catalog link)**

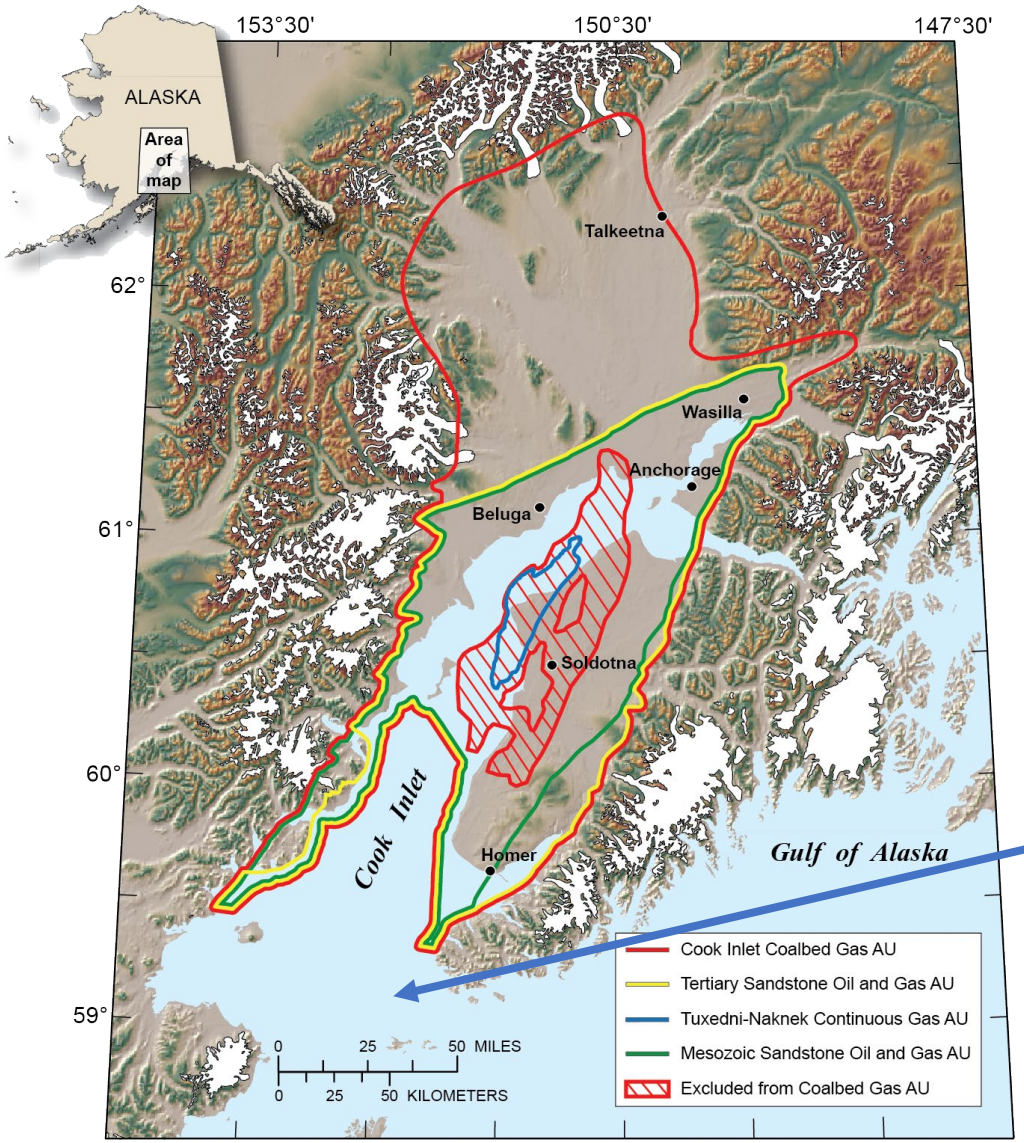
Cook Inlet Stratigraphic Column



Modified by Alaska DOG / DGGS staff from USGS 1995, MMS 1995, Swenson 2003, Curry *et al.* 1993

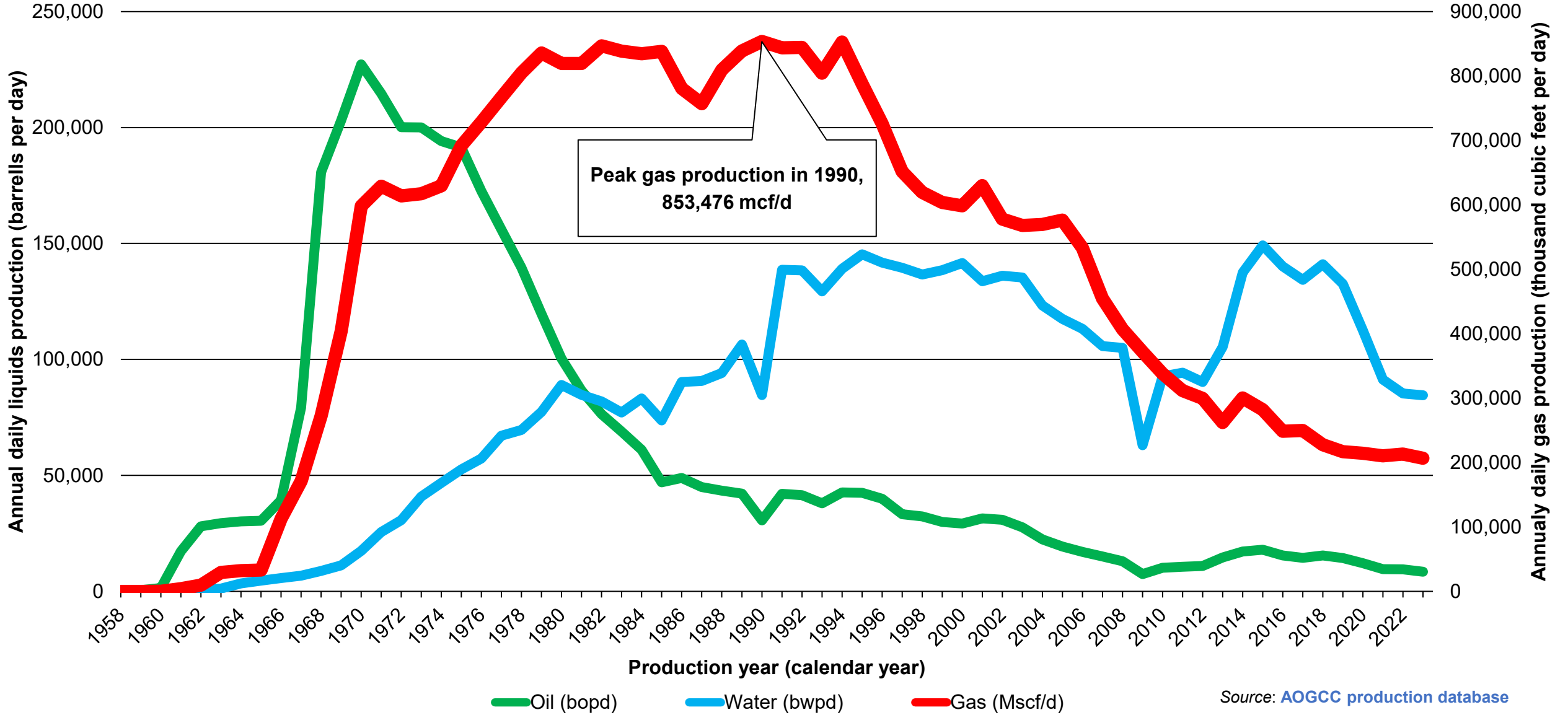
Quick Look Guide to Cook Inlet Oil and Gas
J.S. Gregersen, 3-13-2020

Cook Inlet Exploration & Development: Undiscovered Resources



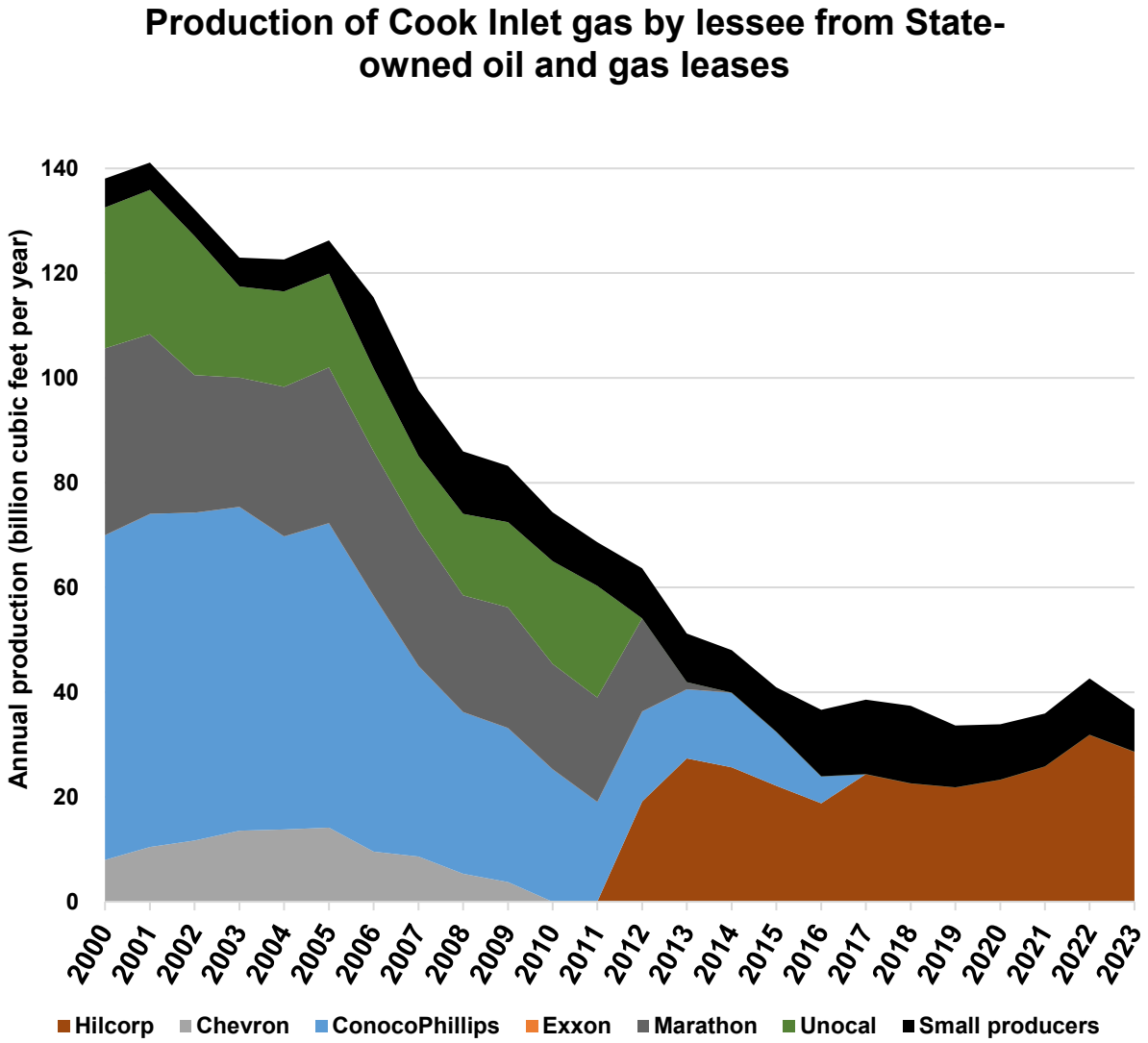
- **Undiscovered, Technically Recoverable Oil & Gas** (U.S. Geological Survey 2011):
  - mean conventional oil 599 million barrels of oil
  - mean conventional gas 13.7 trillion cubic feet
  - mean unconventional gas 5.3 trillion cubic feet
- **Undiscovered, Technically Recoverable Gas:**
  - 1.2 trillion cubic feet additional mean resource assessed in the federal Southern Cook Inlet Outer Continental Shelf area (Bureau of Ocean Energy Management 2011)
- Governor's Legislation targets making these prospects more economic for development

Cook Inlet Production History

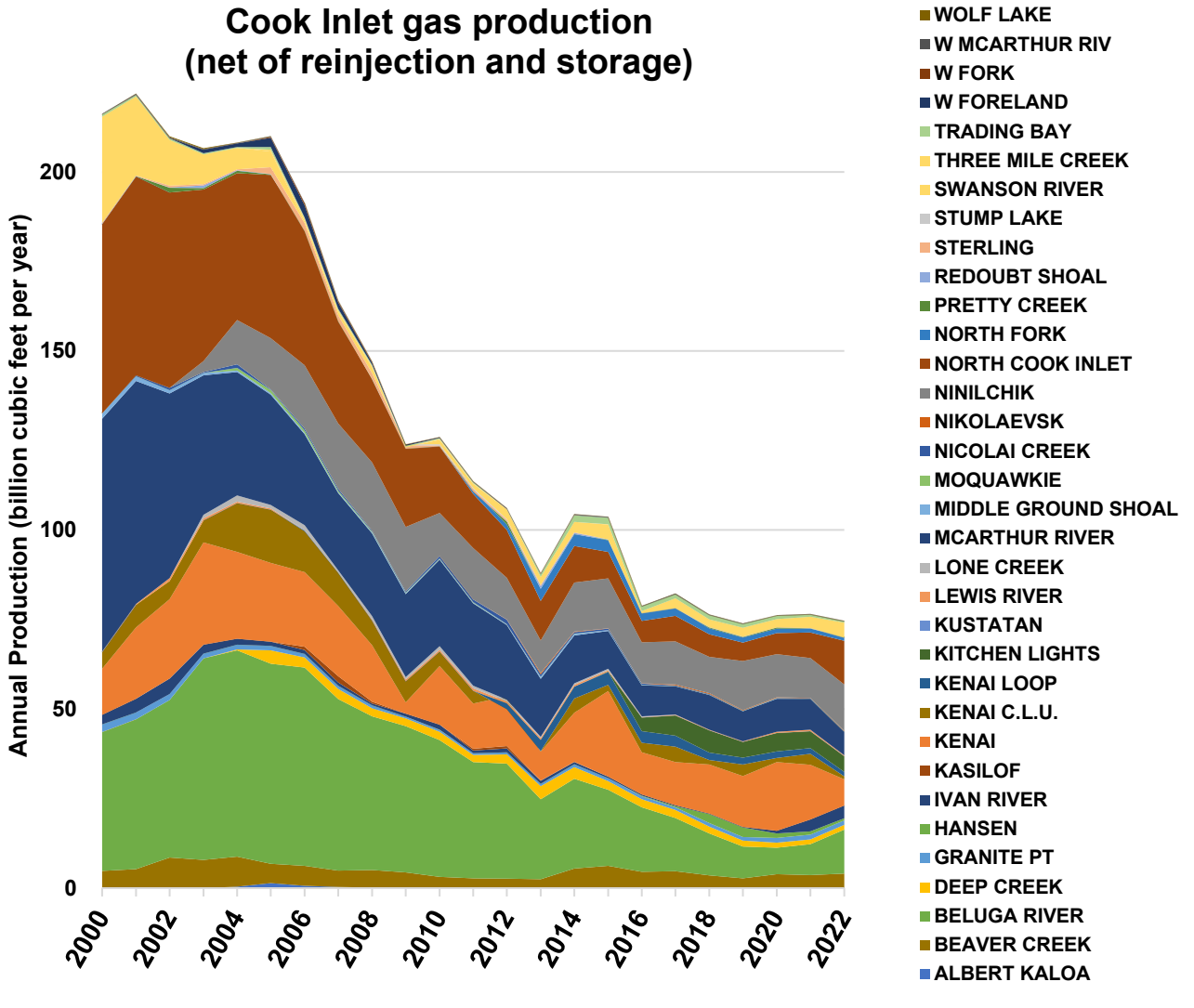


Source: **AOGCC production database**

Gas Production History



Note: State Lands Only



Note: State + Federal + Private Lands

Cook Inlet Production by Field:

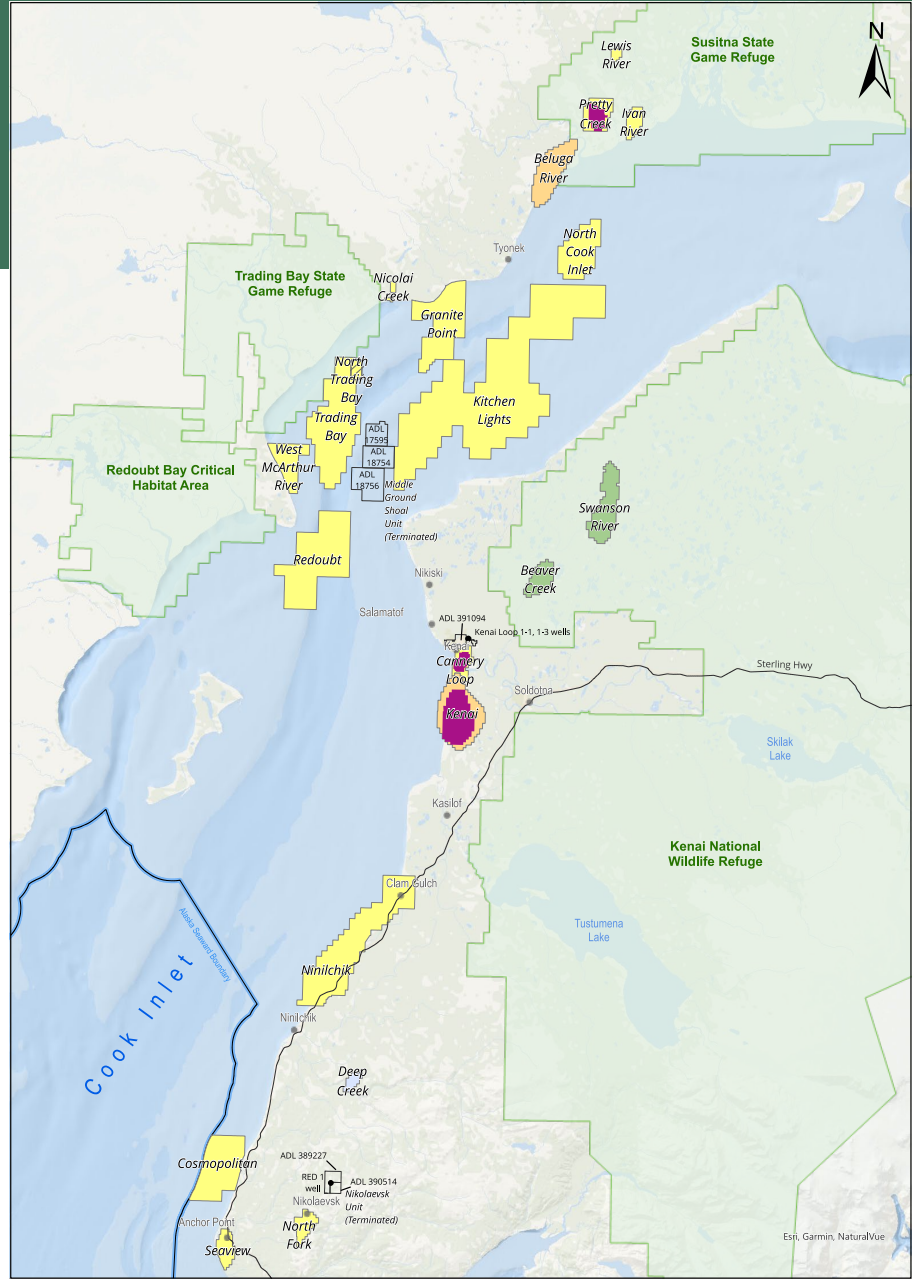
Field	Operator and lessees	2023 Gas Production	2023 Oil Production
Kenai Loop	AIX Energy LLC	0.66.bcf	
Nicolai Creek	Amaroq Resources, LLC	0.1 bcf	
Hansen	Bluecrest Alaska Operating LLC	0.43 bcf	713 bopd
Redoubt Shoal	Cook Inlet Energy, LLC.	0.04 bcf	443 bopd
West McArthur River	Cook Inlet Energy, LLC.	0.05 bcf	586 bopd
Kitchen Lights	Furie Operating Alaska, LLC; Cornucopia Oil & Gas Company; A. L. Berry; Danny Davis; Taylor Minerals, LLC; Corsair Oil & Gas	3.58 bcf	
Beaver Creek	Hilcorp Alaska, LLC	2.73 bcf	382 bopd
Beluga River	Hilcorp Alaska, LLC; Chugach Electric Association	**12.13 bcf**	
Deep Creek	Hilcorp Alaska, LLC	1.27 bcf	
Granite Pt	Hilcorp Alaska, LLC	1.09 bcf	2,232 bopd
Ivan River	Hilcorp Alaska, LLC	2.14 bcf	
Kenai	Hilcorp Alaska, LLC	6.78 bcf	
Kenai C.L.U.	Hilcorp Alaska, LLC	1.97 bcf	
Lewis River	Hilcorp Alaska, LLC	0.22 bcf	
McArthur River	Hilcorp Alaska, LLC	4.85 bcf	2,589 bopd
Middle Ground Shoal	Hilcorp Alaska, LLC	0.00 bcf	0 bopd
Red 1 Well	Hilcorp Alaska, LLC	0.07 bcf	
Ninilchik	Hilcorp Alaska, LLC	**14.31 bcf**	
North Cook Inlet	Hilcorp Alaska, LLC	**12.34 bcf**	
Seaview	Hilcorp Alaska, LLC	0.00 bcf	
Swanson River	Hilcorp Alaska, LLC	2.59 bcf	732 bopd
Trading Bay	Hilcorp Alaska, LLC	0.4 bcf	890 bopd
North Fork	Vision Operating, LLC	0.79 bcf	

bcf = billion cubic feet

bopd = barrels of oil per day

Source: AOGCC through November 2023

https://dog.dnr.alaska.gov/Information/MapsAndGis



State Unit
State/Federal Unit
State/Native Unit
Federal Unit
Gas Storage Lease
Non-Producing
Field
Highway
Well(s)

0 2.5 5 7.5 10 Miles

Scale: 1:500,000

Cook Inlet Oil and Gas Units

State of Alaska
Department of Natural Resources
Division of Oil and Gas

December 2023

This map was created, edited, and published by the State of Alaska, Department of Natural Resources (DNR), Division of Oil and Gas (DOG). The information displayed is for graphical illustration only.

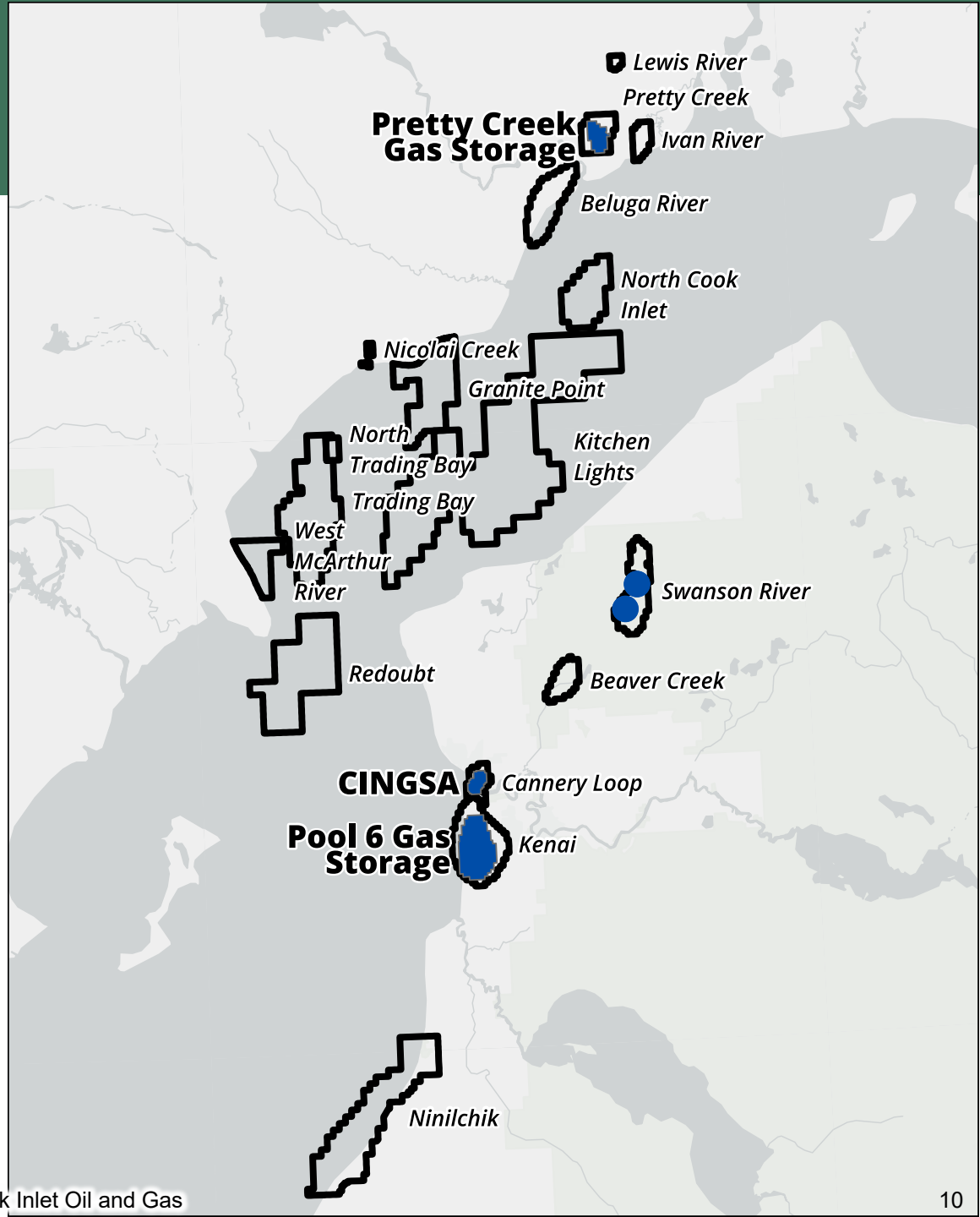
Gas Storage

What is gas storage?

- Gas can be stored by re-injecting it in subsurface reservoirs and re-producing when it is needed, although it comes with costs and operational demands.
- It is used within a year to mitigate the fact that demand is much higher in the winter than the summer, but it is best to produce from fields at a relatively steady rate. Production over the summer months can be “saved up” for cold winter days.
- Storage is critical, as peak winter demand already requires more gas than is deliverable from producing reservoirs.
- Gas storage can also be used across multiple years.

There are currently four active gas storage pools

- CINGSA – Established in 2011, gas storage capacity 18 bcf, operated by CINGSA (an RCA regulated utility)
- Kenai Gas Pool 6 – Established in 2006, gas storage capacity 50 bcf, operated by Hilcorp
- Pretty Creek – Established in 2005, gas storage capacity 3 bcf, operated by Hilcorp
- Swanson River (Federal) – Established in 2001, gas storage capacity 3.4 bcf, operated by Hilcorp



bcf = billion cubic feet of natural gas
CINGSA = Cook Inlet Natural Gas Storage Alaska

Cook Inlet Gas Demand

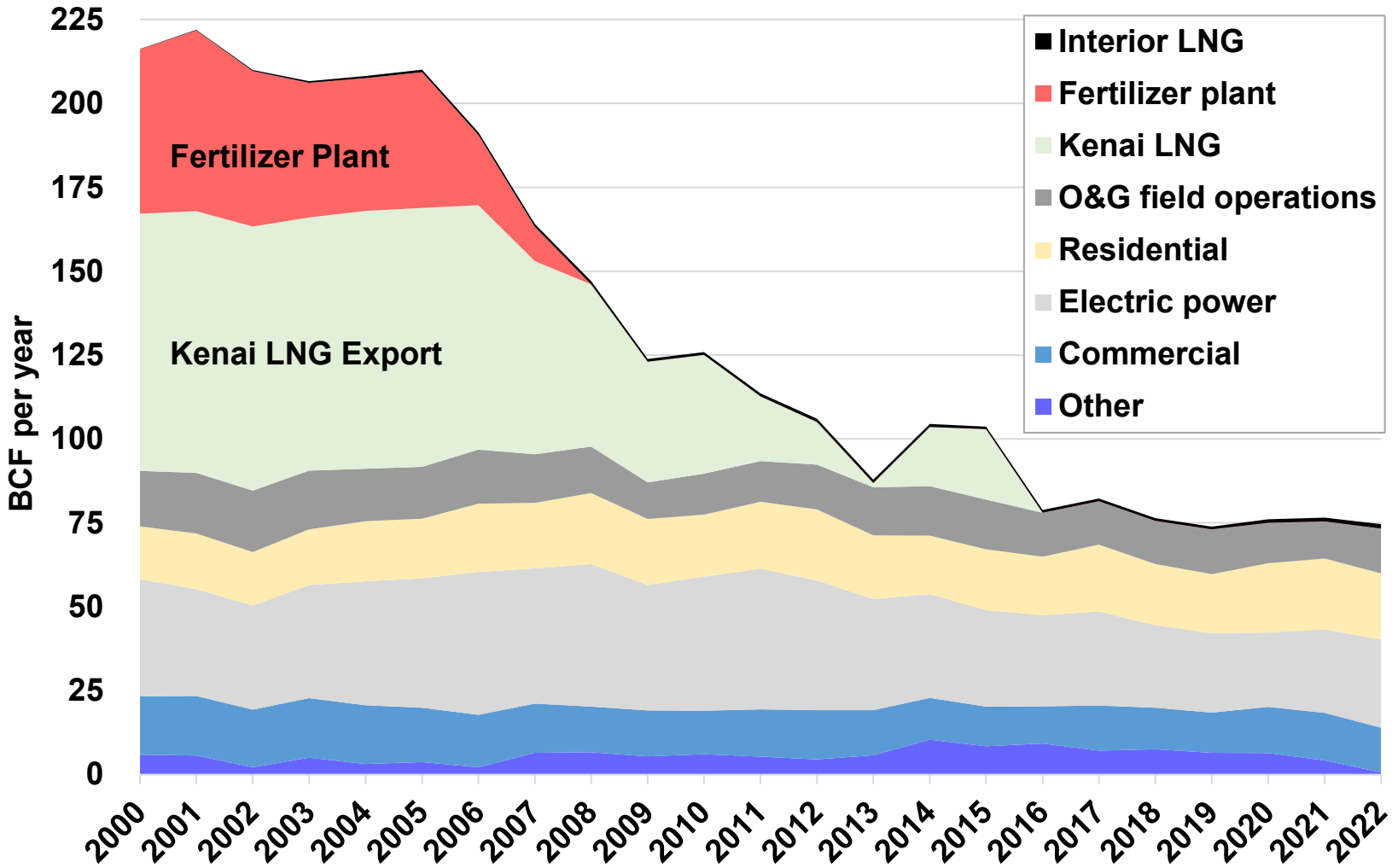
Kenai LNG Plant

- Nikiski liquified natural gas (LNG) facility is operated by Trans-Foreland Pipeline Co. LLC – which is a subsidiary of Marathon Petroleum
- Last exported LNG was 2015
- Department of Energy (DOE) authorization for exporting LNG expired in 2018
- Dec. 2020 Federal Energy Regulatory Commission (FERC) approved LNG imports to this facility an annual capacity up to 1.8 billion cubic feet (bcf) per year

Nutrien Fertilizer Plant

- Second largest ammonia/urea plant in U.S.
- Shut down and mothballed in 2007, however Nutrien maintains permits and remains interested in reopening the plant
- Gas prices relative to Lower 48 makes economics difficult
- Potential source for blue hydrogen/blue ammonia

Estimated consumption of Cook Inlet gas by end use
(Source: EIA, AOGCC)



DNR 2022 Cook Inlet Forecast

Purpose of the 2022 Cook Inlet Gas Forecast:

- Independent analysis to provide information on gas supply issues in the Cook Inlet
- Also provides production information for the Department of Revenue's revenue forecast

Methodology:

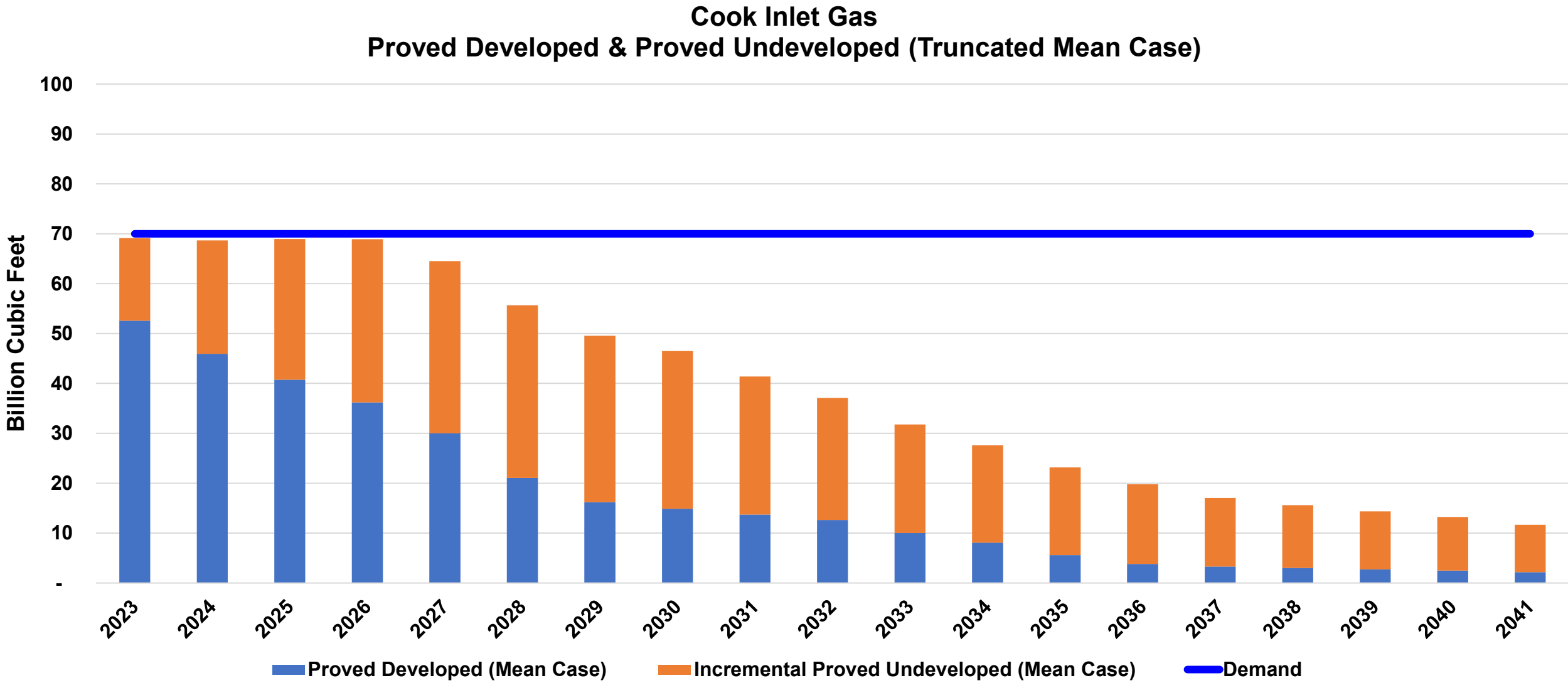
- Utilized public production data to assess Units producing gas in the Cook Inlet
- Generally accepted petroleum engineering practices used to develop projections
- Standardized set of economic limits were used for each Unit

Key Assumptions:

- Assumes 15 development wells per year until 2030, and no new wells beyond that
- Assumes gas price is flat at 70 BCF, with escalation for inflation. Does not forecast market changes responding to supply/demand
- Does not include contribution from non-producing known prospects and does not forecast likelihood of their development
- Forecasted volumes do not account for gas produced from gas storage

Download Cook Inlet gas studies from the Division of Oil & Gas website.

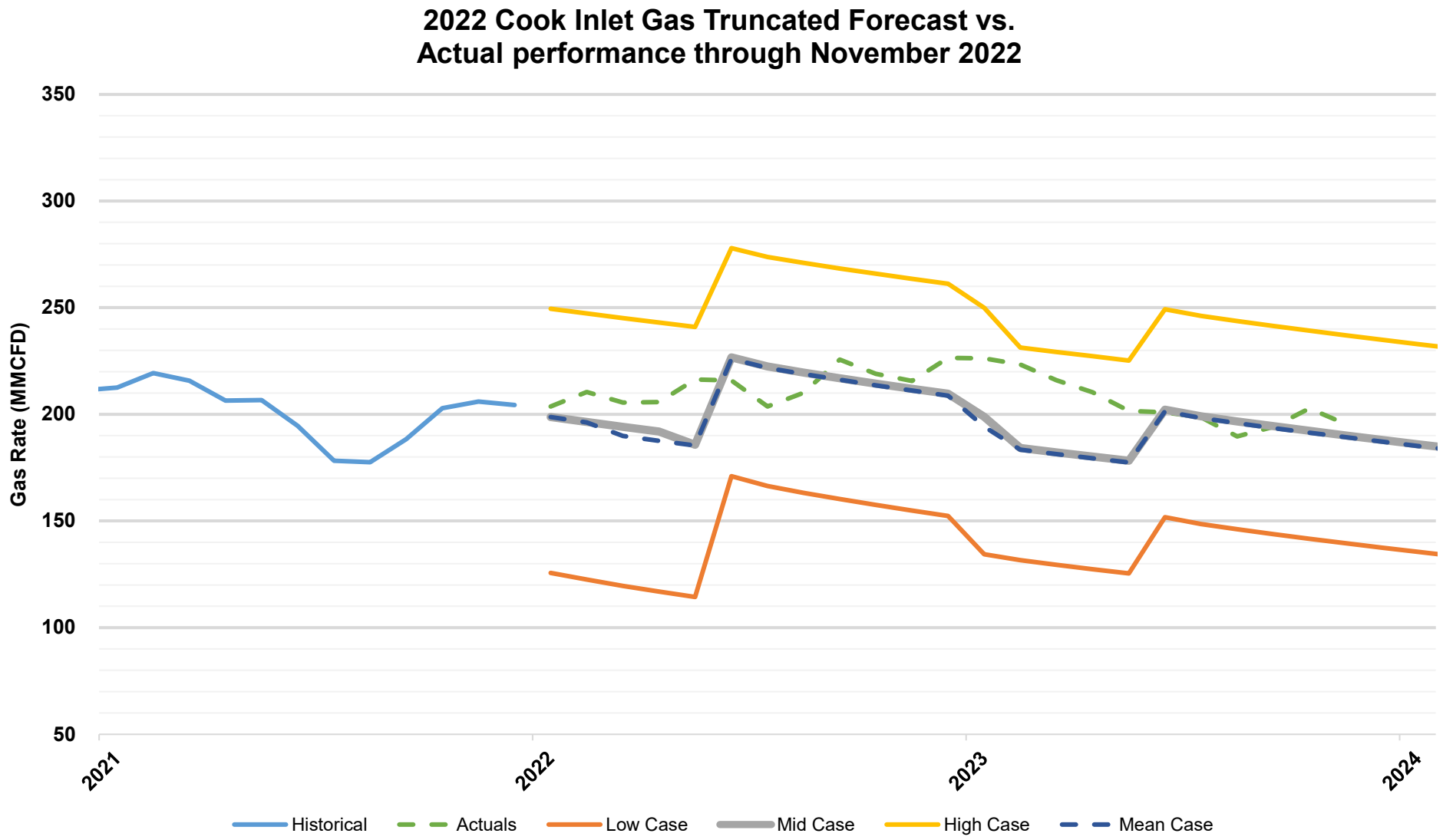
Forecast Proved Developed & Proved Undeveloped



2022 Forecast vs Actuals

Key Differences from Actuals

- Wells Drilled:
  18 development wells were drilled in 2022 vs DNR-assumed 15 development wells
- Routine Field Events:
  - Well Maintenance (i.e., tubing replacements, casing repairs, etc.)
  - Well Enhancements (i.e., perforations, stimulations, etc.)
  - Facility Turnaround Events (i.e., compressor & separator maintenance, infrastructure repairs, etc.)



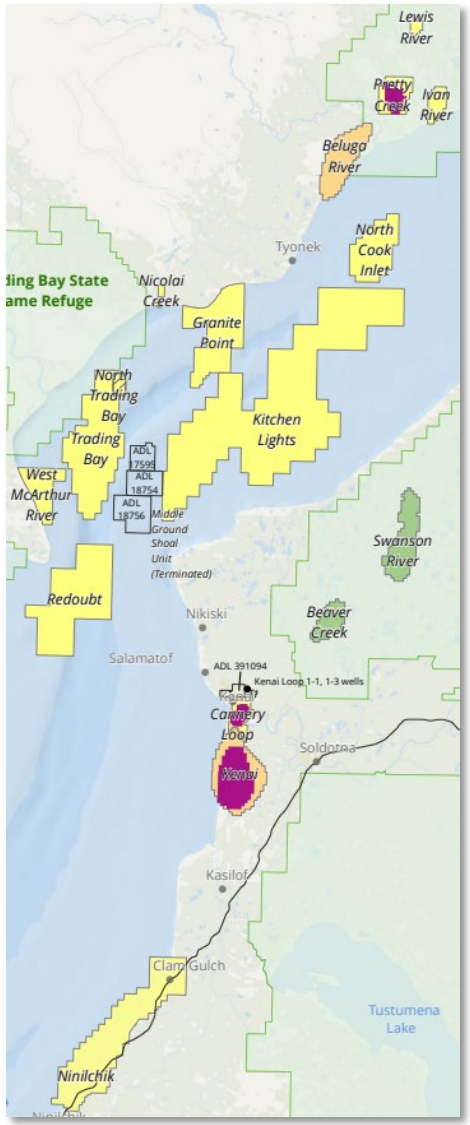
2023 Development Well Activity

Well Activity

- **17** gas development wells have been drilled and completed during calendar year 2023:
  - North Cook Inlet Unit x3
  - Lewis River Unit x1
  - North Trading Bay Unit x1
  - Swanson River Unit x3
  - Beluga River Unit x5
  - Lewis River Unit x1
  - Ninilchik Unit x3

- **1** development well is currently being drilled in Kenai Unit

- **1** development well drilling permit is currently approved for Beluga River Unit



Production

Major Field Contributors (through November 2023):

- Ninilchik ~21.8%
- North Cook Inlet ~18.8%
- Beluga River ~18.5%
- All other gas fields represent less than 10% each

The above percentages are based on gas volumes for sale, and discounts gas produced from storage as well as gas reinjected for EOR purposes.

Cook Inlet 2023 Lease Sale Results

New, competitive lease terms offered:

- Net profit share as the bid variable
- Fixed per-acre cash bonus
- No royalty—percentage of net profits owed to the State after recovering capital investments and operating costs to bring production online

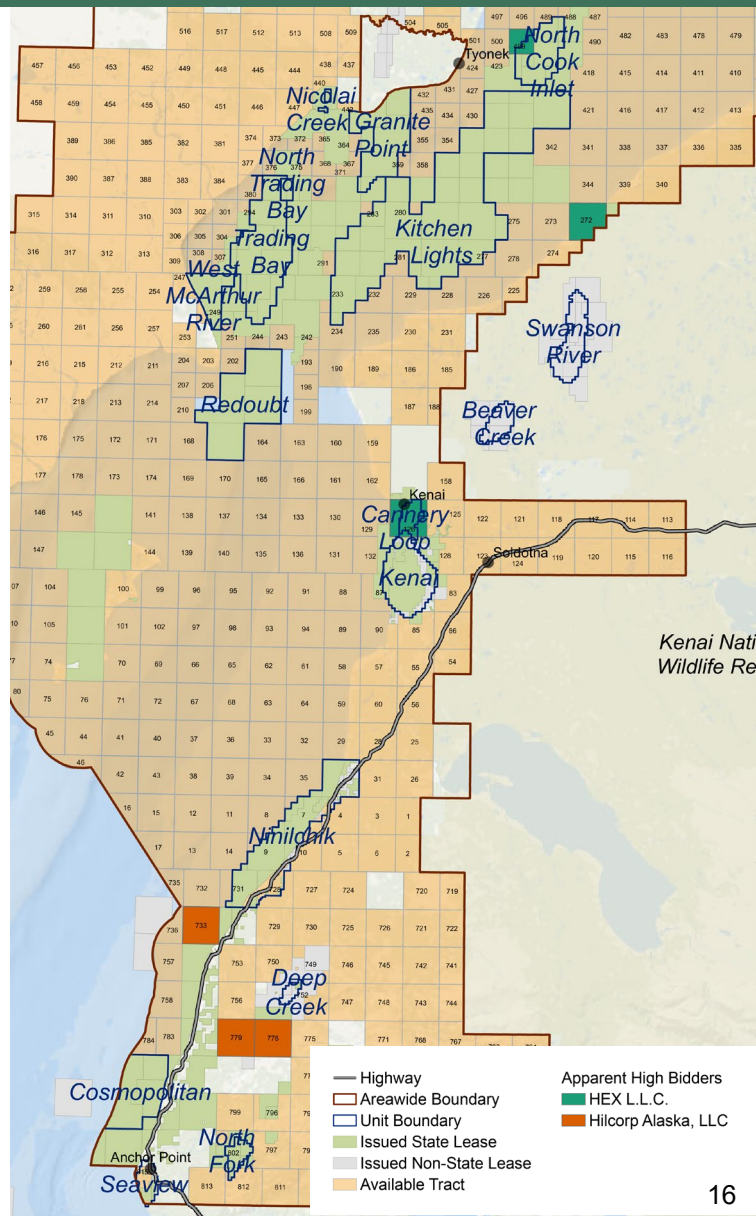
Six tracts received bids

- Three from Hilcorp Alaska LLC
- Three from Hex LLC

Net profit share rate bids: 5.7% – 11%

Cash bonus revenue: About $600,000

Acres receiving bids: About 15,000 acres



Existing Oil & Gas Royalty Statutes

New leases	Existing leases		
No production		**Mature production**	
AS 38.05.180(f)(3) *Prescriptions on commercial terms for DNR's oil and gas leases*	AS 38.05.180(f)(4)–(5) *Five percent royalty rate on initial production under limited circumstances*	AS 38.05.180(f)(6) *Reduced royalty rates on oil for some offshore fields under limited conditions*	AS 38.05.180(j) *Royalty modification by DNR Commissioner*

• Minimum royalty rate at 12.5%
• Options for sliding-scale royalty rates or net profit sharing
	• 180(f)(4) Cook Inlet Discovery Royalty
	  • 1996 SB 112
	  • Only used once
	• 180(f)(5) New production granted 5% royalty for 10 years
	  • 1998 HB 380
	  • Applied to only six known fields at the time of legislation
	  • Four fields qualified
		• 2003 SB 185
		• Effective, more successful at prolonging production than predicted
		• Only applies to offshore oil fields
		• Doesn't apply to all offshore oil fields
			• Expanded in 1995 by HB 207
			• May modify royalty for unproduced pools (5%), mature pools (3%), or shut-in pools that are uneconomic (3%)
			• High bar and lengthy process

SB 194: Why it is Necessary

Why this legislation is necessary

- Alaskans need access to reliable, affordable energy
- Nearly 70% of Alaskans use Cook Inlet natural gas for heating, energy, and electricity generation
- Cook Inlet gas supplies are forecasted to drop below demand in coming years unless new sources are brought online
- There are several significant known natural gas fields in Cook Inlet that are not seeing development under the status quo
- Policies and actions to support future development need to be taken today
- More competitive development terms will increase total recovery and utilization of Alaska's natural resources, which otherwise may not be developed or generate revenue for the State
- Alaska should use all the local natural gas resources available as we work on long-term energy solutions for the Railbelt

SB 194: Effects

What the bill does

- Grants a reduced royalty of five percent for the first ten years of production from pools in Cook Inlet that have not previously been produced for commercial sale
- Includes known resources that are not yet in production and resources that could be discovered through further exploration
- Applies to any state land in Cook Inlet, whether or not in existing fields, units, or leases
- Does not reduce royalties for pools presently in commercial production

SB 194: Qualifying Production

AS 38.05.180(f)(5) is amended to read:

"[T]he lessee of *all or part of an oil or gas pool* in the Cook Inlet sedimentary basin that, subject to determination by the commissioner, *has not previously produced for commercial sale* oil or gas shall pay a royalty of five percent on oil or gas produced for sale from that pool for 10 years following the date on which the production for commercial sale commences;"

What "has not previously produced for commercial sale oil or gas" means:

- Production from wells or sidetracks drilled after the effective date of this legislation that would not have otherwise been produced from existing wells
- "[S]ubject to determination by the commissioner" means DNR considers if the source of oil and gas has produced in the past, proximity to existing wells, drainage area of existing wells, and timeframe for recovery from existing wells
- Examples of qualifying production:
  - A newly-drilled well or sidetrack from the edge of an existing or previously-producing development
  - A new well or sidetrack from an unproduced accumulation of oil and gas
- The lessee or lessees shall jointly or separately apply for reduction in royalty for one or more wells with each application
- Data and interpretations will be supplied with the application, and DNR may request further data and interpretations
- A well or accumulation may be determined to receive reduced royalties before a well is drilled when supported by data and interpretations

SB 194: Sectional Summary

- **Section 1:** Amends AS 38.05.180(f)(5). The original statute granted a five-percent royalty rate for oil or gas for the first ten years but was limited to six Cook Inlet fields discovered before 1988 and provided a deadline of January 1, 2004, for start of production (in AS 38.05.180(dd)).

  This amendment modifies the program to include new production in Cook Inlet, regardless of discovery date, and removes limits on eligible volumes of oil or gas during the ten-year period of reduced royalty. Eligibility is subject to determination by the Department of Natural Resources (DNR) commissioner, rather than being automatic.

- **Section 2:** Repeals the following statutes:

  AS 31.05.030(i):

  This section relates to the powers and duties of the Alaska Oil and Gas Conservation Commission (AOGCC) and the paragraph outlines the procedure for approving plans of development by the AOGCC. This statute is no longer necessary because the Department of Natural Resources, not the AOGCC, is the agency that administers and approves plans of development.

  AS 38.05.180(dd):

  This section relates to the State of Alaska's oil and gas and gas only leasing policies. Paragraph (dd) established a deadline for start of production under the unamended AS 38.05.180(f)(5) and is no longer appropriate.

- **Section 3:** The legislation takes effect immediately under AS 01.10.070(c).

QUESTIONS?

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