

## Nutrien APDES permit under consideration; Jim White clarifies

AMIDST CHATTER ABOUT importing LNG to address the coming natural gas shortage in Southcentral Alaska, on April 10 the Alaska Department of Environmental Conservation is concluding a 10-day preliminary applicant review of an Alaska Pollutant Discharge Elimination System, or APDES, individual permit to Nutrien US LLC for the North Complex of the company's Kenai Nitrogen Operations.

ADEC said Nutrien is considering a project to resume operation of the North Complex in the next 5 years which would include ammonia plants #1 and #4 and urea plant #5. Exactly what that project will be was not described in the paperwork.

During the effective period of the permit, Nutrien is authorized to discharge specified pollutants into the Cook Inlet.

The Nutrien Kenai Nitrogen Operations, or KNO, complex is a large nitrogen manufacturing fertilizer complex consisting of two ammonia plants, two urea plants, two associated utility plants, and a loading wharf.

see INSIDER page 11

## 88 Energy reports Upper SFS flows light oil in Hickory-1 well

In an April 2 ASX announcement 88 Energy Limited reported the successful flow testing of the Upper SFS reservoir in the company's Hickory-1 well in Project Phoenix on the North Slope of Alaska.

The Upper SES, or USFS, is light oil with "multiple oil samples recovered, measuring ~40-degree API oil gravity," 88 Energy said.

The USFS test produced at a peak gauge flow rate of over 70 barrels of oil per day.

Furthermore, the company said the USFS flow rates "achieved from low volume frac over small 20ft vertical interval are in line with expectations and results observed from other reservoirs on adjacent acreage," presumably held by Great Bear Pantheon.

see HICKORY-1 WELL page 11

## Enbridge speeds up expansion, adding dock space, storage plans

Less than a year after striking a deal to expand its rail network investment in North America by US\$9 billion, North America's largest crude and gas shipping company has tossed another C\$500 million into the pot by bolstering its continental transportation system.

In targeting aggressive plans to offer increased volumes on its oil pipeline network by 200,000 barrels per day over the next five years, Enbridge said it expects to offer capacity to handle climbing production from the Western Canada Sedimentary Basin.

"As has happened in the past, as soon as people think there is too much pipeline capacity, there's more production coming on stream," Enbridge CEO Greg Ebel told reporters.

"There probably won't be a major pipeline build, but at this

see ENBRIDGE EXPANSION page 10



### FINANCE & ECONOMY

# ANS surge: high \$80s

ANS bests Brent after 4.7769% pop in 4 trading days: gasoline demand brisk

By STEVE SUTHERLIN

Petroleum News

Alaska North Slope crude was long on gains despite a Good Friday-shortened trading week, vaulting \$4.09 or 4.7769% over four trading days to close April 3 at \$89.71 per barrel — up \$1.07 on the day.

West Texas Intermediate rose 28 cents on the day to close at \$85.43, while Brent added 43 cents to close at \$89.35.

Another remarkable aspect of the day April 3 was that ANS overtook Brent with its superior performance, putting ANS at a 36-cent premium over Brent. ANS also scored a \$4.28 premium over WTI.

While one day's closing is not enough to con-

While one day's closing is not enough to confirm a trend, a likely explanation for higher prices on the West Coast — where ANS is sold — is that China has recently notched a marked improvement in its economy, while India is continuing to report a hot economy with growing oil demand.

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see OIL PRICES page 9

### NATURAL GAS

# More offshore drilling

Hilcorp plans more gas wells at N Cook Inlet, Granite Point, Trading Bay

By KRISTEN NELSON

Petroleum News

Hilcorp Alaska, Cook Inlet's largest natural gas producer, continues to plan more natural gas wells in the inlet. Newly filed plans of development for three offshore units, including one of the inlet's largest gas producers, include up to six new wells as well as work on existing wells and facilities. The PODs, for North Cook Inlet, Granite Point and Trading Bay, were all filed April 1, and all cover July 1 through June 30, 2025.

Alaska Oil and Gas Conservation Commission data for February, the most recent month available, show the three units collectively accounted for just over 30% of inlet natural gas production in that month.

In its 2024 POD, Hilcorp said if commercial quantities of gas are discovered in planned Bruce Platform drilling, it "will evaluate production facility and pipeline capacity constraints to optimize deliverability of gas between existing platforms and to the Granite Point Tank Farm."

### North Cook Inlet

At North Cook Inlet Hilcorp said in its 2024 POD that it anticipates drilling as many as three grassroots wells from the Tyonek platform using

see OFFSHORE DRILLING page 12

### UTILITIES

# Changes are required

The Railbelt electricity transmission grid needs upgrading & new business model

By ALAN BAILEY

For Petroleum News

With pending natural gas shortages in the Cook Inlet region and a desire to move to the increased use of renewable energy sources for power generation in the Alaska Railbelt, the deficiencies of the Railbelt electricity transmission system have become a focus of attention.

The state Legislature is currently considering bills that would change the manner in which the system is managed and funded. The Railbelt electricity utilities have been planning potential upgrades to



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the system, to meet future transmission needs. And the state was recently awarded a \$206-million federal grant for the construction of a second transmission line from the Kenai Peninsula to the Anchorage region — that grant is contingent on matching state funds.

### Importance of the system

During a March 26 meeting of the House Energy Committee Gwen Holdmann, University of Alaska Fairbanks Associate Vice Chancellor for Research, Innovation & Industry Partnerships, provided an overview of

see GRID CHANGES page 10



## ● EXPLORATION &amp; PRODUCTION

# Baker Hughes US rig count drops 3

By KRISTEN NELSON

Petroleum News

The Baker Hughes' U.S. rotary drilling rig count was 621 for the last week in March, down by three rigs from 624 the previous week, and down by 134 from 755 a year ago, following a drop of five rigs last week. The rig count increased in four and decreased in four of the last eight weeks, with a gain of 19 against a loss of 17 over the period, bucking a downward trend dominant since the beginning of May.

A drop of 17 to 731 on May 12, 2023, was the steepest weekly drop since June of 2020, during the first year of the COVID-19 pandemic, when the count also dropped by 17 to 284 on June 5, following drops as steep as 73 rigs in one week in April. The count continued down to 251 at the end of July 2020, reaching an all-time low of 244 in mid-August 2020.

*Baker Hughes shows Alaska with 14 rotary rigs active March 28, unchanged from the previous week and up by four from a year ago when the count was 10.*

For 2023, the count hit its low point Nov. 10 at 616, down from a high of 775 on Jan. 13, 2023. In 2022, the count bottomed out at 588 Jan. 1, reaching a high for the year of 784 on Nov. 23.

When the count dropped to 244 in mid-August 2020, it was the lowest the domestic rotary rig count had been since the Houston based oilfield services company began issuing weekly U.S. numbers in 1944.

Prior to 2020, the low was 404 rigs in May 2016. The count peaked at 4,530 in 1981.

The count was in the low 790s at the beginning of 2020 prior to the COVID-19 pandemic, where it remained

through mid-March of that year when it began to fall, dropping below what had been the historic low in early May with a count of 374 and continuing to drop through the third week of August 2020 when it gained back 10 rigs.

The March 28 count includes 506 rigs targeting oil, down by three from the previous week and down 86 from 592 a year ago, with 112 rigs targeting natural gas, unchanged from the previous week and down 48 from 160 a year ago, and three miscellaneous rigs, unchanged from the previous week and unchanged from a year ago.

Sixty of the rigs reported March 28 were drilling directional wells, 558 were drilling horizontal wells and 13 were drilling vertical wells.

## Alaska rig count unchanged

New Mexico (111) was up by five rigs from the previous

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# Alaska-Mackenzie Rig Report

Rig Owner/Rig Type      Rig No.      Rig Location/Activity      Operator or Status

## Alaska Rig Status

### North Slope - Onshore

<b>All American Oilfield LLC</b>			
IDECO H-37	AAO 111	Hickory 1	Accumulate Energy Alaska Inc.
<b>Doyon Drilling</b>			
Dreco 1250 UE	14 (SCR/TD)	Milne Point, I-23	Hilcorp Alaska LLC
Dreco 1000 UE	16 (SCR/TD)	Deadhorse, Standby undergoing maintenance and upgrades	Available
Dreco D2000 Uebd	19 (SCR/TD)	Badami, B1-33PH Kennicott	Cook Inlet Energy LLC
AC Mobile	25	Alpine, MT7-92	ConocoPhillips
OIME 2000	141 (SCR/TD)	DKing Street-1, exploratory	Lagniappe Alaska LLC
	142 (SCR/TD)	Kuparuk, 3S-610	ConocoPhillips
TSM 700	Arctic Fox #1	Sockey -1, exploratory	Lagniappe Alaska LLC
ERD	26	Alpine, Titan-1	ConocoPhillips
<b>Hilcorp Alaska LLC</b>			
Rotary Drilling	Innovation	Prudhoe Bay, Z Pad	Hilcorp Alaska LLC
<b>Nabors Alaska Drilling</b>			
AC Coil Hybrid	CDR-2 (CTD)	Milne Point, B-15A	Hilcorp Alaska LLC
AC Coil	CDR-3 (CTD)	Kuparuk	Available
Dreco 1000 UE	7-ES (SCR-TD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	9-ES (SCR/TD)	Stacked	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Stacked	Brooks Range Petroleum
Emsco Electro-hoist			
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Stacked	Available
Academy AC Electric CANRIG	99AC (AC-TD)		Available
OIME 2000	245-E (SCR-ACTD)	12 Acre Pad, stacked	Available
Academy AC electric CANRIG	105-E (AC-TD)	Voodoo #1	Lagniappe Alaska LLC
Academy AC electric Heli-Rig	106AC (AC-TD)	Stacked	Available
<b>Nordic Calista LLC</b>			
Superior 700 UE	1 (SCR/CTD)	Deadhorse	Available
Superior 700 UE	2 (SCR/CTD/TD)	Deadhorse, stacked	Available
Ideco 900	3 (SCR/TD)	Kuparuk	ConocoPhillips
Rig Master 1500AC	4 (AC/TD)	Oliktok Point	ENI
<b>Parker Drilling Arctic Operating LLC</b>			
NOV ADS-10SD	272	Pikka	Santos
NOV ADS-10SD	273	Prudhoe Bay	Hilcorp Alaska LLC

### North Slope - Offshore

<b>Doyon Drilling</b>			
Sky top Brewster NE-12	15 (SCR/TD)	Nikaitchuq, SP42-NE4	ENI
<b>Nabors Alaska Drilling</b>			
OIME 1000	19AC (AC-TD)	Oooguruk, Cold Stacked	ENI

### Cook Inlet Basin – Onshore

<b>BlueCrest Alaska Operating LLC</b>			
Land Rig	BlueCrest Rig #1	Stacked	BlueCrest Alaska Operating LLC
<b>Nordic Calista LLC</b>			
	Rig 37	Kenai, Under upgrade	Available
<b>Hilcorp Alaska LLC</b>			
TSM-850	147	Beluga River Unit, F Pad	Hilcorp Alaska LLC
TSM-850	169	Pearl Pad	Hilcorp Alaska LLC

### Cook Inlet Basin – Offshore

<b>Hilcorp Alaska LLC</b>			
National 110	C (TD)	Platform C, Stacked	Hilcorp Alaska LLC
	Rig 51	Steelhead Platform, Stacked	Hilcorp Alaska LLC
	Rig 56	Monopod A-13, stacked	Hilcorp Alaska LLC
<b>Spartan Drilling</b>			
Baker Marine LLC-Skidoff, jack-up		Spartan 151, Tyonek Platform	Hilcorp Alaska LLC
<b>Glacier Oil &amp; Gas</b>			
National 1320	35	Osprey Platform, activated	Glacier Oil & Gas

## Mackenzie Rig Status

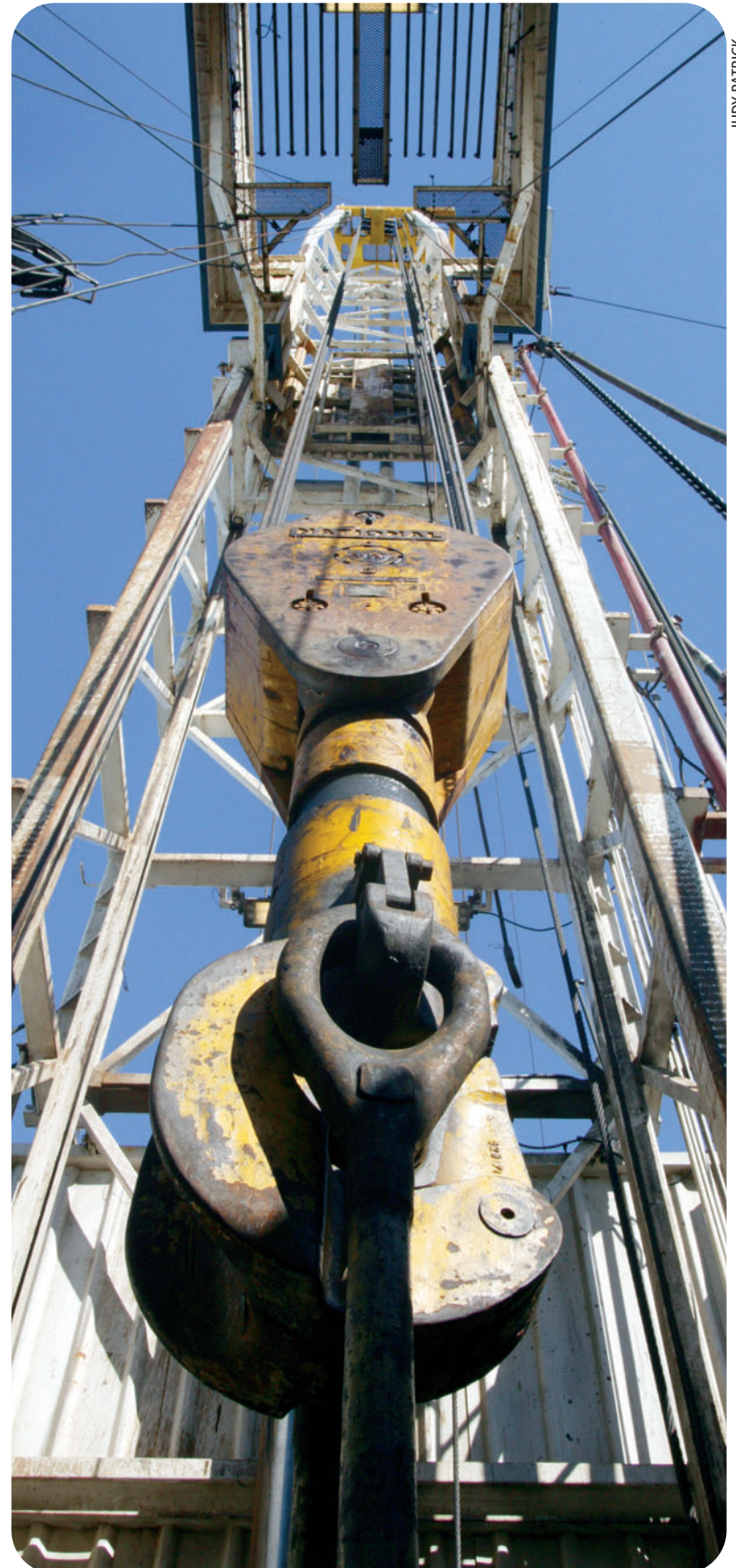
### Canadian Beaufort Sea

<b>SDC Drilling Inc.</b>			
SDC Mobile Offshore Drilling Unit Rig #2		Set down at Roland Bay	Available

The Alaska-Mackenzie Rig Report as of April 3, 2024.  
Active drilling companies only listed.

TD = rigs equipped with top drive units WO = workover operations  
CT = coiled tubing operation SCR = electric rig

This rig report was prepared by Marti Reeve



JUDY PATRICK

### Baker Hughes North America rotary rig counts\*

	March 28	March 22	Year Ago
United States	621	624	755
Canada	151	169	139
Gulf of Mexico	18	21	17

### Highest/Lowest

US/Highest	4530	December 1981
US/Lowest	244	August 2020

\*Issued by Baker Hughes since 1944

The Alaska-Mackenzie Rig Report  
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## EXPLORATION &amp; PRODUCTION

# ANS February volumes up 1.2% over January

Output averaged 481,904 bpd; largest increase at Greater Mooses Tooth, up 22.4%, 3,567 bpd; no February volumes from Pt Thomson

By **KRISTEN NELSON**

Petroleum News

February North Slope production was up 1.2% from January, but down 2.9% from February 2023. The average of 481,904 barrels per day was up 5,785 bpd from a January average of 276,119 bpd but down from a February 2023 average of 496,470 bpd. Crude averaged 423,459 bpd in February, 87.9% of the Slope volume, up 5,462 bpd, 1.3%, from a January average of 417,998 bpd but down 3.1% from a February 2023 average of 437,181 bpd. Natural gas liquids averaged 58,445 bpd in February, 12.1% of the total, up 323 bpd, 0.6%, from a January average of 58,121 bpd, but down 1.4% from a February 2023 average of 59,288 bpd.

Production data come from the Alaska Oil and Gas Conservation Commission which reports production by field and well on a month delay basis.

The temperature in the North Slope Borough averaged -8 degrees F in

February, compared to a 1925-2000 mean of -15.3 degrees. Data on temperature from the county time series maintained by NOAA's National Centers for Environmental Information.

## Month-over-month increases

The largest month-over-month increase was from ConocoPhillips Alaska's Greater Mooses Tooth in the National Petroleum Reserve-Alaska, the Slope's newest producing area, where production began in 2018. GMT averaged 19,488 bpd in February, up 3,567 bpd, 22.4%, from a January average of 15,922 bpd and up 23.7% from a February 2023 average of 15,751 bpd. GTM produces from two pads, GMT6, the Lookout pool, which accounted for 7.3% of February production from a single well, and GMT7, the Rendezvous pool, which accounted for 92.7% of GTM production, and had nine wells online, including one new well, GMTU MT7-93.

The ConocoPhillips Alaska-operated Kuparuk River field averaged 78,517 bpd

in February up 2.5%, 1,879 bpd, from a January average of 76,638 bpd but down 3% from a February 2023 average of 80,948 bpd. In addition to the main Kuparuk pool, Kuparuk produces from satellites at Tabasco and Tarn, and from West Sak.

ConocoPhillips' Colville River averaged 35,951 bpd in February, up 1,487 bpd, 4.3%, from a January average of 34,464 bpd but down 0.6% from a February 2023 average of 36,170 bpd. In addition to oil from the main Alpine pool, Colville includes production from the Nanuq and Qannik oil pools.

Hilcorp Alaska's Milne Point averaged 42,382 bpd in February, up 1,305 bpd, 3.2%, from a January average of 41,077 bpd and up 6.9% from a February 2023 average of 39,655 bpd. Milne Point produces primarily from the Schrader Bluff and Kuparuk oil pools, with minor Sag River and Ugnu volumes.

Hilcorp North Slope-operated Prudhoe Bay averaged 274,089 bpd in February, up 820 bpd, 0.3%, from a January average of 273,269 bpd but down 1.8% from a February 2023 average of 279,166 bpd. Crude volumes from Prudhoe averaged 218,898 bpd in February, 79.9% of the field total, up 370 bpd, 0.2%, from a January average of 218,527 bpd, but down 2.2% from a February 2023 average of 223,718 bpd. Prudhoe NGLs averaged 55,192 bpd in February, 20.1% of the field's total, up 450 bpd, 0.8%, from a January average of 54,742 bpd but down 0.5% from a February 2023 average of 55,448 bpd. In addition to the primary reservoir, production volumes from Prudhoe include Aurora, Borealis, Lisburne, Midnight Sun, Niakuk, Polaris, Point McIntyre, Put River, Raven and

Schrader Bluff.

Hilcorp Alaska-operated Endicott averaged 6,243 bpd in February, up 26 bpd, 0.4%, from a January average of 6,217 bpd but down 2.1% from a February 2023 average of 6,376 bpd. Endicott crude averaged 5,461 bpd in February, 87.5% of the total, up 98 bpd, 1.8%, from a January average of 5,364 bpd but down 4.2% from a February 2023 average of 5,698 bpd. Endicott NGLs averaged 782 bpd in February, 12.5% of the total, down 72 bpd, 8.4%, from a January average of 854 bpd, but up 15.3% from a February 2023 average of 678 bpd.

## Month-over-month decreases

The largest month-over-month decrease was at Hilcorp Alaska-operated Point Thomson, where production halted in mid-January following discovery of a leak in the Point Thomson Export Pipeline. Point Thomson had no production in February, following a January average of 1,790 bpd over 14 days prior to discovery of the leak. In February 2023 the field averaged 8,136 bpd.

Eni's Oooguruk averaged 5,161 bpd in February, down 698 bpd, 11.9%, from a January average of 5,859 bpd and down 22.6% from a February 2023 average of 6,670 bpd.

Eni's Nikaitchuq averaged 13,716 bpd in February, down 603 bpd, 4.2%, from a January average of 14,319 bpd and down 15.6% from a February 2023 average of 16,258 bpd.

Hilcorp Alaska's Northstar averaged 5,496 bpd in February, down 202 bpd, 3.5%, from a January average of 5,698

see **ANS OUTPUT** page 5

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## RIG COUNT

week, the only state with a week-over-week increase.

Texas (290) was down by four rigs, Louisiana (41) was down three and Colorado (15) was down a single rig.

Rig counts in other states were unchanged from the previous week: Alaska (14), California (6), Kansas (1), North Dakota (32), Ohio (12), Oklahoma (44), Pennsylvania (21), Utah (12), West Virginia (9) and Wyoming (11).

Baker Hughes shows Alaska with 14 rotary rigs active March 28, unchanged from the previous week and up by four from a year ago when the count was 10. Thirteen of the Alaska rigs were onshore, unchanged from the previous week, with one rig working offshore, unchanged from the previous week.

The rig count in the Permian, the most active basin in the country, was up by one from the previous week at 316 and down by 36 from 362 a year ago. ●

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## ANS OUTPUT

bpd and down 19.6% from a February 2023 average of 6,835 bpd. Northstar crude averaged 3,025 bpd in February, 55% of the field's total, down 147 bpd, 4.6%, from a January average of 3,172 bpd and down 17.6% from a February 2023 average of 3,673 bpd. Northstar NGLs averaged 2,471 bpd in February, 45% of the field's total, down 55 bpd, 2.2%, from a January average of 2,526 bpd and down 21.9% from a February 2023 average of 3,162 bpd.

Savant Alaska's Badami averaged 861 bpd in February, down 5 bpd, 0.7%, from a January average of 867 bpd but up 70.8% from a February 2023 average of 504 bpd. Savant is a Glacier Oil and Gas company.

### Cook Inlet crude up 3%

Cook Inlet crude averaged 8,861 bpd in February, up 267 bpd, 3.1%, from a January average of 8,594 bpd but down 2.9% from a February 2023 average of 9,122 bpd.

The largest month-over-month increase was at Cook Inlet Energy's Redoubt Shoal, which averaged 662 bpd in February, up 190 bpd, 40.2%, from a January average of 472 bpd and up 13.2% from a February 2023 average of 585 bpd. A year ago, CIE had two wells producing at Redoubt. A third well, Redoubt Unit 5B, is not new — it first produced in October 2013 — but its production has been somewhat sporadic. It was not in production last February, produced part of January and all of this February. CIE is a Glacier Oil and Gas company.

Hilcorp Alaska's McArthur River averaged 2,507 bpd in February, up 50 bpd, 2%, from a January average of 2,457 bpd but down 13.6% from a February 2023 average of 2,901 bpd.

Hilcorp's Trading Bay averaged 911 bpd in February, up 30 bpd, 3.4%, from a January average of 881 bpd and up 8.1% from a February 2023 average of 843 bpd.

BlueCrest's Hansen averaged 689 bpd in February, up 20 bpd, 3%, from a January average of 669 bpd but down 5.8% from a February 2023 average of 732 bpd.

CIE's West McArthur River averaged 874 bpd in February, up 7 bpd, 0.8%, from a January average of 867 bpd and up

99.8% from a February 2023 average of 438 bpd. The biggest year-over-year operational difference is the Sword well — first produced in November 2013 — which was not online in February 2023 and was a producer in both January and February of this year. CIE is a Glacier Oil and Gas company.

Hilcorp's Granite Point averaged 2,140 bpd in February, up 4 bpd, 0.2%, from a January average of 2,136 bpd but down 6.5% from a February 2023 average of 2,288 bpd.

Production at Hilcorp's Beaver Creek was unchanged month-over-month, averaging 289 bpd in both February and January, although down 47.4% from a February 2023 average of 550 bpd.

Hilcorp's Swanson River averaged 789 bpd in February (730 bpd of crude and 59 bpd of NGLs), down 33 bpd, 4.1%, from a January average of 822 bpd but up 0.2% from a February 2023 average of 787 bpd.

ANS crude oil production peaked in 1988 at 2.1 million bpd; Cook Inlet crude oil production peaked in 1970 at more than 227,000 bpd. ●

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## NATURAL GAS

### Pantheon, AGDC looking to provide gas

A March 28 London Stock Exchange release from Pantheon Resources includes word of discussions between Alaska Gasline Development Corp. and Pantheon to provide natural gas to an AGDC gas pipeline with initial delivery in 2029 and full delivery by 2032.

The goal is to provide much-needed natural gas to Southcentral Alaska.

Pantheon said the agreement being discussed is for delivery of up to 500 million cubic feet per day of natural gas at the company's North Slope Ahpun gas plant at a base price of less than \$1 per million British thermal units. "Pantheon and AGDC are working cooperatively to identify mutually beneficial opportunities to further reduce the natural gas price," with Pantheon retaining rights to any helium produced, the company said.

Pantheon said tests of associated gas from Ahpun and Kodiak indicate a CO2 content of some 0.5%, "well below the 3% maximum limit for in-state utility gas."

"Alaska is facing an energy crisis, and AGDC is exploring every option to deliver a new, affordable, reliable, and long-term energy supply," AGDC President Frank Richards said in Pantheon's London Stock Exchange release. "This proposed agreement provides for more than enough gas to meet Alaska's in-state energy requirements, this gas features very low carbon dioxide content eliminating the need for additional treatment costs, and Pantheon's fields are conveniently situated directly along the Alaska LNG pipeline route. We look forward to working with Pantheon to finalize these agreements as we advance Alaska LNG."

David Hobbs, Pantheon Resources executive chairman, said: "We have made considerable progress during he past several months towards accessing funding

see **PANTHEON GAS** page 8

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• THIS MONTH IN HISTORY

# Alaska's Chukchi: Will its time ever come?

20 years ago this month: A handful of wells drilled more than 10 years ago are the only exploration in this challenging area

Editor's note: This story first appeared in the April 4, 2004, issue of Petroleum News.

By ALAN BAILEY

For Petroleum News

Are we close to a time when high oil prices and the possibility of a North Slope gas line can trigger renewed interest in oil and gas exploration in the Chukchi Sea? Or do the daunting technical, economic and environmental issues in this remote region preclude development in the foreseeable future?

With huge geologic structures and an abundance of both source and reservoir rocks, the strata under the Chukchi Sea could yield another field of Prudhoe Bay scale. According to an assessment by the Minerals Management Service the area should hold anywhere between 8.6 billion and 25 billion barrels of conventionally recoverable oil. MMS estimates gas reserves in the range of 13.6 trillion to 154.3 trillion cubic feet.

## Five exploration wells

Following lease sales on the Chukchi Shelf in 1988 and 1991, several companies led by Shell drilled offshore exploration wells in the Chukchi Sea.

"They went out there in the '90s and punched five wells ... they all found hydrocarbons," Kirk Sherwood, a geologist with MMS, told Petroleum News in March 2004. "They actually sampled gas from three ... and encountered pooled oil in two other sites."

One well, the Burger well, found a substantial gas reservoir, Sherwood said. However, none of the oil finds proved commercial and there was little interest in gas at that time.

In an attempt to find a really large oil field, the wells targeted similar geology to the oil-bearing structures around Prudhoe Bay. In particular the so-called Klondike well in the southern part of the exploration area drilled through a 1,000-foot section of the Sadlerochit formation that forms the main reservoir in the Prudhoe Bay field.

Unfortunately the Klondike well found that the Sadlerochit under the Chukchi consists mainly of shale rather than the reservoir sandstone at Prudhoe Bay.

Companies lost interest in exploring in the Chukchi and no further exploration activity has taken place in the area.

## A fresh look

Sherwood thinks that companies became discouraged by the drilling results because they were so focused on finding a similar set up to Prudhoe Bay and they tended not to search beyond that possibility.

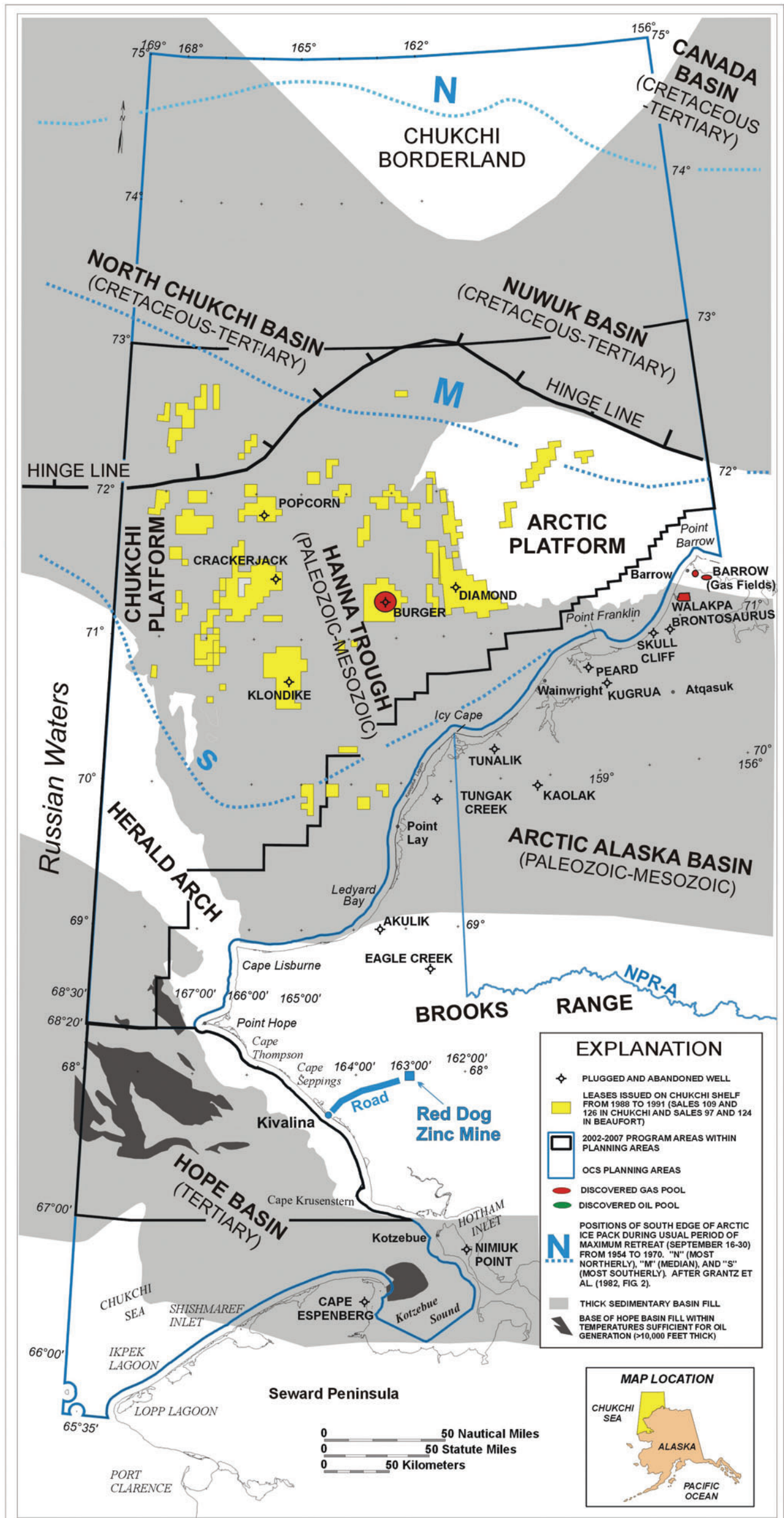
However, Sherwood suggests that people take a fresh look at the positive geological features of the Chukchi. The drilling did demonstrate the existence of good source and reservoir rocks. The estimated thermal history of the area points to the generation of substantial quantities of oil and gas.

"There's probably about 20,000 feet of strata below the deepest well in terms of stratigraphic penetration," Sherwood said. These strata include the bottom half of the Chukchi Lisburne and all the underlying rocks, he said.

And some parts of the stratigraphic sequence include bigger potential reservoirs than their equivalents in the Prudhoe Bay area. For example, the Permian Echooka sandstone is about 70 feet thick across almost the whole of the North Slope. They found about 500 to 600 feet of the



## CHUKCHI SEA AND KOTZEBUE SOUND SEDIMENTARY BASINS





EXPLORATION & PRODUCTION

# More drilling proposed at Prudhoe Bay IPA

Hilcorp North Slope's 2024 plan of development for initial participating areas, oil rim and gas cap, includes as many as 36 wells

By **KRISTEN NELSON**  
Petroleum News

Prudhoe Bay unit operator Hilcorp North Slope said in its 2024 plan of development for the Prudhoe Bay initial participating areas, the gas cap PA and oil rim PA, that for the July 1 through June 30, 2025, period of that POD, it “anticipates a continued increase in drilling activity and plans to complete up to 36 drill wells in the IPA dependent upon rig availability, rig utilization within the PBU, and economic viability.”

The 36 include up to two injection wells to enhance reservoir pressure, part of the PAVE program, pressure and vaporization enhancement.

## 2023 POD volumes

Hilcorp said that during calendar year 2023 IPA crude production averaged 149,885 bpd. This is down from calendar year 2022, when Hilcorp reported average production of 156,487 bpd.

“Fluid handling and production in 2023 were affected by significantly increased levels of planned maintenance and downtime compared to 2022,” Hilcorp said, listing full-scale turnarounds at Flow Station 3 and Gathering Center 3, and shorter-duration facility shutdowns at Flow Stations 1 and 2 and at the Lisburne Production Center.

Compared to calendar year 2022, gas production in 2023 was down by 77 million cubic feet per day, Hilcorp said, with water production up by 7,000 bpd for the same period, and natural gas liquids volumes down by 1,150 bpd in 2023 “due to lower crude oil production reducing NGL blending capacity.”

Alaska Oil and Gas Conservation Commission data show daily crude volumes for 2023 for the entire Prudhoe Bay unit averaged 210,429 bpd, so IPA production was 71.2% of 2023 Prudhoe crude production. (These numbers do not include NGLs.)

Hilcorp said the gas cap water injection rate also declined in 2023, 71,000 bpd of water less than 2022 due to elevated maintenance levels.

## 2023 drilling

Hilcorp had anticipated completing as many as 18 new drill wells in the IPA during the 2023 POD.

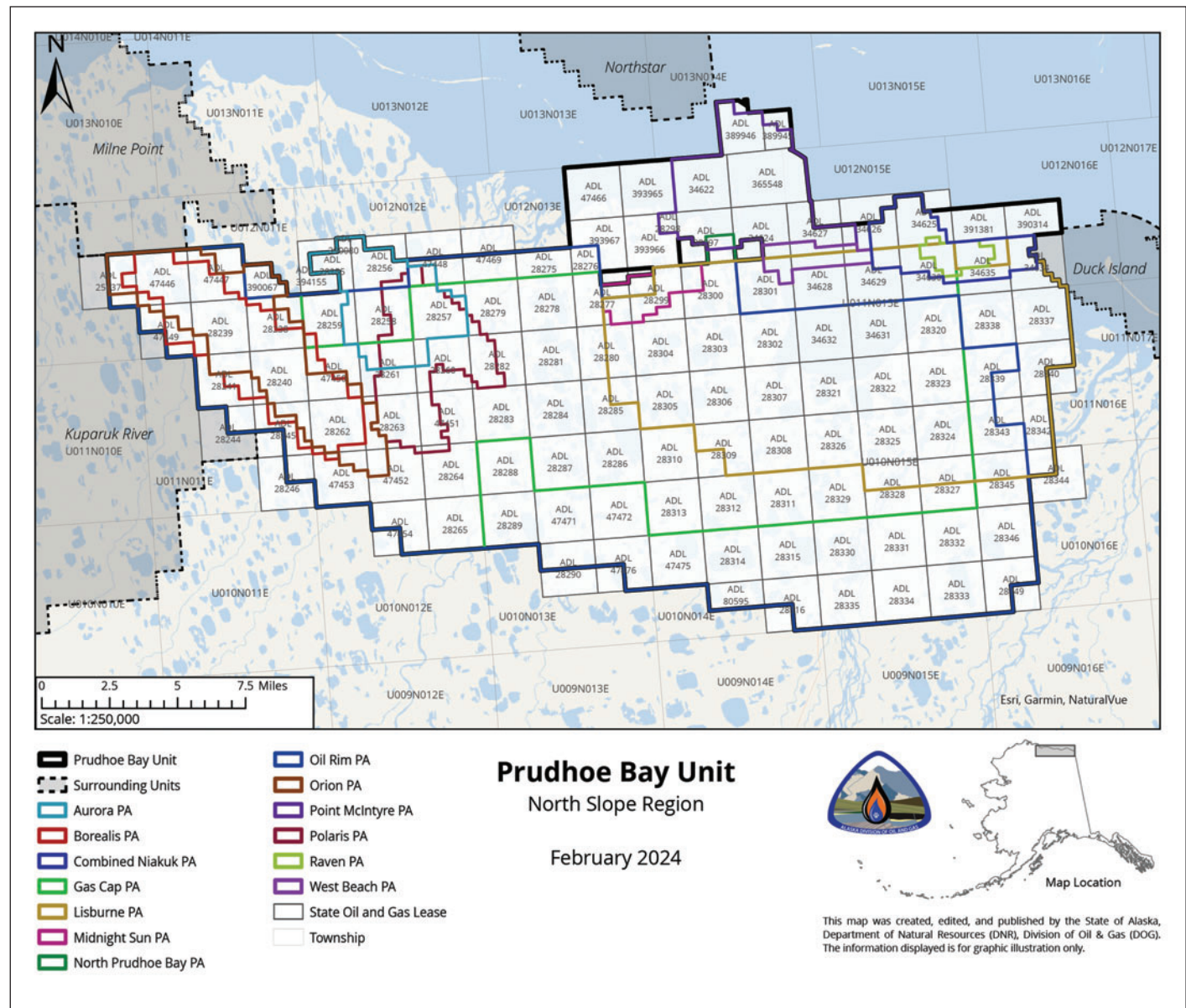
It said drilling completed so far in the 2023 POD includes 11 wells — nine coil tubing sidetracks and two grassroots rotary wells, with five additional wells scheduled to be drilled during the remainder of the POD period, which ends June 30.

The remaining wells are four CTD sidetracks and one grassroots rotary wells.

“The reason for the variance is primarily rig scheduling and availability,” the company said.

## Wellwork, workovers, facilities

Hilcorp said it had anticipated doing workovers as needed “as integrity issues



were identified in the existing wellstock,” with six IPA wells worked over so far in the 2023 POD period, either to restore integrity and/or to prepare the wellbore for a CTD sidetrack.

“Five additional IPA well integrity/CTD set-up workovers are planned to be completed prior to the end of the 2023 POD Period,” the company said.

“Non-rig well intervention activity remained high in 2023,” the company said, with well intervention on some 426 IPA wells in the 2023 calendar year, “excluding annular communication work and subsidence drifts.”

Hilcorp said most of the workovers were to “maintain the well stock or increase existing production through well enhancement activities.”

The company said had completed or anticipated completing several large facility projects by the end of the POD:

- The 2023 scope of CCP compressor updates;
- Redesign of the CG2 B-Bank slug-catcher internals;
- Construction of the Drill Site 18 pipeline; and
- Construction of the H Pad pipeline.

## 2024 proposed drilling, well work, workovers

Hilcorp said that while it anticipates up to 36 drill wells, it “has continued to work

through the backlog of broken wells in the IPA and anticipates a reduction of workover activity in the 2024 POD Period,” with workovers to be completed on an as needed basis “as integrity issues in the well stock are identified dependent upon economic viability.” The company said it anticipates completing up to three workovers during the 2024 POD.

Flat well intervention activity is anticipated, with the focus “on maintaining the existing well stock and increasing existing production through non-rig rate enhancement work.”

## Planned facilities work

Hilcorp said it is evaluating facility upgrade projects including:

- The 2024 scope of CCP compressor upgrades;
- CCP air inlet housing replacement;
- Flow Station 2 de-oiler; and

•The Eileen West End pipeline.

Ongoing maintenance and integrity management will continue, including such activities as equipment overhauls, control upgrades, integrity inspections and corrosion monitoring, the company said.

## Long-range activities

Hilcorp said it will continue to monitor SWOP, the sea water optimization plan, and said that project is performing as anticipated “with formation gas rates slowly climbing and an increase in vapor borne liquid hydrocarbon” from target producers, with rerouted injection water used to achieve high gas cap water injection rates. “The project has been a success and typical reservoir management monitoring will continue henceforth,” the company said. ●

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## EXPLORATION & PRODUCTION

### Conoco plans to expand KRU 3S pad

ConocoPhillips Alaska, operator of the Kuparuk River unit, has applied to the Alaska Department of Natural Resources' Division of Oil and Gas to expand Drill Site 3S at Kuparuk with four new wells planned.

The division said in a March 28 public notice that the plan proposes placing 10,100 cubic yards of gravel on 1.33 acres of tundra, with some 1.07 acres on the west end of the pad for the new wells and the remaining 0.26 acres on the south side to support a new remote electrical and instrumental module. All work will be from existing gravel, with work scheduled to begin May 1.

In its March 14 application ConocoPhillips said in support of the new wells they would be installing piping, vertical support members, thermosyphons, well houses, mouseholes, modules, access platforms, cable trays and other infrastructure.

—PETROLEUM NEWS

## UTILITIES

### CINGSA well planning underway

John Sims, president of Enstar and its subsidiary CINGSA, Cook Inlet Natural Gas Storage Alaska, told the Resource Development Council in a March 21 presentation that CINGSA has received approval from the Regulatory Commission of Alaska to add two wells to the five it currently has at CINGSA's Kenai facilities.

The wells, he said, would provide additional production capacity at the facility, which stores natural gas for use in cold weather when demand is heaviest.

On March 29, CINGSA received approval from the Alaska Department of Natural Resources' Division of Oil and Gas to install two reciprocating compressors and one dehydration unit at CINGSA's Kenai facilities. The division said housing for existing compression and dehydration equipment would be expanded, with all activities on existing pads.

The facility is in the City of Kenai some 2 miles east of the mouth of the Kenai River.



JOHN SIMS

—KRISTEN NELSON

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## HISTORY

Echooka in the Chukchi Diamond well, Jim Craig, a geologist and economic evaluator with MMS, said.

Craig also described some immense, ancient valleys that run north to south under the Chukchi. Hundreds of feet of sand fill these 10-mile wide valleys. It's a similar geological situation to the sand-filled valleys of the Tabasco satellite field at Kuparuk.

"But these paleo-valleys in the Chukchi just dwarf that ... they're orders of magnitude thicker," Craig said.

### New leasing procedures

MMS has been trying to spark renewed interest in the Chukchi by introducing a new leasing procedure and by offering incentives to companies interested in exploring in the area.

Instead of offering leases for sale, MMS is issuing annual calls for interest. This year, for example, MMS published a call for interest in January. Companies need to respond to the call by April. If there's no interest expressed, MMS will repeat the call for interest next year. This procedure will continue throughout the 2002 to 2007 leasing program.

Nobody responded to last year's call for interest, Sherwood said.

If a company does express interest, MMS will focus effort on preparing a lease sale in just the area that the company is interested in exploring.

"Then we'd put that (area) into a sale effort that would resemble a standard lease sale, except that it would be restricted to that area," Sherwood said.

MMS is also asking companies for their views on exploration incentives.

"In recent programs for the Beaufort and Cook Inlet we've had various kinds of incentives to try to help out financially with exploration interests in both of those regions," Sherwood said.

Potential incentives include 10-year lease terms, royalty suspension volumes and lower minimum bid requirements.

We've also lowered the rentals, Craig said. "It starts off low on a sliding scale — it mirrors the state (rental arrangements)," he said. In general, MMS is trying to be more consistent with the terms of state lease sales, Craig said.

### Cost and risk

So, with geological structures big enough to make even the most pessimistic oil geologist salivate, why has there been so little interest in the area? It mainly comes down to the high cost and risk of developing an area that is ice-covered for many months of the year, is subject to severe weather conditions and lies several hundred miles from the nearest oil pipeline.

In the early 1990s Jerry Dees, a then vice president of ARCO, stated that the cost of a Chukchi Sea development would require an oil find approaching 3 billion barrels to be economically viable. It's worth taking a look at what a 3 billion barrel figure means in terms of the cost of making a discovery and the probability of finding an economic oil field.

"Companies are spending a dollar a barrel in finding costs in frontier areas," Craig said. So, finding 3 billion barrels might require \$3 billion in exploration expenditure, he said.

### Probability of finding oil

MMS has used seismic data and drilling results to identify nearly 900 prospects under the Chukchi. This assessment points to the possibility of one or two oil pools of around 3 billion barrels. Of course there's no guarantee of finding an oil pool of that size and the existence of such a large pool

depends on just the right confluence of oil-field producing factors.

On the other hand, there's a good possibility of finding several smaller pools that, in aggregate, contain several billion barrels.

When the MMS factored the oilfield development costs into an economic evaluation, the economic model indicated that the lowest possible oil price for the economic extraction of oil in the Chukchi is about \$15. But that figure takes an optimistic view of the quantity of recoverable oil reserves.

"So at \$15 you might begin to make money out there but there would be a low probability of succeeding," Sherwood said.

The need for large discoveries also pushes the need for a higher minimum oil price — it's unlikely that you could find and viably produce 3 billion barrels or more unless the oil price remains somewhat higher than \$20 per barrel.

"This \$15 (oil price) may not be the driver for the initial standalone field out there — that might be some satellite to the big field," Craig said. If companies are making their exploration decisions at \$20 per barrel, you're right on the threshold of finding the 2 billion to 3 billion barrels that you need for viable development, he said.

So, there's a perception that in the Chukchi you need multibillion barrel oil-fields supported by oil prices of \$25 to \$30 per barrel, Craig said. "I think that if prices stay that high, sooner or later they're going to have to come round to look at it again," he said. Innovative technology could also improve the economics — the present MMS economic analysis assumes the construction of standalone oil platforms.

"With newer technology like sub-sea (completions) you might be able to connect up a cluster of relatively small fields like those that are in the couple of hundred million barrel size that are clearly uneconomic as standalones," Craig said. Collectively they might meet that 2 billion to 3 billion barrel threshold he said.

Also Craig commented that if the on-land infrastructure moves west into the National Petroleum Reserve-Alaska, the economics of the Chukchi might improve because of the shortened distance between the existing facilities and the Chukchi developments.

### The gas factor

The possibility of exporting gas through a pipeline from the North Slope also affects the economics of the Chukchi — the current MMS economic model for oil development doesn't take into account the possibility of both oil and gas production.

"There's quite a bit of gas resource out there," Sherwood said. "Three of the (exploration) wells did discover ample gas." Our estimates were 5 trillion to 10 trillion cubic feet at the Burger well, he said.

And the foothills belt of the Brooks Range continues right out under the Chukchi.

"There are huge, simple anticlines out there that are as large or larger than anything onshore right along the same trend," Craig said.

So, with the current high oil prices and the potential for a gas line from the Slope, is this the time to take another look at the Chukchi? MMS is about to undertake another assessment as part of its five-year work program, Sherwood said. The new assessment will use a revised computer model and will take into account the economic impact of a North Slope gas line and the potential for using sub-sea technology.

But even with the existing assessment it's fairly easy to see the economic issues. So maybe it's just a matter of time before someone decides that the potential gain outweighs the risks of this challenging area. ●

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## PANTHEON GAS

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capture the benefit of reduced numbers (and CapEx) of gas reinjection wells along with a path to low-cost commercialization of the helium potential now identified in the Kodiak field."

He said the company's target is to conclude non-equity funding by the end of the second quarter of the year.

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## OIL PRICES

Concurrently, Ukraine has been able to successfully disrupt crude production and refining with drone strikes on Russian oil and gas infrastructure, just as Russia's prime wartime customers are calling for more crude to power their economies.

When Asian countries need extra oil in a hurry, they bid up the price of floating cargoes on the Pacific, snatching up crude that otherwise might offload on the West Coast. It is not uncommon under such circumstances for crude-laden vessels holding offshore Long Beach and Los Angeles to steam away for China, resulting in demand-pull price inflation as American buyers suddenly must compete for cargoes.

On the demand side, U.S. crude supplies for the week ending March 29 grew, but the build was offset by a bullish larger drawdown in fuel stocks.

U.S. commercial crude oil inventories — not including the Strategic Petroleum Reserve — jumped by 3.2 million barrels over the previous week to 451.4 million barrels, 2% below the five-year average for the time of year, the U.S. Energy Information Administration said in its April 3 report. Total motor gasoline inventories dropped by 4.3 million barrels for the period to 227.8 million barrels — 3% below the five-year average for the time of year, the EIA said. Both finished gasoline and blending components inventories decreased. Distillate fuel inventories fell by 1.3 million barrels.

ANS and WTI each leapt \$1.44 April 2 to close at \$88.65 and \$85.15 respectively. Brent leapt \$1.50 to close at \$88.92.

On April 1, ANS inched 15 cents higher to close at \$87.21, WTI gained 54 cents to close at \$83.71 and Brent inched 6 cents lower to close at \$87.42.

ANS popped \$1.44 March 28 to close at \$87.05, while WTI surged \$1.82 to close at \$83.17 and Brent jumped \$1.39 to close at \$1.39.

### Gold shines on commodity reset

Gold is skyrocketing, trading above \$2,300 April 3 — up 13% over 24 trading days.

Gold had a move of similar magnitude in mid-April of 2020, in late July of 2020 and in March of 2022, according to analyst Bryan Rich.

Inflationary policy is the culprit, Rich said in Pro Perspectives April 3.

The 2020 dates were pandemic response related, in alignment with the fiscal response — more specifically, government putting cash in the hands of citizens — checks, unemployment subsidies and the “Paycheck Protection Program,” he said.

By March 2022 Russia had invaded Ukraine, he said. Inflation was near double-digits on supply chain disruption and the multi-trillion-dollar fiscal pandemic response.

“Adding fuel to the inflation fire, while the clean energy agenda was already curtailing energy supply, Congress responded to Russia with threats to place sanctions on

Russian energy exports,” Rich said.

Today, geopolitical risk and uncertainty are a constant, but the extreme moves in gold are better aligned with “episodes of overt fiscal profligacy,” Rich said, adding, “In this current case, perhaps the catalyst is the \$7.3 trillion budget that Biden revealed early last month — an egregious 6% deficit spending plan in an economy that's growing at a 3% annual rate, with an already ballooning record debt.”

Meanwhile, the Bank of Japan has ended an era of negative interest rates, raising borrowing costs for the first time since 2007 as the country puts decades of deflation behind it, The Financial Times said in a March 18 article.

“Kazuo Ueda, the BOJ governor, brought an end to more than a decade of ultra-loose monetary policy, abandoning a swath of easing measures that were put in place to stimulate Asia's most advanced economy,” FT said. In a 7-2 majority vote, the BOJ sought to guide its overnight interest rate to a range of some zero to 0.1%, making it the last central bank to end negative rates as a monetary policy tool. Its benchmark rate was minus 0.1%.

Commodities may be repricing against fiat currencies, now that the BOJ has signaled final exit from the global central bank money printing era — which has delivered record, unsustainable global government debt, Rich said April 2.

Silver has entered a technical breakout, up 4% April 2, he said. Also in technical breakout: copper ... and oil. ●

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## Oil Patch Bits



### Frost Engineering, Alaska Roteq join forces with PumpTech

Frost Engineering said March 20 that in a strategic move set to redefine the landscape of the petroleum industry, Frost Engineering and Alaska Roteq have officially merged with PumpTech under the Impel family of companies. This landmark alliance heralds a new era of innovation, efficiency, and comprehensive solutions within the sector.

Frost Engineering, renowned for its cutting-edge engineered valves and measurement devices, and Alaska Roteq, a pioneer in precision machining, fabrication, equipment supply and field work, bring decades of expertise and a commitment to excellence to this partnership. Its integration with PumpTech, a leading provider of pumping systems and services, promises an unparalleled suite of offerings tailored to meet the dynamic needs of the petroleum industry.

Under the Impel umbrella, this collaboration signifies a consolidation of resources, talents and capabilities aimed at delivering unmatched value to clients in flow management. The synergies between Frost Engineering's engineering prowess, Alaska Roteq's precision craftsmanship, and PumpTech's innovative pumping solutions are poised to set a new standard for efficiency, reliability and sustainability in petroleum operations.

By leveraging their collective strengths, the newly formed partnership is primed to address the evolving challenges faced by the industry. From upstream exploration to downstream distribution, the Impel team stands ready to provide comprehensive support at every stage of the petroleum value chain.

As the world's energy demands continue to evolve, Frost Engineering, Alaska Roteq and

PumpTech, now united under Impel, are positioned to lead the charge towards a more resilient and sustainable future for the petroleum industry.

### EXP selected for US Department of Energy's program

EXP said March 27 that it has been selected to participate in the U.S. Department of Energy's clean energy technology adoption voucher program and has been matched with the Chenega Regional Development Group to provide clean energy siting and permitting support in the village of Chenega, Alaska, an isolated community in the Prince William Sound accessible only by air or water. The program aims to make clean energy expertise and technology available to small or underrepresented entities through the support of a partner organization.

EXP will assist the village of Chenega in evaluating the potential benefits of a battery energy storage system to improve diesel generator efficiency and enable future integration of renewables into the village's microgrid. EXP will provide knowledge and consulting services including site feasibility assessment, environmental impact evaluation and regulatory road mapping.

“This program allows us to create long-standing partnerships and use our industry experience to support communities across Alaska and beyond. We are excited to work with our partners in strengthening our commitment to enabling clean energy solutions,” said EXP's Senior Environmental Project Manager Jeff Raun.

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## ENBRIDGE EXPANSION

point in time, with the shipments we are talking about, we can add more volumes,” he said.

The investment includes the expansion of Enbridge’s Ingleside Energy Center near Corpus Christi, Texas, to add 2.5 million bpd of storage and buy two marine docks and land next to the facility from Flint Resources.

Ebel said access to dock space will allow his company to load more very large crude carriers to meet growing customer demand.

The Ingleside Facility is “bang in the middle of what we want to do” in terms of expansion to meet growing

*“There probably won’t be a major pipeline build, but at this point in time, with the shipments we are talking about, we can add more volumes.” —Enbridge CEO Greg Ebel*

global demand for North American crude and gas, Ebel said.

Producers in Western Canada have been cranking up production volumes over the past year as global demand reaches record levels.

Canadian oil sands producer Cenovus Energy has reflected that surge by laying out plans to boost its output to 950,000 bpd of oil equivalent by 2028, up about

150,00 boe per day or 9.6% from a year earlier.

To keep its wheels in running order, Enbridge is also joining forces with 1 Squared Capital and pipeline firms Whitewater and MPLX to connect natural gas supplies from the Permian Basin to the U.S. Gulf Coast. The new joint venture underscores Enbridge’s focus on U.S. markets particularly as Canadian LNG projects face delays while global appetite for the fuel continues to grow.

Enbridge will have a 19% stake in the new venture, while 1 Squared and Whitewater will hold a combined 50.6% stake and MPLX will hold 30.4%.

—GARY PARK

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## GRID CHANGES

the current status of the transmission system and the issues that the system faces. Holdmann emphasized that an effective transmission system is critical to ensuring electricity supply reliability while also enabling the delivery of the lowest cost power to consumers, from wherever that power is generated.

And, while consumers are becoming increasingly aware of the importance of the security of energy supplies from the electricity grid, there is also recognition that the grid has certain single points of failure, Holdmann said.

“Everyone benefits from being part of an interconnected transmission system,” she said.

In addition, although the Railbelt has an interconnected transmission system, that system is split up in terms of how it is owned, managed and operated, Holdmann said. Essentially, the system is owned and operated by five independent utilities and the Alaska Energy Authority. At the same time it is necessary to be able to facilitate the various power generation projects that can be built at scale at different locations on the system to benefit Railbelt consumers.

“I think our goal for most of us for the Railbelt grid is to get the cheapest cost power to end users, wherever that power is produced, however it’s produced, whatever that source is,” Holdmann said.

Holdmann commented that over the years there have been several unsuccessful attempts at establishing a more unified approach to the operation and management of the system, but none of these efforts resulted in any change. Those efforts included an attempt in the 1950s by three Southcentral utilities to form the Central Alaska Power Association, with the objective of using cheap hydro power to enable the smelting of aluminum, she said. A number of years ago several of the utilities formed the Alaska Railbelt Cooperative Transmission and Electric Co., in another attempt at a more unified approach to power generation and transmission.

### A ‘prisoner’s dilemma’

Holdmann characterized the current management situation for the transmission grid as a form of “prisoner’s dilemma,” in which individual choices of individual utilities do not necessarily represent the best choices for the whole system.

“This is particularly important right now, because we have an opportunity for making generational investments

in upgrading these transmission systems,” Holdmann said, referencing the recently announced federal grant.

People would like to see a situation in which everyone could have open access to power generation of various types, wherever the generation facilities are located. And power generation needs to be built at locations where the relevant energy resources are available. Moreover, the expectation is that in the future independent power producers, rather than the utilities, will construct and operate new power generation facilities, Holdmann said. It is also desirable to make maximum use of the least cost power generation across the entire system, especially through a power sharing arrangement referred to as “economic dispatch.”

### Three constraints

Holdmann characterized the Railbelt transmission grid as currently being subject to three factors that constrain its ability to support this emerging power supply situation: technical constraints, economic constraints and institutional constraints.

“The problems we’re trying to solve here are not unique to Alaska and in many ways we’re decades behind what other markets have done,” Holdmann said.

Technical constraints, the constraints on being physically able to transmit electrons across the transmission system from wherever the electrons are generated to wherever they are used, may be alleviated through transmission upgrades, such as the upgrade that is the subject of the federal grant. Currently the system has limited capacity for transmitting power between major load and power generation regions. And, in addition to the build out of transmission assets, there is a need for other improvements including additional energy storage.

### The wheeling of fees

A key economic constraint on the use of the system arises from what is referred to as the wheeling or pancaking of transmission fees. Essentially, each owner of a sector of the grid charges its own fees for use of its sector, to recover its costs involved in operating the system. Thus, if a utility connected to one point on the grid wants to purchase power from a power producer some distance away, the utility has to pay a stack of transmission fees to the various owners of the sectors of the grid used to transmit the power. This can render the power supply uneconomic.

At the same time, unless the system becomes overloaded, there is no additional cost to a transmission system operator for moving more electrons through the system. A

fee system based on customers’ contributions to peak load may be more appropriate, Holdmann suggested.

### Local ownership and management

Institutional constraints relate to the fact that different sectors of the grid are owned and managed at a local level, an arrangement that tends to cause decisions to be made in response to local priorities, rather than considering potential grid wide benefits. This constraint is becoming increasingly important, given the increasing diversity of energy sources and the accompanying trend towards power generation being located at a variety of sites.

The recently formed Railbelt Reliability Council is now the electric reliability organization that has oversight of the Railbelt high voltage electrical system, including the transmission system. The RRC is responsible for setting and enforcing reliability standards for the system; for integrated resource planning; and for ensuring consistent interconnection protocols for entities that wish to use the system, Holdmann said. However, these important roles do not encompass managing, owning, maintaining and operating the grid, she said.

### Comparison with Iceland

Holdmann commented that the closest analogy to the small and isolated Railbelt electrical system is the electrical system in Iceland — Iceland’s power grid is of a similar scale and supports a comparable number of consumers. Several years ago Iceland moved to the operation of an organization that oversees, manages and develops its transmission assets and has been very happy with the results, Holdmann said.

“They pretty much universally agree that this was a really important step for them in terms of opening up their energy market to competition and it has allowed them to keep costs low,” Holdmann said.

As a possible model for future management of the transmission system Holdmann cited the Bradley Lake Project Management Committee, the committee that manages the Bradley Lake hydropower system on the Kenai Peninsula and that has members from each of the utilities and the Alaska Energy Authority.

Another possibility to consider is the future integrated planning of all aspects of the electrical system, including the generation, transmission and distribution systems, Holman suggested. ●

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## INSIDER

The complex is located along the bluff above Cook Inlet at Mile 21 of the Kenai Spur Highway, near Nikiski and 10 miles north of Kenai. KNO occupies approximately 125 acres in an industrial area.

Ammonia plant #1, urea plant #2, and utility plant #3 (South Complex) were originally built in 1966-1968. KNO was expanded in 1977-1978 by the addition of the North Complex. The last urea loading occurred in December 2007, followed by the final ammonia shipment in April 2008, afterward the loading wharf was taken out of service; putting it back in service will likely involve federal permitting.

Due to the current lack of availability of natural gas, KNO continues to be non-operational and has no discharge.

Following the close of the 10-day applicant review period, DEC will prepare a draft permit and fact sheet for a formal 30-day public review period. Public comments will be accepted during the formal public review period.



Photo of the older Jim White that his son had printed on the door of their shop that overlooks their well on Beaver Loop.

### Clarification from Jim White

**AFTER THE STORY** “Son carrying on Jim White’s legacy” in the March 31 issue of Petroleum News was released, the younger Jim White sent Petroleum News a clarification about his father’s idea for how Alaskans could solve the current natural gas shortage.

“Regarding royalties for CIRI and Mental Health Land Trust: They are ones that I referred to as key stake-

holders, not the surrounding landowners,” he wrote. “The idea would be for CIRI and the MHLT to get the full 12.5% royalty, and the surrounding landowners” to receive the overriding royalty on top of that,” White said.

### Help celebrate haul road’s 50th

**PER AN APRIL 2 EMAIL** from The Alliance, in preparation for the April 29 celebration of the 50th anniversary of the start of haul road construction, the Alaska Oil & Gas Historical Society is looking for stories and photos from the historic endeavor.

Have items to share? Contact Rebecca Logan: rlogan@alaskaalliance.com

Save the Date: Monday, April 29, 5-7 p.m. at the Petroleum Club of Anchorage. No RSVP Required.

**BUT** do not wait until the April 29 celebration. The Historical Society will not be collecting items at the event — if you have something to share, please contact Rebecca Logan soon.

—Oil Patch Insider was compiled by Kay Cashman

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## HICKORY-1 WELL

88 Energy also said in the ASX announcement that “quality and deliverability of the USFS reservoir now confirmed via oil production to surface under natural flow, with flow back fluids including unquantified volume of marketable natural gas liquids (NGLs) and associated gas,” again “consistent with tests on adjacent acreage.”

88 Energy said it will now seek an independent contingent resource declaration for both the Upper SFS and Lower SFS reservoirs based on the flow of hydrocarbons to surface.

Flow testing operations will “transition to testing the shallower SMD-B reservoir over the next few days, in-line with the multi-reservoir, staged flow test approach adopted for Hickory-1.”

88 Energy holds a 75% interest in Project Phoenix.

### Gilbert pleased

“Outcomes from this test represent a significant milestone for 88 Energy and its shareholders, with the first successful flow of oil to surface achieved at the company’s Alaska projects. The completion of flow testing in this zone and recovery to surface of light oil, in addition to NGLs and associated gas, confirms our understanding of the substantial potential of these reservoirs,” 88 Energy Managing Director Ashley Gilbert said.

“Significantly, these flow rates were achieved from only a 20ft perforated section in a vertical well with a low volume stimulation over a short period. As previously highlighted, production rates in long horizontal production wells are typically multiples of 6 to 12 times higher than tested in vertical wells, as evidenced

in many Lower 48 analogues,” Gilbert said.

“Importantly,” he noted, “the Upper SFS zone had not previously been intersected or tested at either Project Phoenix or on adjacent acreage. It is particularly exciting for us to produce oil to surface and demonstrate the producibility of this additionally discovered reservoir. Future plans for the assessment of the commerciality of Project Phoenix will be communicated post analysis of the Hickory-1 program.”

88 Energy “will now proceed to undertake flow testing of the shallower SMD-B reservoir over the coming weeks. This is a zone which has previously been successfully tested on adjacent acreage to the north,” Gilbert said.

—KAY CASHMAN

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## OFFSHORE DRILLING

Rig 151 and as many as two sidetracks.

In reviewing 2023 POD work, Hilcorp said it produced 13,609.75 million cubic feet of natural gas at North Cook Inlet in calendar year 2023. This is up from 12,169.9 million cubic feet the company reported when it filed its 2023 POD last April.

Hilcorp said it mobilized Rig 151 to the Tyonek platform in June 2023 and sidetracked NCIU A-12A, a shut-in gas well; drilled two grassroots wells, NCIU A17 and NCIU A-18, both to upper and lower Beluga sands; and completed work required to plug and abandon Cook Inlet State 17589 1-A (see story in Aug. 27, 2023, issue of Petroleum News).

The company also did various rig and non-rig well projects, including adding infill perforations at four wells and converting one well to a Class II disposal well.

Hilcorp said it deferred sidetracking one well and anticipates executing that work during the 2024 POD period.

Proposed work for the 2024 POD includes continuing to build an inventory of future development projects — grassroots wells, sidetracks and workovers.

Planned grassroots wells, all targeting Beluga sands, include:

- NCIU A-19, anticipated to be spud in May;
- NCIU A-20, anticipated to be spud in June; and
- NCIU A-21, anticipated to be spud in July.

As many as two sidetracks are anticipated, along with various rig and non-rig well projects.

### Granite Point

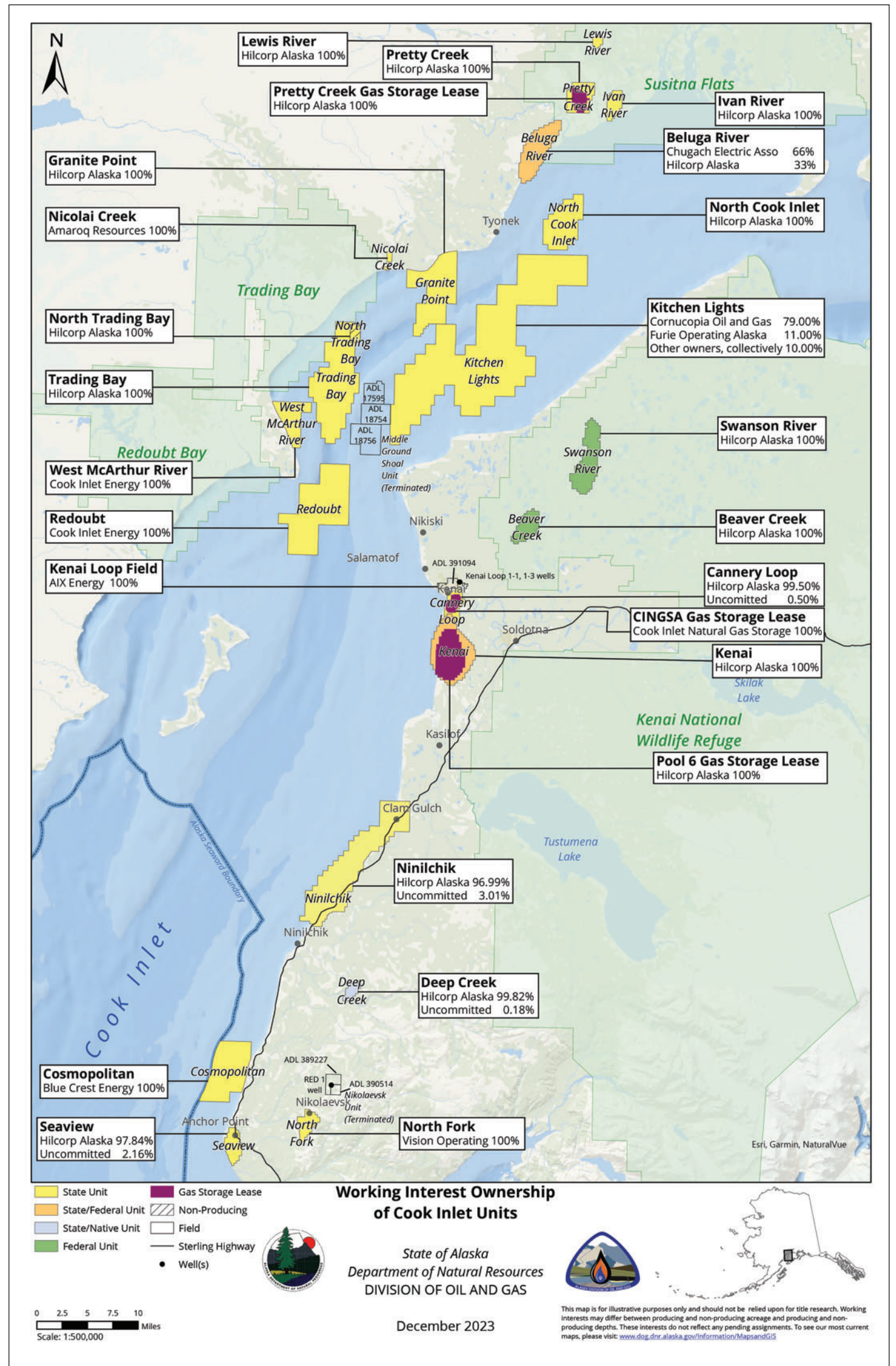
Hilcorp said it anticipates drilling up to one grassroots well from the Bruce Platform targeting the Tyonek formation during the 2024 POD.

Under the 2023 POD, the company had anticipated drilling as many as three grassroots wells targeting the Tyonek formation from the Bruce Platform, but said those wells were not drilled “because Hilcorp elected to drill higher confidence wells at the Tyonek Platform ... to deliver gas for the winter season,” and with only one jack-up rig available, Bruce Platform wells were deferred.

Hilcorp did perform various rig and non-rig well projects, including cementing the kill string in place and perforating Beluga gas sands for a production test in AN-37 and changing out jet pumps in various GPU wells to optimize production.

Calendar year 2023 production was 811,400 barrels of oil and 1,189.4 million cubic feet of gas, down from 2022 production of 875,600 barrels of oil and 1,267.5 million cubic feet of gas.

In its 2024 POD, Hilcorp said if commercial quantities of gas are discovered in planned Bruce Platform drilling, it “will evaluate production facility and pipeline capacity constraints to optimize deliver-



ability of gas between existing platforms and to the Granite Point Tank Farm.”

The single anticipated grassroots well will target the Tyonek formation from the Bruce Platform; no sidetracks are planned.

### Trading Bay

At the Trading Bay unit Hilcorp anticipates up to two grassroots wells from the Steelhead Platform in its 2024 POD, both targeting Grayling gas sands.

One of the wells, TBU M-23, was anticipated to spud in March and the other, TBU M-24, in October.

In calendar year 2023, the McArthur River field — part of the Trading Bay unit — produced 945,100 barrels of oil and 5,255.5 million cubic feet of natural gas, Hilcorp said in its 2024 POD, down from calendar year 2022 production reported in the 2023 POD of 1,049,000 barrels of oil and 6,592.6 million cubic feet of natural gas.

The Trading Bay field produced 325,100 barrels of oil and 428.1 million cubic feet of natural gas in calendar year 2023, up from 311,600 barrels of oil and 431.4 million cubic feet of natural gas for calendar year 2022 reported in the

2023 POD.

Hilcorp’s 2023 POD did not include any new wells but did include extensive work on existing wells.

In its 2024 POD, Hilcorp listed even more rig and non-rig related work accomplished under the 2023 POD, including five replacements of failed electrical submersible pumps either with ESPs or with gas lift completions; two wells returned to production after work; and infill perforations added in two wells.

In addition to the two grassroots wells — including one begun during the 2023 POD period — Hilcorp plans various rig and non-rig well projects.

And the company is continuing to evaluate options to drill from the Monopod into the North Trading Bay unit. ●

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