

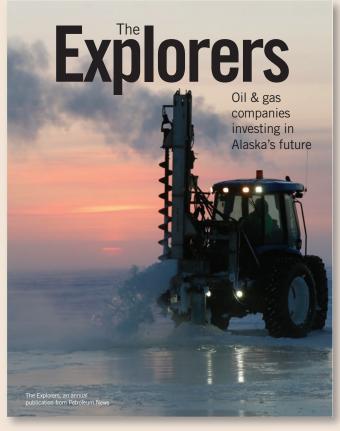
page Pantheon secures rig; company says **5** Alkaid 2 on schedule for July spud

Vol. 27, No. 22 • www.PetroleumNews.com

A weekly oil & gas newspaper based in Anchorage, Alaska

Week of May 29, 2022 • \$2.50

2022 Explorers inside



Inside this week's issue is the annual Explorers magazine, a look at oil and gas companies investing in Alaska's future.

US majors interested in Pikka stake, and much more news....

ON MAY 22, THE AUSTRALIAN Business Review's DataRoom column reported that major North America oil and gas producers were "believed to be lining up in the sale process for a stake" in Alaska's Pikka project, 51% of which is owned by Santos Ltd. and 49% by Repsol.

Nearing the development stage in 2019, both working interest owners (at the time Oil

Search and Repsol) were believed to be interested in bringing in a third partner, selling 15% each of their stake and leaving Oil Search the majority partner and operator.

Correction: At that time, in late 2019 (pre-pandemic), Repsol had not expressed interest in selling any of its interest, but it had

see **INSIDER** page 7

State receives 2 bids in online **Cook Inlet oil and gas lease sale**

The Alaska Division of Oil and Gas received two bids in this year's Cook Inlet online oil and gas lease sale and no bids in the Alaska Peninsula sale.

While the state regularly receives bids for Cook Inlet tracts, Alaska Peninsula sales have drawn bids in just three sales since the area was first offered in 2005, with the last bids received in 2014 and no remaining oil and gas leases in the Alaska Peninsula area.



JOHN CROWTHER

The Cook Inlet bids were from Furie Operating Alaska LLC and are for tracts adjoining that company's Kitchen Lights unit in northern Cook Inlet. Furie produces natural gas from the Julius R platform.

Furie bid \$19.75 per acre for tract 352, a total of \$50,560,

see LEASE SALE page 10

FINANCE & ECONOMY

On the road again

US oil and gasoline inventories fall as Memorial Day driving looms large

By STEVE SUTHERLIN

Petroleum News

laska North Slope crude ticked 42 cents higher May 25 to close at \$116.61 per barrel. West Texas Intermediate rose 56 cents to close at \$110.33 and Brent was up 47 cents to close at \$114.03.

The call of the open road, as summer beckons, appeared stronger than the drag of expensive gasoline — at prices twice those of last summer — as drivers prepare for a Memorial Day weekend expected to be the busiest in two years.

The American Automobile Association said it expects some 39.2 million people to travel Memorial Day weekend, up 8.3% year over year.

"Public operators have been reluctant to chase higher production growth and remain focused on capital discipline in the face of cost inflation and labor and equipment shortages." —Rystad

Some 3 million people are expected to fly during the holiday weekend, surpassing 2019 levels.

"We're not seeing any elasticity in refined products demand," Gary Cunningham, director of market research at Tradition Energy told Reuters May 25. "People are still going to drive; people are still driving."

see OIL PRICES page 8

Growth without gravel

Fiord West Kuparuk satellite produces first oil, 10,000 barrels per day

By KAY CASHMAN

Petroleum News

n May 18, ConocoPhillips Alaska Inc. achieved first oil at its North Slope Fiord West Kuparuk satellite in the Alpine field of the Colville River unit from a record-setting horizontal well, CD2-310, **EREC ISAACSON** drilled by Doyon 26, an extend-

ed reach drilling rig nicknamed the "Beast" because of its immense size.

On May 20 the well's flowrate was "being progressively increased and is currently producing

VINCENT LELARGE

close to 10,000 barrels of oil per day, exceeding expectations," CPAI said.

Initially, CPAI hoped to produce some 20,000 barrels of oil per day from Fiord West at its peak.

The company said the injector well will be "pre-produced for 5-6 months prior to being converted to permanent injec-

tion service." (CD2-310 was initially planned to be a development well, but its status was recently changed by CPAI to that of an injector.)

see FIRST OIL page 12

PIPELINES & DOWNSTREAM

Fertilizer squeeze

Nikiski plant owner addresses high prices for natural gas-derived nutrient

By ALLEN BAKER

For Petroleum News

ast fall, U.S. farmers were facing a daunting bill for nitrogen fertilizer, as prices had nearly doubled from what they had been paying just a year earlier. Many talked about waiting for spring, in hopes that the cost would drop.

Then, late in 2021, prices for natural **KEN SEITZ** gas, the feedstock for nitrogen fertilizer, skyrocketed in Europe to as high as \$35 per million British thermal units (Btus). Nearly half of the nitrogen fertilizer plants in Europe shut down, along with some in Great Britain. It didn't look good.

That was even before the conflict in Ukraine



broke out, and Western powers led by the United States started slapping sanctions on Russia, the world's largest exporter of nitrogen fertilizer. Russia accounted for 23% and 14% of global exports for ammonia and urea respectively in 2020. Oops.

"The world went into 2020 with low prices and low inventories," said Richard Reavey, communications director for industry leader Nutrien Inc., in an inter-

view with Petroleum News. Then natural gas prices doubled, plant turnarounds that had been delayed by the pandemic

see FERTILIZER SQUEEZE page 10

Hilcorp asks Paxton 5 spacing exception

Well has been in production from the Beluga-Tyonek gas pool; company now wants to produce from shallower Sterling-Beluga sands

By KRISTEN NELSON

Petroleum News

ilcorp Alaska has applied to the Alaska Oil and Gas Conservation Commission for a spacing exception for its Paxton 5 well in the Ninilchik unit on the Kenai Peninsula.

The company said it will be applying to the Alaska Department of Natural Resources' Division of Oil and Gas to produce the well as a tract operation and said it will allocate production in accordance with approved tract operations. Hilcorp said in its May 2 application to AOGCC that production will not begin until tract operations are approved.

Hilcorp drilled the Paxton 5 in 2013 and it has produced a total of some 5.2 billion cubic feet from the Beluga and Tyonek formations, the company said in its application. The well ceased producing commercial quantities of gas this February.

Production from the Beluga and Tyonek formations is covered in the commission's conservation order for the Ninilchik field. The company now plans "to add perforations to the Paxton 5 well in various Sterling and Beluga sands located above the defined Beluga/Tyonek Pool,"

Hilcorp said.

Hilcorp is requesting permission to drill, test and produce Paxton 5 from the Ninilchik undefined gas pool, within 1,500 feet of a property line where owners are not the same on both sides of the line, requiring the spacing exception.

Hilcorp said it plans to add perforations to the Paxton 5 for test or regular production in the undefined gas pool with anticipated top of the productive horizon at 780 feet measured depth within 1,500 feet of the property line.

Hilcorp said it "anticipates that the productive sands in Paxton 5 will be discontinuous channel sands in the Sterling and Beluga Formations within the Undefined Gas Pool that cannot be produced by wells conforming to applicable spacing restrictions. Geologic analysis of drilling data from various Ninilchik Field wells suggests that the Undefined Gas Pool consists of a series of thin, discontinuous, stacked channel sands with a low net-to gross ratio. The channel belt widths are too narrow to yield efficient drainage based on the current spacing for gas wells," the company said, hence the need for a spacing exception.

Hilcorp said it owns 100% working interest in all affected oil and gas leases and operates the Ninilchik field, while private landowners own 100% of the mineral interest in the

lands where Paxton 5 is located, currently under lease to Hilcorp.

Hilcorp said it will allocate production in accordance with the DNR approved tract operation, with production beginning only after DNR approves a tract operation.

The company said it will "allocate royalties to all leased owners/landowners based on their tract allocation percentage, mineral ownership, and lease royalty shown on the approved PA allocation schedule." AOGCC has tentatively scheduled a public hearing for June 21 at 10 a.m. in its Anchorage offices. The commission said the hearing may be changed to full virtual if necessary. Audio call-in information is 907-202-7104, conference ID 833 606 877#.

If no request for hearing is filed by 4:30 p.m. June 2, the commission said it may issue an order without a hearing. Written comments on the application may be submitted prior to 4:30 p.m. June 20; if the hearing is held, written comments must be received by the conclusion of the hearing. See public notice on AOGCC's events website: www.commerce.alaska.gov/web/aogcc/Events.aspx.

Contact Kristen Nelson at knelson@petroleumnews.com

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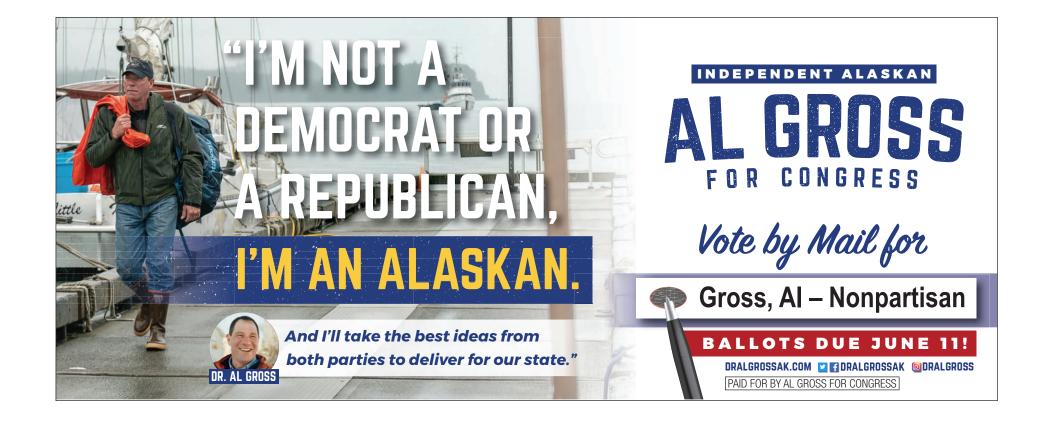
Resource-related bills passing included microreactors, LNG bonding, RCA extension, royalty oil sales to Marathon, Petro Star

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AOGCC OKs Hilcorp plug, abandon plan

Work to P&A old Cook Inlet wells to begin this summer on Dillon platform, then continue on Baker, Spurr platforms in 2023, 2024

By KRISTEN NELSON

Petroleum News

The Alaska Oil and Gas Conservation Commission has approved Hilcorp Alaska's plans for plugging and abandoning wells on three Cook Inlet platforms — Dillon, Baker and Spurr.

Hilcorp acquired the Baker and Dillon platforms from Chevron's Union Oil Company of California in 2011 and the Spurr platform from Marathon Oil in 2012, when it acquired those company's Cook Inlet assets. Hilcorp also holds Cook Inlet assets it acquired from XTO in 2015 (Middle Ground Shoal) and from ConocoPhillips in 2016 (the North Cook Inlet unit, along with other ConocoPhillips Cook Inlet lease interests).

The three platforms were installed during the heyday of inlet platform building in the 1960s — Baker, dating from 1965, was the second platform to be installed in the inlet. Dillon dates from 1966 and Spur from 1968.

Marathon ceased production at Spurr in 1992. Unocal said in late 2002 that it would be shutting in Dillon by the end of the year and Baker early in 2003, saying it was no longer profitable to operate the platforms.

In its May 19 decision, the commission said production and injection operations ceased on the Dillon platform in 2002, on Baker in 2014 (although oil production had ceased from the platform in 2003) and on Spurr in 1992.

Hilcorp told the commission in communications on the P&A request that all pipelines to the Dillon and Baker platforms are out of service, with the gas and oil lines at Spurr out of service and the Spark Spurr intertie in service for fuel gas. Dillon and Baker are powered by onsite diesel generators with fuel tanks filled by supply vessels, while Spark is powered by an onsite natural gas generator with fuel supplied by pipeline.

Earlier P&A plans

Based on information provided by Marathon, the commission said in its decision, it determined in 2009 that wells on the Spurr platform had no further utility. Marathon planned to P&A wells on Spurr by 2013, but before that work was done Spurr was purchased by Hilcorp, which requested an extension to re-evaluate the platform for potential startup.

The commission said it denied Hilcorp's application for suspension renewal in 2017 "for lack of future utility" and approved limited well suspensions conditioned on a timeline for well P&A and a yearly progress report from the company.

"Hilcorp has taken four years to get the Spurr platform in a condition to support the well P&A campaign. Well P&As on the Spurr platform were planned to start in 2021 but were delayed again due to crane malfunction," the commission said.

Hilcorp has told the commission that Dillon and Baker platform cranes and helidecks are operational.

The commission has asked about

potential undeveloped resources near the platforms, and Hilcorp said those resources could be drilled from open well slots on nearby platforms.

Request to reprioritize

Hilcorp requested reprioritizing P&A plans for the platforms — work which was formerly planned to begin on the Spurr platform. (See story in Feb. 20, 2022, issue of PN.)

The company told the commission it would do P&A work this year, but not on Spurr, with its work schedule based on a risk assessment of idle platforms and wells in Cook Inlet. The risk assessment looked at well integrity, surface pressures, gas or oil well, and known intervention issues, and ranked Dillon at the highest risk, followed by Baker and Spurr. The higher ranking of Dillon is because most of the Dillon wells do not have any cement plugs in them, whereas all the Spurr wells have at least one cement plug between the reservoir and the surface.

The commission said in its decision that due to delays at Spurr, "it is appropriate to set dates by which wells on Dillow, Baker and Spur platforms will be P&A'd.

Commission order

It its May 19 order the commission said Dillon wells would be P&A'd in 2022, followed by Baker wells in 2023 and Spurr wells in 2024.

Work on Dillon is to begin "immediately and is to be completed by the end of the ice-free season," the commission said. "If for some reason P&A activity cannot begin on Dillon platform, then P&A activity at Baker will take place according to this timeline."

There is one well on the Spurr platform, Spurr 05RD3, on which the commission is requiring work this year. That well "must have a tree and pressure monitoring equipment installed not later than June 15, 2022," the commission said in its order.

It is also requiring monthly monitoring checks on all Spurr wellheads until those wells are P&A'd, with AOGCC given an opportunity to witness platform checks, and results of the checks to be sent to the commission.

A report is required by Nov. 15 each year on P&A activities completed the previous summer and plans for the following year's open water season, including, but not limited to:

•Discussion of how P&A went for each well and how the P&A compared with what the company expected;

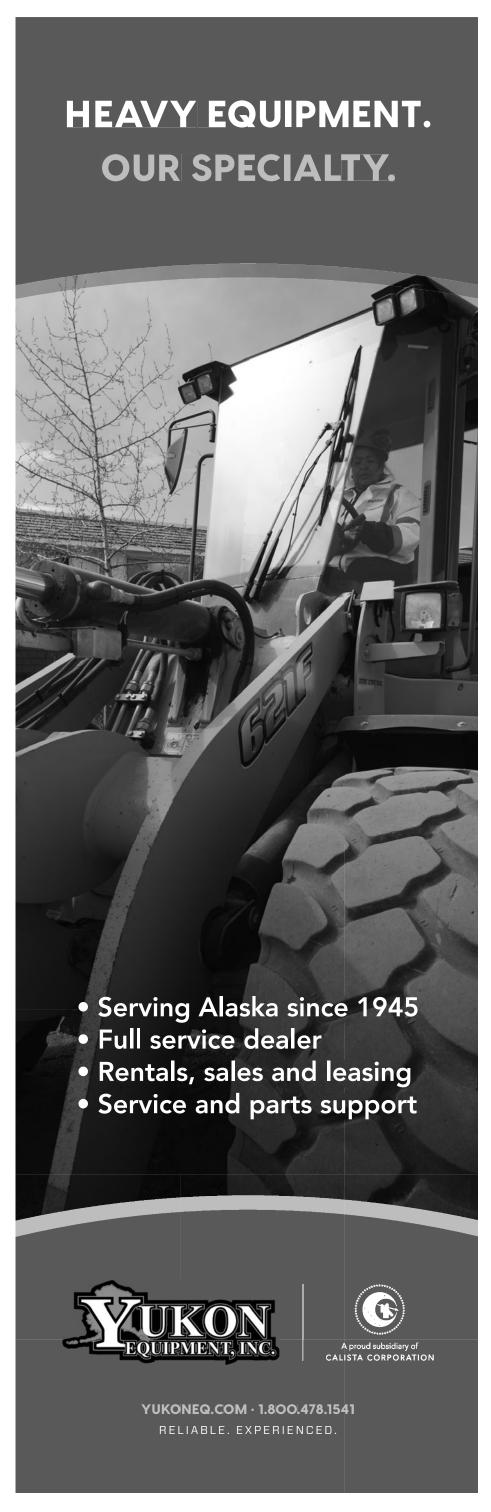
•Challenges and lessons learned during the P&A;

•How lessons learned will be applied to future P&A programs;

•Discussion of whether the approved P&A schedule needs to be adjusted and why; and

•"An update on the maintenance, functionality and integrity of equipment on the Spurr platform to ensure that it will be in a condition to P&A wells in 2024." ●

Contact Kristen Nelson
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US drilling rig count jumps 14 to 728

The Baker Hughes' U.S. rotary drilling rig count was 728 on May 20, a gain of 14 rigs from the previous week and up by 273 from 455 a year ago.

When the count dropped to 244 in mid-August 2020 it was the lowest the domestic rotary rig count has 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

The count was in the low 790s at the beginning of 2020, where it remained through mid-March, 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 May 20 count includes 576 rigs targeting oil, up by 13 from the previous week and up 220 from 356 a year ago, with 150 rigs targeting gas, up by one

from the previous week and up 51 from 99 a year ago, and two miscellaneous rigs, unchanged from the previous week and unchanged from a year ago.

Baker Hughes shows Alaska with eight rotary rigs active May 20, unchanged from the previous week and up by four from a year ago, when the state's rig count stood at four.

Thirty-nine of the rigs reported May 20 were drilling directional wells, 664 were drilling horizontal wells and 25 were drilling vertical wells.

Alaska rig count unchanged

Texas (357) was up by 12 rigs from the previous week.

Louisiana (64) and Oklahoma (58) were each up by a single rig.

Rig counts in all other states were unchanged week over week: Alaska (8), California (7), Colorado (16), New Mexico (98), North Dakota (36), Ohio (12), Pennsylvania (25), Utah (13), West Virginia (14) and Wyoming (16).

Baker Hughes shows Alaska with eight rotary rigs active May 20, unchanged from the previous week and up by four from a year ago, when the state's rig count stood at four. Seven of the rigs in Alaska were onshore, one was offshore — also changed week over week.

The rig count in the Permian, the most active basin in the country, was up eight from the previous week at 343 and up by 112 from 2310 a year ago.

—KRISTEN NELSON

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Petroleum News and its supplement, Petroleum Directory, are owned by Petroleum Newspapers of Alaska LLC. The newspaper is published weekly. Several of the individuals listed above work for independent companies that contract services to Petroleum Newspapers of Alaska



OWNER: Petroleum Newspapers of Alaska LLC (PNA) Petroleum News (ISSN 1544-3612) • Vol. 27, No. 22 • Week of May 29, 2022

Published weekly. Address: P.O. Box 231647 Anchorage, AK 99523-1647 Subscription prices in U.S. — \$118.00 1 year, \$216.00 2 years Canada — \$206.00 1 year, \$375.00 2 years Overseas (sent air mail) — \$240.00 1 year, \$436.00 2 years

"Periodicals postage paid at Anchorage, AK 99502-9986."

POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

GOVERNMENT

Few O&G-related bills pass Legislature

Resource-related bills passing included microreactors, LNG bonding, RCA extension, royalty oil sales to Marathon, Petro Star

By KRISTEN NELSON

Petroleum News

Fills on the state's geothermal program, a modification of royalty or net profit share and a proposal for gasonly leasing of subsurface lands in Kachemak Bay — all governor's bills introduced in 2021 — failed to win legislative approval this year and died with the end of this Legislature.

Resource-related bills which passed this year were all introduced in 2022: sep-

arate bills approving the sale of state royalty oil to Marathon Petroleum and Petro Star; a bill related to siting of microreactors; an extension of bond authorization for a liquefied natural gas production system and natural GOV. MIKE DUNLEAVY gas distribution sys-



tem; and an extension of the Regulatory Commission of Alaska.

Microreactor bill

Alaska Gov. Mike Dunleavy signed the microreactor bill, Senate Bill 177, on May 24 at the first day of the three-day Alaska Sustainable Energy Conference in Anchorage.

The governor said of the conference: "This isn't about an either or, this is about an all-in approach on energy sources. We're talking about various types of energy, everything from nuclear, tidal, wind, solar, geothermal, hydro and hydrogen will be part of robust conversations and panels here at the conference. As well as natural gas as a bridge to get there."

In remarks on SB 177, Dunleavy said: "Micronuclear technology has a potential role to play in creating low cost, reliable power for communities, remote villages, and resource development projects. With fuel contracts at \$16 per gallon or higher in some Alaska communities, we must pursue all means to reduce reliance on volatile energy sources."

Previously Alaska law required that the Legislature approve the siting of nuclear facilities. SB 177 allows construction of micronuclear plants on land that has not been designated by the Legislature. It also eliminates, for microreactors, a requirement that state departments and agencies conduct studies concerning changes in laws and regula-

Microreactors are defined as nuclear facilities meeting the definition of advanced nuclear reactor in federal law and capable of generating no more than 50 megawatts of electric energy.

While legislative siting approval is no longer required, approval would be required from the Nuclear Regulatory Commission and the local authority. The bill requires the Department of Environmental Conservation to adopt regulations governing issuance of permits for microreactors but requires approval of the local municipality prior to permit issuance or Legislative approval if the proposed facility is in an unorganized borough.

The governor's office said the bill smooths the regulatory process for siting of micronuclear reactors. There are multiple studies of the technology in the state, including at Eielson Air Force Base and by Copper Valley Electric Cooperative.

RIK contracts approved

In April the House and Senate passed, and the governor signed, bills approving two contracts for sale of the state's royalty oil, one with Marathon Petroleum Supply and Trading Company LLC and the other with Petro Star Inc.

Marathon has the refinery at Nikiski; Petro Star has refineries in Valdez and North Pole.

The contract with Marathon is for 3 years for a minimum of 10,000 barrels per day and a maximum of 15,000 bpd from Aug. 1 through July 31, 2025. The contract with Petro Star is for 12,500 bpd between Jan. 1, 2023, and Dec. 31, 2024, and between 12,500 bpd and 10,000 bpd from Jan. 1, 2025, through Dec. 31, 2027.

In the best interest finding from the Department of Natural Resources, DNR

see **LEGISLATIVE WRAP** page 6

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Pantheon secures rig; Alkaid 2 on schedule

By KAY CASHMAN

Petroleum News

atrick Galvin, chief commercial officer and general counsel for Great Bear Pantheon, told Petroleum News May 17 that the company has "a contract in place" for Nabors Rig 105AC to be used for Alkaid 2 well that will be spud in July.

"It is the same rig we used in 2012 to drill the Alcor 1 and Merak 1 wells," he

When asked whether the company also planned to use the rig for the Alkaid 3 well, Galvin said that has not yet been determined.

Alkaid 2 will be a step out from the Alkaid 1 discovery well, which was drilled a few years ago as a vertical test well and in 2019 flow tested 108 barrels of oil per day through a 6-foot perforated interval.



PATRICK GALVIN

Alkaid 2 will be drilled horizontally to maximize flow rates and is expected to substantially exceed those seen at Alkaid 1, Pantheon Resources has said.

Pantheon is an AIM listed oil and gas company with 100% working interest in all of its oil projects spanning 153,000 acres adjacent and near to transportation and pipeline infrastructure on Alaska North Slope. Its acreage is operated by affiliate Great Bear Pantheon.

Alkaid 2 objectives

Great Bear Pantheon told Alaska's Division of Oil and Gas in April that the Alkaid 2 well has three objectives, from shallowest to deepest:

- 1. To appraise the shallower Shelf Margin Deltaic, or SMD, horizon, which management believes contains a contingent resource of 2.6 billion barrels of oil in place and 404 million barrels of recoverable resource.
- 2. To commence a long-term production test of the primary objective Alkaid horizon, which the independent expert engineering firm Lee Keeling &

REGIONAL CONTEXT – LOCATION, LOCATION, LOCATION..... PANTHEON'S ACREAGE ON THE NORTH SLOPE Caelus Energy Several onshore multi-billion barrel conventional oil discoveries have been made in Alaska over recent years Acreage under/adjacent to: ✓ Dalton Highway – main supply road for Oil Search/ Armstrong/Repsol **North Slope** Claimed largest onshore oil discovery in US in 30 years 3C (P10) 907 mmboe √ Trans Alaska Pipeline – main pipeline infrastructure bil Search \$400m investment (Nov 2017) t \$3.10/bbl 2C Contingent Resource ConocoPhillips 400-800 mmbbls recoverable Expected production 100 kbopd **NPRA** Theta West Lower Basin Floor Fan* Pantheon Leases Talitha
SMD: 2.7 BNBBLS OIP
System - 2.2 BNBBLS OIP ANWR 10 Miles

Associates estimates to contain 76.5 million barrels of oil contingent resources (recoverable).

3. To evaluate the extent of the oil column within the Alkaid horizon immediately below the total depth at Alkaid 1.

A slide in a Pantheon Resources mid-May investor presentation listed two objectives for the Alkaid 2 well, also saying the well would be "on production October 2022:"

- 1. "SMD appraisal Oil in place 2.6 billion bbl & 404 million bbl recoverable (company estimate)."
- 2 "Alkaid production test 76.5 MMBO contingent resources (recoverable)."

Alkaid 1 background

The Alkaid 1 exploration well was drilled during the 2014-2015 winter exploration season by original owner and operator Great Bear Petroleum. Drilling did not reach target depth and the well was terminated within the oil zone due to flooding of the Dalton Highway from the Sag River, which led to an eventual suspension of activities at Alkaid 1.

Great Bear Petroleum continued to acquire 3D survey data sets in the area throughout 2015 and 2016.

In 2019, Alkaid 1 was re-entered, and flow tested with the results previously mentioned. And Pantheon Resources essentially bought 100% working interest in most of Great Bear Petroleum's acreage.

Based on seismic and other analytical analysis, Pantheon believes the Alkaid horizon's oil zone is substantially thicker than reported to date, offering the potential for additional resource growth.

In addition to securing the rig contract, Great Bear Pantheon has received its plan of operations approval from the Alaska Department of Natural Resource' Division of Oil and Gas on the Alkaid projects (previously reported Petroleum News).

Along with permits from the U.S. Army Corps of Engineers and the North Slope Borough, all necessary permits and authorizations to begin construction of the Alkaid 2 gravel pad and driveway

(ingress and egress) have been secured, Pantheon said in mid-May.

Great Bear Pantheon expects to finish gravel mining and conditioning in early June, then build the Alkaid 2 gravel driveway and drill pad by July 1. The company will finish building the Alcor staging pad (which sits directly across the Dalton Highway from the Alkaid 2 ingress road), using rig mats by July 1, move the drill rig to Alkaid 2, rig up and spud by July 15.

\$1M facility unique to Slope

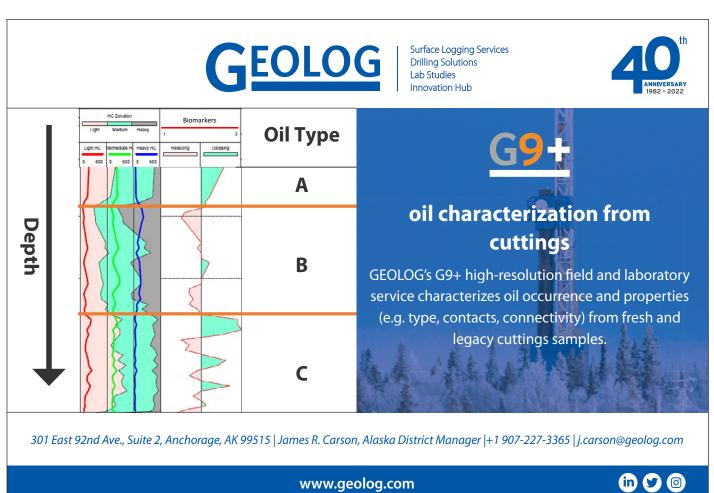
If everything goes well with Alkaid 2, Great Bear Pantheon will commence a long-term production test, processing the crude through a \$1 million, 2,000 barrel per day processing facility.

A Pantheon executive said there will be a three-phase flow from the wellhead (oil, gas, water). A production separator will send oil to conditioning tanks; from there oil will be transported by truck for sale on the North Slope.

A water injection pump will reinject produced water, eliminating the need to

see ALKAID DRILLING page 7









LEGISLATIVE WRAP

Commissioner Corri Feige said that based on forecast volumes, between 48,000 bpd and 67,000 bpd of Alaska North Slope royalty oil will be available over the next 5 years, with the 5-year Petro Star contract representing between 19% and 22% of Alaska's total royalty-in-kind oil.

The 3-year Marathon contract covers a period when the state is expected to have between 48,000 bpd and 66,000 bpd of ANS royalty oil, with the Marathon volumes representing between 15% and 31% of ANS royalty oil.

A current Marathon contract is for 10,000 to 15,000 bpd between Aug. 1, 2021, and July 31, 2022.

A current 1-year Petro Star contract from January through December of this year is for 10,000 bpd and follows a 4-year contract which expired at the end of last year.

Bonding authority extended

House Bill 307 extends the Alaska Industrial Development and Export Authority's authorization to finance and issue bonds for a liquefied natural gas production system and natural gas distribution, which would have expired June 30, 2023, to June 30, 2028.

The bill passed the House 39 to 0 April 27 and the Senate 19 to 0 May 16 and is awaiting transmittal to the governor.

This bonding is for the Interior Energy Project, with up to \$150 million in conduit revenue bonds for a natural gas supply chain to the Interior, with expansion of natural gas liquefaction facilities in the Matanuska-Susitna Borough and expansion of natural gas mains and service lines in the Fairbanks North Star Borough.

In a sponsor statement for the bill, Rep. Grier Hopkins, D-Fairbanks, said that due to the COVID-19 pandemic, the Interior Gas Utility "has paused the final investment decision on its Titan liquid natural gas (LNG) plant expansion project located in the Mat-Su Borough, which will necessitate access to AIDEA bonds. Bonds of \$136 million of the original \$150 million authorized may be issued to provide up to the \$275 million financing cap authorized under SB 23." SB 23, passed in 2013, gave AIDEA the ability to provide financing for development of the Interior Energy Project, Hopkins said.

Also achieving passage was an extension of the termination date for the Regulatory Commission of Alaska, which was June 30 this year and has now been extended to June 30, 2030. The original passed the Senate 16 to 0 on April 8; there was a title change in the House and the

House passed a committee substitute 38 to 1 on May 18; the Senate voted unanimously May 18 to concur with the House version.

Not passing

The resource-related bills which failed to win approval were all introduced last year.

HB 81, allowing the commissioner of the Department of Natural Resources to adjust the net profit share rate through royalty modification, was limited to existing net profit share leases and would have impacted only future NPSL payments. Under existing statutes, NPSL modifications require legislative approval.

The bill passed the House 37 to 0 May 14, 2021, and was referred to Senate Finance May 5, 2021. That committee heard and held the bill April 20, 2022, but it never advanced.

The Senate version, SB 61, passed Senate Resources last year, pass on to Senate Finance, but that committee never heard the bill.

HB 82 would have allowed DNR to offer non-surface use, gas-only leases in a small area of Kachemak Bay which is currently closed to oil and gas leasing. The area proposed in the bill is offshore acreage adjacent to Hilcorp Alaska's Seaview unit.

The Senate version of the bill, SB 62, passed Senate Resources May 9, 2021, with a referral to Senate Finance, where the bill was scheduled, but not heard, on March 18, 2022.

HB 82 never got further than House Fisheries, where it was heard and held both last year and this year, facing serious opposition from committee members.

HB 135 would have modified the definition of geothermal to include lower-temperature resources, expanded the window for geothermal development from 2-3 years to 5 years by expanding the timeline for converting exploration permits or licenses to leases and expanded the acreage for geothermal exploration licenses in recognition of the typically large geographic spread of geothermal resources.

The Senate version, SB 104, cleared Senate Resources in early May 2021, and was heard and held in Senate Finance Jan. 24, 2022.

HB 135 was heard and held in House Resources last year and cleared that committee in late January this year. It moved out of House Finance in late April, reached a third reading on the House floor in early May, but was returned to the Rules Committee May 9. ●

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INSIDER

an agreement with Oil Search to leave the Australian company in control of operating Pikka, regardless of ownership percentages. Later, Repsol said it would be open to a 15% sale of its stake in Pikka, which is west of the central North Slope.

In her May 22 column, DataRoom editor Bridget Carter wrote: "In the process of the Moelis-advised competition are understood to be major US energy heavy-weights" such as ConocoPhillips, ExxonMobil and Chevron. (Moelis & Co.is a global investment bank that, among other things, provides investment advice to industry clients, including Santos.)

But after its acquisition of Oil Search Ltd. late last year, Santos execs also talked about selling all of the company's 51% interest and if not that, giving up operatorship to a third partner, with top executive Kevin Gallagher going so far as telling Reuters he has a "very good relationship" with ConocoPhillips and sees the company as a "world class operator."

But in the last few months, energy security issues have arisen in the U.S. and elsewhere, in large part because of the Russia-Ukraine conflict and the Biden administration's policy to deter U.S. oil and gas production.

Oil prices have soared, and climate considerations have seemingly taken a backseat to energy security concerns.

But Pikka, on track to begin production in 2025 from its first phase, fares well with companies concerned about climate change. Among the prospective oil projects today, Pikka Phase 1 is in the top 25% for the lowest GHG intensity, per Wood Mackenzie's emissions benchmarking tool.

Carter's DataRoom column said oil and gas companies are reportedly "rallying to buy more assets in their own regions only months after fossil fuels were blacklisted by many investors."

She also suggests Pikka might be worth more now that such assets are in high demand.

The latest official word from Santos on its intentions regarding Pikka came from its May 3 annual general meeting. Santos Chairman Keith Spence praised the company's Pikka project, saying it was a "very low emissions-

intensity oil project in the world-class, producing hydrocarbon province on the North Slope of Alaska."

The project, he said, "is currently being progressed towards being sanction ready by the middle of this year." Pikka operator is Santos subsidiary Oil Search (Alaska), with many of the individuals in its Anchorage office having been there under Armstrong/Repsol's ownership and then Oil Search Ltd./Repsol ownership.

"Value from the Pikka project may be delivered through sell-down processes and/or participation in project development," Spence told shareholders.

For 2022 Santos allocated capital spending of \$300 million in Alaska, including continued work on Phase 1 of the Pikka project, which is still on track to bring 80,000 barrels of oil online shortly after startup in 2025.

Eighty thousand barrels per day represents a 25% increase in flow through the 800-mile trans-Alaska oil pipeline.

Pikka Phase 1 involves a single drill site; subsequent phases are expected to add two more drill sites and increase output.

ConocoPhillips helps Kenai Watershed Forum

ON MAY 23, THE KENAI WATERSHED FORUM said it was "granted a generous matching donation of up to a total of \$150,000 from ConocoPhillips Alaska," for its "next generation" match campaign.

The Soldotna-based forum said that ConocoPhillips has helped the Kenai Watershed Forum, or KWF, for the past 25 years

A press release announcing the matching contribution was sent by Branden Bornemann, KWF's executive director, who said, "since its inception, KWF has served the communities of the Kenai Peninsula and Alaska as a trusted partner, looking out for the needs of our cherished environment and all those that live, work, and play here. From educators to fishermen, to scientists and weekend warriors alike, we can all agree on the work that keeps the Kenai and people of Alaska healthy."

The matching grant, "accompanied by the generosity of our community, will allow KWF to continue working together for generations to come. Because when we work together today for a healthy environment, we all benefit and can strengthen the impact we have for generations to come," Bornemann said.

The campaign will run through June 19, 2022. Individuals can donate and have their gift matched by ConocoPhillips Alaska at: www.kenaiwatershed.org.

Railbelt utilities engage Hickey to coordinate

ON MAY 23, THE FIVE RAILBELT UTILITIES,

Chugach Electric Association Inc., Golden Valley Electric Association Inc., Homer Electric Association Inc., Matanuska Electric Association Inc., Seward Electric along with the Alaska Energy Authority, said they have "engaged Brian Hickey as executive

director of regional Railbelt coordination."

Hickey will work on cross-utility regional efforts at the state and federal levels.

"The Railbelt utilities are united on a vision for the future that includes energy diversification, resilience, and collaboration for the benefit of Alaskans," said Tony Izzo, CEO of Matanuska Electric Association and chair of the Bradley Project Management Committee which will be overseeing Hickey's work.

"We are fortunate to have Mr. Hickey's leadership and expertise dedicated to helping our group of utilities navigate a joint path through this ever-evolving and increasingly complex industry," Izzo said.

Hickey is the former chief operating officer at Chugach Electric and brings more than 40 years of electric industry experience and 35 years working in the Alaska Railbelt electric utility engineering and operations and executive management arena.

see **INSIDER** page 9

BRIAN HICKEY

TONY IZZO

continued from page 5

ALKAID DRILLING

tanker water offsite for disposal. Natural gas from the well will be used to provide power and for use in a gas lift system, eliminating the need for nitrogen for lift.

The extended well-test facility is unique to the North Slope because of its location on the Dalton Highway. The facility merges Canadian and U.S./Alaska methods and is fully electric and fit for remote standalone operations, Pantheon said.

The facility and the ability to truck oil for sale eliminate the real cost of entry to production on the North Slope, allowing Pantheon to begin production with a single well, rather than having to build a pipeline and drill enough wells to support it.

The processing facility includes an electric process heater, a production separator, oil conditioning tanks, a water injection pump, a gas microturbine generator and a lift gas compressor.

Jay Cheatham, CEO of Pantheon Resources, said in mid-May prior to an investor presentation: "We are on track to spud in July, allowing Pantheon to commence a long-term production test and, importantly, begin generating revenue for the company, as well as conducting potentially impactful appraisals of the Shelf Margin Deltaic and the deeper portion of

the Alkaid horizon."

Bob Rosenthal, technical director, also said prior to the presentation: "Following the reported flow rates in certain horizons tested in the vertical Theta West and Talitha test wells, we are pleased to share with investors our approach to modelling possible horizontal outcomes. This analysis is extremely important given our 100% working interest Theta West, Talitha and Greater Alkaid projects are estimated by management to contain over 23 billion

barrels of oil in place and over 2.3 billion barrels of recoverable resource in those horizons that flowed oil." ●

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OIL PRICES

U.S. commercial oil and gasoline inventories fell for the week ending May 20, adding bullish fuel to prices.

U.S. commercial crude inventories fell 1.0 million barrels from the previous week to 419.8 million barrels, 14% below the five-year average for the time of year, the Energy Information Administration reported May 25. Gasoline inventories decreased by 0.5 million barrels, now standing 8% below the 5-year average for this time of year.

COVID-19 lockdowns in China couldn't derail the upward price vector.

At \$116.61 May 25, ANS notched the highest close in more than a week, since settling at \$117.71 May 17.

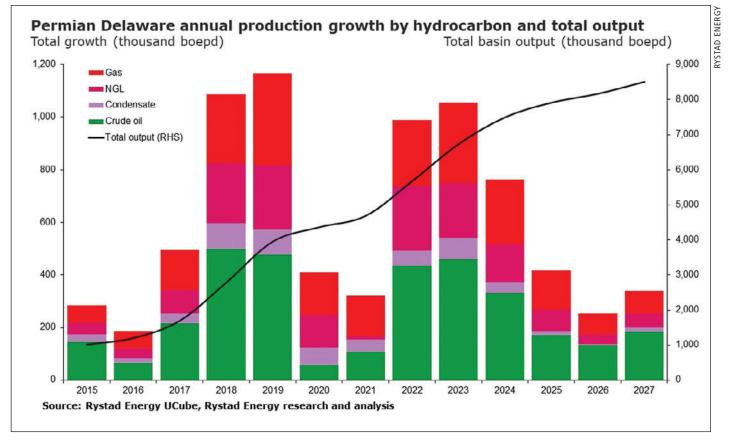
WTI fell May 24 on the U.S. Department of Energy's notice that it was offering to sell up to 40.1 million barrels of crude from the Strategic Petroleum Reserve from June 21 through Aug. 15 as part of the previously announced White House plan to release 1 million bpd of SPR crude for six months in hopes of lowering gasoline prices.

WTI slipped 52 cents May 24 to close at \$109.77, but ANS rose 24 cents to close at \$116.19 and Brent rose 14 cents to close at \$113.56.

Saudi Arabia has done all it can

Prince Faisal bin Farhan, Saudi Arabia's foreign minister, said there is nothing more the kingdom can do to tame oil markets, implying it does not plan to accelerate its gradual production increases.

"As far as we are aware there is no short-fall of oil," Faisal said, speaking on a panel at the World Economic Forum in Davos, Switzerland. "We have to be sure that while we transition to a renewable future, there is enough energy in the market. The kingdom has done what it can."



Faisal, responding to a question about why the Saudis and other members of OPEC+ won't pump oil faster, said more oil isn't the answer.

"It's much more complex than just bringing barrels to the market," he said, according to a report by S&P Global. "The problem is refined products, which is something that is more connected to a lack of investment over the last year-and-a-half (to) two years in refining capacity."

"Our assessment is that actually oil supply right now is relatively in balance," he said.

Permian Delaware production to jump

Total hydrocarbon production in the Permian Delaware Basin — the top-produc-

ing play in the Permian — will reach 5.7 million barrels of oil equivalent per day average in 2022, according to Rystad Energy research.

Spurred by high oil prices and appealing well economics, total production is set to grow by around 990,000 boepd, almost half of which is new oil production, Rystad said in a May 19 release.

Investments in the basin are expected to rise more than 40% from 2021 levels to reach \$25.7 billion this year, the consultancy said.

The majors — ExxonMobil, Chevron, BP and ConocoPhillips — this year are expected to raise investments in the basin by 60%, bringing their total to \$7.4 billion, Rystad said. Private operators' share is

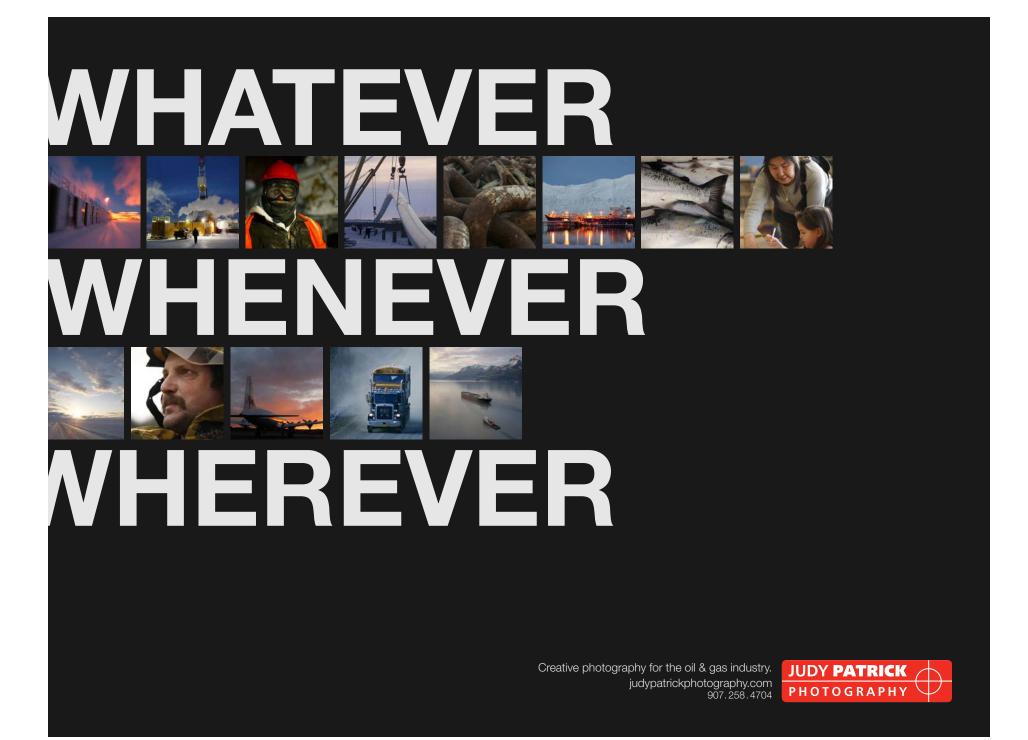
expected to rise 50% from \$5.8 billion in 2021 to \$9 billion in 2022.

Cost inflation on services is expected to range between 10% and 15% this year, it said.

The operator-specific findings are based on Rystad Energy's research of a peer group of 61 basin operators, based on a scenario in which WTI oil futures averages \$106 per barrel in 2022 before dropping to \$70 per barrel next year and to \$50 per barrel towards 2025, Rystad said.

"The Permian Delaware has emerged as the top oil-producing play in the US shale patch, outpacing growth in other oil-rich regions," said Veronika Meyer, Rystad vice president. "With oil prices expected to

see OIL PRICES page 9



OIL PRICES

remain elevated, 2022 promises to be another outstanding year for production growth in the region,"

Private operators have reacted quickly to the elevated market, more than doubling their collective rig count in the basin, from 30 to 73 in a little over a year, between January 2021 to April 2022, Rystad said.

"Private players are also less focused than their public counterparts on well optimization and environmental objectives — such as cutting flaring levels — which have emerged as significant play-level trends in recent years," Rystad said.

"This production growth may seem like a reaction to the US government's call for increased supply, but most of the drilling and capital expansion was already guided by the companies at the end of 2021, before Russia's invasion of Ukraine," Rystad said. "Public operators have been reluctant to chase higher production growth and remain focused on capital discipline in the face of cost inflation and labor and equipment shortages." •

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INSIDER

He has a bachelor's degree in electrical engineering from Montana State University, a master's degree in global finance from Alaska Pacific University and a master's certificate in project management from ESI/George Washington University.

Hickey is a graduate of the Robert Kabal school of electric cooperative management, a registered professional electrical engineer and registered project management professional.

He also serves on the board of Nuvision Federal Credit Union, a credit union with \$2 billion in assets and branches in Alaska.

"This is an exciting time in the electric industry and the Railbelt," Hickey said. "State and utility cooperation is more critical than ever as we continue to provide reliable and cost-effective electric service in an increasingly complex environment. I am excited to collaborate with the utilities, the state and other stakeholders to enhance Railbelt grid resiliency and develop a sustainable pathway to increased system resiliency, fuel diversification and decarbonization."

The release announcing Hickey's appointment came from Julie Estey, senior director of external affairs and strategic initiatives at Matanuska Electric Association, Alaska's oldest existing and second largest electric cooperative.

Maddox named AOGA regulatory, legal manager

ON MAY 24, THE ALASKA OIL AND GAS ASSOCIATION said it had hired Tamara Maddox as the organization's new regulatory and legal affairs manager.

Maddox most recently served as an associate attorney at the Alaska Public Offices Commission and prior to that was an associate attorney at the Denali Law Group. She has diverse experience in criminal law, guardianship issues, legal research, and regulatory drafting and analysis.

Maddox grew up in Anchorage, and attended Oceanview Elementary, Hanshew Junior High, and Service High School.

While being stationed around the country as a military spouse, she obtained a Bachelor of Arts degree from Fayetteville State University and obtained her Juris Doctor from Seattle University School of Law.

"We are excited for Tamara to join our team," said AOGA President and CEO Kara Moriarty. "Her hard work and dedication will serve the oil and gas industry well as our members work to responsibly develop Alaska's resources in a safe, legal manner that follows science and creates lasting benefits for Alaskans."

As AOGA's regulatory and legal affairs manager, Maddox will be responsible for

evaluating government actions and initiatives, and coordinating AOGA's review and response to such initiatives, including preparing written and oral testimony at public hearings; managing litigation issues with outside counsel; and directing AOGA's legal and environmental committees.

AOGA is a professional trade association whose mission is to foster the long-term viability of the oil and gas industry in Alaska for the benefit of all Alaskans. More information about the organization can be found at www.aoga.org, on Facebook (AlaskaOilAndGas), or twitter (@AOGA).

—Oil Patch Insider compiled by Kay Cashman

Contact Kay Cashman at publisher@petroleumnews.com



KARA MORIARTY

Petroleum

Oil Patch Bits



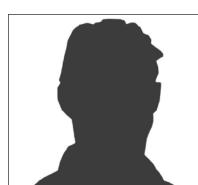
Airgas announces customer appreciation event

Airgas, an Air Liquide company, said recently that it is kicking off its summer solstice welding and customer appreciation events in Anchorage and Fairbanks.

The Anchorage event will be held June 21 from 10 a.m. to 3 p.m. at 6415 Arctic Boulevard. The Fairbanks event will be held June 23 from 10 a.m. to 3 p.m. at 2089 Van Horn Road.

Hotdogs and burgers will be served at both events from 11 a.m. to 2 p.m.

Join Aigas for this one-day event to see the latest in welding, plasma and industrial safety products. Visit with factory representatives onsite, plus take advantage of the one-day sale on a variety of machines and accessories. For more information visit www.airgas.com.



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LEASE SALE

and \$19.57 per acre for tract 361, a total of \$50,099.20. There are 2,560 acres in each tract.

In last year's Cook Inlet lease sale, the state received eight bids from three bidders, including Furie Alaska Operating and HEX LLC, which owns Furie.

In a statement May 25 after results were posted the Department of Natural Resources said the tracts covered 5,120 acres with some \$100,649 in bonus bids, according to preliminary results from the sale. (See map on page 11).

"It's encouraging to see a local producer continue to invest in Alaska, especially our Cook Inlet region," said DNR Deputy Commissioner John Crowther. "At a time when utilities are looking to secure new sources of natural gas to meet local energy demand, reinvestment by an existing operator is a good sign. We of course wish to see more companies and bidding in future sales and are assessing how the state can support this through providing additional data, helping operators navigate complex federal permitting, and potentially making fiscal and policy changes to boost the competitiveness of Cook Inlet development."

DNR noted that Kitchen Lights is one of the newest Cook Inlet gas fields. It came online in 2015 and has pro-

duced more than 30 billion cubic feet of natural gas.

The division said HEX purchased Furie and the Kitchen Lights development in July 2020 and has actively worked to improve production.

Production data from the Alaska Oil and Gas Conservation Commission for March shows production from Kitchen Lights averaged 12,056 thousand cubic feet per day, representing 5.9% of Cook Inlet gas production in that month. Kitchen Lights is one of the seven largest current gas producers in the inlet.

-KRISTEN NELSON

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FERTILIZER SQUEEZE

started chipping away at supply, and by February of this year, the market was tight, he said.

"Then with the invasion of Ukraine, it went from bad to worse."

As Nutrien's top boss, Ken Seitz, puts it, "The upheaval in the fertilizer market didn't happen overnight. It started two years ago as uncertainty about the effects of the coronavirus pandemic contributed to a slow-down in trade and resulted in a drawdown of fertilizer inventories globally. Then, in the second half of 2020, demand began to rise sharply."

At that point, he noted in an opinion piece for Agri-Pulse, there were a bunch of natural disasters, notably hurricanes and the flooding in Canada, that disrupted production and supply. There were labor shortages. Natural gas prices kept marching upward. And, in addition to the Russian ban, China added export restrictions on its urea and other fertilizers.

Nutrien, with eight nitrogen fertilizer plants in North America plus one in Trinidad, is among the top three in the world in that category, with annual production of 7 million tons in the diverse world market totaling 120 million tons. Nutrien was formed in 2018 through a merger of PotashCorp with Agrium Inc., which once ran a huge fertilizer plant in Nikiski.

Green Revolution roots

It's been a long road for nitrogen fertilizer, the product that was probably the largest component of the so-called Green Revolution of the 1960s and led to a multifold increase in global crops.

That's especially true for corn, which yielded about 40 bushels an acre under traditional farming methods early in the twentieth century. Now, by contrast, corn farmers routinely harvest 180 bushels from an acre.

Nitrogen is the key to that yield, and it has to be applied each growing season, mul-

Nutrien moves ahead on new-technology fertilizer plant

A new nitrogen fertilizer plant that would capture and sequester most of its carbon dioxide emissions has gone into the design phase, according to Saskatchewan fertilizer giant Nutrien Ltd. The new \$2 billion facility would be built in Geismar, Louisiana, the company said on May 18. The company is willing to start design work on the huge project despite current high prices for its natural gas feedstock.

Meanwhile, the company's mothballed facility in Nikiski remains in limbo until and unless an "affordable" long-term supply of natural gas can be found, a company spokesman told Petroleum News.

The Louisiana site is already home to an existing Nutrien nitrogen plant.

"It's access to low-cost natural gas, tidewater access, a skilled workforce, and established CO2 pipeline all make it an ideal location," said Richard Reavey, Nutrien's communications director.

The plant will capture at least 90% of carbon dioxide emissions and send them directly to sequester in the ground. That's because the U.S. government provides a tax credit of \$70 per ton for sequestration, Reavey said, compared with a credit of \$30 a ton and \$15 to \$20 a ton paid for the gas if it were used for enhanced oil recovery.

Annual production capacity would be 1.2 million metric tonnes of ammonia, using auto thermal reforming technology. Construction would begin in 2024, if it gets final approval, with full production by 2027.

Aside from fertilizer applications, the ammonia could be used as carbon-free fuel for ocean ships.

"As one of the world's largest ammonia traders by marine transportation, Nutrien announced in 2021 a collaboration agreement with EXMAR to jointly develop and build one of the first low-carbon, ammonia-fueled maritime vessels to help decarbonize shipping," the company said.

Meanwhile, Nutrien is keeping its options open on reopening the Nikiski facility that once employed as many as 400 people, Reavey said. It shut down in 2007.

Reopening at Nikiski "is dependent on securing a long-term supply of affordable natural gas. At present we have no plans to reopen the facility, but in March of 2022 Nutrien did apply to the Alaska Department of Natural Resources for an extension of its wharf permit at the facility, which will allow the company to continue to evaluate options there," Reavey said.

Opening half of the facility would cost \$200 million or more and would require a gas supply of about 80 million cubic feet a day.

The Nikiski plant was built in the late 1960s to capitalize on then-bountiful supplies of natural gas from Cook Inlet fields. An LNG export facility was built next door. That also has been mothballed.

The fertilizer plant was one of the top two ammonia producers in the country at the time, and it was the biggest taxpayer in the Kenai Peninsula Borough.

—ALLEN BAKER

tiple times in some applications.

Natural gas is the feedstock for that process, in which nitrogen from the air is turned into ammonia and urea fertilizers. The Haber-Bosch process used in that con-

version originated around the turn of the nineteenth into the twentieth centuries. It has been refined and improved over the years since.

Heat and pressure are used to break the

strong bonds of the two-atom nitrogen molecules in the air, and that nitrogen then bonds with the hydrogen in the methane to form ammonia compounds. Urea is a couple of ammonia groups joined by a carbon-oxygen combo. It can be made in handy pellet form.

Natural gas represents 70 to 90% of costs in the process.

Farmers compensate

But here we are with high fertilizer prices and shortages of supply that make it hard for farmers to make a profit on corn. Historically, fertilizer amounts to between 33 and 44% of the operating cost for growing corn, according to the U.S. Department of Agriculture. If corn stays near \$8 a bushel as it is now, farmers could make a decent return. If corn brings \$5 a bushel as it did at times last fall, then it's tougher. Go back a couple more years, and corn sold for \$3.50. Farming is nothing if not a gigantic gamble.

Higher prices for corn mean higher costs for many products. About 40% of the corn crop goes to make ethanol that's blended into the fuel sold at the gas pump. Nearly that percentage is fed to livestock and ends up affecting meat prices.

Any way you look at it, higher prices for fertilizers contribute to thinning the wallets of Americans and other consumers around the world. And the problem likely will continue to build.

Fertilizer plants are huge investments, so the owners sign long-term contracts for their natural gas supplies. The producers aren't paying anywhere close to the current price of natural gas, which reached \$9.22 on May 25, but those contracts generally are negotiated upward over time to reflect market realities.

Even with natural gas at \$8.50 per million Btus, Nutrien's breakeven price for nitrogen fertilizer would be around \$1,250 per ton, according to company spokesman Reavey. That's an increase of around 45% from current prices.

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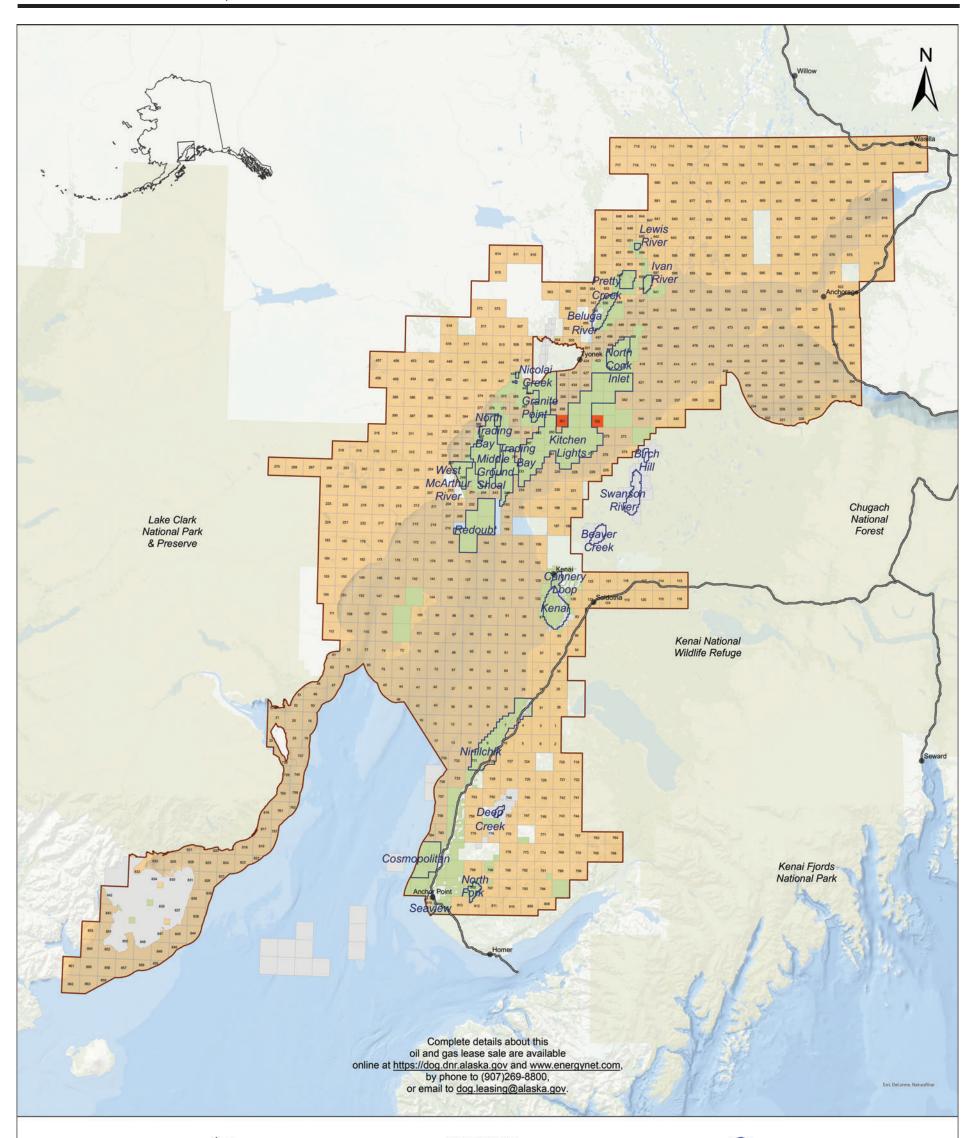
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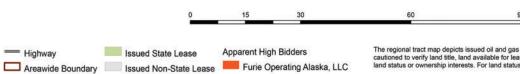
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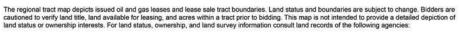
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Data on this map are depicted at section- or township-level resolution. Base map data are from geospatial data maintained by the Department of Natural Resources and are available at https://dog.dnr.alaska.gov/Information/MapsAndGis. Base map data are in North American Datum, Alaska Albers projection. The use of multiple datasets from varying sources may result in discrepancies in coincident boundaries.

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PETROLEUM NEWS • WEEK OF MAY 29, 2022

continued from page 1

FIRST OIL

The largest mobile land rig in North America, Rig 26 drilled CD2-310 to a total measured depth of 35,526 feet, on April 11, making it the longest North American land based well.

Doyon 26 is a technologically advanced rig, capable of drilling in excess of 40,000 feet, which substantially extends the reach from a single pad.

That means the rig will be able to develop 154 square miles of reservoir from a 14-acre drilling pad versus 55 square miles using today's conventional rigs. CD2-310 is the first well drilled by the rig.

The Fiord West Kuparuk development "opens a new era we call 'growth without gravel' where we can use extended reach technology to access 60% more acreage from a single pad, dramatically reducing our footprint and enabling us to safely produce from environmentally sensitive areas," CPAI President Erec Isaacson said May 20.

Technology has been at the heart of ConocoPhillips Alaska's greening of its oil fields on the North Slope.

"We are always seeking new and better ways to responsibly deliver Alaska's energy potential," Isaacson wrote in a recent editorial.

"Extended reach technology has been a game changer for ConocoPhillips," said Vincent Lelarge, vice president, Alaska Asset Development. "It's how we are able to responsibility develop fields like Fiord West Kuparuk with minimal footprint on the tundra and the surrounding environment."

Lelarge said CPAI has worked collaboratively on the Doyon 26 rig since 2011 when use of an extended reach drilling rig was being evaluated. From front-end engineering and design studies to ConocoPhillips Canada colleagues collaborating with Doyon Drilling during construction, the rig arrived on the North Slope of Alaska in 2020.

Taking a summer break

CPAI said data from the Fiord West Kuparuk well will aid in optimizing the design of the next well, which jives with what the company told state and federal officials in a May 18 status update of an April 11 annual update of the 24th Colville River unit plan of development.

CPAI said given the "significant challenges seen" in the CD2-310 well, the company's "drilling plans for 2022 had been updated to include a drilling break" for Doyon 26 this summer in order to "improve ERD drilling operations."

Rig 26 started drilling the Fiord West Kuparuk CD2-310 well in second quarter 2021. It was supposed to be finished in first quarter 2022. Petroleum News sources say the rig is currently undergoing annual maintenance but remains under contract to CPAI.

"This break in the ERD program," CPAI said in its May 18 update, "will be





used to incorporate the lessons learned from CD2-310 execution and make required engineering changes to the ERD well designs going forward."

Deviations from 23rd plan

On March 16, 2021, CPAI submitted the 23rd annual status update to the





Colville River unit plan of development, or POD. It identified the possibility of up to four Fiord West Kuparuk wells being drilled during the 2021-Q1 2022 POD period by Doyon 26.

This big ERD rig was used in Q2 2021 to drill the initial well, CD2-310, but as we now know, it took longer to drill than expected.

Thus, the remaining Fiord West Kuparuk ERD wells premised in the previous 23rd POD are now considered opportunity wells for the 24th POD period.

Furthermore, in the 23rd POD, a Narwhal injector, the CD4-597, to complete the first pattern was planned for early 2022. That well was not drilled during the 23rd POD period. However, as of May 2, 2022, Doyon Rig 142 was preparing to drill CD4-597 as part of the 24th POD.

Doyon Rig 142

On May 2, Doyon 142 completed operations on WD-03 on CD1 pad. The rig was moved from CD1 to the CD4 pad.

Following the CD4-597 well, Doyon 142 "may move back from the CD4 pad to the CD1 pad to drill the WD-04 well (replacement for the WD-03 well) or it may drill another opportunity well," CPAI said.

The Alaska Oil and Gas Conservation Commission said the waste disposal well, WD-03, which was being drilled when a gas release occurred in early March at CD1, has been "cemented to surface and a dry hole tree" installed on May 2.

AOGCC said the well was considered suspended "pending cutoff at proper depth below original tundra level and installation of the required abandonment marker plate."



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