

page 5 Explorers' Magazine preview: Great Bear Pantheon goes for conventional

Haaland revokes Trump-era O&G orders, forms climate task force

On April 16, Interior Secretary Debra Haaland issued two secretarial orders: one, SO 3398, revoking a series of fossil fuel-related secretarial orders issued under the Trump administration, and the other, SO 3399, establishing a climate task force to coordinate across the department, prioritizing climate change and addressing environmental justice in agency decisions.



DEBRA HAALAND



CORRI FEIGE

see **O&G ORDERS** page 10

OCS land withdrawal dismissed by 9th Circuit; appeal declared moot

In an April 13 order the U.S. Court of Appeals for the 9th Circuit dismissed an appeal against the withdrawal of large areas of the U.S. Arctic offshore from future oil and gas leasing, thus leaving the withdrawal in place. The court said that the appeal was moot, given that in a January executive order President Joe Biden had re-instated the withdrawal, originally put in place by former President Barack Obama in 2016.

The executive orders in question place much of the outer continental shelf of the Chukchi and Beaufort seas indefinitely off limits to oil and gas leasing. However, a 2.8 million acre strip of the Beaufort Sea with relatively high oil and gas potential, immediately north of the coastline, between Smith

see **LAND WITHDRAWAL** page 10

88 Energy wraps drilling in Q1; Alaska spend \$14.2M in quarter

88 Energy Ltd. spent \$11.8 million on exploration and evaluation in Alaska during the first quarter 2021 — ending March 31 — primarily associated with expenditure on Project Peregrine Merlin 1 well drilling, the company said in its quarterly report issued April 20. It spent \$ 1.5 million on the project in the previous quarter.

The company paid lease rental payments to the State of Alaska totaling \$2.4 million in Q1, it said.

88 Energy has been actively raising capital in Q1, with two placements that raised a total of \$14 million. In February, the company announced completion of a “heavily oversubscribed”

see **88 ENERGY DRILLING** page 8

Canadian spending program leaves petroleum industry pondering

The Canadian government has shrugged off three decades of fiscal restraint at the federal level by rolling out a big spending post-pandemic economic recovery budget, including C\$17.6 billion to stimulate green and climate initiatives.

That, along with C\$30 billion of day care and early education spending, make up the largest items in C\$101 billion of new spending.

Finance Minister Chrystia Freeland said her budget is “about finishing the fight against COVID-19 and healing the economic wounds” left by the devastating virus.

To some observers, the record 700-page document seems premature at a time when the pandemic is raging across Canada’s four largest provinces — Ontario, Quebec, British Columbia and

see **SPENDING PROGRAM** page 3

EXPLORATION & PRODUCTION

Dogged pursuit

Talitha well: 5 oil zones confirmed, hung up in promising, but atypical Kuparuk

By **KAY CASHMAN**

Petroleum News

Recent releases of information from Pantheon Resources plc offered encouraging results on the Talitha A exploration/appraisal well drilled by affiliate Great Bear Pantheon on Alaska’s central North Slope, despite the fact well testing was interrupted by operational challenges resulting in the well being suspended until next winter when testing can be completed.

Reaching a total depth of 10,456 feet, the well encountered five stacked oil-bearing reservoir zones over a 3,700-foot interval which “manage-

The oil “appears to be lighter than expected and an additional significant zone has been discovered. ... These zones are all independent of the Kuparuk and will be tested next winter.”

ment believes has validated its earlier assertion of over 1 billion barrels recoverable oil potential from this multi-billion barrel oil in place play at Talitha,” Pantheon said in its April 19 operational update.

see **TALITHA A RESULTS** page 9

FINANCE & ECONOMY

Uneven demand rebound

Benchmarks drop on COVID surge in India and Japan, but remain in \$60s

By **STEVE SUTHERLIN**

Petroleum News

Alaska North Slope crude slid \$1.34 to close at \$64.55 per barrel April 21, West Texas Intermediate dropped \$1.09 to close at \$61.35, and Brent lost \$1.25 to close at \$65.32.

Oil traders caught the demand fear jitters as a new wave of COVID-19 infections continued to flare up in India and Japan.

The Japanese government is expected to declare a state of emergency within days for Tokyo, Osaka prefecture, Hyogo prefecture and Kyoto prefecture, according to an April 21 Reuters report.

If the expected emergency measures are adopted, a quarter of Japan’s population of 126 million would

be affected. Quasi-emergency measures are already in place in 10 of Japan’s 47 prefectures, including Tokyo and Osaka.

India reported 295,041 new coronavirus infections April 21, with hospitalizations straining its health system.

While the country has administered 130 million doses of vaccine, behind only the United States and China, the shots have reached just a fraction of its population of 1.35 billion.

Various Indian states and cities, including the capital New Delhi and the largest city Mumbai have imposed curfews and lockdowns.

But there are positive signs emerging in other parts of the world, Bloomberg reported April 20.

see **OIL PRICES** page 11

FINANCE & ECONOMY

Canadian M&As heat up

Oil assets regaining interest from global equity players; C\$20.5B in deals in '21

By **GARY PARK**

For Petroleum News

The latest surge in oil prices has been accompanied in Canada by the reappearance in the oil patch of foreign private equity players.

Cenovus Energy Chief Executive Officer Alex Pourbaix told analysts the activity has prompted his company to take a fresh look at asset sales now that bear markets of recent years have faded.

He said Cenovus asked Husky Energy last year to shelve the planned sale of its retail fuel business in the midst of low crude prices when the two companies were negotiating their C\$24 billion merger.

Pourbaix said it was his view that Husky “was trying to sell at what was the very bottom of the market. We’re probably now moving into a much

better market for that kind of asset.”

In the current climate, he said Cenovus is “deleveraging very quickly without selling any assets” and is hoping the uptick in oil prices may allow the company to hold the line on a debt of C\$8 billion rather than its previously announced C\$10 billion.

That prospect allows Cenovus to open the door to new buyers who are taking a fresh look at the Canadian energy sector, he said.

Recent transactions

The mood has been bolstered by two recent transactions — one by London-based private equity players, McIntyre Partners and Griffon Partners, to buy the Hangingstone oil sands project with

see **ASSET SALES** page 4

● EXPLORATION & PRODUCTION

Hilcorp applies for Seaview pool rules

Company expects to bring lower Kenai Peninsula natural gas field online later in the year, once pipeline to Enstar is completed

By KRISTEN NELSON
Petroleum News

As Hilcorp Alaska moves closer to producing gas from its Seaview field on the southern Kenai Peninsula it has taken another regulatory step, applying to the Alaska Oil and Gas Conservation Commission for an order establishing pool rules.

In a March 18 application, the company said the pool rules would apply to the current area of the Seaview unit in and around Anchor Point.

“The Seaview Beluga-Tyonek Gas Pool should include all intervals from the Top of the Beluga to 500 feet below the base of the Tyonek,” Hilcorp said in the application, and be defined as gas bearing intervals correlating to the interval between 343 feet measured depth and 8,343 feet measured depth in the Seaview No. 8 well.

The Seaview 8, the field discovery well, was drilled in late 2018 to a true vertical depth of 10,148 feet and tested for gas in May 2019 from a Tyonek sand. “Commercial production was found in the Seaview No. 8 Well,” Hilcorp said in its application to the commission.

The Alaska Department of Natural Resources approved formation of the Seaview unit in October of last year, and formation of the Clark participating area —

The company told the commission it “plans to continue its exploration efforts within the Seaview Field, extending outside of the existing productive areas,” with one to two new exploration/delineation wells anticipated in 2021 and 2022.

defining the area from which production will occur — in November.

Production had been planned to start late last year, but there were construction delays on the 2-mile pipeline needed to connect the field to Enstar’s gas transmission line, Jennifer Starck, Hilcorp’s Kenai team lead told the Alliance in a digital luncheon meeting in February (see story in Feb. 28 issue of Petroleum News).

Stark said horizontal directional drilling is required for two crossings beneath the Anchor River, work scheduled for the first and second quarters of the year, which should allow production to begin this summer.

In its AOGCC pool rules application the company was more conservative, saying production is “anticipated by the end of 2021 once the Seaview pipeline is completed.”

Background

“Hilcorp cannot efficiently drill and produce the

remaining reserves under AOGCC’s current statewide pooling rules,” the company told the commission. “While existing rules and procedures may have adequately protected correlative rights and prevented waste during the field’s initial discovery, they are not applicable to the effort necessary to explore, produce and develop the remaining hydrocarbon reserves.”

There are many small parcels at Seaview and not all owners have agreed to participate in the unit.

The unit is some 2,975 acres, with some 1,126 acres owned by the state and 1,849 acres held by private landowners or by the Kenai Peninsula Borough.

Hilcorp is the 100% working interest owner and sole operator at Seaview.

When AOGCC allowed production of the Seaview 8 well in October, amending an earlier order, it required Hilcorp to establish and maintain an escrow account for nonparticipating owners from which no funds were to be dispersed without a written order from the commission.

The proposed pool rules include the escrow requirement, with Hilcorp required to deposit by the 10th day of each month royalties for non-participating owners at the rate of 12.5% at the prevailing value for Cook Inlet gas published by the Alaska Department of Revenue.

Hilcorp said gas bearing sands at the Seaview 8

see **SEAVIEW POOL** page 4

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ON THE COVER

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Company came to North Slope looking for unconventional oil; has since pivoted to conventional targets in central North Slope

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Company expects to bring lower Kenai Peninsula natural gas field online later in year, once pipeline to Enstar is completed

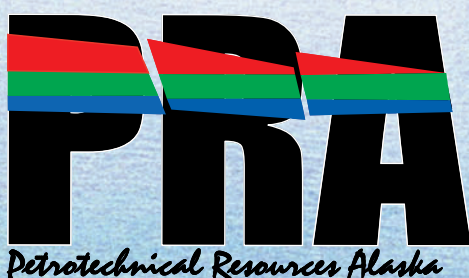
4 At 439, US rotary rig count is up by 7

8 Conoco applies for Rendezvous pool rules

Production, expected by the end of the year, will be from new pad, MT7, in Greater Moose’s Tooth unit in NPR-A, southwest of MT6

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SPENDING PROGRAM

Alberta — overloading hospitals and intensive care units.

Freeland vigorously disagreed, noting that Canada's employment levels are 460,000 below pre-2020 levels in a population of 37 million.

"Canada needs jobs. We need to get back to work. This budget will do that," she said, pointing to the sluggish recovery after the 2009 recession.

"The world did not respond fast enough and hard enough (in 2009). We let economic hardships fester."

The result from last year's multibillion-dollar wage and rent subsidies and support for small businesses will be a deficit of C\$354.2 billion and be followed by another C\$154.7 billion in 2021-22 before starting a gradual return to levels around C\$30 billion in 2025-26.



CHRYSTIA FREELAND;

Natural resources

Left in the lurch amid Freeland's spending spree is Canada's natural resource industry, despite plans for a 50% tax cut for manufacturers of technologies to achieve net-zero carbon emissions and C\$5 billion over seven years to create a fund for projects to reduce greenhouse gas emissions by 36% over the next decade from the original target of 30%.

"We are at a pivotal moment in the green transformation," Freeland told Parliament. "We can lead, or we can be left behind. Our government knows that the only choice for Canada is to be in the vanguard."

Three days before the budget was released, Canada's Natural Resources Minister Seamus O'Regan, who said carbon capture "was an important part of how we get to net-zero," gave hope to Alberta Premier Jason Kenney's expectations of a firm financial commitment to kickstart new carbon capture utilization and storage, CCUS, projects based on "very encouraging discussions with the federal government."

In March, Kenney asked Prime Minister Justin Trudeau for C\$30 billion in assistance and various incentives for CCUS, noting that Alberta has "the technology, the workforce and producers who are keen to participate ... what we don't have are the right incentives."

Role of investment tax credits

The initial interpretation of the budget is that investment tax credits could play a major role in lowering carbon outputs at refineries, cement and fertilizer production plants and power stations, while helping to shrink emissions at oil sands operations.

While the Kenney government and the petroleum industry wait for specific details of the tax credits — which the Trudeau government has promised after 90 days of consultation — environmental organizations are wasting no time in pummeling any prospect of funding for CCUS technology, arguing that would only delay the transition away from fossil fuels.

Julia Levin, the climate and energy program manager at Environmental Defense, said the proposed funding risks locking Canada into "decades of increased carbon pollution ... we need to start winding down the oil and gas sector in order to ensure we have a liveable planet ... these supports would do the opposite."

The early conclusion by Saskatchewan Premier Scott Moe and Alberta Finance

Minister Travis Toews is that the Trudeau government is sending out a signal that it opposes using CCUS for enhanced oil recovery, EOR, by using the carbon emissions to rebuild reservoir pressures.

Toews said he is concerned about the absence of budget details, "specifically the exclusion of EOR projects with a net-zero carbon profile," despite Alberta's estimate that CCUS technology could reduce emissions by 30 million metric tons a year and aid Canada's goal of achieving net-zero emissions by 2050.

The Business Council of Alberta said the budget spends in nearly every area of the Canadian economy and society but comes up "woefully short on the approach necessary to enable Canada's industrial and resource sectors to reach their emissions potential."

However, Alex Pourbaix, chief executive officer of Cenovus Energy, one of the largest oil sands producers, said the prospect of a CCUS tax credit is "an important step forward (in the) important work of decarbonizing Canadian oil production."

—GARY PARK

Contact Gary Park through publisher@petroleumnews.com

LAND & LEASING

Spring sale bidding to begin online May 17

Bidding in the state's spring oil and gas lease sales begins online May 17 and closes June 3, the Alaska Department of Natural Resources' Division of Oil and Gas said April 21. The southern areawide sales are offered in the spring sale: the Alaska Peninsula and Cook Inlet.

The division said it has contracted with EnergyNet Services LLC to provide online bidding, with bidder registration and bid submission on the EnergyNet Government Listings site at www.energynet.com.

Sale results will be available to the public online at <https://dog.dnr.alaska.gov> at 9 a.m. June 9.

Bidding method for both sales will be cash bonus and fixed royalty.

The Alaska Peninsula sale includes some 5 million acres in 1,004 tracts ranging in size from 1,280 to 5,760 acres and encompasses onshore and offshore acreage from the Nushagak Peninsula down the north side of the Alaska Peninsula to just north of Cold Bay.

The Cook Inlet sale includes some 3.3 million acres in 833 tracts ranging in size from 640 to 5,760 acres and encompasses onshore and offshore acreage from Wasilla in the north to Anchor Point in the southeast, then along Alaska's Submerged Lands Act boundary in Cook Inlet to the Iniskin Peninsula.

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EXPLORATION & PRODUCTION

At 439, US rotary rig count is up by 7

The Baker Hughes U.S. rotary drilling rig count, 439 on April 16, was up by seven from 432 the previous week and down 90 from a count of 529 a year ago.

When the count bottomed out at 244 in mid-August last year, it was not just the low for 2020, but the lowest the 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 1981.

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 when it gained back 10 rigs.

The April 16 count includes 344 rigs targeting oil, up by seven from the previous week and down 94 from 438 a year ago, 94 rigs targeting gas, up one from the previous week and up by five from 89 a year ago, and one miscellaneous rig, down one from the previous week and down one from a year ago.

Twenty of the holes reported April 16 were directional, 398 were horizontal and 21 were vertical.

Alaska unchanged from previous week

Texas (214), with the most active rigs in the country, was up by five rigs from the previous week.

Louisiana (47), North Dakota (15) and Oklahoma (21) were each up by a single rig. Pennsylvania (18) was down by one rig.

Counts in other states were unchanged from the previous week: Alaska (3), California (7), Colorado (10), New Mexico (70), Ohio (10), Utah (8), West Virginia (11) and Wyoming (4).

Baker Hughes shows Alaska with three rigs active April 16, unchanged from the previous week and unchanged from a year ago, when the state's count also stood at three.

The rig count in the Permian, the most active basin in the country, was up by three from the previous week at 227, but down by 56 from a count of 283 a year ago.

—KRISTEN NELSON

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ASSET SALES

capacity of 12,000 barrels per day, for an undisclosed price, and the other by Whitecap Resources, which acquired Kicking Horse Oil & Gas for C\$300 million in shares and cash, to gain 8,000 barrels of oil equivalent per day, which is expected to grow over the next year to 19,000 boe per day.

Those deals came on the heels of ARC Resources' C\$8 billion purchase of Seven Generations Energy and the hostile bid of C\$13 billion by Brookfield Infrastructure Partners for Inter Pipeline.

FP Data has estimated 24 M&A energy deals have been proposed or concluded in Canada so far this year for a combined value of C\$20.5 billion, compared with C\$805 million over the same period of 2020.

Change from a year ago

Craig Bryksa, chief executive officer of Crescent Point Energy, agreed with Pourbaix that the buyers' focus on oil and gas assets has undergone a drastic change from a year ago.

He said that in April 2020 companies were more worried about their overall debt levels and their bank covenants.

"This year we're focused on cash flow generation and what we're going to do with that free cash.," Bryksa said.

He said that if oil prices average

US\$60 a barrel this year Crescent Point will generate C\$600 million, which he expects will initially be allocated to paying down debt.

RBC Capital Markets analysts have scoured the energy sector looking for CEOs who have signaled their companies are open to offers.

Analyst Robert Kwan said management at AltaGas, which has a C\$5.9 billion market capitalization, is "prepared to split up the company in the medium term as a means to unlock shareholder value."

He also said Gibson Energy, valued at C\$3.2 billion, has a management team and board of directors who are focused on "shareholder value creation, which could include selling the business."

Another round of deals is also anticipated in the oil sands as the giant operators Suncor Energy and Canadian Natural Resources continue to buy out their partners.

In a recent report, Scotia Capital analyst Jason Bouvier predicted Suncor will spend up to C\$2.5 billion over the next two years to acquire minority stakes in the Fort Hills operation owned by mining giant Teck Resources and France's Total.

Vancouver-based Teck, having abandoned its planned Frontier oil sands megaproject, has indicated it is ready to bail out of Fort Hills and shift its attention to copper. ●

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SEAVIEW POOL

exploration well were in the Sterling, Beluga and Tyonek formations.

The company told the commission it "plans to continue its exploration efforts within the Seaview Field, extending outside of the existing productive areas," with one to two new exploration/delineation wells anticipated in 2021 and 2022.

Benefits of pool rules

One of the benefits of pool rules, the company said, is allowing the company "to target the smaller, un-drained portions of heterogeneous sand bodies that cannot be penetrated by wells conforming to current spacing restrictions."

Without pool rules, statewide spacing rules would apply, allowing a gas well-bore to "be open to test or regular production within 1,500 feet of a property line only if the owner is the same and the landowner is the same on the sides of the line," commission regulations state.

"Due to complex ownership current

statewide spacing rules would make field development very difficult, and could ultimately result in bypassed pay," the company said, while with pool rules, spacing requirements within the unit are eliminated, with the only requirement that wells not be closer than 1,500 feet to the exterior boundary of the unit.

According to acreage ownership information, effective Oct. 7, 2020, posted on the Division of Oil and Gas website, there are 420 tracts in the unit, with 86.84% of unit acreage, some 2,584 acres, committed to the unit and some 391 acres, 13.16%, uncommitted.

Hearing scheduled

AOGCC has scheduled a hearing on Hilcorp's pool rules application for 10 a.m. May 20 at its Anchorage offices; telephonic participation is available by calling 1-800-315-6338 (code for the meeting is 14331). The commission said in a public notice that phone lines will be available starting at 9:45 a.m. ●

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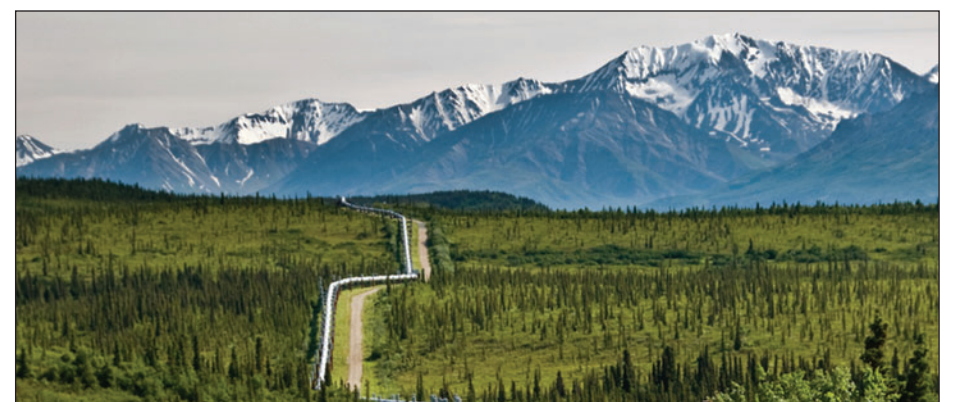
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● EXPLORERS MAGAZINE PREVIEW

Great Bear Pantheon: conventional targets

Company came to North Slope looking for unconventional oil; has since pivoted to conventional targets in central North Slope

By ERIC LIDJI

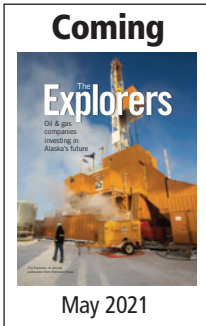
For Petroleum News

Great Bear Pantheon's exploration program in Alaska started unconventionally.

Great Bear Petroleum Operating LLC arrived in the state about a decade ago with a big idea. It wanted to find and develop the source of the North Slope's prolific oil fields.

In the years since, and now with the help of London-based Pantheon Resources Plc, the company has pivoted somewhat toward a more conventional program: targeting oil fields contained in some of the same formations that also host those prolific fields to the north.

The new approach recently received encouraging news — with the results of the Alkaid program in 2019 and then with the results of the Talitha program earlier this year. Those results have convinced the company to proceed with appraisal and possibly development.



In late 2020, the state formed the neighboring Talitha and Alkaid units in the central North Slope, south of the Prudhoe Bay unit, along the Dalton Highway. The unit agreements include plans for exploration and development work in the near future that could potentially expand North Slope production south of the legacy fields in the basin.

A new approach

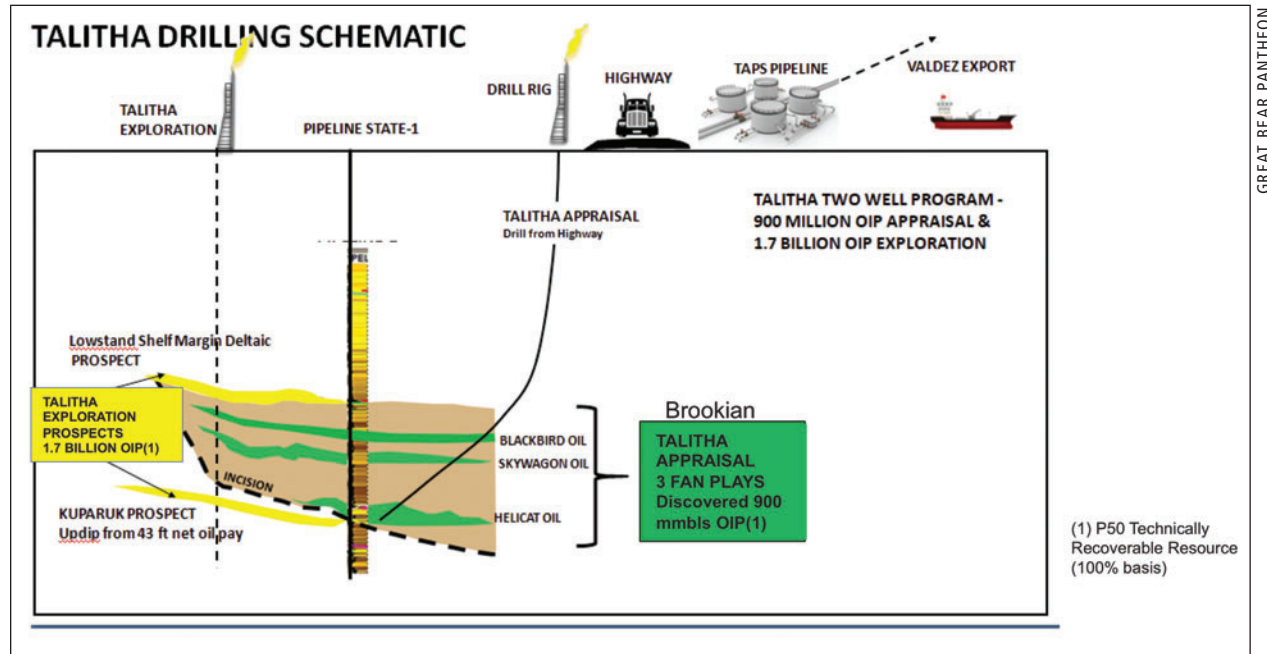
The progress of the past two years builds off more than a decade of work by Great Bear Petroleum, which in turn builds off a half century of limited work by other operators.

The leases within the current Alkaid and Talitha units are lightly explored.

ARCO drilled Toolik Federal 1 and Toolik Federal 2 wells in the vicinity of the current units in 1969. Both wells targeted deeper oil in the region. The company returned with the North Franklin Bluffs Unit 1 well in 1973 to target shallower natural gas. Mobil also looked for shallower gas in the region with the West Kadleroshilik 1 well in 1974.

ARCO drilled the Pipeline State 1 well within the current unit boundaries in 1988, again targeting deeper oil. Conoco drilled the Sequoia 1 well in 1991 and Eni US Operating Co. drilled the Maggiore 1 well in 2007, both testing deeper oil outside the current unit area.

All those earlier wells represented an older way of



thinking about the North Slope.

Great Bear Petroleum LLC began its Alaska program in 2010, when it bid more than \$8 million for 105 tracts covering more than 500,000 acres at a state lease sale. The haul accounted for 92% of the high bids in the sale. The company was more successful than it had intended, forcing it to cull to stay below a state-imposed 500,000-acre limit.

At the time, then Division of Oil and Gas Director Kevin Banks compared the Great Bear acquisition to the results from a lease sale the year prior, when the Armstrong Resources LLC subsidiary 70 & 148 LLC also dominated, also took a large block of leases south of the Kuparuk River unit and also briefly became the largest leaseholder in Alaska.

Looking back, the early 2010s represented a moment when smaller players were considering new ideas for the North Slope. Through various partnerships, Armstrong helped launch the trend toward exploration and development of the Nanushuk formation, which now accounts for much of the planned development on the North Slope. Similarly, Great Bear wanted to bring the emerging trend of unconventional prospects to Alaska.

The principals — Ed Duncan and Bob Rosenthal — both had experience in the Alaska oil industry and knowledge of the North Slope's geology. They wanted to replicate the successes of the Eagle Ford shale and the Barnett shale in the Lower 48, where companies were drilling into source rock and using advances in hydraulic fracturing to extract hydrocarbons from geology once

thought too tight to produce. "It's new to Alaska but it's not new to resource play exploitation in the Lower 48," Duncan said in 2010.

Hydrocarbons are created when organic materials deep within the earth encounter extreme temperatures and pressures. Once created, hydrocarbons migrate and accumulate based on their particular properties and also on the nature of different rock formations.

The process always leaves some oil behind, trapped in source rocks. Those rocks were once too tight to produce, but advances in well stimulation have made that oil viable.

The oil found in prolific North Slope fields like Prudhoe Bay and Kuparuk was presumably created elsewhere. Great Bear believed that "elsewhere" was the deep shale to the south. It believed it could launch 50 years of development by proving up its idea.

Early on, Great Bear was proposing a program unlike anything seen before in Alaska, and policymakers were both incredibly intrigued and incredibly skeptical with the claims.

The company envisioned three 15-year phases, each featuring 3,000 wells drilled from one-acre pads, with 200 wells to a pad. The program would require 20 rigs, drilling year-round. It would cost approximately \$2 billion each year, at a rate of \$10 million per well.

For comparison: at that time, only about 1,000 wells had been drilled in the main Prudhoe Bay field, throughput on the trans-Alaska oil pipeline was hovering around

see EXPLORERS PREVIEW page 6

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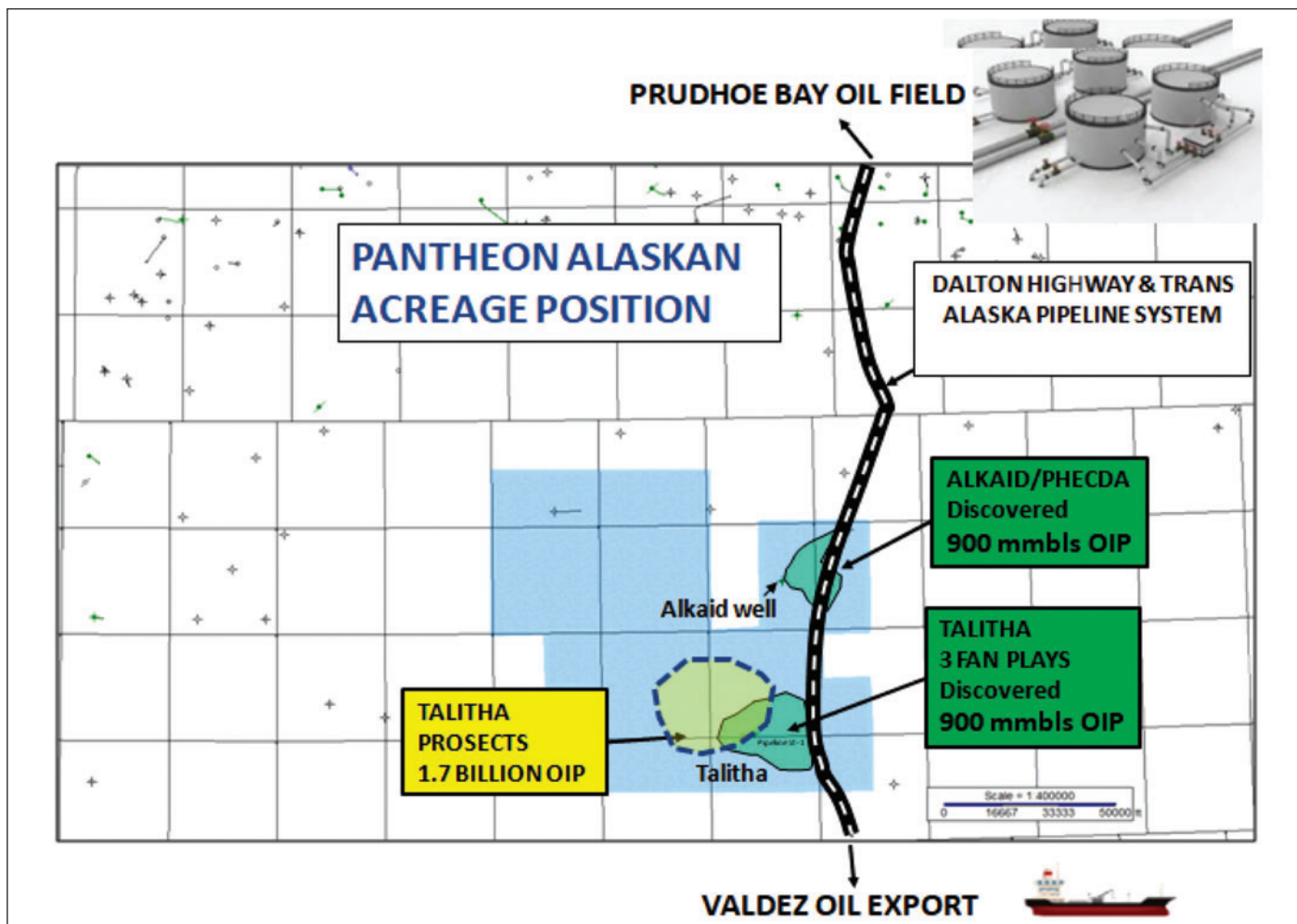
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EXPLORERS PREVIEW

550,000 barrels per day and the state usually only had between 20 and 30 rigs at any given time.

Why so many wells? Hydraulic fracturing is limited in its reach. It only produces oil contained in the thin fractures it creates. By comparison, the legacy oil fields of the North Slope are mostly conventional reservoirs — think: giant underground pools. With sufficient pressure, and accommodating geology, one well can drain a relatively large area.

The entire Alaska oil industry was developed around these conventional plays. For example, unitization is designed in part to protect correlative rights, making sure that one leaseholder doesn't surreptitiously drain away all the oil contained under a neighboring lease. What good is a unit when it comes to hundreds of thousands of oil-saturated rocks?

Great Bear also envisioned incredible rates of production: starting at 200,000 barrels per day by 2020 and reaching a peak of 600,000 barrels per day by 2056. The company even claimed it could produce 1 million barrels per day, simply by drilling more quickly.

If other players joined Great Bear in the region, Duncan told lawmakers in early 2011, the state might even need to build a second trans-Alaska oil pipeline to handle the flow.

Alcor and Merak

In pursuit of that goal, Great Bear proposed a six-well and lateral test program. The wells were named after the stars in the Ursa Major constellation, also known as the Great Bear: Alcor No. 1, Merak No. 1, Mizar No. 1, Megrez No. 1, Dubhe No. 1 and Alioth No. 1.

The program began in the summer of 2012 — unusually for the Slope, Great Bear was able to take advantage of the road system to allow for some year-round exploration — when the company drilled the 10,812-foot Alcor 1 well and 11,094-foot Merak 1 well.

"I can tell you with absolute confidence that where we thought we would find oil in these source rocks, we found oil," Duncan said in September 2012. Around the same time, he told a shale conference that the company would be producing oil by the end of the year.

But the challenge of source rock development is less in finding oil than in producing it commercially. By the end of the year, the company had only completed the vertical section of two wells and collected 600 feet of core but had not drilled the laterals.

"Certainly operations took a little bit longer than we expected, particularly on Alcor, and the lab analysis quite frankly has taken much longer than we had hoped," Duncan said.

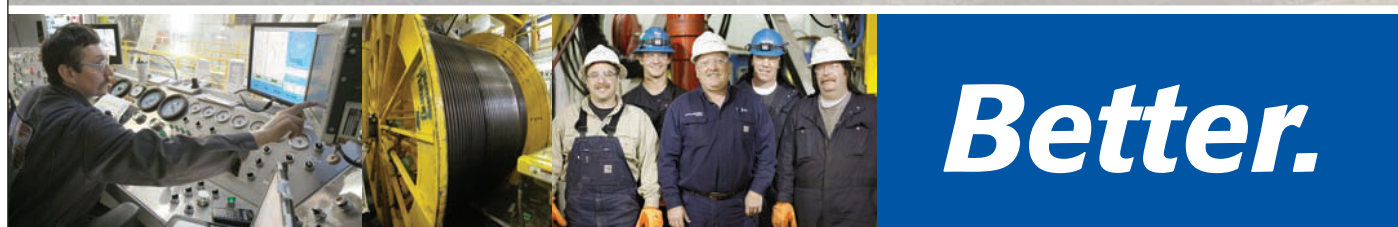
Great Bear plugged and abandoned both wells and spent several years evaluating its drilling results and conducting seismic. It returned to exploration in 2014-15, when it proposed a three-well program targeting conventional and unconventional resources.

The idea was to use near-term conventional production to generate cash flow that would finance the complexity of bringing unconventional development into a new basin.

In early 2015, Great Bear drilled the Alkaid 1 well. The well targeted the Kuparuk formation, but operations were ended before the entire Brookian had been penetrated.

Flooding along the Dalton Highway prevented the company flow testing the Alkaid well that season. By the time the

see EXPLORERS PREVIEW page 7



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EXPLORERS PREVIEW

company suspended the well and demobilized equipment, all zones had been logged and sidewall cores had been taken at the deepest zones, confirming indications of oil in three major zones, from some 4,000 feet to 8,100 feet.

The company again turned to seismic acquisition, looking to bolster its understanding of a relatively underexplored and under-mapped section of the North Slope. But the suspension of exploration tax credits during the Walker administration prompted Great Bear Petroleum to further delay its exploration activities in the central North Slope.

Pantheon arrives

Pantheon Resources acquired two Great Bear subsidiaries in early 2019. The deal gave Pantheon a majority stake and operatorship of more than 250,000 acres of Great Bear leases, mostly located immediately south of the Prudhoe Bay and Kuparuk River units.

Pantheon announced plans to raise \$16 million plus expenses to help fund the acquisition and related exploration activities. While some of those funds would go toward existing exploration activities at its East Texas properties, most would go toward a suite of projects in Alaska. The goal of the program, the company said at a 2019 annual meeting, was “to prove up acreage ... and sell at a significant premium to a larger company.”

The Alaska projects included revisiting the Alkaid well and participating in the Winx No. 1 well on leases south of the Colville River unit and the village of Nuiqsut. Winx No. 1 was operated by 88 Energy Inc., profiled elsewhere in this edition of *The Explorers*.

In early statements, Pantheon said that its newly acquired acreage had “an estimated P50 technically recoverable resource (gross) of 2 billion barrels oil” in which \$200 million has been invested to date, including more than 1,000 square miles of 3D seismic. The acreage reportedly contained two discovery wells with six hydrocarbon-bearing zones.

Alkaid

The newly formed Great Bear Pantheon re-entered and flow tested Alkaid 1 in early 2019. The well produced 108 barrels of 38° API oil and 300 barrels of water over 24 hours from the Upper Brookian formation. The company estimated that the main zone of interest in the Brookian contained 240 feet of net pay within 400 feet of reservoir rock.

“Such flow rates are considered to be an excellent result and indicate the potential for materially higher flow rates when wells are drilled in the typical manner for Brookian wells in Alaska — horizontally, stimulated and with larger intervals perforated,” Pantheon said in a March 24, 2019, statement, referring to the vertical Alkaid No. 1 well.

Secondary targets in the West Sak and Ugnu formations were both wet.

The program also prompted the company to change its view of the nearby Phecda prospect. Instead of a separate venture, it now saw Phecda as an Alkaid appraisal well.

“These two projects will now likely be part of a single development plan, favorably located adjacent to the Dalton Highway and TAPS pipeline,” the company said. “The better than expected results in the zone of interest will also impact the pre-drill P50 technically recoverable resource estimates which will be assessed in the near future.”

In later announcements, Pantheon said that combining the prospect essentially

Great Bear Petroleum LLC began its Alaska program in 2010, when it bid more than \$8 million for 105 tracts covering more than 500,000 acres at a state lease sale.

doubled the P50 recoverable reserves — to a range of 90-135 million barrels, from 59 million barrels of oil. The estimated combined oil in place was increased 50% to 900 million barrels from 595 million barrels. The recovery factor also bumped up slightly.

The results prompted the company to review its pre-drill conceptual development plans at the Alkaid prospect and also to formulating plans for future farm out discussions.

By that summer, Pantheon was telling investors that it planned to implement a phased production program at Alkaid and could bring the field into production as early as 2021.

For the initial phase, the company said it would bring mobile production units to the area to process approximately 1,500 barrels of oil per day from three to four delineation wells and would then truck the oil north along the Dalton Highway to Pump Station No. 1 of the trans-Alaska oil pipeline. As the project advanced toward a full-scale development with as many as 50 wells, the company would construct a standalone processing facility.

While trucking oil year-round has occasionally been used as a short-term solution in Cook Inlet, it is nearly impossible across much of the North Slope due to the lack of permanent roads. The location of Alkaid along the Dalton Highway changed every-thing.

A month later, the company moved its timeline. Positive conversations with state and federal regulators had led the company to believe it could bring production online as soon as the summer of 2020, “subject to completion and timing of a successful farm-out.”

Over the summer, Pantheon opened a data room and released investor updates designed to market the project, but neither successfully enticed a partner to join the project.

In October 2019, Pantheon announced it was buying out minority partners Halliburton Energy Services LLC and Red Technology Alliance LLC’s 25% interest in the six leases of the Alkaid/Phecda prospect. Pantheon said that the acquisition was important for improving ongoing farm-out discussions. But a potential partner remained elusive, especially given the epic

uncertainty of 2020 — first the pandemic, then the price crash.

Talitha

The results of Alkaid also increased Pantheon’s confidence in the Talitha prospect.

Great Bear Pantheon drilled 10,456-foot Talitha No. A in January 2021 and reported oil shows and potentially productive zones in all five formations: the Kuparuk, Lower Basin Floor, Upper Basin Floor Fan sequences, Slope Fan and Shelf Margin Deltaic horizons.

In early 2019, around the time of the acquisition, Pantheon described the Talitha well as a re-drill of Pipeline State No. 1 from 1986. The Talitha well would appraise oil sands seen in the plugged and abandoned ARCO well and would also “test a topset exploration play analogous to recent major discoveries in the area” using techniques that “far surpass what was available in the 1980s.” The company said that 900 million barrels of oil in place had been discovered in three zones and estimated 1.7 billion barrels of exploratory upside.

“ARCO drilled the well looking for a thick, clean sand and instead found a thick zone of interbedded, laminate-type sands and shale,” Pantheon Technical Director Bob Rosenthal said during a June 2019 webcast to share additional results. “The sands were oil-bearing but at the time given the ... \$10 price of oil and the fact completion technology wasn’t as advanced as it is today, the well was plugged and abandoned. ... With today’s horizontal drilling technology we believe we have a significant discovery” at the Talitha prospect.

Early results led the company to shift its approach. Initially, it had prioritized the Shelf Margin Deltaic. But instead the company is looking at a secondary target in the Kuparuk.

After attempting to test the well from the open well bore, Pantheon drilled a sidetrack approximately 80 feet from the original wellbore and perforated the sidetrack between 10,069 feet and 10,085 feet measured depth. The sidetrack encountered significantly higher than expected reservoir pressure and collected “exceptionally light oil.” The results promoted the company to consider “a more methodical approach to ongoing operations,” the company reported in a six-month financial report released March 30.

“Fracking and testing operations are now underway,” the company reported.

Work plans

The state Division of Oil and Gas

formed the Talitha unit in late 2020 based on the potential of the Kuparuk C and Brookian formations. Both formations are conventional. They are the same formations that host many of the large producing fields to the north.

In its first plan of exploration, Great Bear Pantheon proposed drilling the Talitha A well in early 2021 and the Talitha B well in early 2022, as well as some seismic reprocessing.

Given the lack of exploration in the unit, the state required Great Bear Pantheon to post a \$3.3 million performance bond by September 2021. Failure to post the bond would result in automatic termination of the unit. To recover the bond, the company would need to drill a well within two years, or two wells within four years, of the formation of the unit.

The state also approved the neighboring Alkaid unit to the north of Talitha.

The accompanying Plan of Exploration proposed an 8,000-foot Alkaid No. 2 well to the bottom of the Brookian formation with a 10,000-foot lateral to the southwest. The project would begin with infrastructure construction in June 2021 with drilling to follow.

The company intends to conduct a long-term flow test of the Alkaid No. 2 well over a six-month to nine-month period starting September 2022. The flow test would be designed to establish the initial production rate, the slope of the decline curve and the rate at which the decline curve levels off in order to accurately predict the production tail.

Great Bear Pantheon also intends to conduct non-drilling activities, including reprocessing some 50 square miles of merged seismic information collected between 2012 and 2016, as well as other modeling activities and engineering work to consider possibilities for connecting a future development to the trans-Alaska oil pipeline.

The company is also considering a potential Alkaid No. 3 well in 2022. The well would depend on the current non-drilling activities, as well as the results of Alkaid No. 2. As currently envisioned, it would be similar in depth and design to the Alkaid No. 2 well but with a lateral to the northeast. A similar long-term flow test would also be conducted.

A schedule included with the plan calls for starting construction of the Alkaid No. 3 well in early 2022 with the production test occurring over the second half of the year. ●

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EXPLORATION & PRODUCTION

Conoco applies for Rendezvous pool rules

Production, expected by the end of the year, will be from new pad, MT7, in Greater Moose's Tooth unit in NPR-A, southwest of MT6

By KRISTEN NELSON

Petroleum News

ConocoPhillips Alaska has applied to the Alaska Oil and Gas Conservation Commission for pool rules and an area injection order for the Rendezvous oil pool in the Greater Moose's Tooth unit, a regulatory step in the company's plan to have the second pad in the unit, MT7, online by the end of the year.

Production began from Greater Moose's Tooth in 2018, when the Lookout oil pool came online from the MT6 pad.

The Greater Moose's Tooth unit was formed in 2008, the company said in its April 12 application, and a 2018 record of decision on a supplemental environmental impact statement authorized development of the Rendezvous oil pool, ROP.

This project is also known as Greater Moose's Tooth 2, GMT2, ConocoPhillips said, and was sanctioned in 2018.

The Alpine C and Alpine D intervals are proposed for inclusion in the ROP, from a measured depth of 8,229 feet to 8,393 feet, based on a type log from the Rendezvous 2 well.

ConocoPhillips said the proposed Rendezvous pool boundary "extends approximately one full quarter section beyond the largest estimate of Alpine sand presence," an extent proposed to ensure appropriate coverage of the reservoir held by the GMT working interest owners, with the pool boundary terminating "in the south and southeast at the GMTU boundary" and excluding sections not currently held by the unit WIO.

ConocoPhillips is the 100% working interest owner in GMTU and 100% WIO of producing intervals in the Colville River unit.

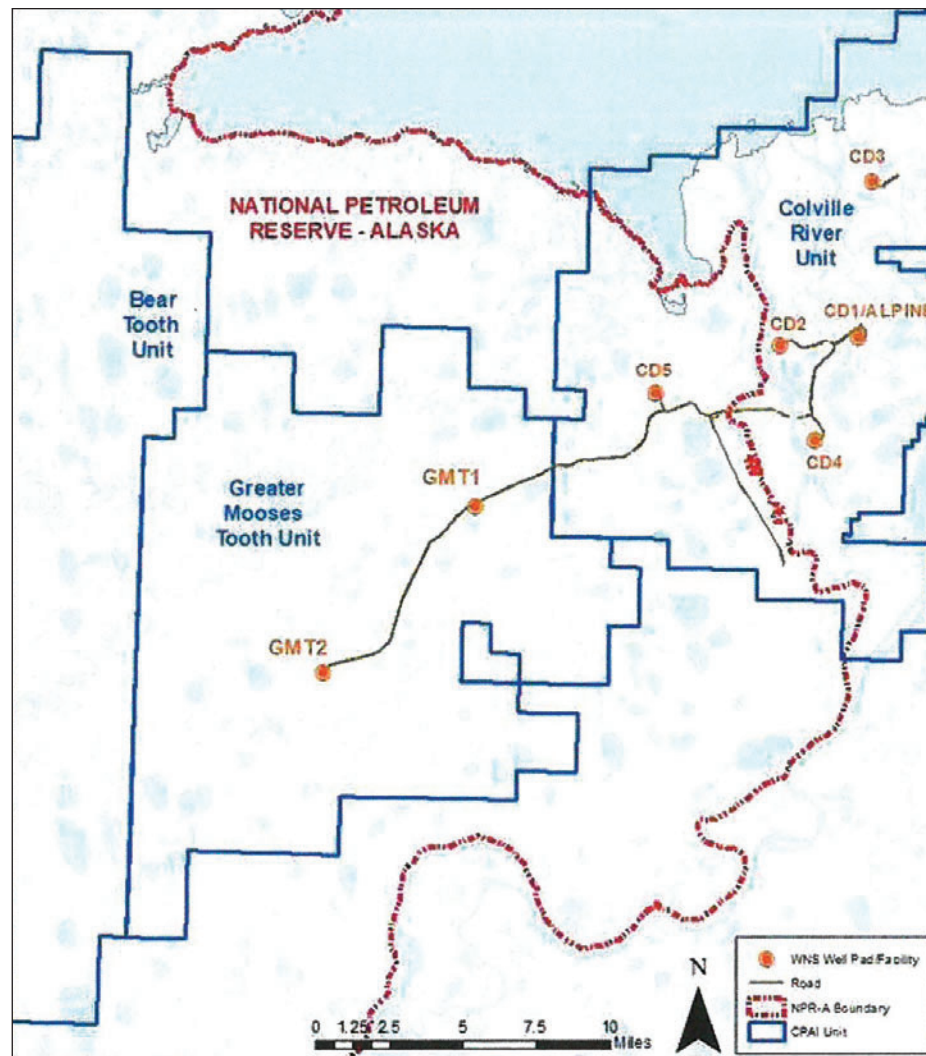
Discovery

The ROP was assessed and delineated from 2000 to 2004 by the Rendezvous A, Rendezvous 2, Spark 1A, Moose's Tooth C, Altamura 1, Spark 4 and Carbon 1 wells.

"Rendezvous 2 and Altamura 1 encountered liquid hydrocarbons, while Rendezvous A, Spark 1A, Spark 4, and Carbon 1 encountered a full gas column with liquid hydrocarbons present in the well tests," ConocoPhillips said.

Based on data from these wells, a gas oil contact is estimated to lie somewhere between the Rendezvous A and Rendezvous 2 wells.

The gas oil contact, GOC, is north of the



"The main intent of the GMT2 project is to avoid drilling into or producing from the gas cap as commercial production from the gas cap is not intended and high GOR wells will not be competitive with ACF gas handling constraints," ConocoPhillips said.

ROP, the company said, but has not been intersected in a wellbore.

"The main intent of the GMT2 project is to avoid drilling into or producing from the gas cap as commercial production from the gas cap is not intended and high GOR wells will not be competitive with ACF gas handling constraints," ConocoPhillips said.

With that in mind, the first northern injector will target the gas cap to confirm the depth of the GOC contact.

The southern wells are not expected to encounter the GOC.

"A voidage replacement ratio of 1.0 is targeted to avoid production from the gas cap," the company said.

Development

ConocoPhillips said a standalone processing facility would not be economically feasible for Rendezvous and that oil from the ROP oil column will be routed to the Alpine Central Facility for processing. Because of gas handling limitations at the ACP, which would "result in significant production backout of existing pool," gas development from the area is not feasible, although the company said it continues to analyze development options for natural gas found in the area.

GMT2 includes a new drill site, MT7, and associated facilities some 8 miles southwest of GMT1's MT6 drill site. A permanent road connects the two. There are four new cross-country pipelines for produced fluid, water injection, gas injection and dry gas supply. Thirty-six horizontal wells are planned, 18 producers and 18 injectors, with a planned injection program of water alternating with enriched gas injection to optimize recovery from the ROP.

AOGCC data shows the company filed a drilling permit for the first well at ROP, GMTU MT7-04, a service well, on

April 8.

The company said ROP is like the Lookout oil pool "in that it does not have Alpine A sand present, does not include Kuparuk sands, and is light oil" and has a higher solution gas-oil ratio than Colville River unit Alpine sand. It said ROP will be operated similar to upper Jurassic oil pools at Lookout and the Colville River unit. ROP oil has an API gravity of 37.2 degrees.

Recovery

ConocoPhillips said successful secondary and tertiary recovery in the Alpine C sand at the Colville River unit "provides an analog for the expected performance in the ROP," with favorable rock properties and waterflood mobility expected to yield ultimate recovery in the 35-60% range of original oil in place.

Primary recovery alone is expected to yield a 20% recovery, the company said. "The remaining ultimate recovery is expected through secondary and tertiary mechanisms with EWAG injection," enriched water alternating gas.

The company said the initial 36 wells will "yield additional data that will provide a better understanding of the sand distribution in the Rendezvous reservoir." The MT7 pad is designed to accommodate 12 additional wells considered extended reach drilling.

The company said it "continues to also analyze future development options for Spark."

For waterflood EOR, ConocoPhillips said seawater will be provided to ROP and in the future, produced water from the ACT may be used.

ROP production is expected to be "fully compatible" with production from the Lookout oil pool and other Colville River unit pools, the company said. "The ROP is a very close analog to the AOP because both pools share a similar geologic history with the same oil charge source (Lower Kingak) and comparable structural and depositional schemes."

Hearing scheduled

AOGCC has scheduled a hearing on the application at its Anchorage offices on May 25 at 10 a.m., with telephonic access available by calling 1-800-315-6338 (meeting code is 14331). The commission said lines for the hearing will be available beginning at 9:45 a.m. ●

Contact Kristen Nelson
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88 ENERGY DRILLING

bookbuild to domestic and international institutional and sophisticated investors to raise \$9.3 million before costs through the issue of 1,500 million ordinary shares at A\$0.008 (equivalent to \$.0062) per new ordinary share.

On March 22, the company entered into a share subscription agreement with a major contractor for the Merlin 1 drilling operation, ELKO International LLC, to raise \$5 million, the company said. Under the agreement ELKO was issued 360 million ordinary shares at A\$0.018 (equivalent to \$0.014), which is a 225% premium to the Feb. 12 placement. There were no fees associated with the placement.

Cash call proceeds received from joint venture partners in the quarter totaled \$6 million, the company said.

88 Energy held cash and cash equivalents of \$15.5 million at the end of Q1, it said, up from \$11.5 million at the end of the previous quarter.

On March 23, 88 Energy's 100% controlled subsidiary Accumulate Energy Alaska Inc. entered into a \$16.5 million debt refinancing agreement to replace the existing Bank of America debt facility secured by available Alaska production tax credits, 88 Energy said. Financing facilities, consisting of all forms of financing arrangements available to 88 Energy, stand at \$16 million — which was equal to the total amount drawn at the end of Q1.

Project Peregrine

At the Merlin 1 well, interpretation of logging while drilling data indicated multiple potentially hydrocarbon bearing zones had been encountered in the Nanushuk formation, the company said. The results were considered encouraging, and the joint venture approved a wireline pro-

gram to determine the presence of mobile hydrocarbons.

"Subsequent to period end the company announced that initial petrophysical interpretation of the wireline logging program indicates several potential pay zones in Merlin 1, however operational issues prevent hydrocarbon samples from two most prospective zones," the company said.

88 Energy said the Nanushuk formation, which contains the primary targets for the Merlin 1 well, was encountered ~600' low to prognosis and is interpreted to be ~500' thicker than that encountered in the wells drilled into the Willow Oil Field to the north of the Project Peregrine acreage.

Umiat acquisition

Immediately south of the Project Peregrine acreage lies the Umiat oil field, which was acquired during Q1 by 88

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TALITHA A RESULTS

“Testing of the deepest of these zones, the Kuparuk formation, which flowed high-quality light oil intermittently at rates up to 100 barrels of oil per day, a disappointing rate, encountered a number of operational issues. The Kuparuk horizon at this location was over-pressured which was both unexpected and unlike any known Kuparuk well regionally, which caused challenges in testing,” Pantheon said.

Why did Pantheon persevere with the Kuparuk and not abandon it and move to the shallower horizons?

Per its April 20 investor presentation, the Kuparuk

was “too good to let go.” The company pointed to the “340 million barrel target with exceptional logs and gas chromatograph readings.”

The four normally pressured shallower Brookian zones, “all of which encountered light oil and offer excellent potential based upon analysis to date,” will be flow tested as early as next winter, dependent on a farm-out, which the company has started.

In the meantime, the “enormous amount of drilling, logging and testing data” collected from Talitha A will be evaluated.

Kuparuk horizon testing

The Kuparuk proved more “geologically complex”

than expected.

The well encountered more than 60 feet of “well-developed sand with high resistivity readings, indicating the presence of hydrocarbons,” Pantheon said.

Talitha A “demonstrated the key elements of a proven hydrocarbon system in the Kuparuk formation with the presence of movable high-quality (plus-42% API) oil. However, during testing the well-produced oil intermittently along with solution gas, with formation water fresher than anticipated,” the company said. “The 100 barrels of oil per day flow rates were not consistent with our expectation based on Talitha logs compared to nearby Kuparuk field production.”

see **TALITHA A RESULTS** page 11

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88 ENERGY DRILLING

Energy through its wholly owned subsidiary Emerald House LLC, from Malamute Energy Inc and Renaissance Umiat LLC, 88 Energy said. The consideration for the purchase was a 4% overriding royalty interest and assumption of liability for abandonment of the Umiat 18 and Umiat 23H wells, drilled by Linc Energy in 2013-14.

In March, cement work associated with plugging and abandoning of the two historical wells at the field was executed; remedial site work will be finalized in April.

The Umiat field is covered by two leases comprising 17,633 acres, which are in a unit that was formed in September 2019 with an initial 10-year term, the company said. The current conditions of the unit stipulate a well commitment (exploration or appraisal) by the end of August 2022.

“Umiat was discovered in the mid-1940s with 11 appraisal wells drilled by 1953, several of which were tested, the company said. Umiat 5 flowed 268 barrels per day on a three-month test and Umiat 8 flowed natural gas.

Linc Energy’s Umiat 23H was tested with a maximum flow rate of 800 bpd and sustained flow of 200 bpd, 88 Energy said. Substantial engineering and environmental work were done by Linc Energy in support of a potential future development, in fact, one of the access routes to infrastructure runs directly through 88 Energy’s Project Icewine.

Project Icewine

At Project Icewine, in-house analysis continued in Q1 on various commercialization options for gas condensate discovered in the Torok Formation in 2020 by 88 Energy’s Charlie 1 well, which found 1 trillion cubic feet of independently estimated gross mean prospective gas as well as associated condensate, the company said. Commercialization options include but are not limited to possible local power generation, compressed natural gas, as well as potential for conversion to hydrogen using steam methane reforming with carbon capture and storage.

During the quarter, the high impact well Talitha A was being tested by Pantheon Resources PLC on acreage adjacent to Project Icewine, 88 Energy said. Several of the prospective horizons in Talitha A are interpreted to extend into 88E acreage.

Pantheon announced that testing had commenced on the Kuparuk horizon, with the Talitha A well flaring natural gas as it cleans up, 88 Energy said. Pantheon said it is too early to make a definitive assessment as to the ultimate commerciality of the Kuparuk horizon, with further results to be announced at the conclusion of testing.

Leases owned predominantly by Burgundy Xploration LLC in the eastern portion of Project Icewine where no money has been spent were relinquished as part of a rationalization process in Q1.

Yukon leases

88 Energy, through its wholly owned subsidiary

Regenerate Alaska Inc. was formally awarded lease AA095899 in the recent Arctic National Wildlife Refuge Coastal Plain lease sale, effective Jan. 1, 88 Energy said, adding that the lease is considered highly prospective for oil and gas due to several prospects on the central North Slope side of the boundary which are interpreted to extend into the area.

It is considered likely that a significant portion of these oil pools may be accessed without surface access within the Coastal Plain area, the company said. The addition of lease AA095899, which is adjacent to the existing Yukon Leases held by Regenerate Alaska Inc, is anticipated to assist in advancing continuing discussions with nearby resource owners to optimize the monetization strategy of the acreage.

The Yukon leases contain the 86 million barrel Cascade prospect, which was intersected peripherally by Yukon Gold 1, drilled in 1994, and classified as an historic oil discovery, the company said, adding that it recently acquired 3D seismic over Cascade and, on final processing and interpretation, high-graded it from a lead to a drillable prospect.

“The Yukon Leases are located adjacent to ANWR and in close proximity to recently commissioned infrastructure,” the company said. “Permitting and planning to continue ahead of a future possible drilling campaign — subject to farm-out.”

—STEVE SUTHERLIN

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LAND WITHDRAWAL

Bay and the western side of Camden Bay, does remain open for future leasing.

Section 12(a) of the Outer Continental Shelf Lands Act, the act that provides a statutory framework for resource development on the outer continental shelf, gives clear authority to the president to withdraw unleased OCS lands from future leasing. However, the act is silent on the circumstances, if any, under which a land withdrawal may be reversed.

President Trump cancelled order

In April 2017 former President Donald Trump issued an order cancelling Obama's 2016 OCS land withdrawal. A group of environmental organizations subsequently launched an appeal in the federal District Court in Alaska, challenging the validity of Trump's

The court vacated the District Court decision, "without prejudice," presumably leaving the door open for another appeal, should a similar situation arise in the future.

land withdrawal reversal. In March 2019, in response to the appeal, Judge Sharon Gleason issued an order, declaring Trump's order to be unlawful, and hence reinstating the land withdrawal. Gleason said that the structure of the OCSLA supports a view that section 12(a) of the act does not give a president the authority to revoke a previous land withdrawal.

The Trump administration subsequently appealed the District Court decision to the 9th Circuit. However, Biden's January 2021 order, re-instating the land withdrawals, rendered the appeal against the 2016 withdrawal order irrelevant to the continuation of the land withdrawal. Consequently, the 9th Circuit court asked

the parties in the appeal against the District Court decision to file supplementary briefs, commenting on the situation. Parties subsequently indicated that they viewed the appeal to be moot, given the Biden executive order.

Case declared moot

Commenting that the terms of Trump's challenged executive order are no longer in effect, given Biden's executive order, the 9th Circuit, in its April 13 order, declared the appeal against the District Court's 2019 to be moot. The court vacated the District Court decision, "without prejudice," presumably leaving the door open for another appeal, should a similar situation arise in the future.

—ALAN BAILEY

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O&G ORDERS

The Trump era secretarial orders include a 2017 SO intended to increase oil development in the National Petroleum Reserve-Alaska, or NPR-A.

Former Interior Secretary Ryan Zinke signed the 2017 order on the petroleum reserve at a conference in Anchorage, saying the path to U.S. energy dominance is "a path through the great state of Alaska."

New leasing already on hold

The Interior Department is already conducting a climate review of oil and gas drilling on public lands and waters. While this is ongoing, the Biden administration has paused new leasing — a move that has incited a pushback from Republicans in Congress and across oil-producing states. (Most Republicans did not vote to confirm Haaland's appointment as Interior Secretary, but Alaska's two senators did — Sen. Lia Murkowski and Sen. Dan Sullivan.)

As part of the new climate task force order, Interior is withdrawing an opinion that said the agency must hold at least two lease sales during a five-year period under the National Outer Continental Shelf Oil and Gas Leasing Program, giving officials time to review requirements under the Outer Continental Shelf Lands Act.

The "new secretarial orders and resulting delays will bring economic harm to Alaskans, and particularly to the residents of the North Slope, who directly benefit from the revenues generated from development and who own resources within restricted federal areas," Feige said.

Impact Native, State lands

"The Interior Secretary's actions are disappointing, but not surprising," Alaska Department of Natural Resources Commissioner Corri Feige told Petroleum News in an April 21 statement. "They confirm our concerns that new layers of federal bureaucracy will discourage activity and economic development, not just in Alaska on land owned by the State and Alaska Natives, but across the entire United States."

The "new secretarial orders and resulting delays will bring economic harm to Alaskans, and particularly to the residents of the North Slope, who directly benefit from the revenues generated from development and who own resources within restricted federal areas," Feige said.

Biden's climate change summit

Haaland's actions are part of a government-wide effort by the Biden administration to further address climate change before a virtual global summit on climate change that Biden is hosting April 23-24.

"From day one, President Biden was clear that we must take a whole-of-government approach to tackle the climate crisis, strengthen the economy and address environmental justice," Haaland said.

"I know that signing secretarial orders alone won't address the urgency of the climate crisis. But I'm hopeful that these steps will help make clear that we, as a department, have a mandate to act," she added.

The American Petroleum Institute, the oil industry's top national lobbying group, disagreed with Haaland.

Trump era orders revoked

The secretarial orders revoked by Interior Secretary Debra Haaland on April 16 are as follows:

SO 3348 — "Concerning the Federal Coal Moratorium" (March 29, 2017)

SO 3349 — "American Energy Independence" (March 29, 2017)

SO 3350 — "America-First Offshore Energy Strategy" (May 1, 2017)

SO 3351 — "Strengthening the Department of the Interior's Energy Portfolio" (May 1, 2017)

SO 3352 — "National Petroleum Reserve — Alaska" (May 31, 2017)

SO 3354 — "Supporting and Improving the Federal Onshore Oil and Gas Leasing Program and Federal Solid Mineral Leasing Program" (July 6, 2017)

SO 3355 — Streamlining National Environmental Policy Reviews and Implementation of Executive Order 13807, "Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects" (Aug. 31, 2017)

SO 3358 — "Executive Committee for Expedited Permitting" (Oct. 25, 2017)

SO 3360 — "Rescinding Authorities Inconsistent with Secretary's Order 3349, "American Energy Independence"" (Dec. 22, 2017)

SO 3380 — "Public Notice of the Costs Associated with Developing Department of the Interior Publications and Similar Documents" (March 10, 2020)

SO 3385 — "Enforcement Priorities" (Sept. 14, 2020)

SO 3389 — "Coordinating and Clarifying National Historic Preservation Act Section 106 Reviews" (Dec. 22, 2020)

API warned that policies aimed at slowing or stopping oil and natural gas production on federal lands and waters could harm environmental progress, as well as national security and the economy.

"Banning or greatly hindering federal leasing ... would threaten decades of American energy and climate progress and return us to greater reliance on foreign energy with lower environmental standards," said Kevin O'Scannlain, an API vice president.

State of Alaska not consulted

"It is also unfortunate that the Secretary did not consult with the State of Alaska on any of these new orders, which directly affect the unique federal obligation to develop the natural resources of Alaska in NPR-A and the ANWR 1002 area," Feige said.

"The North Slope remains one of the most prospective areas in North America for energy development, and the State will continue to fight to draw investment despite these additional obstacles," she said.

Trump, Obama differences

Haaland's first order attacked Trump-era directives that promoted what the former president called an "energy dominant" policy for the United States. The concept is not very different from the "energy independence" positions of past U.S. presidents, including Barack Obama.

The difference is "Democrats are less comfortable getting up on the stand and saying, yes, we are a big oil producer. Yes, we are a big gas producer, and we feel

good about that," Tim Boersma told CNBC in 2017. (Boersma was identified as a senior research fellow at Columbia University's Center on Global Energy Policy. Today, Columbia describes him as "Senior Research Scholar of International and Public Affairs.")

Here is how former Energy Secretary Rick Perry explained energy dominant to the White House press corps in 2017: "An energy dominant America means self-reliant. It means a secure nation, free from the geopolitical turmoil of other nations who seek to use energy as an economic weapon. An energy dominant America will export to nations around the world, increasing our global leadership and our influence."

The first part of Perry's statement dovetails with every U.S. president's goal since Richard Nixon faced the Arab oil embargo in 1973, which halted oil shipments from the Middle East to the United States, the Netherlands, Portugal, Rhodesia and South Africa, in retaliation for support of Israel during the Yom Kippur War.

It was the first worldwide energy crisis.

Role of Yom Kippur War

The Yom Kippur War started in October 1973 when Egypt and Syria launched a surprise attack against Israel on the Jewish holy day. Egyptian and Syrian forces made early gains across the Suez Canal and Golan Heights, but Israel turned the tide, and within a few weeks Israeli troops had pushed into Egyptian and Syrian territory.

The Arab oil embargo was an attempt to pressure Western countries to force Israel to withdraw from seized lands. As a result, the United States experienced its first fuel shortage and first significant increase in gasoline prices since World War II.

In response to the embargo, the U.S. government imposed fuel rationing and lowered speed limits to reduce consumption.

As a last resort Nixon seriously considered military action to seize oil fields. However, negotiations led to the lifting of the embargo in March 1974.

The embargo caused the United States and western European countries to reassess their dependence upon Middle Eastern oil. It also led to changes in U.S. energy policy, including increased domestic oil production and greater emphasis on energy efficiency.

Arab members of OPEC — Organization of the Petroleum Exporting Countries — were responsible for the embargo. Until that time, OPEC, had kept a relatively low profile, mainly negotiating with international oil companies for better terms for member countries.

Enviro groups cheered Haaland

Environmental groups heralded Haaland's April 16 orders and pledged to work with the secretary to ensure Interior Department decisions are guided by science and respect for Indigenous communities, wildlife, outdoor recreation and other uses.

More than 25% of all U.S. greenhouse gas emissions originate on public lands, and Interior has "unrivaled opportunities to restore natural carbon sinks, responsibly deploy clean energy and reduce existing emissions," said Collin O'Mara, president and CEO of the National Wildlife Federation.

—KAY CASHMAN

(Associated Press writers Matthew Daly, Matthew Brown contributed to this story.)

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OIL PRICES

Morning rush hour congestion in cities including Beijing exceeded 2019 levels in the second week of April, according to TomTom International BV. In the United Kingdom, road use reached 99% of pre-pandemic levels on April 18, according to government data.

April 21 was the second day in a row to register falling prices.

ANS fell 73 cents April 20 to close at \$65.89, while WTI fell 94 cents to close at \$62.44 and Brent fell 48 cents to close at \$66.57.

The price action on April 20, however, was thought to be largely influenced by supply factors.

In early trading, prices rose due to a potential supply interruption from Libya, but the markets reversed lower on a report from the American Petroleum Institute of a 436,000-barrel build in crude oil inventories of for the week ending April 16. Analysts had expected a draw of 2.860 million barrels for the week.

The swoon stood in contrast to price action of the previous week, as prices staged a strong recovery April 14 on falling U.S. inventories.

Bloomberg reported April 17 that the unprecedented oil inventory glut that amassed during the coronavirus pandemic was almost gone.

Just a fifth of the surplus that surged into storage in developed economies when oil demand crashed last year remained as of February, according to the International Energy Agency, and the flotilla of tankers laden with stored oil was diminishing.

Notwithstanding the losses on April 20 and 21, oil remains in the low to mid \$60s trading channel it regained on April 14.

Road fuel drives demand

Road fuel was the strongest category in an updated oil demand forecast released by Rystad Energy on April 15.

Rystad's latest forecast calls for a 6% year-on-year increase in global oil demand in 2021, reaching an average of 95.4 million barrels per day from 89.6 million bpd in 2020, and rising to 99.4 million bpd in 2022.

April demand is expected to settle at 93.0 million bpd, climbing to 94.0 million bpd in May and 95.8 million bpd in June, Rystad said.

Total global demand for road fuels is expected to rise by 9% in 2021, to 45.1 million bpd, from 41.3 million bpd in 2020, rising further to 47.5 million bpd in 2022.

Road fuel demand is expected to average 44.2 million bpd globally in April, rising to 44.9 million bpd in May and 45.9 million bpd in June.

Jet fuel continues to be the laggard in fuel demand recovery.

"Among the various fuel sectors, jet fuel has been hit the

hardest by the pandemic," Rystad said.

The consultancy expects jet fuel demand to average 3.9 million bpd in 2021, up 21% from 3.2 million bpd in 2020, "but still a far cry from pre-pandemic levels."

Jet fuel demand in April is expected to be 3.4 million bpd, 3.6 million bpd in May, 3.9 million bpd in June, 4.3 million bpd in the third quarter and 4.6 million bpd in the fourth quarter.

In 2022, Rystad expects jet fuel demand to average 5.4 million bpd as air traffic returns to more normal levels.

United Airlines CEO Scott Kirby mirrored the optimism for air travel recovery in 2022.

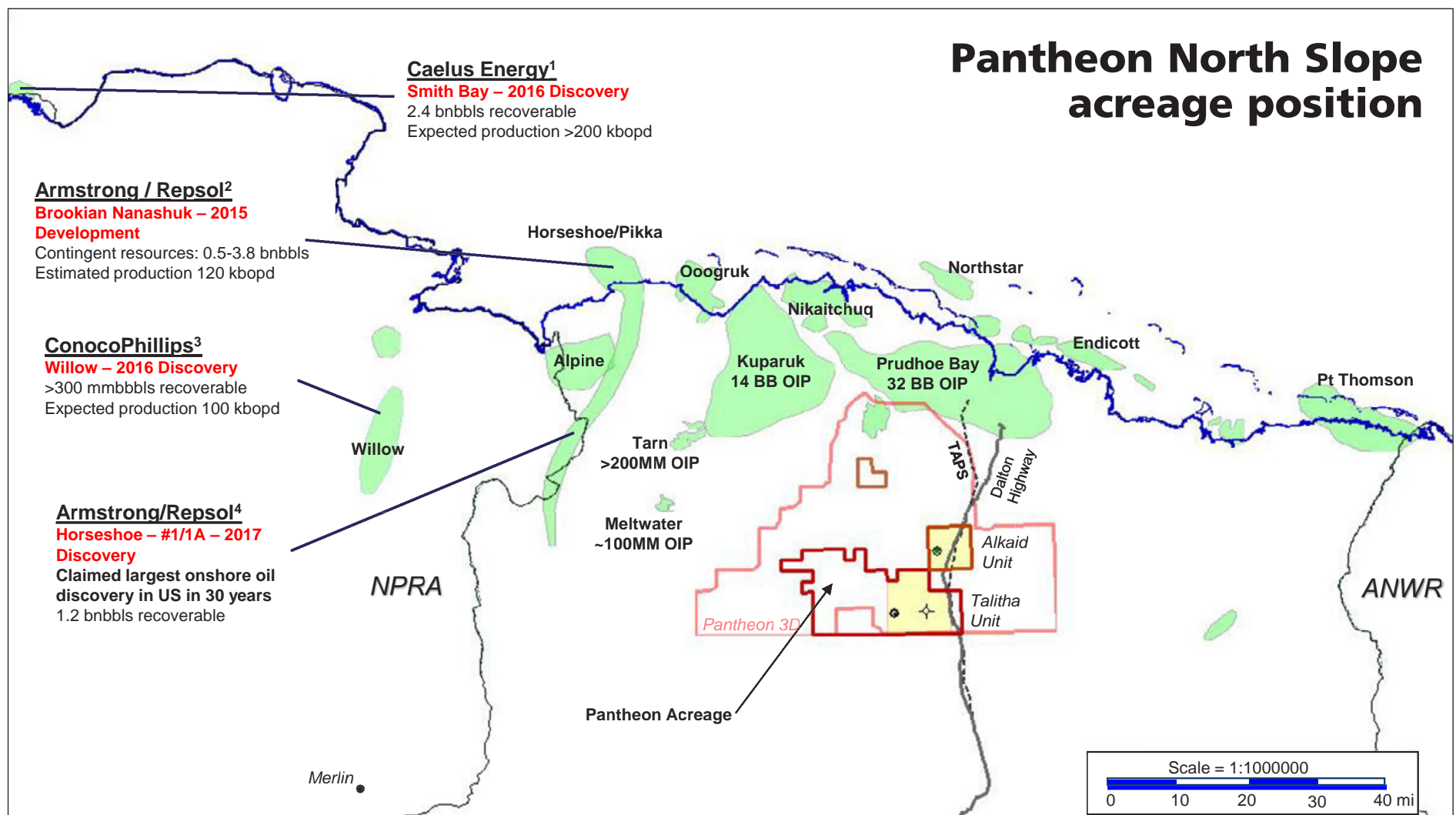
Demand for business and long-haul international flights is off 80% from pre-pandemic levels, Kirby said during a call with analysts.

United doesn't expect business travel to bounce back significantly until 2022 but Kirby said he expected the business travel market to improve in the latter part of 2021.

"If you go to downtown Chicago, the streets are empty," said Andrew Nocella, United's chief commercial officer. "You have to have people back in office buildings, which I think probably starts in the fall; that begins business travel."

But Nocella said leisure travel is taking off, with countries that allow tourists to enter with proof of vaccination rapidly experiencing a return to 2019 visitor levels. ●

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TALITHA A RESULTS

A comprehensive analysis of the Kuparuk has already started, Pantheon said, "to gain a greater understanding of the atypical reservoir characteristics encountered" in Talitha A.

Early analysis "suggests that the Kuparuk horizon at this location might respond better to different drilling fluids and techniques," Pantheon said.

The shallower horizons

The shallower Shelf Margin Deltaic horizon was the primary well target. The Kuparuk formation at this location is some 800 feet downdip from its ideal "updip" position, Pantheon said.

The reservoir qualities in the four shallower zones are "in line with expectations," the company said. The oil "appears to be lighter than expected and an additional significant zone has been discovered, increasing the total resource potential significantly. These zones ... will be tested next winter."

From shallowest to deepest, the five oil bearing zones encountered in Talitha A are as follows: Shelf Margin Deltaic, Slope Fan System, Upper Basin Floor Fan, Lower Basin Floor Fan and Kuparuk.

The Basin Floor Fan zone was thicker than expected, encountering more reservoir, with the Upper BFF an addi-

From shallowest to deepest, the five oil bearing zones encountered in Talitha A are as follows: Shelf Margin Deltaic, Slope Fan System, Upper Basin Floor Fan, Lower Basin Floor Fan and Kuparuk.

tional zone with good reservoir properties.

The Slope Fan System was not as well developed as anticipated, however, but the company "now interprets that the SMD extends across the Alkaid project, and is better developed as it extends south east across the Dalton Highway," Pantheon said.

Baker Hughes and Advanced Hydrocarbon Stratigraphy, or AHS, provided Volatile Analysis Service, or VAS, a "comprehensive, sophisticated and independent evaluation of hydrocarbon presence in the well bore, using mass spectrometry analysis of well cuttings."

VAS entailed taking samples every 10-20 feet, "hermetically sealing approximately half of those samples to avoid any evaporation of hydrocarbons, with the other half of the samples tested after exposure to air," Pantheon said.

These samples are subjected to mass spectrometry analysis in the Baker Hughes AHS VAS lab. VAS analysis confirmed the presence of continuous stacked oil-bearing reservoir zones. Every sample extracted oil, Pantheon said.

The company said it also used conventional data collection techniques including "Logging While Drilling, mud

logging, side wall cores and an entire suite of wireline logs."

Increasing resource estimate

Pantheon has started work on updating its resource estimates across the shallower Talitha A zones.

The discovery of oil in the Basin Floor Fan will become "an area of intense focus as this is part of the significant Theta West prospect, Pantheon's largest target, now considerably de-risked" by Talitha A results.

"Theta West will test the exceptionally large Basin Floor Fan in a better structural location and hence should attract strong partner interest in drilling this significant prospect," the company said.

A silver lining

"A great frustration is that we simply ran out of time to test all the zones. ... when we ... come back this coming winter, we will have the twin luxuries of a testing program incorporating the results of a thorough analysis of the dataset, and a much longer testing window. This can be accomplished with a small rig and at a much reduced cost," Jay Cheatham, Pantheon CEO, said, which is especially good news combined with the fact this past winter's drilling and testing of Talitha A came in one-third under budget. ●

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