

page Wulff says Oil Search moving to Pikka FEED decision at year end

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### **DNR's Feige dismisses one** default by Alliance on Guitar unit

One of the two Guitar unit defaults issued by the Alaska Department of Natural Resources' Division of Oil and Gas has been cured, per an Aug. 19 decision by DNR Commissioner Corri Feige.

On March 26, Alliance Exploration LLC, operator of the central North Slope Guitar unit, received a notice of unit termination for failure to provide a plan of exploration update and failure to comply with applicable statutes and regulations requiring a unit operator bond to be posted with DNR (state statute 11 AAC 83.390).

The small independent promised to secure the bond by June 25 but did not do so. However, the bond was received by

see UNIT DEFAULTS page 12

### **New North Slope player; 88E** snags Premier for Icewine JV

Independent 88 Energy Ltd. said Aug. 22 it has a new joint venture partner for its conventional Icewine project on Alaska's North Slope. London-based independent Premier Oil (LON:PMO) signed a sale and purchase agreement with 88 Energy and Burgundy Xploration to farm-in for a 60% interest in Area A, containing the Malguk-1 discovery drilled by BP in 1991, which discovered but never tested 251 feet of light oil pay in turbidite sands in the Brookian Torok formation.

Premier will pay the full costs of an appraisal well, Charlie-1, up to a total of US\$23 million to test the reservoir deliverability of the Malguk-1 discovery. The well will be drilled and tested in the first quarter of 2020.

Premier, which was founded in 1934, estimates an accumu-

see **ICEWINE JV** page 12

#### **Rocking the NS investment boat:** another effort to raise oil taxes

An initiative was filed Aug. 16 to put what backers are calling the "Fair Share Act" on the Alaska ballot in 2020, increasing what the group calls "Alaskans' share of production revenues from the sale of our oil."

This is the second oil tax related initiative Alaska has seen in recent years. The current initiative would enact oil tax legislation; the 2014 initiative would have repealed oil tax legisla-

"Alaskans should receive their fair share from the sale of our oil," said Robin Brena, one of the current initiative committee members. The group proposing the initiative said the tax increase would only apply to the largest and most profitable

see OIL TAX INITIATIVE page 15

### RCA orders rework of some elements in CINGSA's proposed tariff rates

Following a lengthy hearing, the Regulatory Commission of Alaska has ordered Cook Inlet Natural Gas Storage Alaska to rework its proposed revenue requirement. The revenue requirement, the revenue that a utility needs to obtain to cover its costs and earn a return on its investments, is a key factor in determining the rates the utility charges its customers.

CINGSA provides natural gas storage services for gas and electricity utilities in Southcentral Alaska, enabling the utilities to warehouse gas during periods of low gas demand. The stored gas is critical to ensuring adequate gas supplies and deliverability when gas demand is high, particularly during the winter. CINGSA's rates impact the rates that the utilities need to charge their customers for the supply of gas and electricity.

see TARIFF RATES page 14

#### EXPLORATION & PRODUCTION

# Trident fishbones

BlueCrest triple fishbones equal reservoir contact of 21-27 individual wells

By STEVE SUTHERLIN

Petroleum News

lueCrest Alaska has unveiled its new O"trident fishbone" well design, building on the company's successful fishbone design oil wells, which have markedly improved the economics of BlueCrest's Cosmopolitan project targeting the Hansen field offshore Cook Inlet. J. BENJAMIN JOHNSON As the name implies, the trident configu-

ration involves the drilling of three fishbone wells from one single wellbore.

"The fishbone wells achieve significantly more reservoir contact and penetration than conventional wells, but we haven't calculated the incremental ultimate recovery; it is substantial," J. Benjamin



told Petroleum News. "Each fishbone well contacts the same

amount of reservoir rock as seven-nine individual horizontal wells, and each trident well should recover the same ultimate reserves as three fishbone wells since the reservoir contact is the same," Johnson said, adding, "so, each trident well provides the same amount of reservoir contact as 21-27 individual wells."

Johnson, BlueCrest CEO and president

The trident fishbone allows more wells to be drilled in a shorter time, bringing new oil production online sooner, BlueCrest said in a recent presentation. "This saves substantial time and cost associated with drilling the long-reach wells from

see **FISHBONE WELLS** page 11

#### EXPLORATION & PRODUCTION

# Pikka moving closer

Oil Search files development plan for the Pikka portion of giant Nanushuk Project

#### By KAY CASHMAN

Petroleum News

il Search Ltd. has taken one more step toward production of its big Nanushuk oil discovery, scheduling its 120,000 barrel per day development for April 2023.

On July 15, Oil Search (Alaska) LLC submitted a plan of operations application to the Alaska Department of Natural Resources' Division of Oil and Gas to authorize the development phase of a portion of its Nanushuk Project within the Pikka unit. The Nanushuk oil reservoir west of the central North Slope is thought to rival that of multibillion-barrel Kuparuk River unit, the second largest In turn, on Aug. 19, the division posted a 30-day notice asking for public comments on the proposed Nanushuk Project's Pikka

development, which includes some infrastructure on leases outside the unit.

oil field on Alaska's North Slope.

In turn, on Aug. 19, the division posted a 30-day notice asking for public comments on the proposed Nanushuk Project's Pikka development, which includes some infrastructure on leases outside the unit (see project overview map in pdf of this

see PIKKA PROGRESS page 7

# Glimmer of hope for gas

Alberta electricity producers start switch from coal to gas fired power plants

#### By GARY PARK

For Petroleum News

wo of Canada's largest electricity generators L are giving a lift to Alberta's hard hit natural gas sector by converting more of their coalfired facilities to consume gas.

And even more of Alberta's existing energy only electricity market could join the trend once the provincial government embarks on a promised plan to tackle some of the electricity sector's fundamental issues.

For now, the move to change is being led by Calgary based TransAlta, which has 70 power plants in Canada, the United States and Australia that are currently 52% fired by coal, 22% by gas, Despite Western Canada's imbalance of gas production that is weighted in favor of "dry" gas, there has been success in pursuing the associated light petroleum liquids in the Montney formation that crosses the Alberta British Columbia border.

13% by wind, 11% by hydro and 2% by geothermal, and Capital Power Corp., a multinational operation with capital assets estimated at C\$450

TransAlta Chief Executive Officer Dawn Farrell said the conversion of her company's coalfired

see HOPE FOR GAS page 13

GOVERNMENT

# Balash resigns from Department of Interior

By KRISTEN NELSON

Petroleum News

oe Balash, assistant secretary of the U.S. Department of the Interior, has resigned effective Aug. 30, Alaska Public Media reported Aug. 20. Secretary of Interior David Bernhardt announced the resignation by tweet

Aug. 20, saying that Balash had announced that day he would be moving on from Interior. Bernhardt said he joined the president in thanking Balash for his service.

Balash was confirmed to the Interior position in 2017. In announcing his confirmation, Interior said the assistant secretary heads the department's management of all federal lands and waters, JOE BALASH



and associated mineral and nonmineral resources, as well as appropriate regulation of surface coal mining, including both the Bureau of Land Management and the Bureau of Ocean Energy Management.

Prior to his positions in Washington, D.C., Balash, who is from North Pole, served as deputy commissioner and then commissioner of the Alaska Department of Natural Resources, and before that was staff in the Alaska Legislature.

Prior to being named assistant secretary, Balash served as chief of staff to U.S. Sen. Dan Sullivan, R-Alaska.

"Joe Balash has been a dedicated public servant for over twenty years," Sullivan said in an Aug. 21 statement. "During his tenure at the Department of the Interior, he worked tirelessly to promote the goal of American energy dominance, and understood that Alaska was key to that goal. In doing so, he has helped set Alaska up for success for years to come. I wish him all the best in his future endeavors."

"I greatly appreciate Joe's hard work and dedication at the Department, where he has led the way on a number of issues that are critical to our state and nation," U.S. Sen.

Lisa Murkowski, R-Alaska, said Aug. 21.

"From standing up the leasing program for the 1002 Area to the lifting of decades-old Public Lands Orders, Joe has worked tirelessly to advance responsible resource development and improvement land management," Murkowski said. She said Alaska is in a better place because of his leadership, thanked him for his public service and wished him the best in future endeavors. Murkowski said she is "confident that even without him, the strong partnership we have formed with the Department in this administration will continue."

Prior to his positions in Washington, D.C., Balash, who is from North Pole, served as deputy commissioner and then commissioner of the Alaska Department of Natural Resources, and before that was staff in the Alaska Legislature.

He told Alaska Public Media that he was resigning to pursue another opportunity, which he would describe at a later date.

> Contact Kristen Nelson at knelson@petroleumnews.com

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EXPLORATION & PRODUCTION

# Oil Search, Conoco team up in Alaska

Operators working together to develop huge Nanushuk oil reservoir; Oil Search still plans to divest percentage in core leases

#### By KAY CASHMAN

Petroleum News

il Search Ltd.'s half year financial report and webcast on Aug. 20 carried news about its Alaska activities and plans, most significant that Oil Search (Alaska)

LLC is working with ConocoPhillips develop the North Slope's big Nanushuk oil reservoir and that the ASX listed company is still looking at taking on a partner, aiming to retain approximately 35% across its core leases KEIRAN WULFF versus the 51% it currently holds.



Informally dubbed the Narwhal trend by ConocoPhillips, the Nanushuk reservoir lies west of the central North Slope, its boundaries continuing to expand with exploration by both companies.

The top oil producer in Alaska, ConocoPhillips operates the nearby Colville River (Alpine) unit and the Kuparuk River unit, as well as mostly undeveloped leases in the area, many of which are to the west in the National Petroleum Reserve Alaska (see map of entire area in the pdf version of this story).

As previously disclosed, Oil Search has revised its Pikka unit development plan. First production of approximately 30,000 barrels of oil per day is targeted

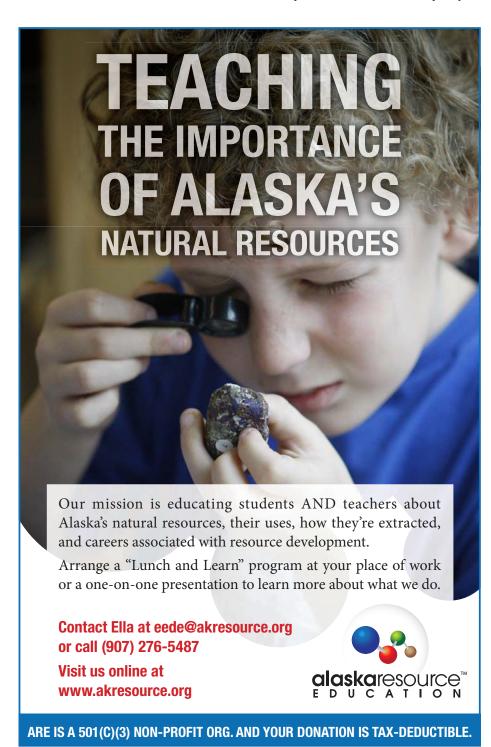
Pikka North Nanushuk and Alpine Fairway ConocoPhillips ConocoPhillips ExonMobil ConocoPhillips Pikka Kuparuk Rive Putu 2 (2018) 550 mmbbl) (2:9 bnbbl) (13.5 bnbbl) Willow 500 mmbbl) Antigua ConocoPhillips Stony Hill 1 (2018) Horseshoe Kachemach East of Hue 2017 **Grizzly North** National Petroleum Reserve Alaska Legend Exploration Pikka Development Unit New Lagniappe Leases Oil Field OSH 2018/2019 Wells

for 2022, a year earlier than initially planned.

The company is "finalizing development plans associated with early production and is focused on exploring opportunities to utilize infrastructure owned by a nearby operator. The full-scale field development, with a nominal capacity of 120,000 bopd, is expected to come onstream in 2024. This revised and phased development approach will allow early learnings from development drilling to be incorporated into the full development plan, as well as generating early cashflow," Oil Search said in its half year ending June 30 results report.

The development plan submitted in mid-July to the Alaska Department of Natural Resources' Division of Oil and Gas indicated start-up of the 120,000 bpd facility would be in April 2023 and do not mention possible early production of

see NANUSHUK TEAM-UP page 5





## FINANCE & ECONOMY

## Koch joins Alberta oil sands bailout

The foreign based pullout from Alberta's oil sands sector gathered even more momentum with word that giant Koch Industries has sold it assets to Calgary based Paramount Resources, notably the largest land holding in the Athabasca region.

The deal includes turning over five oil sands leases to Cavalier Energy, a unit of Paramount, the Alberta Energy Regulator reported.

Because Koch is privately held, the value of the transaction was not reported, although Paramount Chief Executive Officer Jim Riddell hinted the price was not large.

But the deal reinforces the oil sands exodus by foreign controlled companies, led by ConocoPhillips, Royal Dutch Shell, Devon Energy and Norway's Equinor, driven by their desire to avoid endless conflicts with environmentalists and indigenous commu-

The AER approved the assets transfers on Aug. 1, almost two months after an appli-

For Koch, the deal brings to an end its disappointing foray into the oil sands, including its decision in 2016 to scrap plans for the C\$800 million steam powered Muskwa project because of "regulatory uncertainty" and policies by the former Alberta government of Premier Rachel Notley to reduce carbon output from the oil sands.

Koch also brought to a halt in 2003 its C\$3.5 billion Fort Hills mining project because of Canada's ratification of the Kyoto Accord.

It later sold its interest, which a consortium led by Suncor Energy has turned into a C\$17 billion project.

Koch was unable to attract any offers for six properties covering 220,000 net acres and holding an estimated 8 billion barrels of bitumen resources it put on the block in 2012. It later removed the assets from the market.

Paramount has created in 1976 and since acquiring Canadian assets of Apache that have lifted its output to nearly 100,000 barrels of oil equivalent per day.

It holds diverse assets in Western Canada and the Northwest Territories and is targeting a top tier position in the heart of northern Alberta's Duvernay and Montney plays.

—GARY PARK



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## **EXPLORATION & PRODUCTION**

# US drilling rig count up by 1 to 935

On Aug. 16 the number of rigs drilling for oil and natural gas in the U.S. was up by one from the previous week to 935, Houston oilfield services company Baker Hughes said, but down 122 from 1,057 active rigs a year ago.

In its weekly rig count, the company reported that 770 rigs targeted oil (up six from the previous week; down 99 from a year ago) and 165 targeted natural gas (down four from the previous week; down 21 from a year ago). There were no miscellaneous rigs active (down one from the previous week; down two from a year ago).

The company said 68 of the U.S. holes were directional, 815 were horizontal and

Pennsylvania was up by four rigs from the previous week; Louisiana was up by

Alaska and New Mexico were each up by two rigs.

North Dakota and Wyoming were each up by one rig.

The rig count in California, Colorado and Utah was unchanged from the previous

Oklahoma was down by a single rig; Ohio was down by three rigs.

Texas, which at 450 has the most active rigs in the country, was down four rigs from the previous week, as was West Virginia.

Baker Hughes shows Alaska with 10 rigs active for the week ending Aug. 16, up from six a year ago.

The U.S. rig count peaked at 4,530 in 1981. It bottomed out in May 2016 at 404.

—KRISTEN NELSON

## ND drillers set production record in June

North Dakota regulators say drillers set a record for oil production in June.

The Department of Mineral Resources says the state produced an average of 1.42 million barrels of oil daily in June. That was up from 1.39 million barrels a day in May and the previous record of 1.4 million barrels daily set in January.

North Dakota also produced a record 2.87 billion cubic feet of natural gas per day in June, up from 2.81 billion cubic feet in May.

Statewide, companies flared 24% of all gas produced, or double the 12% tar-

There were a record 15,741 wells producing in June. The June tallies are the latest figures available.

There were 61 drill rigs operating Aug. 15, down two from the June average.

—ASSOCIATED PRESS

## **ENVIRONMENT & SAFETY**

# SD seeks solution to abandoned gas wells

South Dakota leaders are considering legislation to prevent the state from bearing the financial responsibility of closing abandoned gas wells.

The state is on the hook for nearly \$1 million to plug 40 abandoned wells in northwestern South Dakota. Department of Environment and Natural Resources Minerals and Mining program administrator Mike Lees says the state has never faced this problem before and has no established policy as a result.

The Argus Leader reports the Minerals and Environment Board and the governor's office have started to consider legislation for the 2020 session.

The Rapid City Journal reports the Board of Minerals and Environment is considering an increase in bonding for oil and gas drilling as the state pursues a \$15.5 million lawsuit against a Texas based company for abandoning gas wells in western South Dakota.

The state is suing Spyglass Cedar Creek, of Houston, Texas, for abandoning the wells after a drilling project fell through several years ago.

Spyglass Cedar Creek drilled 40 natural gas wells near Buffalo then abandoned them after natural gas prices plummeted.

Board members called the Spyglass saga a "perfect storm."

Lees says the state has not had similar issues with other oil and gas developers in the state.

—ASSOCIATED PRESS



#### EXPLORATION & PRODUCTION

# New Mexico oil production causes boom

#### **ASSOCIATED PRESS**

ew Mexico is now on track to collect an unprecedented \$7.8 billion in the budget year thanks to skyrocketing oil production, according to a new legislative revenue tracking report.

The report says total state revenue collections were roughly \$273 million above projected levels through April largely because of oil production in southeastern New Mexico, the Albuquerque Journal reports.

The higher than expected revenue surge for the budget year that ended June 30 could allow for additional spending increases on public schools, roads, pension funds and other programs.

Legislative and executive economists will release new official revenue estimates at a legislative hearing in Red River later in August. New Mexico was already expecting a \$1.3 billion budget surplus for the fiscal year. The latest Legislative Finance Committee revenue tracking report suggests that the final surplus figure will likely end up being larger.

"There are a few storm clouds on the horizon, but we know our revenues are running strong," said Sen. John Arthur Smith, D-Deming, chairman of the Legislative Finance Committee.

Most of the revenue windfall is due to an oil boom in the Permian Basin that has been driven by improvement in drilling techniques and production methods and has made New Mexico the nation's third highest oil producing state.

Already, the state's cash-flush revenue situation has allowed lawmakers to authorize an unprecedented \$663 million spending increase for the budget year that started

in July — or roughly 11% over previous — during this year's 60-day legislative session. Roughly two thirds of that amount is going toward salary increases for teachers and other types of education spending.

In addition, the \$7 billion budget signed into law by Gov. Michelle Lujan Grisham authorizes \$389 million in spending for highway repairs and construction around New Mexico.

While Smith cited concern about a possible looming glut of oil production and uncertainties in the international market, he said the state's budget situation could allow for another big spending increase for the coming year while still keeping cash reserves of 20% or higher.

The record high revenue levels come just two years after a steep revenue downturn forced lawmakers to cut spending and take money from various state funds. •

continued from page 3

### **NANUSHUK TEAM-UP**

30,000 bpd (see related story on Pikka on page 1 of this issue of Petroleum News).

#### **FEED timing**

According to comments made in the Aug. 20 webcast by Oil Search's top executive in Alaska, Keiran Wulff, the company is "moving to FEED at end of this year," FEED meaning front-end engineering and design.

He noted that Pikka has already received its most critical approval, which was the U.S. Army Corps of Engineers' Record of Decision and permit that was issued in May and contained Oil Search changes reflecting feedback from permitting agencies and key stakeholders, in particular the residents of the nearby Native village of Nuiqsut.

Wulff said the company doesn't need to drill more appraisal wells in the core Pikka development area, having done a "very, very comprehensive independent review," incorporating 3D seismic and drilling results from several wells in the field.

Instead, Oil Search will be drilling two "very big potential exploration prospects" nearby during the coming winter drilling season, likely referring to Horseshoe and Grizzly, which the company has mentioned before in conjunction with next winter's two-rig program.

In the written results, the company said the two "high quality prospects" offered "early commercialization options."

#### Taking on a partner

Oil Search and Repsol originally intended to take on a third major partner for Pikka and Horseshoe acreage "backto-back with the exercise of the Armstrong option," the company said in a June 27 statement.

"Despite not running a formal process, in late 2018/early 2019 Oil Search received strong expressions of interest According to comments made in the Aug. 20 webcast by Oil Search's top executive in Alaska, Keiran Wulff, the company is "moving to FEED at end of this year," FEED meaning front-end engineering and design.

from third parties, including an attractive conditional offer, to acquire an interest from the joint venture in the Pikka unit development project and adjacent leases," Oil Search said.

The process was "suspended in early 2019 due to a change in partner views regarding the upside resource potential, following the positive results of the 2018/19 appraisal drilling and the increase in resource potential recognized in the Horseshoe area, both within the existing field extension and in newly identified Nanushuk prospects within the Horseshoe block," Oil Search said, validating rumors and related statements from Repsol executives that the Madrid based major was interested in increasing, not decreasing its North Slope investments.

Oil Search said in June it would be "recommencing a formal divestment process" to bring in a third partner for some of its interests in its Alaska portfolio, scheduled to conclude in the first half of 2020, ahead of a final investment decision for the initial Pikka development.

This was confirmed in its Aug. 20 results and webcast, although the words "third partner" were not used.

"Preparations to divest a portion of our Alaskan portfolio are advancing well, with Oil Search aiming to retain approximately 35% across our core leases. A formal sell-down process is planned to commence late in the fourth quarter, with completion expected to occur prior to a final investment decision on the Pikka unit development, currently scheduled for mid-2020. We believe this timeframe will enhance the value of our sell-down, by incorporating the expected resource

upgrade within the Pikka unit, optimized drilling information and early results from the 2019/20 winter drilling season," the company said.

Regarding the resource upgrade, the following was said: "The results of the drilling program are presently being combined with well data from other wells drilled in the trend as well as reprocessed and merged 3D seismic data. As previously indicated, we anticipate a material resource upgrade above the acquisition case, which will be reviewed by independent experts ahead of a formal certification process in early 2020 and before the planned equity sell-down."

#### Looking to 'secure' two rigs

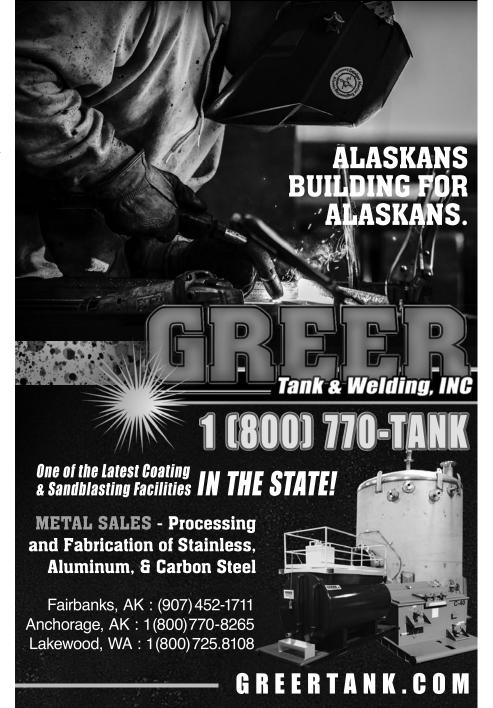
Other interesting Alaska news that came to light Aug. 20 included:

• "Negotiations advanced to secure two

rigs capable of drilling 70% of >120 wells" per a chart in the results.

- As part of Oil Search's new organizational structure, Wulff's title was changed from executive general manager and Alaska president to "EVP and Alaska president," and, Bruce Dingeman, formerly business unit executive vice present, is now chief operating officer, and continues to report to Wulff.
- Capital costs in Alaska in the first half the year were US\$290-\$340 million for exploration and evaluation and \$450 million for exercising the "Armstrong option" for a final buyout.
- The "Repsol farm-down" to a 49% working interest in Pikka, Horseshoe and nearby leases netted Oil Search \$64 million. ●

Contact Kay Cashman at publisher@petroleumnews.com





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### **PIKKA PROGRESS**

story).

In its plan, Oil Search said it intends to continue to operate Pikka, including the completed production facility and related infrastructure.

The company had previously said discussions for possible facilities sharing on the 120,000 barrel per day development were taking place with "current North Slope operators." Negotiations were to be completed by the time a Pikka FEED, or front-end engineering and design, decision was made in the second half of this year. The timing has since been narrowed down to the fourth quarter (see article in this issue titled "Oil Search, Conoco team up in Alaska.")

In addition to oil from the prolific Nanushuk formation, the Pikka development will target the Alpine C interval, another one of six stacked plays in the unit, per a 2016 statement by former operator head Bill Armstrong.

#### Three drill sites, 151 wells

The leases involved in the actual production of oil are held by Oil Search. All are state of Alaska leases, although in most cases the subsurface mineral estate is jointly managed by the state and Arctic Slope Regional Corp., the Native regional corporation for the area, with the surface land owned by Kuukpik Corp., the Native village corporation for the community of Nuiqsut.

Per the Pikka development plan, which was submitted by Oil Search's permitting manager Julie Lina, the company has, or anticipates having, an access agreement in place.

The Pikka development will have three Nanushuk Project drill sites, A, B and C, with as many as 151 production and injection wells — 43 at ND A, 55 at ND B, and 53 at ND C (see chart titled Pikka Schedule of Operations in the pdf of this story).

Other significant infrastructure will include the Nanushuk processing facility, the Nanushuk operations pad, tie-in pad, infield pipelines, import and export pipelines, infield and access roads, a boat ramp and a potable water system. The Oliktok Dock will be used for offloading barges transporting sealift modules to the project.

But prior to these activities, screeding will be done in front of the existing Oliktok Dock.

Oil Search's plan also said minor upgrades and maintenance to the existing road system may be required to facilitate transportation of sealift modules.

Gravel for project development will be from one or more existing gravel mine sites, which will be permitted and operated independently of the project.

#### Permanent and temporary structures

The Pikka development will include both permanent and temporary buildings.

The Nanushuk operations pad will support fieldwide operations and will have the following: a 200-bed operations camp; office, warehouse and maintenance buildings; warm and cold storage buildings; water/wastewater treatment plants; communications structures; backup generators and fuel storage; and a helicopter landing pad.

The Nanushuk processing facility will include processing and utilities modules; metering and pigging facilities; power generation facilities; a truck fill station; construction material and equipment staging areas; and a central control room. The processing facility will have either a single flare or dual flares to support both

**Pikka Schedule of Operations** 

Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1.	Pre-pack and construct ice roads and pads (winter only)	11/1/2019	5/31/2021
2.	Placement of temporary construction camps (off ice pad in winter only)	12/1/2019	5/31/2023
3.	Gravel hauling and construction of roads and pads (construction in winter only and access from existing infrastructure in summer, gravel farming in summer)	12/1/2019	5/31/2021
4.	Facilities construction (summer and winter)	6/1/2019	5/1/2021
5.	Pipeline construction (winter only)	8/1/2022	5/31/2023
6.	Placement of temporary constrstruction camps (year-round)	11/1/2020	12/1/2021
7.	NOP camp construction (year-round)	1/1/2021	6/30/2021
8.	Screeding of barge landing at Oliktok Point area (summer), sealift delivery (summer), and transport of modules (winter or summer)	8/1/2022	8/31/2022
9.	Drilling (year-round)	1/1/2021	2036
10.	Operations (year-round)	4/1/2023	Life of Field

high and low pressure safety relief systems

A number of additional temporary camps will be established to support construction and drilling activities

Offsite pioneer construction camps will be near the selected mine site on an ice pad or on an existing gravel pad, pending available space, Oil Search said in its plan. These camps will be used until the construction camps are installed and operational (up to two years) and house as many as 300 people each.

Construction camps capable of housing a total of 800 people will be on one or more of the project's gravel pads. The camps will remain through the completion of the construction and startup phase (two to five years), after which they will be decommissioned and removed from the site.

Drilling support camps will be on each drill site. They will house 120 to 150 people per rig and be used for up to 19 years before being decommissioned and removed.

The design life of the Pikka project is "30 years or more," Oil Search said.

#### Well sites

The locations of the three drill sites were dictated by the configuration of the oil reservoirs and defined by previous exploration efforts, with consideration for site accessibility requirements and operational constraints. Drill sites are also oriented with the long axis parallel to the prevailing northeast/southwest wind direction to minimize snow drifting, Oil Search said

The drill sites might have additional well slots to accommodate two Class 1

underground injection control disposal wells

Grind and inject facilities will be built on ND B.

In addition to accommodating drilling equipment and support facilities, the drill sites will have space for well testing equipment, stimulation equipment, drilling mud and cement tanks, production gathering facilities, diesel fuel storage tanks, a communication tower, cold storage, emergency response equipment, process heaters, drilling laydown areas, temporary camps and offices.

No processing of multiphase product — a mixture of crude oil, natural gas and produced water — beyond routine well

testing and process fluid heating, will occur at the drill sites.

#### Nanushuk processing facility

Multiphase product from the drill sites will be transported to the Nanushuk processing facility via multiphase pipelines.

Seawater and produced water separated from the oil at the processing facility will be treated and transported back to the drill sites via water injection pipelines to be reinjected into the subsurface formation to help with crude oil production.

Separated gas will be used for fuel at the facility, and the remainder will be

see PIKKA PROGRESS page 8





#### **PIKKA PROGRESS**

transported back to the drill sites via pipelines for gas lift. Excess gas, if any, will be injected into dedicated injection wells at the drill sites.

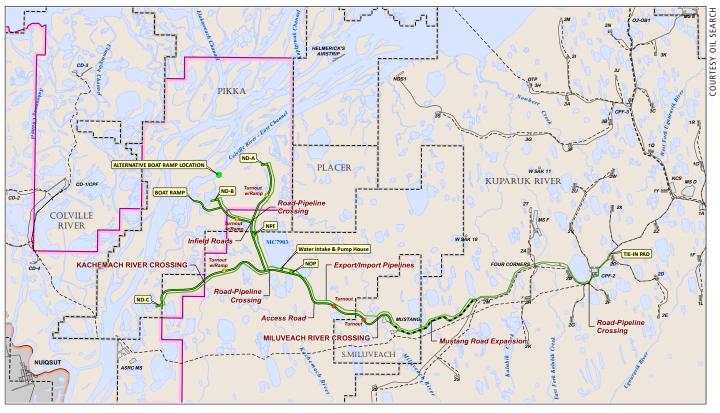
Sales quality oil will be transported to the tie-in pad near the Kuparuk central processing facility 2 via the Nanushuk Pipeline, where it will tie into the Kuparuk sales pipeline for conveyance to the Trans Alaska Pipeline.

Equipment designed for fluid separation (gas, oil, water), heating and cooling, pumping, gas treatment and compression for gas lift and injection, and water treatment for injection will all be at the Nanushuk processing facility.

The processing facility will also include metering and pigging facilities; power generation facilities; a truck fill station; construction material and equipment staging areas; a central control room; an equipment receiving module; and a communication tower.

The facility will house a tank farm for diesel, crude oil, production chemicals, glycol, and methanol storage tanks.

All facilities will be fabricated off site and delivered to the project overland by truck or by barge during the summer. Modules delivered by barge will be offloaded at Oliktok Dock and moved to the site: "The project also includes delivery of large modules by barge to Oliktok Point during open water and transport using self-propelled module transporters over the existing and new road system. Minor upgrades and maintenance to the existing road system to facilitate transportation of sealift modules will occur if engineering and construction design determine it is required," Oil Search said.



#### Nanushuk operations pad

The Nanushuk operations pad infrastructure includes:

- A 200-bed operations camp to house operations and maintenance personnel, including living quarters, housekeeping, a recreation area, food service facilities and a small medical clinic.
- Office, warehouse, and maintenance buildings.
  - Warm and cold storage buildings.
- Water/wastewater treatment plants and temporary waste storage areas.
- Communication structures, including a tower.
- Diesel-fired standby power generators and fuel storage.
- A helicopter landing pad, although Oil Search said routine helicopter use is

not planned under normal operating conditions.

• A tank farm for diesel and refined fuel.

The operations pad will also support construction camps, offices, laydown, storage and maintenance facilities during the construction phase. Once removed, the area will be repurposed for drilling and operations.

#### **Utilities**

Power generation facilities at the Nanushuk processing facility, will consist of gas-powered turbines. Power will be supplied to other project facilities, including drilling rigs, if power availability allows, via power cables installed on infield and Nanushuk Pipeline horizontal support members, or HSMs, using mes-

senger cables.

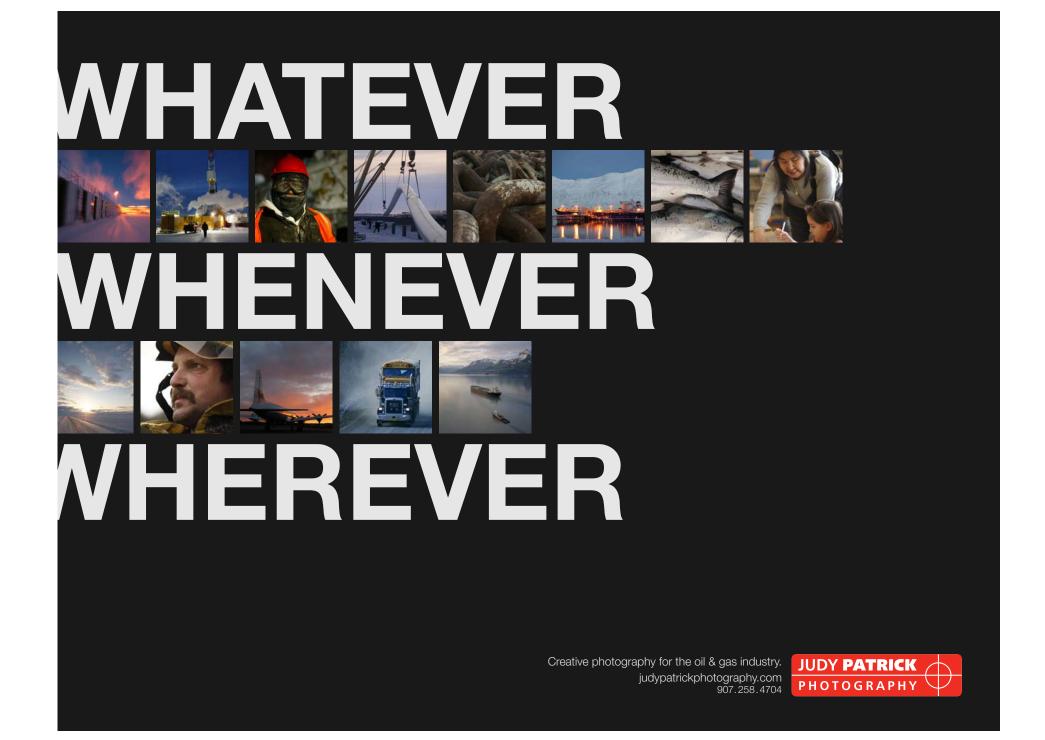
Power generated at the processing facility will be supplied to each drill site through 34.5 kV power cables. A 13.8 kV cable will run from the facility to supply power at the Nanushuk operations pad and the tie-in pad.

When power from the processing facility is not available, diesel-fired engines used to power the drilling rigs will comply with EPA Tier 4 final emission standards, Oil Search said.

Communications between project facilities will be via fiber optic cables installed on infield and Nanushuk Pipeline HSMs using messenger cables.

Communication towers will be at the drill sites, the processing facility, the operations pad, and the tie-in pad. The

see PIKKA PROGRESS page 9



9

continued from page 8

### **PIKKA PROGRESS**

towers will be approximately 30 feet at the drill sites and 120 feet at the processing facility and operations pad.

#### **Gravel roads**

The Pikka development plan includes 12.4 miles of gravel infield roads — a 3.5 mile ND A road, a 2.1 mile ND B road, a 5.2 mile ND C road, a 1.4 mile Nanushuk boat ramp access road and a 0.2 mile water source access road — to provide all-season ground transport between the processing facility, drill sites, and other project facilities. The project also calls for a 9.5 mile gravel Nanushuk access road to provide all-season transport connecting the processing facility to other infrastructure.

Gravel roads will be built to be 24 feet (up to 44 feet at the base) to 32 feet (up to 52 feet at the base) wide at the surface, although roads could be wider at curves for larger modules, resulting in widths within a range based on North Slope industry construction and safety practices.

Six road turnouts (three along the Nanushuk access road, one along the ND A road, one on the ND B road and one on the ND C road) will be constructed to allow safe access to project facilities during movement of large equipment such as drilling rigs.

Three gravel tundra access ramps will be placed at road turnouts near the drill sites to provide access for off-road travelers.

Snow ramps will initially be built for "tundra access and the gravel tundra access ramps will be sited and constructed based on areas of highest use by local subsistence users," Oil Search said.

Access and infield roads are designed to accommodate two-way traffic for use during "facility construction; drilling; and operations for mobilization of construction materials, drill rigs and drilling materials, supplies, personnel, and, if necessary, emergency spill response equipment."

The Nanushuk access road will follow the existing Mustang access road for 4.7 miles, although the exact length could vary slightly due to wider curves and other topographical features, Oil Search said.

Use of the Mustang access road will need upgrades to bring it up to minimum design standards and improve road surface condition, possibly involving expansion of the road base width and the addition of higher quality material to improve load capacity.

Gravel roads will parallel the proposed pipelines to facilitate year-round access for maintenance, repair, monitoring, and, if necessary, emergency response.

#### **Bridges and culverts**

The Nanushuk access road will cross the Miluveach River and the ND C infield road will cross the Kachemach River on 170 and 245 foot bridges, respectively. Both bridges will be multi span structures and will include pipe pile foundations at sheet pile abutments and several sets of

intermediate pier piles between abutments, Oil Search said.

The bridges will consist of steel girders with precast concrete decks.

At the Kachemach River crossing, the bridge is designed to accommodate boat traffic.

The access road will include drainage structures to pass the expected flow along the road. Prior to construction, an engineer will walk and slope-stake the roads to determine precise locations of drainage structures and determine on-site conditions for final layout.

Typical drainage culverts will be structural steel pipe

Fish passage culverts will be designed at stream crossings where the Alaska Department of Fish and Game determines that fish are present, and design will be in accordance with the department's Title 16 fish passage standards.

Flow velocities at culvert outlets will be analyzed, and outlet erosion control measures will be designed as necessary to prevent channel degradation.

Downstream scour protection, where required, generally consists of articulated concrete block mats or other appropriate material in Oil Search's plan.

Typically, steel pipe culverts will be built during winter.

Multiplate culverts will be installed during the summer months to allow proper compaction of gravel around the culverts; however, temporary passage structures can be installed during winter, Oil Search said, allowing continued flow during construction of the permanent multiplate structure.

Cross-drainage culverts will be installed within the infield and access roads to reduce impoundment and allow conveyance of surface water flow that intersects the road in order to maintain natural drainage patterns.

#### Ice roads and pads

Ice roads will be used during construction of the pipelines, gravel roads and bridges.

Approximately 190 to 280 miles of ice roads are planned during the construction phase.

Standard duty ice roads on the North Slope are a minimum of 6 inches thick and an average of 12 inches thick due to terrain features, Oil Search said.

Ice roads for construction, materials and personnel transportation will be built to support expected loads and protect the vegetation and organic soil beneath.

The roads will be wide enough to safely accommodate two-way vehicular traffic (minimum of 20 feet), drill rigs (minimum of 35 feet) and other traffic, as required.

The ice road season each year varies depending on weather conditions and ice road completion times.

Seasonal ice pads will be used to support construction activities, including gravel placement, and pipeline and bridge installation. Ice pads will likely be adjacent to bridges, at each major gravel pad, and every 3 to 4 miles along access/infield roads and Nanushuk/infield pipelines.

see PIKKA PROGRESS page 10









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#### **PIKKA PROGRESS**

Construction support ice pads will house field offices, break shacks, envirovacs and field shops, and will stage construction equipment, vehicles, materials and supplies until gravel pads become available.

Each construction support ice pad will be a minimum of 6 inches thick and one acre or less in size. If space on an existing gravel pad is not available, an ice pad may be used to house the offsite pioneer construction camp during winter seasons of construction. Water for ice roads and ice pads will be obtained from permitted surface water sources.

#### **Pipelines**

The Pikka development includes two types of pipelines: infield pipelines, which connect the drill sites to the processing facility, and the Nanushuk Pipeline that connects the processing facility to existing infrastructure on the North Slope via the tie-in pad.

All pipelines will rest on HSMs supported by one or two (such as at anchor supports) 8 to 24 inch-diameter pipe pile VSMs spaced approximately 55 to 60

Pipelines diameters will vary from as small as 6-inch for gas lift and gas injection lines and 24-inch for multiphase lines.

Where feasible, pipelines will be parallel to gravel roads at a distance of between 500 and 1,000 feet to minimize caribou disturbance and excessive snow

All pipelines will be externally coated with 20 mils of fusion-bonded epoxy, covered with 3 inches of polyurethane foam insulation, and wrapped in a 24-

Alaska's #'

INDICATIVE DEVELOPMENT TIMELINE **FOR EARLY PRODUCTION IN 2022, FULL FIELD DEVELOPMENT IN 2024** 



**EPS tie to adjacent facility Production FEED Appraisal** Main **Full field Development** 

- Putu drilled (COP)
- 3D seismic reprocessing
- Reservoir modelling
- Build data base
- Pikka B & C wells drilled
- Value engineering (wells and facilities)
- Key permits
- Integrated dynamic reservoir modelling
- Early works programme
- Contracting strategy
- Land access
- FEED commitment by end-2019 with FID in 2020
- Construction and production from Early Production System (EPS) facilities:
- ♦ Initial EPS rate of ~30,000 bopd
- Build ~60 km pipelines and ~42 km roads Construct new CPF or cooperative

development with adjacent operators

- EPS drilling lessons will optimise development drilling
- · Production from main facility (full-field development) targeting 2024:
- Full field plateau rate nameplate 120,000 bopd
- Debottlenecking opportunities
- Appraisal drilling, near field exploration

Sales quality oil will be transported to the tie-in pad near the Kuparuk central processing facility 2 via the Nanushuk Pipeline, where it will tie into the Kuparuk sales pipeline for conveyance to the Trans Alaska

pipeline road crossings will extend at least 2 feet beyond the road embankment

Power and fiber optic cables will cross under the road prism via a trench located

parallel to each pipeline-road crossing.

Trenching will take place during the winter. Trenched materials will be temporarily sidecast onto an ice pad adjacent to the trench. Trenched materials will be taken off the ice pad and backfilled into the excavation once trenching is com-

#### All other facilities, equipment

No new airstrip is proposed for Pikka. During construction, drilling and operations the commercial airport in Deadhorse, approximately 52 miles away, will support air transport of project personnel and small materials and supplies to the North Slope.

Personnel and materials flown into Deadhorse will be driven to the project area via the existing road system and ice roads until the gravel access road is completed.

The tie-in pad will include a pig launcher and receiver, a metering skid, transformer skid, a pipe rack, pumping infrastructure, a shutdown valve, a laydown area, a communications tower and the remote electrical and instrumentation module.

A boat ramp will be constructed in the vicinity of ND B. Located on the lower Kachemach River, the ramp was requested by the community of Nuigsut in 2014.

The boat ramp's slope could be as much as 15% and will integrate erosion protection such as armor rock and/or concrete erosion protection mats to stabilize the side slopes.

The ramp will be 20 feet wide at surface and include a small staging and turn-

around area with enough space for short term parking of vehicles with trailers.

The ramp will also include an access road (a minimum of 24 feet wide at the surface) to provide access from the ND B infield road.

An alternative boat ramp location was identified by Nuiqsut whaling captains and search and rescue in 2019, Oil Search said.

#### Leases involved

The project components and their affected leases are as follows:

Nanushuk processing facility, ADL 392983, 392964;

Nanushuk drill site A, ADL 393012; Nanushuk drill site B, ADL 392984;

Nanushuk drill site C, ADL 393029,392989;

Nanushuk operations center, ADL 392964;

Tie-in pad, ADL 25654;

Pump house pad, ADL 392964;

Nanushuk boat ramp, ADL 391445; Nanushuk access road, ADL 390680, 390681, 392964, 390692, 390691;

Mustang road upgrades, ADL 390680, 25590, 25585, 25586;

Infield roads, ADL 391022, 393029, 392982, 392984, 391445, 392985, 392986, 392983, 392964, 392987, 392966, 392967, 392988, 392989, 393012, 393013, 393014;

Miluveach River bridge, ADL 390692, 390691;

Kachemach River bridge, ADL 392966, 392967

Nanushuk Pipeline, ADL 390680, 25590, 392964, 390692, 390691, 25570, 25587, 25586, 25585, 25654, 25655, 25657, 25656;

Infield pipelines, ADL 392982, 392963, 392984, 392986, 392966, 392983, 392964, 392987, 392967, 392988, 392989 391553, 393012, 393014;

Potable water system, ADL 392964; Oliktok Dock barge offload area, ADL 355024.

#### Comment deadline Sept. 20

On Aug. 19 the division also posted two other notices, these for private easements Oil Search had requested.

One was for the Nanushuk processing facility and the Nanushuk operations pad, requesting authorization to construct and operate both on state land outside the Pikka unit.

The other was for the Nanushuk access road, again on state land outside the Pikka

Comments to the division, which must be written, on the Pikka development and the two easements are due by 4:30 p.m., Alaska Standard Time, on Sept. 20. ●

Pipeline. gauge sheet-metal jacket. Pipelines will have a non-reflective finish to reduce reflectivity and potential impacts to wildlife. Where pipelines cross road embankments, coated and insulated pipelines will be encased in structural steel pipe casings buried in the roadway. Casings for

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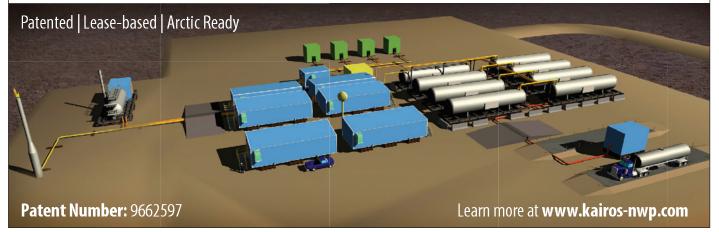
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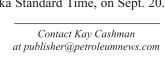


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### FISHBONE WELLS

the onshore drilling location to the offshore reservoir for each fishbone."

Under BlueCrest's original fishbone concept, a complex formation of wellbores drilled through the rock provides one long horizontal "mainbore" along the bottom of the oil zone, from which multiple full diameter wellbores are drilled upward to penetrate individual productive oil sands.

The finished well structure resembles a fishbone, with multiple "ribs" that flow down into the mainbore, then into the long reach well to the surface.

It will take approximately four months to drill each trident fishbone well from spud to production, Johnson said.

Development at Cosmopolitan will proceed more rapidly due to the trident fishbone well.

"Each trident well saves five months to drill the wells that would reach the same reservoir penetration with just the fishbone wells," Johnson said. "Overall, it cuts the total drilling time down by more than two years."

#### Fishbone well possibilities

The old-school method of opening up all the productive sand members of a traditional onshore development would be to drill scores of wellbores, each penetrating all of the layers. But BlueCrest is drilling oil deposits under Cook Inlet from an onshore surface location about three miles away, a distance rendering scores of wellbores to be impractical and uneco-

With its powerful purpose commissioned directional drilling rig, BlueCrest has accurately steered paths of wells throughout the reservoirs, while setting new Cook Inlet records for long-distance drilling at Cosmopolitan.

Drilling costs have fallen over time, the company said.

BlueCrest confirmed that Cosmopolitan reservoir rock is "highly consolidated, providing a strong capability of wellbores to remain open after the holes have been drilled through the rock."

In addition to steering wellbores in any direction desired, BlueCrest was able to sidetrack wells to create new well-paths branching off from an existing well.

After considering all these factors, BlueCrest conceived of, and was able to



BlueCrest Rig No.1

execute, the fishbone approach.

#### **Production headed upward**

As it looks forward to drilling its first trident fishbone well, BlueCrest has enjoyed a year over year production increase at Cosmopolitan.

Production data reported by the Alaska Oil and Gas Conservation Commission said BlueCrest's Hansen field averaged 1,469 barrels of oil per day in June — the most recent month reported, down 14.2%, 244 bpd, from a May average of 1,713, but up 83.4% from a June 2018 average of 801 bpd. BlueCrest had two wells in production in June 2018 and five wells in production in June.

The advent of the trident fishbone well is likely to hasten the production growth

The total combined thickness of the Cosmopolitan oil sands is more than 1,000 feet.

Like many oilfields, Cosmopolitan oil is deposited between the grains of sand in underground geological layers stacked on top of each other The individual oil filled sand layers are separated by thin horizontal layers of silt or shale that create barriers preventing the oil from moving vertically between the oil-filled sands.

#### **Unconventional location**

BlueCrest estimates that in an old onshore basin such as West Texas, a conventional development of Cosmopolitan's type and size of oil deposit would require more than 100 individual wells.

But Cosmopolitan's conventional field is in an unconventional location, which has prodded the company to innovate.

Many modern wells on Alaska's North Slope and in other basins are initially drilled downward from a surface location, then turning horizontally to pass through the reservoir, opening paths for oil to flow from sands contacted by the wellbores, BlueCrest said. Hydraulic fracturing is commonly employed to create limited paths for the oil to flow from other nearby sands into the horizontal wellbores.

But BlueCrest, over the past three years, has focused on developing a drilling and completion process that would optimally open up the multiple layers of Cosmopolitan sands to production utilizing long extended reach wells drilled from onshore.

BlueCrest said hydraulic fracturing was conducted in two of its initial Cosmopolitan wells, but the cost of the fracturing process was very high and the small fractures were inefficient at creating vertical flow paths between the stacked layers.

The fishbone ribs in the first BlueCrest fishbone well penetrate the reservoir at a 110 degree angle, spaced 800 feet apart — 15 acre spacing. Each rib penetrates the entire production interval, from the Hemlock to the Starichkof. The oil flows downward into the common horizontal main bore; no hydraulic fracturing is employed.

Each rib of the fishbone is equivalent to a separate well drilled from the surface, BlueCrest said.

> Contact Steve Sutherlin at stevepna@hotmail.com







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#### **UNIT DEFAULTS**

the state on Aug. 5 from Alliance's surety bonding agent, Bowen, Miclette & Britt Insurance Agency of Houston, Texas.

In her decision to dismiss the March 25 default, the commissioner asked that Alliance also file its second plan of exploration update, which had been due by July 1, no later than Sept. 1. Not doing so, she said "will be grounds for another default."

#### Second default

The second default was not cured. It had been issued Feb. 7 for failure to meet work commitments; specifically, to drill a well by March 31.

In a May 16, 2018, letter, the division-

lation of more than 1 billion barrels of

oil in place, based on the original well

data and its evaluation of the existing

work program, Premier will have the

option to assume operatorship.

ing interest in Area A.

On successful completion of the

88 Energy will retain a 30% work-

Should the Charlie-1 well prove

successful, Premier has the option to

earn a 50% working interest in Areas B

or C through spending US\$15 million.

half 2019 financial results showed an

after tax profit of US\$121 million, free

cash flow of US\$182 million, and

worldwide production of approximate-

ly 8,400 barrels of oil equivalent per

with a company of the technical caliber

of Premier. Premier has a strong track

record of delivering projects through to

"We are delighted to be partnering

Premier Oil's recently released first

continued from page 1

**ICEWINE JV** 

3D dataset.

day.

questioned statements made by Alliance in an April 2018 exploration progress report that said the drilling delay arose from the complications of adding a lease to the unit. The company said it had informed the agency prior to unit formation that drilling a well in the unit was premised on the division assigning the additional lease. The company said it had understood that this lease would be assigned in the fall of 2017.

Then division Director Chantal Walsh said that neither Alliance's application to form the Guitar unit nor the division's approval of the unit formation made mention of the assignment of the additional lease, nor of the lease assignment being integral to the unit plan of exploration.

#### The lease in question

The Guitar unit consists of three state

production and is an excellent addition to the joint venture," Dave Wall, the

managing director of 88 Energy, was

quoted as saying in the company's press release.

"The Charlie-1 well has been designed to test all of the prospective horizons identified in the Western Play Fairway, giving benefit usually only derived from a multi-well program," Wall added.

88 Energy has previously said that Icewine's conventional acreage contained multiple stacked plays, including a Schrader topset play and the Torok slope and basin floor fan play.

88 Energy Alaska, whose general manager of operations is Erik Opstad, is a subsidiary of Australian independent 88 Energy Ltd., a West Perth-based ASX and AIM listed firm.

More information on Premier can be found on its website at premieroil.com.

—KAY CASHMAN

Contact Kay Cashman at publisher@petroleumnews.com

leases, which had previously been part of the Hemi Springs unit, formed in 1983 by ARCO Alaska and terminated in 1992.

Alliance has a 100% working interest in its three leases, while Samuel Cade and Daniel Donkel have small overriding royalty interests. The additional lease, which Alliance said in its April 2018 progress report was integral to its exploration plan, sits at the northwest quadrant of what, with the three Guitar unit leases, would form a square shape.

ConocoPhillips and minority partners were holding that fourth lease, ADL 28249, because the Hemi Springs State No. 1 well, drilled by ARCO in the lease tract in the mid-1980s, was certified as capable of producing hydrocarbons in payable quantities from the Kuparuk C formation.

"The well head is on the Conoco lease, but the bottom hole is on one of our leases," Barry Foote, a member owner of Alliance, told Petroleum News June 25.

In the company's Guitar unit plan of exploration, approved by the division in 2017 in conjunction with the unit approval, Alliance said that it would drill a well in one of its three leases in the unit, preferably during the winter of 2018, but no later than the winter of 2019, depending on the permitting situation.

The well would penetrate the Ivishak formation, the formation that hosts the Prudhoe Bay field reservoir, with a lateral well targeting a seismic anomaly in the Kuparuk C. Depending on the results from the first well, Alliance said it might drill a second well in the following year.

And positive results from the first well would trigger a plan for delineation drilling, Alliance's plan said. It did not mention access to a fourth lease, so if Alliance had told someone in DNR or the division, there was no written record of it.

Alliance said in its April 18, 2018, progress report that it had taken several steps to enable the well to be drilled by the March 31, 2019, deadline. Those steps included moves to acquire the fourth lease, the acquisition and processing of 3D seis-

mic for the unit; the hiring of a consultant to evaluate drilling targets; starting the permitting for the drilling; initiating the preparation of a contingency plan; preparing cost estimates for the drilling project; identifying a contractor for the drilling; and hiring an expert for the eventual marketing of oil from the unit.

#### Oil potential

The division's approval document for the Guitar unit said that Alliance had used an interpretation of the logs from the Hemi Springs well to infer the location of the oilwater contact at the base of the Kuparuk C oil accumulation and had used 3D seismic to trace that contact into the Guitar unit leases — the seismic interpretation suggested space for a potential oil accumulation up dip of the oil-water contact.

Although Alliance's well would target the Kuparuk C and Ivishak, oil shows had been demonstrated in the West Sak and Ugnu across the region, the document said.

Sam Nappi is listed in division paperwork as the president of Alliance.

Barry Foote and Derek Foote, who heads up Alliance in Alaska and is based in Sterling, told Petroleum News in 2018 their preference was to find a partner to come in and drill the exploration well with them. (Nappi and the Footes are the member owners of Alliance.)

Derek Foote said the Guitar unit "is the easiest North Slope play to get developed because it's easily accessible and has an existing well on one lease."

The operator "should be able to cut the time way down" that it takes to first oil, he said, noting it would only require 6 to 7 miles of ice road to drill the well Alliance had scheduled. "The staging area that BP has is right there; there's an existing pad."

Barry Foote told Petroleum News June 25 that although the unit could have an upside in the neighborhood of 200-300 million barrels of oil, his company still needed a partner to help cover the cost of drilling a well.

#### Alliance gets fourth lease

In June, Alliance said it had finalized a lease transfer document and production sharing agreement with ConocoPhillips on the fourth lease.

In response to Alliance's request for a two-year extension, on Feb. 7 Feige had given the company a one-year reprieve until March 31, 2020.

In her Aug. 19 letter to Alliance, Feige said she wanted Alliance to include the well in its updated plan of exploration.

—KAY CASHMAN

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### **HOPE FOR GAS**

plants may stop short of a wholesale switch. Instead TransAlta will favor hybrid plants.

"Our view is that fundamentally (there will be a carbon tax) over the next 20 years no matter what," she told analysts. As a result, she said, TransAlta "cannot get off coal fast enough ... and gas right now is extremely inexpensive.

"So our coal to gas strategy is completely predicated on our belief that it's not smart to be in carbon intensive fuels for the future," Farrell said.

Capital Power Chief Executive Officer Brian Vassjo said the Edmonton based company plans to spend C\$50 million over the next two years to introduce gas at the giant Genesee complex south of Edmonton where it is 100% owner of two stations and joint owner of a third with TransAlta. It is expected to start construction of two more units this year.

Vassjo said Capital Power expects to burn coal in the winter when natural gas prices are high and gas in the summer when prices are "real low."

#### Cost of switch questioned

The government of Premier Jason Kenney has shelved plans to redesign its electricity system, asking the Alberta Electric System Operator to spend the next year trying to determine if changes to the existing market, which sets a price cap of C\$999 per megawatt hour, MWh, are needed. In 2016, AESO said the province under the New Democratic Party government of Premier Rachel Notley was examining raising the cap to C\$5,000 per MWh as it targeted a phaseout of coalfired power by 2030.

The AESO said such a switch was "unlikely to be successful in attracting investment due to increased price volatility" at a time when the Kenney government has scaled back forecasts for future generation needs.

While that juggling continues, gas producers are turning for help to Kenney's United Conservative Party government at a time when their commodity has traded from a staggering low of 3 cents per thousand cubic feet to just over C\$2 at the AECO trading hub in Alberta.

#### Gas production dropping

A new note from Raymond James reported that Canadian gas production was 14.1 billion cubic feet per day in the first week of August, down 1.5 bcf per day from a year ago and 2.1 bcf per day from March this year.

Phil Hodge, chief executive officer of Pine Cliff Energy, told the Calgary Herald there is a clear recognition from the Kenney government that gas can "play a pretty significant role in the overall health of the province. And we're going through a pretty rough patch here "

Raymond James analyst Jeremy McCrea said the gas sector is "on a lot of life support. There are some real concerns here that things need to get better ... and soon."

That comes amidst a round of meetings between Alberta Associate Natural Gas Minister Dale Nally and five producers on issues confronting the industry.

Nally said the government is pondering various actions to minimize price volatility and restore confidence in the sector.

But he noted the gas industry is "complex with many competing interests, which makes it challenging to find solutions that will be supported across the sector."

McCrea said there would not be "nearly as much buy in" for curtailments in gas markets as there was for the cutback of Alberta crude volumes, "so the government is in a bit of a tight spot."

Underscoring the tangle facing the government, in mid July a group of nine Alberta producers issued an open letter demanding the province support a plan under which royalty credits would be issued to producers who voluntarily cut production to boost low commodity prices at a time when supply swamped pipeline capacity.

#### **Big hope LNG**

The big hope for years was the prospect of up to 20 LNG projects going ahead in British Columbia, an

see HOPE FOR GAS page 15



# Lynden training center first to conduct rescue course tionship we have

The Lynden Training Center recently conducted a six day course in Kodiak for the Kodiak Fire Department. "We are extremely proud that the General Technical Rescuer class is the first of its kind to be taught in Alaska for State of Alaska certification," says Tyler Bones, director of HSSE.



has been working with the Alaska Fire Marshal's office for the past six months to become accredited to instruct the course. "It's rare that new courses are added to the state's accreditation list, so our training center being the first shows what a great working rela-



tionship we have with the state," Tyler explained. In 2015, the Center received accreditation from the state of Alaska Training and Education Bureau as the first third party provider to offer state of Alaska hazardous materials training, a designation usually reserved for state agencies and fire departments.

Oil Patch Bits

The Kodiak Fire Department has received Lynden training for the past two years. Last year, after the department completed the Confined Space Rescue course, firefighters put their skills to the test when responding to a rescue on a fishing vessel.

For more than 20 years, the Lynden Training Center in Fairbanks, Alaska, has provided training to individuals, businesses and government employees all over Alaska and the Lower 48. Experienced Lynden instructors educate, train and prepare people from all industries to work safely, prevent accidents and to respond to disasters like chemical spills, train derailments and other emergencies.

Professional development courses with classroom instruction are followed by hands-on exercises and drills in simulated response situations.

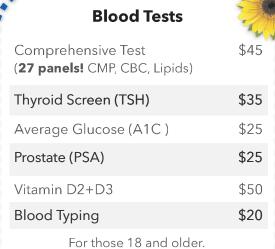
# Companies involved in Alaska's oil and gas industry

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continued from page 1

#### TARIFF RATES

When CINGSA went into operation in 2012, the storage facility determined its initial rates using a revenue requirement based on estimates of its likely cost structure. In 2014 the utility conducted a true up of its tariff, based on actual costs. Now, with several years of service under its belt, the facility can determine its revenue requirement using what is referred to as a "test year," a year in which actual costs are used as a basis for estimating future costs. In the case of the tariff filing that RCA has now ruled on CINGSA used 2017 as its test year.

One tricky issue involves factoring in the potential maintenance costs of the facility's wells.

#### **Contention over some items**

However, contention has arisen between CINGSA and its customers, and with the state of Alaska, over some cost items that CINGSA claimed should be factored into its revenue requirement. For example, CINGSA wanted to include the planned cost of an additional employee, and to recover costs associated with an RCA docket in which CINGSA had requested commission preapproval of some potential upgrades to its facility. In its new order, RCA has rejected some of these proposals. The commission now requires CINGSA to file a revised revenue requirement proposal, taking into account the commission's findings.

One tricky issue involves factoring in the potential maintenance costs of the facility's wells. Determining the depreciation cost for the facility's equipment is also difficult. If the facility ceases to be needed at some time in the future, as Cook Inlet gas supplies run down, the equipment could become obsolete while still in working condition. But what might be the operational life of the facility?

#### What rate of return?

Another complex issue revolves around the rate of return that CINGSA might expect on the equity invested in its facility. As with any return on investment, the higher the risk, the higher the return needed. But what are the risks associated with the CINGSA facility? Moreover, there are different methods of determining a reasonable return based on the risk assessment.

RCA has ruled that a return of 10.25% is appropriate — this is the midpoint between rates of return calculated by two different methods and is slightly lower that CINGSA's requested rate of return of 11.875%.

Commissioner Janis Wilson disagreed with the other commissioners on this point. She views CINGSA's proposed rate of return as reasonable when compared with the same rate of return that the commission approved for Enstar Natural Gas Co.

—ALAN BAILEY

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#### OIL TAX INITIATIVE

fields and also said the proposed legislation would require filings by producers on costs and revenues to be public.

Kara Moriarty, president and chief executive officer of the Alaska Oil and Gas Association, called news of the initiative no surprise, "but," she said, "the proposed ballot measure would dramatically increase taxes on the heart of Alaska's oil patch. No industry in Alaska can sustain an increase of this magnitude without causing a disaster for our state's economy."

"While the initiative is only two pages long, it represents an extreme policy shift that would undoubtedly have an impact on industry, the level of which we are still evaluating."

Moriarty said the increase on production taxes would be more than 90%.

#### **Company response**

BP Exploration (Alaska), in a statement provided by spokeswoman Megan Baldino, said: "The state realizes the benefits of SB21 through a thriving oil and gas industry: more oil flowing down TAPS than forecasted, jobs, additional new developments, and years of life added to backbone fields like Prudhoe Bay and corresponding state revenues for years to come.

"We are still reviewing the initiative, but our initial analysis shows a \$1-\$2 billion tax increase to industry. These costs will stunt investment and make Alaska far less competitive."

ConocoPhillips Alaska spokeswoman Natalie Lowman said ConocoPhillips is "still reviewing the language but the initiative appears to propose a very substantial increase in oil taxes that would make investing here less attractive. As a company, we have responded to the positive investment climate created by SB21: we have brought new projects on line, adding rigs to our North Slope rig fleet, provided hundreds of construction jobs, done significant exploration in NPR-A, and increased our production in the years since SB21 took effect. The current base tax structure is working to keep Alaska competitive for investment."

#### Proposal the 'Fair Share Act'

The proposal, called the Fair Share Act, a two-page bill, would make changes in the production tax system enacted in 2013 in Senate Bill 21, under then-Gov. Sean Parnell.

SB21, the "More Alaska Production Act," replaced ACES, "Alaska's Clear and Equitable Share," passed in late 2007 under the administration of then-Gov.

Sarah Palin.

Continuing investment had been a concern as legislators worked on ACES.

After ACES was enacted, oil prices spiked and so did state revenues. But production levels dropped, as did investment, at a time of high oil prices when investment logically would have grown.

That led to SB21.

Which led an initiative effort to repeal SB21 which failed in 2014. Had that repeal been successful, ACES would have been put back in place.

The act under the current initiative would apply to large established North Slope fields, specified as: "oil produced from fields, units, and nonunitized reservoirs north of 68 degrees north latitude that have produced in excess of 40,000 barrels of oil per day in the previous calendar year and in excess of 400,000,000 barrels of total cumulative oil production. For other oil production, the tax shall be unchanged by this Act."

#### Minimum of 10%

The initiative act says that for production taxed under the act (i.e. large established North Slope fields) the tax due each month will be no less than 10% of the gross value at the point of production when the average price for Alaska North Slope crude on the West Coast is less than \$50, and an additional 1% for each \$5 increment in the average price of ANS crude, with the maximum tax rate not to exceed 15%, which would be reached when the price per barrel is equal to or exceeds \$70.

This appears to change the net tax concept currently in law, which allows specified costs to be deducted from the gross value of oil at the wellhead before the tax is calculated.

The initiative act specifies: "No credits, carried forward lease expenditures, including operating losses, or other offsets may reduce the amount of tax due below the amounts calculated in this sec-

#### Information would be public

The initiative act also goes after infor-

It states: "All filings and supporting information provided by each producer to the Department relating to the calculation and payment of the taxes set forth in Sections 3 and 4 shall be a matter of public record."

This is a change from existing statute, which restricts the Department of Revenue to only releasing information "if aggregated among three or more producers or explorers, showing by month or calendar year and by lease or property, unit, or area of the state:" including production amounts; taxes levied; effective

tax rates; gross value of oil or gas at point of production; transportation costs for oil or gas; qualified capital expenditures; exploration expenditures; production tax values; lease expenditures; other adjustments to lease expenditures; and tax credits applicable or potentially applica-

#### **Comments from promoters**

In its statement on the initiative the proponents said the act would increase production revenues by \$1 billion per year which, they said, would: "Permit commonsense solutions for funding essential services, capital projects, and our PFDs."

"We should not be giving away tax breaks and credits when we are unable to fund essential services such as education, universities, senior services, public safety, rural electrical equalization, and the ferry system," said Jane Angvik, one of the initiative committee members.

Merrick Peirce, one of the initiative committee members, said: "We should be doing much better than we are, and if we are able to keep more of our production revenues within Alaska, it should help our economy, save and create more jobs for Alaskans, help fund capital projects throughout Alaska, and help fund our PFDs."

#### **AOGA** opposes initiative

"This initiative raises taxes on over 90% of Alaska's current production," Moriarty said in AOGA's statement, adding that the act is being proposed "at a time when Alaska is just barely crawling out of a recession."

Moriarty disagreed with the statement of sponsors that new fields would be held harmless, saying "any successful production, such as production from ANWR or large new discoveries will eventually be under this new system. Make no mistake, the entire industry is at jeopardy with this initiative."

She said this may seem like an easy fix to the state's fiscal problems, but "this is bad policy and it is irresponsible to put forth a major policy proposal like this where impacts have not been properly evaluated. Smart policy should encourage new oil production from all fields in Alaska which puts more oil in the pipeline. More oil means more revenue for the state, and that's the best longterm approach to helping the state's fiscal problems."

#### Governor not interested

Gov. Mike Dunleavy, a Republican, has said he is not interested in raising taxes but the administration has contracted with economist Ed King to study oil

The Associated Press reported in July that the contract with King involves the study of potential tax changes and their impact on the oil industry. Revenue Commissioner Bruce Tangeman told AP: "I know the Legislature is geared up. If they gear up, I have to gear up."

—KRISTEN NELSON

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#### **HOPE FOR GAS**

extravagant goal that was suddenly tripped up by mounting opposition and regulatory delays to projects at the same time the list of global LNG projects started shrinking.

One development worth following is being led by Greg Kist, who was president of Pacific NorthWest LNG, a venture operated by Malaysia's Petronas, when it was cancelled in 2017.

Krist had left his post three years earlier and taken time to "decompress," from which he has emerged as president and chief executive officer of Rockies LNG Partners, a consortium of gas producers who hope to attract partners to build and operate a 12 million metric tons a year operation to come on stream in 2026, requiring an investment decision by the end of 2021.

Despite Western Canada's imbalance of gas production that is weighted in favor of "dry" gas, there has been success in pursuing the associated light petroleum liquids in the Montney formation that crosses the Alberta British Columbia border.

One byproduct is condensate, which is vital to dilute oil sands bitumen, allowing it to flow in a pipeline, and has seen output rise to 417,000 barrels per day in March from 150,000 bpd four years earlier.

However, Ian Archer, associate director of North American natural gas with IHS Markit, noted that if condensate accounts for 30% of a gas well volume and 50% of the revenue, that still leaves producers with 70% "they have to deal with."

In as many words, the gas sector can't win for trying.

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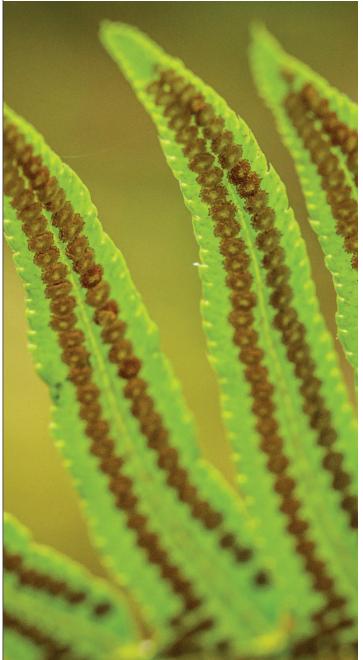


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