Petroleum news

Vol. 22, No. 36 • www.PetroleumNews.com | A weekly oil & gas newspaper based in Anchorage, Alaska | Week of September 3, 2017 • $2.50

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This week's Mining News

NORTH OF 60 MINING news

page 8 Drills turning at Stellar; Coventry eyes modern resource for Zackly

www.MiningNewsNorth.com | The weekly mining newspaper for Alaska and Canada's North | Week of September 3, 2017

NORTHERN NEIGHBORS

Compiled by Shane Lasley

ATAC RESOURCES LTD.

This gold-rich realgar, and arsenic sulfide mineral associate with Carlin-type gold deposits, was drilled at the Conrad zone of the Osiris project in 2011. This year, ATAC Resources is focusing its drilling on fault zones that play an important role in the high-grade gold mineralization found there.

Conrad's faults yield more gold

ATAC Resources Ltd. Aug. 29 said it continues find new areas of high-grade gold within fault zones at the Conrad and Osiris zones of its Osiris project at the western end of the company's vast Rackla Gold property in the Yukon. Hole OS-17-238, drilled within the newly recognized 650 Fault corridor at Conrad, cut 12.5 meters of 20.78 grams per metric ton gold near the top of the hole. Additional intervals of high-grade gold mineralization, including 10.41 meters of 7.15 g/t gold, where encountered deeper in this hole. "The newly identified gold mineralization intersected in hole OS-17-238 is an exciting development as it confirms our belief that the 650 Fault zone plays an important structural role in the mineralizing system at Conrad," said ATAC Vice President of Exploration Julia Lane. Hole OS-17-236, drilled across the northwest trending 650 Fault corridor, cut four zones of high-grade gold. The two best intercepts of hole 236 were 27.43 meters of 4.37 g/t gold and 42.67 meters of 3.78 g/t gold. ATAC said the four mineralized zones in this hole represent the interplay of the 650 Fault hosted mineralization with the strata controlled replacement-style Conrad Upper Zone mineralization.

Millrock explores BC projects

Millrock Resources Inc. Aug. 30 announced the start of the 2017 field program at Willoughby and Oweegee Dome projects in the Golden Triangle region of northwestern British Columbia. This program is being carried out by Millrock and funded by Sojourn Exploration Inc. (formerly Sojourn Ventures Inc.), which has options to acquire full ownership of Willoughby and Oweegee Dome from Millrock. Willoughby has a long exploration history, including two phases of drilling. Stationed out of Millrock's exploration facility in Stewart, this year's work at Willoughby is primarily focused on prospecting for newly exposed surface mineralization along the margins of glacier that have retreated significantly since geologists last investigated the property nearly a decade ago. The field crew will search for mineralized zones, collect rock samples and create geological maps. Additionally, structural geology will be mapped to help understand the gold mineralizing controls. Additionally, the paper records from historical drilling at Willoughby will be digitized, databased and put into a three-dimensional. Past drilling results indicate high-grade gold over significant core lengths. Highlights include 20.5 meters averaging 25 grams per metric ton gold and 184 g/t silver; and 3.5 meters of 132 g/t gold and 2,671 g/t silver. This year's work at Oweegee Dome, which is prospective for porphyry copper-gold and

see NORTHERN NEIGHBORS page 10

KINROSS GOLD CORP.

This bar contains the 6 millionth ounce of gold produced at Kinross Gold's Fort Knox Mine in Interior Alaska. Currently, four hardrock mines and dozens of placer gold operations produce nearly 1 million oz of gold each year across the 49th State.

METALS MARKETS

Rising metals prices

Increasing gold, zinc, copper prices bode well for Alaska's mining sector

By SHANE LASLEY

Mining News

Healthy price gains for zinc and copper this year, and gold rocketing through the US$1,300-per-ounce threshold on Aug. 28, is good news for Alaska's mining sector.

Together, zinc and gold account for more than 80 percent of the value of metals mined in Alaska – silver and lead account for most of the balance. Copper, on the other hand, is set up to play an important role for the future of mining in the state.

Gold rockets above $1,300

Entering 2017 at US$1,151/oz, gold made steady gains through the first half of the year – hitting US$1,294 in early June. It wasn't until North Korea took the provocative step of firing a missile over Japan that the precious metal broke through the US$1,300/oz barrier.

Gold has approached the US$1,300/oz mark four times this year, but did not crack the barrier until Aug. 28.

While Korean Peninsula unrest helped to push gold through the psychological ceiling, analysts believe that the precious metal's gains are being driven by more than safe-haven demand and expect the precious metal to climb closer to US$1,400/oz without added geopolitical pressures.

"Gold seems to have benefited from the tensions, currently trading at a nine-month high. However, most of the gains in the precious metal occurred before the missile launch, meaning that there are different factors supporting prices," FXTN Chief Market Strategist Hussein Sayed penned in a Tuesday morning report.

Before North Korea lobbed a missile over Japan, Sayed predicted, "If gold gathers momentum and manages to close the week above $1,300, I believe we'll be seeing another leg higher, with a potential to test 2016 highs, around $1,375."

Sayed and other market analysts say a number of factors – weak US Dollar, indications the Federal Reserve indicating a slow interest rates increases and a seasonal increase gold buying due to gold-buying holidays in Asia – are fundamental factors that will likely keep gold moving toward the US$1,400/oz mark.

Rising tensions on the Korean Peninsula could push demand for the safe-haven metal even higher.

Currently, about 900,000 oz of gold per year is produced in Alaska. This is expected to more than double if the Donlin Gold project goes into production at the 1.1-million-oz per year levels predicted in a feasibility study for the project.

Permitting for Donlin Gold is expected to be completed early in 2018. Donlin Gold partners – Barrick Gold Corp. and Novagold Resources Inc. – are expected to make a formal decision on developing a mine at this 39-million-oz gold project in Southwest Alaska in the coming months.

Fundamentals push zinc up

While gold has risen a healthy 15 percent in 2017, the upsurge in zinc prices has been even more impressive.

This week, zinc price topped US$1.40 per pound, which is roughly an 18 percent increase over US$1.20/lb levels going into 2018 and the highest price for the galvanizing metal in a decade.

A rally in zinc prices has been predicted since the closure of two large zinc mines – Century in Australia and Lisheen in Ireland – wiped out more than 600,000 metric tons of the world's annual supply of the galvanizing metal in 2015.

Lackluster global economic growth, however, dampened the demand side, delaying the rise.

Analysts predict that zinc demand will outweigh supply, pushing prices higher.

In its Aug. 22 commodities report, Scotiabank said "zinc likely has more room to run before reaching the peak of its cycle."

The Canadian bank, however, believes that despite the strong fundamentals zinc "prices may temporarily fall back in sympathy with the broader metals market."

Red Dog, a high-grade mine operated by Teck

see METALS PRICES page 8

Increasing gold, zinc and copper prices bode well for Alaska's mining sector. Read more in North of 60 Mining News, page 7.

Court OKs Nicolai field sale to Aurora Exploration in bankruptcy

In a court order published on Aug. 22 Judge Gary Spraker of the U.S. Bankruptcy Court for the District of Alaska approved the sale of Aurora Gas's Nicolai Creek gas field to Aurora Exploration. Completion of the sale requires the approval by the Alaska Department of Natural Resources for the transfer of the Nicolai Creek leases to Aurora Exploration.

The sale includes the leases, the associated production equipment and seismic data relating to the Nicolai Creek unit.

Despite the similarity in the names, Aurora Exploration is a completely separate company from Aurora Gas, albeit both companies having originated from the same family of businesses. Aurora Gas is wholly owned by Rieck Oil Inc. Scott Pfoff, manager of Aurora Exploration, had until a few years

see NICOLAI CREEK page 15

Nanushuk draft EIS in September with meetings this month and next

The U.S. Army Corps of Engineers says the draft environmental impact statement for Armstrong Energy's Nanushuk project is due out in early September, a delay from the August release the agency projected earlier this year.

Public meetings on the draft EIS are scheduled Sept. 25 in Nuiqsut, from 4 p.m. to 6 p.m. at the Kisik Community Center; in Utqiagvik Sept. 27 from 5 p.m. to 7 p.m. at the Inupiat Heritage Center; in Fairbanks Oct. 3 from 6 p.m. to 8 p.m. at the Westmark Fairbanks Hotel; and in Anchorage Oct. 4 from 6 p.m. to 8 p.m. at the Hilton Garden Inn.

Based on 2015 exploration work, Armstrong anticipates 120,000 barrels of day of production from the Nanushuk and Alpine reservoirs, an increase from the 60,000 bpd estimated

see NANUSHUK EIS page 14

EXPLORATION & PRODUCTION

Expansion plan nixed

State tells Exxon to try again on portion of Thomson POD tied to 2012 settlement

By KRISTEN NELSON

Petroleum News

The Alaska Department of Natural Resources' Division of Oil and Gas has told Point Thomson unit operator ExxonMobil Production Co. to try again on the expansion portion of its plan of development for the unit.

The Point Thomson POD included two plans — one for the initial production system now in operation and one for expansion project planning.

Point Thomson development came after a 2012 settlement agreement between the state and the Point Thomson unit working interest owners following a legal battle after the state terminated the unit because of a disagreement with the WIOs on moving the unit into production. Condensate production began from the unit in April 2016.

"Conditioning the planning work on commercial negotiations and a decision to fund is directly contrary to the WIOs contractual obligations under the Settlement Agreement," the division said.

An Aug. 29 decision, signed by division Director Chantal Walsh, said the state interprets the 2012 settlement agreement between the state and the Point Thomson WIOs as covering only the original 2012-17 plan of development for the ini-

see EXPANSION PLAN page 15

NATURAL GAS

A duty to sell gas

Meyer says producers must book pipeline capacity or sell gas to the state

By ALAN BAILEY

Petroleum News

The North Slope producers can sell gas for shipment through a planned gas export pipeline and associated liquefied natural gas plant, or, if not, the state will buy the gas from the producers, to sell the gas to customers that the state establishes, Keith Meyer, president of the Alaska Gasline Development Corp., told the Commonwealth North Energy Action Coalition on Aug. 25. Either way, the project will go ahead, but only on the basis of securing firm customers for the gas, Meyer said.

KEITH MEYER

"This project will not be built until we have customers secured, so it's not going to be built on spec," Meyer said. "The state of Alaska is not going to build this. … This takes customers to provide the foundation for the financing, which gives us money for the construction."

However, given that the North Slope gas belongs to the state, the state can insist that the gas is monetized, if the appropriate infrastructure is made available to deliver the gas to market, Meyer said. The state grants resource extraction rights to the producers, he said.

"They've got somewhat of a duty to produce

see DUTY TO SELL page 16

EXPLORATION & PRODUCTION

Another down year

North Slope development drilling on pace for a nearly 30% decline over 2016

By ERIC LIDJI

For Petroleum News

The North Slope is on pace to experience even steeper declines in development drilling this year than it did last year. But the trend can largely be traced to a single company.

The seven North Slope producer-operators drilled 54 development wells during the first half of the year, down from 76 during the same period in 2016, representing a 28 percent decline. By comparison, the 76 development wells from the first half of 2016 represented an 18 percent decline over the 93 development wells drilled during the first half of 2015.

The figures include wells labeled "development" (also known as production wells) and "service" (also known as injection wells) in the weekly well reports published by the Alaska Oil and Gas Conservation Commission. Some exploration wells are later converted to development wells. Some development wells are reported at a delay after completion. As a result, revised totals could be higher but are unlikely to be lower.

The Prudhoe Bay unit is almost entirely responsible for the current decline.

The reduced drilling activity is a steep decline over last year, but lies within historic averages. The North Slope producer-operators drilled 59 development wells in the first half of 2013. The

see DEVELOPMENT DRILLING page 14

GOVERNMENT

Dealing with the tax credit changes

Alaska's Tax Division works through the ramifications of ending cashable tax credits and using operating loss carry forward

By ALAN BAILEY

Petroleum News

KEN ALPER

The Alaska Department of Revenue's Tax Division is working through the ramifications of House Bill 111, the bill passed by the state Legislature earlier this year to end cashable state oil and gas production tax credits, Ken Alper, the division's director, has told Petroleum News.

Complications arise because the cashable tax credits ended at the end of June, so that only expenditures incurred prior to July 1 qualify for credit use. Dealing with this is simple in the case of credits relating to discernible items of expenditure, such as capital credits in Cook Inlet. In that case, the invoice date for the expenditure determines whether the expenditure was incurred prior to the July 1 cutoff date, and hence qualifies for a credit, Alper explained.

Operating loss credits

Operating loss credits present a more complex problem because, whereas the state's fiscal year ends on June 30, the state oil and gas production tax is a calendar year tax, with a tax filing deadline of March 31 of the following year. A company obtaining some revenue from oil and gas production may be operating at an overall loss during 2017. But it is not feasible to identify from the company's tax filing what portion of that loss applied to just the first half of the year.

It may have been possible to deal with this issue by splitting 2017 into two separate tax periods, with one ending on June 30 and both requiring the filing of tax returns. However, this would have created a huge regulatory burden for the state, Alper said.

Instead, the legislators included in HB 111 a provision enabling the use of a company's operating losses for the whole of 2017. The law allows 50 percent of this loss to be attributed to the first half of 2017, thus qualifying it for a cashable credit — the other 50 percent does not qualify. This arrangement, while a rational solution to the credit allocation problem, works to the advantage of a company with a large specific expenditure in the second half of the year, but to the disadvantage of a company with a large expenditure in the first half, Alper explained.

Tax credit certificates can be earned for the second half of the year, but these certificates cannot be exchanged for cash from the state — they can be held as credits against future production taxes, or they can be sold to another company, which can then use them as credits against their taxes.

Operating loss carry forward

Starting in 2018 the state is moving to a new arrangement, under which operating losses rather than tax credits are carried forward. Those losses can be deducted against future production tax liabilities, using the tax rules, such as the tax rates, that apply at the time.

The Tax Division has held a meeting with the oil companies to glean the industry's comments and suggestions for how to implement the new tax law.

A complication is that the operating losses will be attached to the leased land rather than the company that incurs the losses, Alper explained. Moreover, under the new tax law the operating losses will be ring fenced: They can only be offset against taxes relating to the property for which they were incurred and not against taxes relating to any of a company's other North Slope operations.

This raises questions of how specifically to apply the ring fencing rules. There is also an issue regarding how to deal with a lease transfer when there are expenditures tied to the lease, Alper said.

The Tax Division has held a meeting with the oil companies to glean the industry's comments and suggestions for how to implement the new tax law. This fall the division will work on drafting new regulations to accommodate the statutory changes. The regulation revision process will incorporate a public comment period, Alper said. ●

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● GOVERNMENT

Meyer: Enjoying first year on Resources

Anchorage Republican, Senate Rules Chair says he's getting fresh perspective on legislation with seat on Senate Resources Committee

By STEVE QUINN
For Petroleum News

Senate Rules Committee Chair Kevin Meyer was long accustomed to seeing resource development bills come across his desk while serving as a Finance Committee co-chair in the House and Senate, but this year he had a broader view: that as a member of the Senate Resources Committee.

Meyer, an Anchorage Republican, spent his first year on the committee under veteran Chair Cathy Giessel. Though he has yet to file for the lieutenant governor's post in the 2018 election, Meyer has been speculated to be among three Republicans vying for the job along with Sen. Gary Stevens and former House Rep. Lynn Gattis. For now, Meyer spoke only of his first year on the Resources Committee and how much he enjoyed the perspective of the variety of bills the committee heard. The former Senate president shared his thoughts with Petroleum News, still not having officially committed to pursuing a statewide office.


KEVIN MEYER

Petroleum News: So what attracted you to be on Resources after all of these years?

Meyer: You know, I think I've always been attracted to it. Working part time like I do at ConocoPhillips, it was probably a committee I needed to avoid because Resources handles so many topics and bills. However, what I'm finding is they take on a lot of other issues, too, like land issues and hunting and fishing. It's much more than just oil and gas. It dawned on me after all these years that most of the bills that come from Resources go to Finance anyway. I've been sitting on Finance all these years, so I've been hearing these bills anyway. Why not just sit on the committee, especially as I'm not on Finance anymore? It just kind of made sense — the reason why I hadn't been on it all these years really wasn't legitimate. I've been hearing the bills anyway so I might as well just sit on Resources. I would hear all the bills that interest me. When you get to Finance, you're more concerned about the cost to the state. You look more at the financial impact. Resources looks at it from a policy standpoint.

Petroleum News: You didn't seem to get much pushback as in past years for your work with ConocoPhillips.

Meyer: No I didn't. I think after 18 years, people have either accepted it or just don't worry about it anymore. It's one of those things I've found out if people disagree with my position, they tend to use it as a reason for me not participating or not voting. If you do agree with me, then you think it's fine that I participate. The people who I represent in my district, they all know where I work. I disclose that. I've been very clear about that. Frankly, I think that's why a lot of them vote for me. I am a part-time legislator. I think that's what our founding father's wanted. They put 121 days in the constitution.

It is our largest and most important industry of our state since we get so much of our revenue from that industry. I think people like the fact that I know something about it. I guess I'm at a point where I disclose it, let people know and if they don't like the fact that I work part-time for the industry and I have for many years, they can vote for the other guy, I guess. The bottom line is, I have been in office for 18 years and yeah, it comes up when I go door-to-door. Some people, they just don't like that. Most people accept that I'm not a wealthy guy, I have to work somewhere.

Whether I work at ConocoPhillips, or I work at Sears, or as a fisherman or as a lawyer, as many do, you could say we all have a conflict of some kind because we are all part-time legislators. Unless you're retired. Even then, you might say they have a conflict because they might be getting a pension check from somewhere.

Petroleum News: So did you enjoy your first year on Resources?

Meyer: I did. There was quite a diverse set of topics from timber to the ferries. I know (Sen. Bert) Stedman had a bill dealing with the ferries (discharge), but there were a lot of land issues in particular. Some of those land trades doesn't come to Finance because it may not have a financial impact to the state. I probably do get to hear more resource-related bills than I did in Finance, so I've enjoyed it. Frankly, (Chair) Cathy Giessel runs a pretty tight committee as you know but let's everyone have ample time for questions and discussions.

Petroleum News: It seems inevitable there would be an oil tax bill before you guys. What do you think was accomplished with HB 111?

Meyer: Well, the oil tax credits and tax credits in general have been around for some time. The first ones we started in Cook Inlet in 2010 and 2012 was really a bipartisan issue. Both Sen. Wielechowski was pushing it as well as Sen. McGuire. The hope and intent was to get more small guys looking for gas in Cook Inlet because we had a critical shortage in Southcentral. In fact, I still remember the TV ads. It wasn't that long ago. The mayors of the Kenai borough, the Mat-Su valley and Anchorage were telling people, be prepared for brownouts, we were running out of gas.

I remember a meeting with Chugach Electric discussing having ConocoPhillips turn the export plant into an import plant. There was serious discussion about that. Then we did the tax credits, the small guys came up and now we've got a surplus. About that same time oil prices were sky high, we had that extra money, and we realized that production was declining on the North Slope, but we knew there was still more oil up there to be had and found. It's so expensive on the North Slope, it takes incentives, especially for the smaller guys.

I was OK with the Big 3 as some like to call it, but you know, the more the better. It's always good to have competition. The hope was we would attract more exploration and development up there. It's worked as well and worked as far as getting the small guys up there. Who had ever heard of Armstrong, Repsol, Caelus and Hilcorp? We really hadn't heard of them until the tax credits going into effect. At 2014, when the price of oil started falling and we no longer had a surplus, we realized we couldn't afford to continue this program any more. Frankly, we probably didn't need to. We not only had a surplus of gas, we also had major oil discoveries.

So they worked, but like I said, we wanted to phase it out. We started with Cook Inlet last year (HB 247). It was a tough one to get passed. I remember the House had to fly (former Rep. Mike) Hawker down, who wasn't well, to get that 21st vote just so we could stop tax credits in Cook Inlet. I don't think the Democrats were opposed to getting rid of tax credits in Cook Inlet. They just wanted much more.

Again, SB 21 — which wasn't easy to pass — we think it's working. We also

see MEYER Q&A page 13

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

OWNER: Petroleum Newspapers of Alaska LLC (PNA)
Petroleum News (ISSN 1544-3612) • Vol. 22, No. 36 • Week of September 3, 2017
Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518
(Please mail ALL correspondence to:
P.O. Box 231647 Anchorage, AK 99523-1647)
Subscription prices in U.S. — $118.00 1 year, $216.00 2 years
Canada — $206.00 1 year, $375.00 2 years
Overseas (sent air mail) — $240.00 1 year, $436.00 2 years
"Periodicals postage paid at Anchorage, AK 99502-9986."
POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

Alaska - Mackenzie Rig Report

Alaska Rig Status

North Slope - Onshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Kuparuk 1J-115	ConocoPhillips
Dreco 1000 UE	16 (SCR/TD)	Standby	
Dreco D2000 Uebd	19 (SCR/TD)	Alpine CD5-314	ConocoPhillips
AC Mobile	25	Standby	
OIME 2000	141 (SCR/TD)	Kuparuk, Stack Out	ConocoPhillips
	142 (SCR/TD)	Kuparuk 1H-102	ConocoPhillips
TSM 7000	Arctic Fox #1	Prudhoe Bay, Icewine#2	Accumulate
Hillcorp Alaska LLC			
	Rig No.1	Milne Point	Hilcorp Alaska LLC
Nabors Alaska Drilling			
AC Coil Hybrid	CDR-2 (CTD)	Deadhorse	BP
AC Coil	CDR-3 (CTD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Deadhorse	Available
Mid-Continental U36A	3-S	Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Deadhorse	Available
Dreco 1000 UE	7-ES (SCR/TD)	Deadhorse	Available
Dreco 1000 UE	9-ES (SCR/TD)	Deadhorse	Available
Oilwell 2000 Hercules	14-E (SCR)	Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location	Available
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Deadhorse	Available
Oilwell 2000	33-E	Deadhorse	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Deadhorse	Available
OIME 2000	245-E (SCR-ACTD)	Kuparuk	Available
Academy AC electric CANRIG	105AC (AC-TD)	Deadhorse	Available
Academy AC electric Heli-Rig	106AC (AC-TD)	Deadhorse	Available
Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)		Available
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay	Available
Ideco 900	3 (SCR/TD)		Available
Parker Drilling Arctic Operating Inc.			
NOV ADS-10SD	272	Prudhoe Bay DS 18	BP
NOV ADS-10SD	273	Prudhoe Bay DSW-59	BP

North Slope - Offshore

BP			
Top Drive, supersized	Liberty rig	Inactive	BP
Doyon Drilling			
Sky top Brewster NE-12	15 (SCR/TD)	Spy Island, NIK North Mod	ENI
Nabors Alaska Drilling			
OIME 1000	19AC (AC-TD)	Oooguruk, Cold Stacked	Caelus Alaska

Cook Inlet Basin – Onshore

BlueCrest Alaska Operating LLC			
Land Rig	BlueCrest Rig #1	Anchor Point, drilling production section of H14	BlueCrest Alaska Operating LLC
Glacier Oil & Gas	Rig 37	West McArthur River Unit Workover	Glacier Oil & Gas
All American Oilfield LLC			
IDECO H-37	AAO 111	In All American Oilfield's yard in Kenai, Alaska	Available
Aurora Well Services			
Franks 300 Srs. Explorer III	AWS 1	Stacked out west side of Cook Inlet	Available
Saxon			
TSM-850	147	Stacked	Hilcorp Alaska LLC
TSM-850	169	Stacked	Hilcorp Alaska LLC

Cook Inlet Basin – Offshore

Hilcorp Alaska LLC			
National 110	C (TD)	Platform C, Stacked	Hilcorp Alaska LLC
	Rig 51	Steelhead Platform, Stacked	Hilcorp Alaska LLC
	Rig 51	Monopod Platform, Drilling	Hilcorp Alaska LLC
Spartan Drilling			
Baker Marine ILC-Skidoff, jack-up		Spartan 151, Stacked Seward	
Furie Operating Alaska			
Randolf Yost jack-up		Nikiski, OSK dock	Furie
Glacier Oil & Gas			
National 1320	35	Osprey Platform, activated	Glacier Oil & Gas
Kuukpik Drilling	5	King Salmon Platform	Hilcorp Alaska LLC

Mackenzie Rig Status

Canadian Beaufort Sea

SDC Drilling Inc.			
SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Available

Central Mackenzie Valley

Akita			
TSM-7000	37	Racked in Norman Well, NT	Available

The Alaska - Mackenzie Rig Report as of August 31, 2017.
Active drilling companies only listed.

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

This rig report was prepared by Marti Reeve

JUDY PATRICK

Baker Hughes North America rotary rig counts*

	Aug. 25	Aug. 18	Year Ago
United States	940	946	489
Canada	217	214	146
Gulf of Mexico	17	16	17

Highest/Lowest

US/Highest	4530	December 1981
US/Lowest	404	May 2016

*Issued by Baker Hughes since 1944

EXPLORATION & PRODUCTION

BP, Hilcorp permit facilities expansions

By KRISTEN NELSON
Petroleum News

BP Exploration (Alaska) Inc. has applied to expand H Pad at Prudhoe Bay and Hilcorp Alaska LLC has applied to re-route a flowline and place gravel for a tie-in pad and access road at Milne Point.

Notices of the work were posted Aug. 29 by the Alaska Department of Natural Resources, Division of Oil and Gas. Comments on the proposals are due by 4:30 p.m., Sept. 29.

The BP proposal is to place gravel fill to expand H Pad in the Prudhoe Bay unit by half an acre. The company said equipment would work from the existing pad.

BP said the project would provide "access for safely maneuvering larger drilling rigs to access wells on the drilling pad," and said the expansion is necessary to maintain ongoing oil and gas production. The expansion will allow for larger drilling rigs currently in use at Prudhoe, the company said, with some 7,400 cubic yards of gravel from permitted sources to be used in the expansion.

The company said the project is scheduled to begin this December and conclude in December 2022 and said it would minimize fill "by only completing pad expansions on a well by well incremental basis."

The Hilcorp application is for work at Milne Point which would re-route an existing flowline and place 1.002 acres of gravel for a tie-in pad and access road. Hilcorp said development of the Schrader Bluff reservoir at Moose Pad will require two new flowlines to transport production fluids to the central facilities pad. The company said that because of increased production within Milne Point, produced fluids from the F and L pads would be "routed to Moose Pad for primary separation in a new flowline," and the fluids would then be transported to the central facilities pad through a second new flowline.

Hilcorp said both flowlines would be installed on a single pipe rack from Moose Pad to the existing pipe rack that connects the F and L pads to the central facilities pad.

The company said the Moose Pad development project will provide access to some 7 square miles of undeveloped oil reserves within the Milne Point unit, and will involve construction of a gravel pad and access road.

The project began with season one ice road construction in December 2016, followed by gravel mining and placement from mid-December 2016 through the end of March 2017. Gravel turning and compaction at the Moose Pad access road and tie-in pad and culvert placement were scheduled for July and August, with power and fiber installation and associated trenching from July through the end of October.

Late summer supplemental gravel work at the flowline tie-in pad and Spine Road widening for flowline crossing are scheduled from Sept. 25 through Oct. 31, with second season ice road construction beginning in December and running through January. Pipeline installation is scheduled to begin in mid-December and run through April, with facility installation beginning in May and running through the end of September 2018, with the drilling program scheduled to begin in September 2018. ●

Contact Kristen Nelson at knelson@petroleumnews.com

UTILITIES

Enstar agrees to continuing AIX gas supply

Enstar Natural Gas Co. has requested Regulatory Commission of Alaska approval for a new gas supply agreement with AIX Energy LLC, operator of the Kenai Loop gas field. The new contract commits AIX to continue supplying gas to Enstar for another three years after the completion of gas sales through an existing contract that ends around June 2018.

AIX acquired the Kenai Loop field in the city of Kenai in 2014, as part of the fallout from the bankruptcy of Buccaneer Energy Ltd.

The new contract involves the firm supply of 1.370 billion cubic feet of gas between July 1, 2018, and March 31, 2019; 1.464 bcf between April 1, 2019, and March 31, 2020; and 1.095 bcf to 1.825 bcf between April 1, 2020, and March 31, 2021. Gas would be delivered at a continuous rate of 5 million cubic feet per day during the first year of the contract, 4 million cubic feet per day in the second year and 3 million to 5 million cubic feet per day in the third year. Uncertainties in the delivery volumes in year three reflect the possibility that AIX may inform Enstar by Sept. 1, 2019, of the availability of additional gas from Kenai Loop.

The price of the gas is $6.35 per thousand cubic feet in the first year of the contract; $6.44 in the second year; and $6.54 in year three. Enstar would be committed to the purchase of the gas.

Although the AIX supply under the contract only represents about 5 percent of Enstar's total gas needs, the AIX contract helps ensure diversity in the gas utility's gas supply sources at reasonable pricing, Enstar told the commission.

"This is important to ensure the safe and reliable delivery of gas to our customers and could encourage further exploration in the Cook Inlet," Enstar said.

AIX acquired the Kenai Loop field in the city of Kenai in 2014, as part of the fallout from the bankruptcy of Buccaneer Energy Ltd., the previous field owner. The field has four wells, two of which are producing gas. AIX has not conducted any new drilling in the field but has been considering the addition of gas compression and the return of one of the dormant wells to production.

—ALAN BAILEY

NORTH OF 60 MINING news

page 8 Drills turning at Stellar; Coventry eyes modern resource for Zackly

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* **Week of September 3, 2017**

NORTHERN NEIGHBORS

Compiled by Shane Lasley

ATAC RESOURCES LTD.

This gold-rich realgar, and arsenic sulfide mineral associate with Carlin-type gold deposits, was drilled at the Conrad zone of the Osiris project in 2011. This year, ATAC Resources is focusing its drilling on fault zones that play an important role in the high-grade gold mineralization found there.

Conrad's faults yield more gold

ATAC Resources Ltd. Aug. 29 said it continues find new areas of high-grade gold within fault zones at the Conrad and Osiris zones of its Osiris project at the western end of the company's vast Rackla Gold property in the Yukon. Hole OS-17-238, drilled within the newly recognized 650 Fault corridor at Conrad, cut 12.5 meters of 20.78 grams per metric ton gold near the top of the hole. Additional intervals of high-grade gold mineralization, including 10.41 meters of 7.15 g/t gold, where encountered deeper in this hole. "The newly identified gold mineralization intersected in hole OS-17-238 is an exciting development as it confirms our belief that the 650 Fault zone plays an important structural role in the mineralizing system at Conrad," said ATAC Vice President of Exploration Julia Lane. Hole OS-17-236, drilled across the northwest trending 650 Fault corridor, cut four zones of high-grade gold. The two best intercepts of hole 236 were 27.43 meters of 4.37 g/t gold and 42.67 meters of 3.78 g/t gold. ATAC said the four mineralized zones in this hole represent the interplay of the 650 Fault hosted mineralization with the strata controlled replacement-style Conrad Upper Zone mineralization.

Millrock explores BC projects

Millrock Resources Inc. Aug. 30 announced the start of the 2017 field program at Willoughby and Oweegee Dome projects in the Golden Triangle region of northwestern British Columbia. This program is being carried out by Millrock and funded by Sojourn Exploration Inc. (formerly Sojourn Ventures Inc.), which has options to acquire full ownership of Willoughby and Oweegee Dome from Millrock. Willoughby has a long exploration history, including two phases of drilling. Stationed out of Millrock's exploration facility in Stewart, this year's work at Willoughby is primarily focused on prospecting for newly exposed surface mineralization along the margins of glacier that have retreated significantly since geologists last investigated the property nearly a decade ago. The field crew will search for mineralized zones, collect rock samples and create geological maps. Additionally, structural geology will be mapped to help understand the gold mineralizing controls. Additionally, the paper records from historical drilling at Willoughby will be digitized, databased and put into a three-dimensional. Past

see **NORTHERN NEIGHBORS** *page 10*

KINROSS GOLD CORP.

This bar contains the 6 millionth ounce of gold produced at Kinross Gold's Fort Knox Mine in Interior Alaska. Currently, four hardrock mines and dozens of placer gold operations produce nearly 1 million oz of gold each year across the 49th State.

METALS MARKETS

Rising metals prices

Increasing gold, zinc, copper prices bode well for Alaska's mining sector

By SHANE LASLEY
Mining News

Healthy price gains for zinc and copper this year, and gold rocketing through the US$1,300-per-ounce threshold on Aug. 28, is good news for Alaska's mining sector.

Together, zinc and gold account for more than 80 percent of the value of metals mined in Alaska – silver and lead account for most of the balance. Copper, on the other hand, is set up to play an important role for the future of mining in the state.

Gold rockets above $1,300

Entering 2017 at US$1,151/oz, gold made steady gains through the first half of the year – hitting US$1,294 in early June. It wasn't until North Korea took the provocative step of firing a missile over Japan that the precious metal broke through the US$1,300/oz barrier.

Gold has approached the US$1,300/oz mark four times this year, but did not crack the barrier until Aug. 28.

While Korean Peninsula unrest helped to push gold through the psychological ceiling, analysts believe that the precious metal's gains are being driven by more than safe-haven demand and expect the precious metal to climb closer to US$1,400/oz without added geopolitical pressures.

"Gold seems to have benefited from the tensions, currently trading at a nine-month high. However, most of the gains in the precious metal occurred before the missile launch, meaning that there are different factors supporting prices," FXTN Chief Market Strategist Hussein Sayed penned in a Tuesday morning report.

Before North Korea lobbed a missile over Japan, Sayed predicted, "If gold gathers momentum and manages to close the week above $1,300, I believe we'll be seeing another leg higher, with a potential to test 2016 highs, around $1,375."

Sayed and other market analysts say a number of factors – weak US Dollar, indications the Federal Reserve indicating a slow interest rates increases and a seasonal increase gold buying due to gold-buying holidays in Asia – are fundamental factors that will likely keep gold moving toward the US$1,400/oz mark.

Rising tensions on the Korean Peninsula could push demand for the safe-haven metal even higher.

Currently, about 900,000 oz of gold per year is produced in Alaska. This is expected to more than double if the Donlin Gold project goes into production at the 1.1-million-oz per year levels predicted in a feasibility study for the project.

Permitting for Donlin Gold is expected to be completed early in 2018. Donlin Gold partners – Barrick Gold Corp. and Novagold Resources Inc. – are expected to make a formal decision on developing a mine at this 39-million-oz gold project in Southwest Alaska in the coming months.

Fundamentals push zinc up

While gold has risen a healthy 15 percent in 2017, the upsurge in zinc prices has been even more impressive.

This week, zinc price topped US$1.40 per pound, which is roughly an 18 percent increase over US$1.20/lb levels going into 2018 and the highest price for the galvanizing metal in a decade.

A rally in zinc prices has been predicted since the closure of two large zinc mines – Century in Australia and Lisheen in Ireland – wiped out more than 600,000 metric tons of the world's annual supply of the galvanizing metal in 2015.

Lackluster global economic growth, however, dampened the demand side, delaying the rise.

Analysts predict that zinc demand will outweigh supply, pushing prices higher.

In its Aug. 22 commodities report, Scotiabank said "zinc likely has more room to run before reaching the peak of its cycle."

The Canadian bank, however, believes that despite the strong fundamentals zinc "prices may temporarily fall back in sympathy with the broader metals market."

Red Dog, a high-grade mine operated by Teck

see **METALS PRICES** *page 8*

NEWS NUGGETS

Compiled by Shane Lasley

Zackly resource drilling begins

Coventry Resources Ltd. and Millrock Resources Inc. Aug. 28 announced the start of a 3,000-meter drill program at Stellar, a copper-gold project along the south slopes of the Alaska Range. The drilling is focused on Zackly, a skarn deposit with a historical resource of 1.54 million metric tons grading 4.5 grams per metric ton (218,944 oz) gold and 2.9 percent (66.9 million pounds) copper. Millrock, which recently exchanged its interest in Stellar for a 10.6 percent equity stake in Coventry, is executing the the 2017 program. With two rigs turning on the property, Coventry and Millrock plan to drill around 25 holes aimed at upgrading the historical Zackly resource to Australian Joint Ore Reserves Committee (JORC) mineral reporting standards, which is similar to National Instrument 43-101 standards in Canada. To accomplish this, one rig will drill roughly twelve holes through the known deposit. A second drill will test potential expansions of the deposit where induced polarization surveys indicate extensions of the skarn mineralization. Coventry also owns the Caribou Dome copper deposit, a high-grade copper project immediately southwest of Stellar. The main deposit at Copper Dome hosts 2.8 million metric tons of total resource (measured, indicated and inferred) averaging 3.1 percent (190 million lb) copper. This year, Coventry is completing detailed geological mapping and structural interpretation of outcrop and drill core at the Caribou Dome deposit. Baseline environmental studies are being carried out at Zackly and Caribou Dome in anticipation of moving the combined project toward a pre-feasibility study in 2018.

After acquiring Stellar, raising AU$5.5-million and consolidating its shares, Coventry is now in the process of a name change. The company had originally planned to be named Polaris Resources but has since decided upon PolarX Ltd., according to a notice sent to shareholders on Aug. 15. A special meeting to vote on the name change is scheduled for Sep. 15.

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METALS PRICES

Resources Ltd. on NANA Regional Corp. land in Northwest Alaska, produced roughly 1.26 billion lb of zinc in 2016, which is about 5 percent of the world's global supply.

While zinc is the primary metal produced at Red Dog, it also is an important tertiary metal at Hecla's Greens Creek Mine near Juneau.

Thanks to zinc, along with lead and gold, the cost to produce an ounce of silver at this Southeast Alaska operation totaled just US$1.26 through the first half of 2017. With zinc and gold prices climbing, this cost could be even lower for the balance of the year.

Copper overheated?

Copper has been among the hottest metals in 2017, gaining nearly 23 percent on the year to a high of US$3.08/lb on Aug. 29.

While shrinking copper inventories at London Metal Exchange warehouses has helped to push copper prices to a three-year high, analysts believe the price rally is overheated as investors grab stockpiles ahead of anticipated real supply shortages expected next year.

The average price forecast is for copper to retreat to US$2.60/lb by the end on 2017.

While copper is not currently produced in Alaska, the state hosts world-class deposits of the red metal that could be developed into mines over the next decade.

The best known of these is Pebble, the largest undeveloped copper deposit on Earth.

This deposit in Southwest Alaska hosts roughly 56.8 billion lb copper, 70.4 million oz gold, 3.4 billion lb molybdenum and 343.6 million oz silver in the measured and indicated resource category.

Northern Dynasty Minerals Ltd. hopes to bring on a global mining partner and initiate the permitting process for Pebble by the end of 2017.●

Petroleum news

North of 60 Mining News is a weekly supplement of the weekly newspaper, Petroleum News.

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● COLUMN

Upturn in mining continues across Alaska

Increased global demand for zinc and gold bodes well for operations at Red Dog, Fort Knox, Pogo and state's other producing mines

By CURT FREEMAN
Special to Mining News

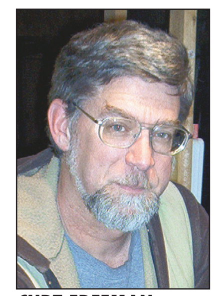
The Alaska mining industry continued its increased pace of activities in August, even as the first hint of autumn starts to be felt across the state. Metals prices were relatively stable with increasing demand for zinc and gold, the two metals that generate the most revenue from Alaska's operating mines.

Wood Mackenzie is forecasting a 3 percent increase in global refined zinc demand in 2017 to 14.7 million metric tons. With refined zinc production limited to a 2 percent increase, to 13.8 million metric tons, that leaves the zinc market in deficit again this year. Total reported zinc exchange stocks fell 198,800 metric tons during the second quarter to 356,180 metric tons. Total exchange zinc stocks are now estimated at 9.5 days of global consumption, well below the 25-year average of 23.4 days.

The World Gold Council reported that during the second quarter of 2017, other than Exchange Traded Funds (ETF) investment, gold consumption rose for bar and coin consumption, jewelry demand, central bank purchases and technology demand.

On the exploration front, several new project start-ups commenced operation in August and promising results from ongoing exploration have begun to trickle in the from field. Stay tuned, there is more to come!

The author


CURT FREEMAN

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Western Alaska

TECK RESOURCES LTD. and partner **NANA INC.** announced second quarter 2017 results from its Red Dog mine. During the quarter, the mine produced 127,800 metric tons of zinc in concentrate. Zinc ore grade decreased significantly to 14.2 percent, while mill recoveries fell slightly to 80.6 percent. The mine also produced 31,600 metric tons of lead in concentrate. Lead ore grade increased to 5.2 percent, while mill recoveries decreased slightly to 54.7 percent. The mine posted a US$114 million operating profit for the quarter, up significantly from the US$71 million profit in the year-previous period. Zinc production in the second quarter was 16 percent lower than the same period a year ago, primarily due to lower grades and recoveries, which were partially offset by higher mill throughput. Lead production increased 17 percent compared with output last year, primarily due to higher grades. Under the operating agreement between Teck and NANA, the mine currently pays to NANA a 30 percent royalty on net proceeds from production. This royalty increases by 5 percent every fifth year to a maximum of 50 percent, with the next adjustment to 35 percent occurring in the fourth quarter of 2017. Royalty costs for the quarter were US$21 million versus US$7 million in the year-previous quarter. The concentrate shipping season commenced on July 1, with expected sales of 145,000 metric tons of contained zinc in the third quarter and 165,000 metric tons in the fourth quarter, reflecting the normal seasonal pattern of concentrate sales.

REDSTAR GOLD CORP. announced encouraging soil sampling results from recent field efforts at its Unga gold-silver project near Sand Point. About 600 soil samples were collected over a 4.5 kilometer (2.8 miles) zone extending from the Orange Mountain area to the Shumagin area of the project. At Shumagin, the combined soil grid data show an approximate 1,500-meter long by 100-meter wide zone containing anomalous gold (from 20 to 50 parts per billion) with higher values near exposed gold-silver bearing breccia outcrops. The 2017 soil grid work covering the Northern Footwall Anomaly returned elevated gold, silver, copper and zinc in soils that are parallel to common northeast-trending structures visible throughout the footwall area. Soils with values of up to 130 parts per billion gold, 1.7 parts per million silver and highly anomalous copper, lead and zinc were found within the areas of observed quartz-sericite-pyrite altered basalt and andesite and quartz-adularia-carbonate veins. At the Red Creek Trend and Saddle Creek Anomaly, soil sampling returned approximately 100 meter wide northeast-trending zones with elevated silver, copper, lead and zinc with sporadic gold with values similar to those that occur along the Main Breccia at Shumagin. Prospecting work within creek beds that cross the Red Creek Trend revealed exposures of sheared and quartz-sericite-pyrite altered basalt and volcanic breccia cut by centimeter scale quartz stockwork with minor carbonate, pyrite and galena that returned highly anomalous Shumagin-style pathfinder elements. In total, the 2017 soil sampling effort confirmed the continuity of alteration and mineralization over a 4.5 kilometer (2.8 miles) long zone. The company plans to

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FREEMAN

conduct follow-up work on several of the newly defined targets while it is conducting drilling on more advanced prospects during its phase 2 program, scheduled to begin in September.

COPPERBANK RESOURCES CORP. announced that a two-rig drilling program has commenced at its Pyramid project located on Aleut Native Corporation lands on the Alaska Peninsula. The first phase of drilling is composed of a minimum of 3,000 meters of drilling designed to test the lateral extensions of known porphyry style copper mineralized. The second phase of drilling will take bigger stepouts to test areas of known mineralization and/or alteration observed at the surface. An alteration halo of about 12 square kilometers was reported by the U.S. Geological Survey, inside of which is the 2 square kilometer area outlined by drilling to date.

CopperBank Resources Corp. also announced that it will conduct a reconnaissance exploration program at its San Diego Bay prospect located 10 kilometers west of its Pyramid project, both of which are located on Aleut Native Corporation lands on the Alaska Peninsula. The program will consist mainly of prospecting and soil sampling over areas where historical work detected anomalous copper and gold values. Historical copper grades reaching 4.3 percent and 16 percent copper and several gold values exceeding 1 gram per metric ton gold are reported in rock samples. The San Diego Bay prospect covers a 40-square-kilometer area of gossan, strong hydrothermal alteration and intrusive rocks, consistent with porphyry copper systems worldwide. All porphyry alteration facies have been observed, including zones of potassic, advanced argillic, phyllic and pyrite zones. Previous Landsat imagery has identified widespread zones of high-temperature clay alteration within one of the largest color anomalies in southern Alaska.

Interior Alaska

KINROSS GOLD announced second-quarter 2017 results from the Fort Knox mine near Fairbanks. The mine produced 91,848 ounces of gold at a cost of US$635 per ounce in the second quarter versus 97,221 ounces of gold at a cost of US$793 per ounce in the year- previous period. Production decreased compared with second quarter of 2016 largely due to a colder spring season that affected heap leach performance, which was offset by an increase in mill grades. The mill treated 3,069,000 metric tons of ore grading 0.86 g/t gold with a mill recovery of 84 percent. The heap leach saw additions of 5.83 million metric tons of ore grading 0.26 g/t gold.

ENDURANCE GOLD CORP. reported the results of the induced polarization and ground magnetic surveys that were undertaken on the Elephant project in the Rampart-Eureka-Manley Hot Springs district. A total of about 43 line-kilometers of induced polarization surveys and 39 line-kilometers of magnetic surveys were completed during the 2017 program. The surveys identified four prioritized resistivity and chargeability anomalies that warrant drilling. The results from the induced polarization survey are dominated by a linear east-west trending low that corresponds to the Elephant Mountain Fault traversing the intrusive. In addition, at least three less dominant linear northwesterly trending resistivity lows intersect the Elephant Mountain Fault complex. Two of these northwesterly trending resistivity lows are coincident with anomalous gold-in-soil, including the high-priority South Zone soil anomaly. Elsewhere on the grid, a well-defined two-lobed chargeability feature, referred to as the North zone and the Pump zone targets what are estimated at 1,200 by 600 meters in size and are associated with pervasively sericite altered granodiorite and 1 percent to 3 percent disseminated sulfides, quartz veinlets and sulfide-quartz veinlets with associated gold. These chargeability anomalies are part of a kilometer-scale, plus-100 part per billion gold-in-soil anomaly, that was partially tested by a 2016 North zone hole, EL 16-13, which returned 0.40 g/t gold over 147.1 meters, including 0.63 g/t gold over 48.2 meters. Future plans at the North, Pump and Central zones will focus on discovery of the feeder zones and/or oxidized lower grade gold zones. At the South Zone target, south of the Elephant Mountain Fault, drilling is recommended to focus on expanding on the South Zone discovery drill hole and identifying the source of the near surface chargeability anomaly.

Alaska Range

MILLROCK RESOURCES INC. announced an update on its Liberty Bell project, located in the Bonnifield Mining District. The program is funded by a subsidiary of **KINROSS GOLD CORP**. The project targets distal skarn gold deposits and possibly porphyry copper-gold deposits. The company reported that about 1,600 soil samples were collected from the property as well as stream sediment and rock samples. Once results are received and compiled with existing project data, drill targets will be selected for a proposed 2018 program.

COVENTRY RESOURCES announced commencement of 2017 exploration at the Stellar copper-gold project. Diamond drilling has begun at the high-grade Zackly copper-gold deposit with two rigs. Historic resources at Zackly stand at 1.5 million metric tons grading 2.9 percent copper and 4.51 g/t gold. One rig will evaluate the eastern and western extensions of the Main Skarn already identified in previous induced polarization surveys, while the second rig will twin about 12 of the historically drilled holes in the Main Skarn to verify grade-thickness intervals and allow an industry-compliant resource estimate to be completed. The twinned holes also will provide structural details and material for use in metallurgical test-work programs to evaluate current processing options for Zackly skarn mineralization. In addition to drilling, induced polarization surveys and geological mapping will be undertaken at Zackly, as well as the nearby Mars copper-gold target and Senator copper targets. The company recently staked an additional 70 state mining claims over possible extensions of mineralization. The company also indicated that it would conduct detailed geological mapping and structural interpretation of existing drill core at its nearby high-grade Caribou Dome copper deposit to provide further insight on the geometry of mineralized lenses and better plan the next round of drilling.

Southeast Alaska

CONSTANTINE METAL RESOURCES LTD. announced initial drilling results from its planned 7,000-meter, US$7 million program at its Palmer volcanogenic massive sulfide project near Haines. Results from the newly discovered Nunatak AG zone, 3 kilometers from the current resource base, included hole CMR17-92, which returned 17.8 meters grading 11.7 percent zinc, 0.2 percent copper, 6.3 grams per metric ton silver and 0.2 g/t gold, and 6.7 meters grading 5.7 percent zinc, 2.2 percent lead, 30 g/t silver, and 0.2 g/t gold, hole CMR17-94, which returned 24.6 meters grading 260 g/t silver, 0.5 g/t gold, 1.4 percent zinc, and 0.5 percent lead, including 10.3 meters grading 461 g/t silver, 0.9 g/t gold, 2.0 percent zinc, and 0.7 percent lead and hole CMR17-96, which returned 20.4 meters grading 9.9 percent zinc, 0.2 percent copper, 14.4 g/t silver and 0.1 g/t gold. Strong metal zonation occurs between holes, grading from silver-gold-barite dominant to zinc dominant. Mineralization varies from massive barite-sulfide to semi-massive sulfide, stockwork and replacement. Additional drilling is continuing with assays pending.

GRANDE PORTAGE RESOURCES LTD. announced that it has commenced diamond drilling at its Herbert project, a mesothermal vein gold deposit near Juneau. The company intends to drill about 13 holes from up to four different platforms which will test up to four separate major veins and their satellite structures. The company will specifically target the Main, Deep Trench, Ridge and Goat veins and will test targets significantly deeper and further to the east than in past campaigns. The project hosts industry-compliant indicated resources of 821,100 metric tons containing 182,400 oz. of gold at 6.91 g/t gold. It also hosts inferred resources of 51,600 metric tons containing 12,800 oz. of gold at 7.73 g/t gold. The system is open to length and depth and is host to at least six vein-fault structures that contain ribbon structure gold-quartz-sulfide veins. ●

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NORTHERN NEIGHBORS

drilling results indicate high-grade gold over significant core lengths. Highlights include 20.5 meters averaging 25 grams per metric ton gold and 184 g/t silver; and 3.5 meters of 132 g/t gold and 2,671 g/t silver. This year's work at Oweegee Dome, which is prospective for porphyry copper-gold and volcanogenic zinc-lead deposits, includes stream sediment sampling, prospecting, mapping and soil sampling. Past exploration at Oweegee Dome includes airborne geophysics, ground sampling and drilling. One hole drilled there in 2007 cut 138.7 meters averaging 0.189 g/t gold and 0.074 percent copper, including a 17.1-meter section that averaged. 0.468 g/t gold and 0.11 percent copper. Sojourn and Millrock closed two deals on Aug. 24 that provide Sojourn the opportunity to earn full ownership of Willoughby and Oweegee Dome by issuing 4.14 million shares to Millrock over the next two years and investing C$4 million on exploration of the properties over the next three years. Upon closing of the option agreement, Millrock received the first payment of 1.8 million Sojourn shares. With this issuance, Millrock owns 12.6 percent of Sojourn's issued and outstanding shares.

More drilling, gold at Dublin Gulch, Yukon

Victoria Gold Corp. Aug. 28 reported results from 12 additional holes drilled at the Shamrock deposit at its Dublin Gulch gold property in the Yukon. Highlights from this latest batch of results include 39.6 meters of 1.04 grams per metric ton gold in hole DG17-818C; 22.5 meters of 2.78 g/t gold in DG17-848C; and 16.5 meters of 2.24 g/t gold in DG17-845C. So far, Victoria has completed more than 23,000 meters of drilling at Dublin Gulch this year – encountering gold at multiple targets across the property. Given this success, Victoria has expanded its 2017 exploration budget to C$12.5 million, more than double the original C$6.2 million budget. More than 5,000 meters in 24 holes have been completed at the Olive-Shamrock Zone so far this year. Assays for the final nine holes are pending. This year's drilling includes in-fill and step-out drilling within the core Shamrock Zone, as well as areas southwest of the Olive-Shamrock open-pit as envisioned in a feasibility study completed last year. The 2017 Olive-Shamrock drilling is now complete and Victoria is now focused on Spinach, a zone north of Shamrock where a fault-related, high-grade shear zone has been interpreted to exist.

Drills trace high-grade Indin Lake gold zones

Nighthawk Gold Corp. Aug. 28 reported the expansion of gold zones at the Colomac project on its Indin Lake property about 160 kilometers (100 miles) north of Yellowknife, Northwest Territories. Hole C17-12B cut 145.75 meters (25 meters true width) of 3.33 grams per metric ton gold in, effectively extending Zone 1.5 at Colomac an additional 50 meters to the north. Drilling also cut gold in a gap between Zone 1.5 and Zone 2.0, which lies to the south. One hole drilled in this area, C17-10B, cut 86.3 meters of 1.45 g/t gold. Colomac drilling continues to deliver; backstopping confidence in the deposit's resource expansion opportunities, and confirming the north plunging mineralization and strong continuity of the high-grade domain at Zone 1.5. Another hole drilled in this area, C17-09B, cut 66.6 meters (50 meters true width) of 1.04 g/t gold. Nighthawk said this drilling confirms wide zones of continuous mineralization between Zone 1.5 and Zone 2.0. "We remain encouraged by the breadth of the mineralized zones that we continue to intersect, and are confident in our ability to continue tracing and expanding the high-grade mineralization at Zone 1.5. The fact that it can now be accurately tracked and expanded, and that it maintains its higher-grade character, are both important features that will positively impact our upcoming resource estimate," said Nighthawk President and CEO Michael Byron. Nighthawk is nearing the halfway point of a planned 25,000-meter drill program for 2017.

More gold, drilling at Committee Bay

Auryn Resources Inc. Aug. 24 reported results from 21 out 148 holes drilled so far during the summer program at the Committee Bay gold project in Nunavut. Drilling at West Plains, which is at the southwest end of the 250-kilometer- (155 miles) long Committee Bay property, continues to show promise. Highlights from the six holes reported from West Plains include 9.15 meters of 3.48 grams per metric ton gold in hole 17WPR055; 9.15 meters of 2.89 g/t gold in 17WPR052; and 6.1 meters of 2.54 g/t gold in 17WPR053. The bottom 1.53 meters of hole 53 averaged 7.48 g/t and ended in mineralization where the hole was lost. The company has expanded its 2017 program to drill five additional targets identified by gold-in till-anomalies and outcropping mineralization. The two most intriguing new targets – Kinng Mountain and Kinng Gold – are situated in the northeastern half of the property. Grab samples at Kinng Mountain returned grades as high as 40.04 g/t gold and Kinng Gold outcrop samples returned 15.12 g/t gold. Auryn added 4,000 meter to the Committee Bay drill program, for a total of 29,000 meters for 2017. ●

● ENVIRONMENT & SAFETY

EPA approves Fairbanks air quality plan

Borough actions will help address pollution issues but further work needed to fully alleviate particulate levels in winter air

By ALAN BAILEY
Petroleum News

The Environmental Protection Agency has approved a plan submitted by the Alaska Department of Environmental Conservation for the improvement of air quality in Fairbanks. In June the federal agency heightened its classification of air quality problems in the city from "moderate" to "serious," for non-attainment of national air quality standards. DEC's plan goes some way to addressing the city's air pollution problems but the "serious" classification still requires the submission of a more comprehensive plan by the end of this year. Under EPA rules, a serious air quality plan requires the implementation of the best available emission control technologies and measures.

"The state and borough have worked hard to implement reasonable measures to improve air quality in the Fairbanks North Star Borough and they have met a significant milestone," said Tim Hamlin, director of EPA's Region 10 Office of Air and Waste. "We are encouraged that they will continue these improvements as they turn their focus to developing a more stringent air quality plan. We think that the borough and the community are in the best position to solve this issue locally, and we intend to continue to support their efforts."

The air quality issue arises primarily because of the widespread use of wood stoves to heat houses during the winter in the Fairbanks area, given the high cost of alternative forms of heating. During severe cold weather, thermal inversions tend to trap the fine particulates from wood smoke close to ground level, causing people to inhale the polluted air.

The state plan for addressing the air quality problem includes the provisions of incentives for the replacement of old, inefficient wood burning stoves with modern wood burning units, prohibiting the emission of dense smoke from chimneys and prohibiting the burning of unseasoned wood. The use of wood burning heaters will be banned during periods when high particulate pollution in the air is anticipated.

The state is using money from a $2.5 million grant from EPA to fund a wood stove change out program, EPA says. The Alaska Industrial Development and Export Authority's Interior Energy Project has air quality improvement in the Fairbanks area as one of its objectives: That project aims to increase the use of natural gas for heating buildings in the city and is currently trying to establish an appropriate supply of gas for this purpose from the Cook Inlet basin. ●

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● UTILITIES

RCA approves MEA all-service rate case

New rate structure reflects electric utility's transition to the generation of its own power from Eklutna Generation Station

By ALAN BAILEY
Petroleum News

The Regulatory Commission of Alaska has approved a rate case filed by Matanuska Electric Association to accommodate the fact the utility has transitioned to a full-service business, generating its own power as well as distributing power to its customers. The change comes as a result of the commissioning in 2015 of the Eklutna Power Station. The new rates, which go into effect on Sept. 1, are based on an analysis of the utility's operations during 2016.


TONY IZZO

The new rates do not reflect the cost of the gas fuel used to generate the power but involve a 2.75 percent increase in the fees charged to support the operation of the generation facility, and the power transmission and distribution systems. MEA has commented that an increase in the fixed facilities charge for the infrastructure costs allows a counterbalancing reduction of the per-kilowatt-hour "energy charge" for infrastructure use.

The utility says that the net impact on a typical consumer's monthly electricity bills will be less than 1 percent.

MEA had filed its proposed rate change on June 30. The process for RCA approval of the new rate included a 30-day public comment period.

"Prompt approval means cost savings for MEA members," said MEA CEO and General Manager Tony Izzo in response to the RCA decision. "It is a direct reflection of the hard work and careful planning from our board, management team and employees."

Change to full service

In the past MEA has obtained its power from Chugach Electric Association, with MEA acting as a transmission and distribution company, shipping the power to MEA's customers. But, with that arrangement for power supplies scheduled to cease at the end of 2014, MEA proceeded with the construction of its Eklutna generation facility, thus becoming a full-service utility.

Conceived during a time of worry over the viability of future natural gas supplies from the Cook Inlet basin, the facility can use diesel fuel as an alternative to gas.

Unlike the turbine-based, gas-fueled power generation facilities elsewhere on the Alaska Railbelt transmission grid, the Eklutna Generation Station uses 10 powerful reciprocating engines to drive its generation. Conceived during a time of worry over the viability of future natural gas supplies from the Cook Inlet basin, the facility can use diesel fuel as an alternative to gas. The use of multiple engines and reciprocating engine technology enables rapid adjustments in power output while maintaining power generation efficiency. This makes the power station particularly suitable for counterbalancing fluctuations in power output from renewable sources such as wind farms.

In a further development MEA is joining a new power pool arrangement with Chugach Electric Association and Municipal Light & Power. This will enable all three utilities to make optimum use of the most efficient power generation in the Anchorage and Matanuska-Susitna valleys region, with MEA's Eklutna Generation Station becoming part of the power generation mix. ●

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● PIPELINES & DOWNSTREAM

Feds OK gas pipeline fought by residents

ASSOCIATED PRESS

The Federal Energy Regulatory Commission has approved construction of a high-pressure pipeline that will carry natural gas from the shale fields of Appalachia, across northern Ohio and into Michigan and Canada, a decision likely to be a death blow for project opponents concerned about safety and property rights.

The planned $2 billion NEXUS Gas Transmission project is a partnership between Calgary, Alberta-based Enbridge and Detroit-based DTE Energy. The 255-mile-long pipeline will be capable of carrying 1.5 billion cubic feet of gas per day, enough to meet the needs of about 15,000 homes for a year.

The commission Aug. 25 issued a certificate of public necessity and convenience, the project's last major regulatory hurdle. Despite the opposition, there wasn't much chance the project wouldn't be approved as long as the NEXUS partnership was willing to pay for it. The Natural Gas Act of 1938 gives private companies wide latitude to build pipelines in the U.S., and FERC has no known history of disapproving projects like NEXUS.

see PIPELINE page 13

Petroleum news

Oil Patch Bits

Fluor celebrates 20 years of Irving Oil alliance

Fluor Corp. recently celebrated 20 years of providing engineering, procurement and construction support services for Irving Oil Ltd. Since 1997, Fluor has supported projects ranging from sustaining capital to major growth projects at Irving Oil's refinery and marine terminal in Saint John, New Brunswick, Canada.

Fluor's personnel are integrated with the Irving Oil team working on site at Canada's largest refinery. About 100 projects are carried out each year by the joint site team with an execution capability of up to $300 million annually. The team has saved more than $100 million through value creation efforts over the past 13 years and has worked more than seven years without a single recordable incident.

"We are proud to work alongside Fluor team members each and every day on our site as we continue to create jobs and deliver projects together safely," said Mark Sherman, vice president and chief operating officer of Irving Oil.

"With similar values and a strong cultural alignment, we are honored to celebrate this milestone in the Irving Oil and Fluor relationship," said Mark Fields, president of Fluor's energy and chemicals business in the Americas. "The success of this alliance is a testament to the results that are achieved when personnel are truly blended as one team with a common goal of high-quality project delivery. With our flexibility and strong project execution expertise, we will continue to partner with Irving Oil to deliver safe, on-schedule and capital-efficient projects."

Schank earns second ATA Driver of the Year award

Lynden Transport recently announced that the Alaska Trucking Association presented John Schank with the Alaska Truck Driver of the Year award this summer at a special event in Fairbanks. In addition to that honor, Schank was recognized for setting a new record as the first Lynden Transport driver to log 40 years of safe driving — 5,360,000 miles to be exact. Starting with the opening of the Dalton Highway in 1975, he has been driving one of America's most treacherous roads: the haul road between Fairbanks and Prudhoe Bay. The haul road is known for extreme grades and extreme weather. John still drives the route today, making the 1,000-mile round trip twice a week.

"John is a true professional," said Lynden Transport President Paul Grimaldi. "He was named ATA Driver of the Year in 2014 and participates in the annual ATA truck driving championships each year. He received a letter of commendation in 2014 from former Governor Sean Parnell for his driver of the year award and from Governor Walker for his awards." He also received a letter of congratulations from Joe Marushack, president of ConocoPhillips Alaska, and Janet Weiss, president of BP Alaska, for helping these Lynden customers continue to safely perform their work.

"For 43 years, John has been climbing behind the wheel and doing his job safely and as the quiet professional," added Lynden Chairman Jim Jansen. "He exemplifies the Lynden Everyday Heroes who consistently, efficiently and safely serve our customers. John has set the standard for drivers on the haul road with a spotless safety record. We are proud of him and his commitment to safety while driving in the most challenging conditions in the nation."

Companies involved in Alaska and northern Canada's oil and gas industry

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PIPELINE

"Receiving this stamp of approval is a testament to our strong history of consultation and successful project execution," said NEXUS Gas Transmission President Jim Grech in a statement.

Jon Strong of Medina County's Guilford Township in northeast Ohio scoffs at the notion that property owners were consulted in any meaningful way. He became one of the leaders of a fight that began with an effort to convince NEXUS and FERC's staff to move the pipeline south to farmland and away from semi-rural communities like Strong's and cities like Green in neighboring Summit County. Green officials provided detailed plans for alternate routes that both NEXUS and FERC's staff rejected as having no advantage over company's preferred route.

A federal lawsuit filed by opponents against FERC over the approval process was dealt a blow earlier in August when a magistrate wrote that U.S. District Court was the wrong venue for their complaint.

Strong and others refused to allow NEXUS surveyors onto their property, even when they were accompanied by armed sheriff's deputies. Property owners have no choice now. What's left for holdouts is negotiating easement rights that preserve what they can of their property and gets them the best possible price for land used by the pipeline. ●

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MEYER Q&A

think the voters confirmed that it's a good bill. They rejected the recall of that bill. It's been through enough test and challenge. Let's give it a chance to work. If you talk to the oil companies who are doing most of the work up there, whether it's ConocoPhillips and their expansion westward into NPR-A, and Hilcorp and Caelus, even Armstrong who isn't in production yet. There is certainly BP who is trying to squeeze more oil out of Prudhoe Bay, even ExxonMobil at Point Thomson to some extent. They will all tell you they are moving forward and going in the direction they are because we now have a stable oil tax policy in place that our consultants have told us it's fair on a global basis, it's fair at low oil prices and it's fair at the high oil prices.

Unfortunately, oil prices are low and so our tax revenue is low. That's no reason to change your tax codes just because you want to get more money at lower prices. I'm sure the oil companies would like to get more money at lower oil prices. I think it's important that we not tamper with that. I know we did tinker with it some in HB 111 with the ring fencing concept, which frankly, I'm a little worried about. I think it could hurt those who are trying to be more aggressive by expanding and connecting these small fields and turning them into a big field or medium size field.

That's what ConocoPhillips is doing, going around to CD-5, Greater Moose's Tooth I and Greater Moose's Tooth II with other small fields there and bringing them all together. Ring fencing could hurt that. I think it depends how the regulations are drawn.

Petroleum News: Why do you think it took so long to get HB 111 passed when most people pretty much knew what needed to be done?

Meyer: Again, I think some of the older guys who voted against SB 21, don't like SB 21, are still trying to tinker with it through other oil and gas bills. Then you have a lot of new guys who aren't familiar with SB 21 who think it's a good idea to get new revenue no matter how we do that. I think that is always going to be a concern. What's fair to both the state and the industry without going too far one way or the other? I think that's why we hired some more consultants. They are all on board now.

I think Cathy Giessel was going to have meetings with Geran Tarr over the interim to look at the whole policy and get feedback from all the consultants to make sure that what we have got in place is the best, kind of the sweet spot, that we're getting the maximum for the state and still encouraging investment. As you know it is very expensive on the North Slope and the fields take a long time, even after discovery until you have first production.

When you have money that is tight you are much better — and I'm shocked that we are getting as much capital investment up there that we are — it's much better, quicker, more efficient to invest in the oil shale plays in the Lower 48. You don't have to invest as much and you get quicker production than you do in Alaska. We have to be careful. As you know there is a surplus of gas now because of the oil shale. We are exporting oil now because we've got more than we need, though we are still importing from Canada.

We just need to make sure that our policy isn't such that we chase off investment in Alaska. That's kind of what ACES did to some extent. We should have had much more investment at high oil prices than we did. It was just easier for the oil companies to make a greater return at less risk elsewhere.

Petroleum News: You talk about a surplus of gas, let's talk about AKLNG. What are your views on that project right now?

Meyer: Everything I read just says the world is swimming in gas and Canada has a lot of stranded gas that once they figure out how to get it to the coast or the Lower 48, we are going to have even more gas. It would make you believe what are we doing here, even spending $100 million that he (Gov. Bill Walker) wants to spend? Of course, he's hired Keith Meyers who is getting $550,000 a year plus potential bonuses. So, one can say what are we doing?

On the other hand, if he is able to get a tax exemption from the IRS, which he may or may not have. I read a preliminary announcement that says he may have it but then someone said that's not the final ruling. So, I'm not sure. If he got that, it would certainly help the economics.

Petroleum News: So, given that it's uncertain whether the state has that exemption or not, what would you like to hear next?

Meyer: I think they are still going through the FERC process. If they came back and said FERC has approved it and we don't have to pay taxes on it, and the economics improve significantly, that would then maybe get me a little more interested, a little more excited about the project. If we don't have FERC approval and if we don't have the tax exemption, I don't know how this project goes. We should probably put it back on the shelf until the forecast for gas changes in maybe 10 years or 20 years.

Petroleum News: At the beginning of the summer, Interior Secretary Ryan Zinke visited Alaska and spoke of a commitment from the Trump administration. What were your takeaways from his visit?

Meyer: I think we were all very encouraged. He was talking about some of the land that was off limits in NPR-A, taking another look at that. I can't recall exactly what his comments were about ANWR, but they were certainly more positive than Secretary Jewell's. I think he was even positive at looking at offshore leasing again. Everything has to do with timing. I think if Shell was trying to do the offshore drilling now under the Trump administration rather than the Obama administration and Sally Jewell, they could have had enough time and money to go after two or three wells instead of just the one they drilled. I was encouraged by his visit and I hope he is able follow through with it because it can only help. The more land you make available for exploration, the more likely you are to have a discovery.

Petroleum News: Still on Secretary Zinke, he appointed an Alaskan, Joe Balash, to his team. How can that help Alaska?

Meyer: I think it's great for Alaska for someone like Joe Balash in there on the front lines looking out for us. I don't know he's been confirmed yet. Once he starts going through the process, I think he will get confirmed. I haven't heard anybody say he won't. I know Sen. Sullivan has been promoting his name and Sen. Sullivan has the respect of his peers back there.

Petroleum News: There have been times when you and Joe have been on the same side of a bill and opposite sides, mostly while he worked for Gov. Palin.

Meyer: It's hard to say if those were Joe's thoughts or the person he worked for. Gov. Palin wasn't all that supportive of the industry whereas I think Joe is working at a whole different environment now starting with the top and President Trump and then of course Secretary Zinke is pro resource development. I think that is where Joe's personal thoughts are right now. I think under Gov. Palin, he had orders he didn't necessarily agree with.

Petroleum News: Secretary Zinke also brought Steve Wackowski on board. It looks like he is building his team with some key Alaskans.

Meyer: Steve will be great. I think he has been confirmed. He has a military background so a lot of his background checks are already done. Sen. Sullivan and Sen. Murkowski are very pro resource development.

Petroleum News: Then last month (former Senate President) Drue Pearce was named deputy administrator of the Pipeline and Hazardous Materials Safety Administration, but this is part of the U.S. Department of Transportation. Still, it's another Alaskan getting a prominent post.

Meyer: I don't know enough about what she is going to be doing to have a comment, but Drue has always been supportive of the state and the direction the state wants to go. We didn't have that under the previous administration. First of all, President Obama and Secretary Jewell were not very supportive of resource development. In fact, a lot of times, they were content with just leaving it (the resource) in the ground. We are working in a whole different environment right now. It's an environment that is conducive to overall economic benefit to the state of Alaska. ●

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NANUSHUK EIS

in the company's June 2015 application.

The higher production rates required some changes from the original application, the Corps said, including relocation of Drill Site 3 some 1.5 miles south of the originally proposed site; an increase in the number of wells to as many as a total of 150 for the three proposed drill sites; changes in the pad layout and size to accommodate additional wells and a larger processing facility; a possible increase in power requirements; and a possible increase in pipeline diameters.

Based on 2015 exploration work, Armstrong anticipates 120,000 barrels of day of production from the Nanushuk and Alpine reservoirs, an increase from the 60,000 bpd estimated in the company's June 2015 application.

Alternatives announced last year

As reported by Petroleum News in early December, the Corps announced alternatives for the project, including a no action alternative, in November. At that time release of the draft EIS was projected for mid-year.

The other four alternatives other than the no action alternative have features in common: seasonal ice pads and ice roads to support construction; construction of three new gravel pads for drill sites, a central processing facility and a tie-in pad at Kuparuk Central Processing Facility 2 to connect to existing North Slope pipeline facilities; new pipelines for transportation of sales-quality oil and infield pipelines to transport multiphase product — oil, gas and water — to Armstrong's central processing facility; construction of new gravel roads, improvement of existing gravel roads, marine transportation to the Oliktok Point dock and air transport to Deadhorse with bus and truck transport from the airport to the project; the project would also include gravel sources, camps, power generation and transmission, communications, facility lighting, potable and non-potable water sources and distribution; and waste management and disposal.

Applicant's proposal

The project proposed by Armstrong includes an all-season gravel road between Kuparuk drill site 2M and the proposed Nanushuk facilities, using 0.1 miles of the existing Mustang Road before turning west and then northwest to the Nanushuk pad, which would include drill site 1 and the central processing facility. The road would be 13.5 miles and would connect to 11.9 miles of new gravel infield roads to drill sites 2 and 3. The infield road would cross the Kachemach River on a bridge. There would be new pipelines to transport crude between drill sites, the central processing facility and existing infrastructure, with the drill site 3 pipeline crossing the Kachemach River and the export/import line crossing the Miluveach River.

Alternative 3 — southern access

The southern access alternative would maximize use of existing infrastructure developed for Mustang, the Corp said, with the new gravel access road paralleling the Alpine Pipeline corridor and drill site layout similar to the applicant's proposal. This alternative would require two crossings of the Kachemach River. The export/import pipeline would also cross the Kachemach River twice.

Alternative 4 — northern access

The northern access alternative would maximize use of existing Nuna infrastructure, including the permitted but not yet constructed Nuna Road. With this alternative the central processing facility would be located farther from Nuiqsut and a 6.8-mile road would be constructed to connect the project to the Nuna road.

The export/import pipeline would parallel the proposed access road until it approaches the existing Nuna Road and would then go cross-country to the east and south to Kuparuk drill site 2V, and from there parallel existing roads to the tie-in pad at Kuparuk CPF2.

Alternative 5 — reconfigured infield roads

Alternative 5 would reconfigure infield roads to reduce new infrastructure in the Colville River floodplain, the Corps said, as well as making infield roads less parallel to the East Channel of the Colville River to reduce potential impacts to migrating caribou.

The alternative is a response to cooperating agency comments about road and pad configurations having the potential to have a fencing effect on migrating caribou.

—KRISTEN NELSON

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GOVERNMENT

DOE announces coal technology funding

The U.S. Department of Energy has announced the availability of $50 million in funding for projects targeting the design, construction and operation of two large scale pilot plants for the improvement of coal powered systems. The pilot plants must address improved performance, efficiency, emission reduction and the cost of electricity. The plants must use domestic U.S. coal, or fuels derived from domestic coal, DOE says.

Applicants must commit to share at least 20 percent of the project cost and have already demonstrated success in a small-scale pilot project.

The funding will be disbursed in three phases. Phase one will support preliminary cost estimating, planning and the assembly of environmental information for selected projects. Projects then selected to progress to phase two will complete front-end engineering design and conduct the process required under the National Environmental Policy Act. Then DOE will choose at least two finalist projects to proceed to the construction and operation of the large-scale pilot facilities.

At this point, DOE is seeking applications for phase one. However, applicants must also offer preliminary plans for carrying out phases two and three.

—ALAN BAILEY

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DEVELOPMENT DRILLING

ongoing suspension of drilling activities at the Eni-operated Nikaitchuq unit and the Caelus-operated Oooguruk unit continue to hamper overall drilling totals.

The seven North Slope producers are BP, Caelus, ConocoPhillips, Eni, Hilcorp, the North Slope Borough and Savant. Only BP, ConocoPhillips and Hilcorp have drilled this year.

Prudhoe to blame

The Prudhoe Bay unit is almost entirely responsible for the current decline.

BP Exploration (Alaska) Inc. drilled 11 development wells during the first half of the year, down from 27 drilled in the first half of 2016 and 33 in the first half of 2015.

Even though the company is cutting back considerably on development drilling, it is diversifying its work by drilling at the Lisburne and Raven fields, as well as the main Prudhoe field. And the company is undertaking some pad expansions to aid operations.

ConocoPhillips Alaska Inc. drilled 27 development wells at the Kuparuk River unit during the first half of the year, down from 32 during the first half of 2016 and 45 in the first half of 2015. The current well count is higher than first-half 2013 and 2014 totals.

The company is continuing its strategy of multilateral drilling. The program this year has included a pent-lateral well at Drill Site 1C and a quad-lateral well at Drill Site 3M.

ConocoPhillips drilled 11 development wells at the Colville River unit during the first half of the year, up from eight in the first half of 2016 and five in the first half of 2015.

The drilling activity this year has included six Alpine wells from the new CD-5 pad, four Alpine wells from the existing CD-2 pad and a Fiord well from the existing CD-3 pad.

The wells at the Prudhoe Bay and Kuparuk River units were all development wells. The drilling activity at the Colville River unit in the first half included two services wells.

Hilcorp Alaska LLC drilled five wells at the Milne Point unit in the first half of 2017, down from seven in the first half of 2016. The previous operator, BP, did not drill at Milne Point in the first half of 2015 but drilled 17 wells in the first half of 2014.

Hilcorp drilled the B-30 development well, B-32 development well, B-33 service well, B34 service well and the J-24A service well sidetrack earlier this year. Three of the wells targeted the Schrader Bluff formation, one the Kuparuk and one an undefined oil pool. ●

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EXPANSION PLAN

tial production system, or IPS. The original IPS POD expired May 1 of this year and the division extended it until Sept. 29.

The division approved the IPS POD portion of ExxonMobil's submittal based on the unit agreement and state regulations, but said the expansion plan is specific to the settlement agreement, making it a contractual commitment, governed by the settlement agreement and not by the unit agreement and state regulations.

The decision said the expansion project planning POD "is inconsistent with the Settlement Agreement" and contrary to the interests of the state and the public which the division considers when reviewing a POD, but also said the settlement agreement does not prohibit submission of a revised expansion project planning POD and gave ExxonMobil until Oct. 31 to submit a revised POD.

Issues with expansion POD

The division said the settlement agreement requires the working interest owners to "begin engineering and permitting of a Point Thomson Expansion Project" and to submit a POD for the expansion which "includes work plans for evaluation and selection of an option for development of the Point Thomson Reservoir through a Point Thomson Expansion Project."

The division characterized the expansion POD which ExxonMobil submitted as conditioned on "commercial negotiations and a decision to fund" and said those conditions are "directly contrary to the WIOs contractual obligations under the Settlement Agreement," which obligates the owners to "begin engineering and permitting" during the 2017-19 POD period and requires that the POD include "work plans for evaluation and selection of an option for development."

The division said what ExxonMobil submitted is inconsistent with the settlement agreement and "after agreeing to conduct and complete planning work now, the WIOs submitted a POD that would allow them to unilaterally decide to do nothing."

ExxonMobil's expansion project planning POD discusses potential expansion of the IPS facilities to increase production to more than 50,000 barrels per day of condensate for sale down the trans-Alaska oil pipeline and 920 million standard cubic feet per day of gas for injection at Prudhoe Bay, with two new wells and conversion of others, but the company said until the Point Thomson WIOs enter a commercial agreement with the Prudhoe Bay WIOs, no work will be funded. ExxonMobil told the division it has not approached the other Prudhoe WIOs to begin discussions.

A commercial agreement is not part of the settlement agreement, the division said, and the lack of an agreement would not prohibit planning work.

The POD also said front-end engineering design work is dependent on the WIOs deciding to fund that work.

"Conditioning the planning work on commercial negotiations and a decision to fund is directly contrary to the WIOs contractual obligations under the Settlement Agreement," the division said. The POD also lacks the level of detail the WIOs committed to provide with this POD.

"Because of the Settlement Agreement, this Expansion Project Planning POD is not just a regulatory obligation, but a contractual one," the division said. "To settle the PTU litigation and retain the unit, the WIOs agreed to conduct the planning work for an expansion project, starting now and completing by the end of 2019."

IPS POD

The division accepted the initial production system POD, but said that while ExxonMobil drilled the wells identified in the settlement agreement it has not met its production obligation of 10,000 bpd of condensate, with data showing that while production has reached 10,000 barrels on some days, average production has fallen short of 10,000 bpd.

ExxonMobil said in its IPS POD that "production was impacted by difficulties with its gas injection compressor," and the division said during the technical meeting the company "provided additional detail about the compressor and its design flaws and difficulties in relation to this reservoir," telling the division that "it was conducting maintenance or repairs on the compressor during periods when production ceased or decreased."

The division said it "is hopeful that Exxon will belatedly achieve the 10,000 barrels per day after further refinement of the compressor system."

The settlement agreement also required ExxonMobil to identify and pursue debottlenecking work, but, the division said, the company did not identify any such work completed in the 2012-17 POD period.

The IPS POD fails to address permitting for the East Pad, an East Pad well or additional wells, the division said, which indicates ExxonMobil has not fulfilled obligations in the settlement agreement to continue permitting the East Pad, an East Pad well and an additional well.

The division said ExxonMobil does not plan any additional drilling for the 2017-19 POD period, but will consider debottlenecking work.

The division said it is concerned that ExxonMobil did not fulfill requirements for the 2012-17 POD period including sustaining 10,000 bpd production, identifying and pursuing debottlenecking and continuing to permit the East Pad, an East Pad well and an additional well.

"Exxon did provide an extensive explanation of its problems with the compressor and the Division remains hopeful that those problems are now resolved and that Exxon will soon meet its production rate obligation," the division said.

The proposed POD does provide for continued production, which is a benefit to the state, the division said, adding that unitized production "generally conserves resources, minimizes environmental impacts, and prevents waste."

Despite concerns, the division approved the IPS POD for Sept. 30, 2017, through Dec. 31, 2019. ●

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NICOLAI CREEK

ago been president of Aurora Gas — Pfoff left Aurora Gas in 2011 to focus on exploration activities with Aurora Exploration.

Aurora Gas operates five gas fields, including Nicolai Creek, on the west side of the Cook Inlet.

Involuntary bankruptcy

Following major problems with two of the company's projects, a group of the company's creditors filed an involuntary bankruptcy petition against Aurora in early May 2016. Complicating the company's financial woes is the non-payment of some state tax credits which the company claims it is owed, but which have been deferred because of an issue relating to proof of payment of some of the gas producer's costs.

During the ensuing bankruptcy court case Aurora Gas had suggested a sale of its assets to raise money owed to the company's creditors. An offer in June of this year from Trading Bay Oil & Gas LLC to purchase all of Aurora Gas's assets fell apart after the Native corporations that are landowners for some of the gas fields declined the terms of the offer.

Subsequently Escopeta Oil and Gas Corp and Aurora Exploration each made offers, just for the Nicolai Creek field, which is entirely in state land and forms Aurora Gas's main source of gas. According to a court filing Escopeta has subsequently withdrawn its offer. Aurora Gas offered $75,000 in cash for the field.

Urgency

Recent court filings from Aurora Gas's creditors expressed urgency in dealing with Aurora Gas's assets because, according to the filings, Aurora Gas's daily expenses would begin to exceed its daily income after Aug. 31.

According to Judge Spraker's Aug. 22 order, the asset sale includes Aurora Gas's gas supply contracts other than large commercial contracts held by Helena Energy. Prior to the bankruptcy petition, Aurora Gas had spun off Helena Energy as a separate marketing company holding those commercial contracts. The disposition of these contracts, for which Aurora Exploration has offered $10,000, will require a further court order, Spraker said.

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DUTY TO SELL

the gas. What we're building is the commercialization vehicle," Meyer said. "So they can subscribe to capacity on the system … put it into their global portfolio."

Alternatively the state will purchase the gas from them.

"There's not a third doorway that says I want to hold off on Alaska's supply while I go do these other projects," Meyer said.

The state might also invest in anything up to 25 percent of the project development cost in the form of equity in the project, he said.

Viable project

The plan is to build a gas treatment plant on the North Slope, a 42-inch gas pipeline from the Slope to Nikiski on Cook Inlet, and a three-train LNG plant at Nikiski that would offload LNG onto tankers for export. Meyer expressed confidence that the around $40 billion project is viable. AGDC anticipates operating the system on a tolling model, charging customers for the shipment of gas delivered on the North Slope.

An open season, inviting solicitation for use of the system, ended on Aug. 31. However, it was clear from Meyer's presentation that, if there are insufficient bids to account for system capacity, the state will itself market the gas.

For success, the project needs to clear three hurdles: the global LNG market, the market for financing the project and the achievement of an adequate netback for the state of Alaska, Meyer said. And this will require alignment between all of the stakeholders, including the state and the producers, on AGDC's mission of maximizing the value of the upstream resource for the state of Alaska, he said.

Clearing the market

In terms of clearing the hurdle of the global LNG market, Meyer said that the project's target market is Asian countries, in particular Japan, China and South Korea. Although these markets currently enjoy a surplus LNG supply, that supply will bleed off in the early 2020s while gas demand continues to grow. Several big 20-year supply contracts end in 2026.

"So everybody in the industry, all of the sellers, are all focused on this dip," Meyer said, adding that the about 1 trillion cubic feet of gas passing though the North Slope gas line each year would fit comfortably within the anticipated gas market. Meyer also expressed confidence that long-term LNG supply contracts, rather than spot market sales, would be prevalent in that future market, given the impossibility of building new LNG infrastructure on the basis of a spot market.

At a North Slope gas price in the range $1 to $2 the Alaska LNG could compete effectively with a Gulf Coast project, he suggested.

Australia is currently a major global supplier of LNG. But, having already brought its better projects on line, the next generation of Australian projects will not be as competitive, Meyer said. Instead, Alaska's main competition in the mid-2020s will come from the Lower 48, in particular Texas and Louisiana, he said. The U.S. administration is pushing for new U.S. exports to Asia, with those exports potentially coming from Alaska as well as from the Gulf states. And, although Qatar is very competitive in the LNG trade, buyers may be looking for more diverse sources of supply. Moreover, there is likely to be sufficient LNG demand to satisfy production from both Qatar and the United States, Meyer said.

Russian gas supplies are also competitive, but people already buying gas from that country may seek supply reliability elsewhere — for gas and power utilities, the main purchasers of LNG, supply reliability comes a close second to price in supply selection criteria, Meyer said.

Gulf Coast comparison

Looking at that future competition between Alaska and the Lower 48, the Gulf Coast enjoys the advantage of an existing gas pipeline infrastructure, while Alaska benefits from a much shorter sea route to Asia and no need to transit LNG carriers through the Panama Canal. Although it would cost more to build an LNG facility in Alaska than in the Gulf region, that cost differential would be almost exactly offset by the relative efficiency of LNG production in Alaska's cool climate, Meyer said. And, while the Henry Hub pricing of gas in the Gulf region tends to be volatile, Alaska gas pricing should be relatively stable. The Energy Information Agency projects Henry Hub pricing to range from the current level of some $3.25 per thousand cubic feet up to perhaps $5.10, Meyer said. The stranded gas on the North Slope would be cheaper: At a North Slope gas price in the range $1 to $2 the Alaska LNG could compete effectively with a Gulf Coast project, he suggested.

Financing structure

AGDC sees the $40 billion financing for the Alaska project coming from 75 percent debt and 25 percent equity. The equity portion could come from the state, but could come from other sources as well. It is also possible that the system's customers could purchase some share of the equity interest. By characterizing the project as an infrastructure project, essentially a pipeline system, the cost of the financing drops, Meyer said.

The idea is to have a 20-year debt term, a period of time corresponding to the length of a typical long-term LNG supply contract. During that period, revenue from the system would likely generate about $1 billion per year return for the equity investors. Once the debt is retired, that return would jump to $5 billion per year, a level of return that, for this type of pipeline system, could attract a $50 billion price tag, were the system to be sold to a third party, Meyer said.

"That to me is the Permanent Fund recharged," he said.

Netback for the state

At an LNG price of $8 to $10 on the global LNG market, the project should generate exports with a total value of $8 billion to $10 billion per year. About a quarter of that money would be used for the North Slope gas supply, with 25 percent of that going to the state. About $1.5 billion would cover operations and maintenance costs, and the payment of property taxes to local communities. The operations and maintenance expenditure would remain in the state in the form of payments to contractors and workers. Service of debt on the system would be $3.5 billion and $1.1 billion would be returned to the equity owners, Meyer said.

This analysis demonstrates that, as well as being an attractive investment for the global finance community, the project would bring a reasonable netback to the state, Meyer said. He also commented that, because the project's cost projections include some $16 billion for contingencies and owner costs, there is the possibility of bringing the cost down a bit.

There is also the possibility of using a phased implementation, perhaps starting with just two LNG trains and then expanding to three trains at a later time. However, the system would still be best built using the 42-inch pipeline: A 36-inch pipe could handle the lower capacity but would require more compressor stations than the larger pipe. In addition, the 42-inch line, unlike the 36-inch line, could easily accommodate the expansion to three trains, Meyer said.

Given the vast amount of natural gas thought to exist under the North Slope, there would also be the future possibility of expanding the system beyond the initial three-train design. Expansion of the pipeline capacity would involve building new pipeline segments downstream of the compressor stations, Meyer said.

Meyer also commented that, with a key intent of the planned gas pipeline being the supply of natural gas within Alaska, AGDC would act as the aggregator for in-state gas supplies, buying the gas and then selling it to in-state markets.

Marketing the project

Meanwhile, since taking over the running of the project, AGDC has been actively marketing the project, raising awareness of the project both for the Trump administration and for potential customers. This would be the largest U.S. energy export project, Meyer said. The administration has accepted the project for expedited regulatory treatment and financing under the terms of the Fixing America's Surface Transportation Act, passed in 2015. Moves for international recognition have included alerting the Chinese president to the project during his visit to Alaska, and a meeting with the president of South Korea. AGDC has also signed a memorandum of understanding with Korea Gas Corp., Meyer said.

Given changes that are happening in the global LNG business and the upcoming window of opportunity in the mid-2020s, this is the right time to move forward with the Alaska LNG project, Meyer said. And AGDC needs to move on an aggressive path. To meet that new supply window, engineering and construction must take place in the period 2018 to 2023, with a final investment decision by around the fourth quarter of 2019. There is still some current engineering and permitting work to complete, and a FERC filing that needs to be made, Meyer said. ●

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