Petroleum news

page 2 President says US on brink of becoming net exporter of oil, gas

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This week's Mining News

North of 60 Mining news

page 8 Freeman: new players kicking the tires of big Alaska metals projects

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* Week of July 2, 2017

NORTHERN NEIGHBORS

Compiled by Shane Lasley

IDM MINING LTD.

Underground drilling is testing expansion targets adjacent to the reserves at Red Mountain with the goal of extending the life of the mine proposed for this gold project in northwestern BC.

Red Mountain shows feasibility

IDM Mining Ltd. June 26 said the results of a feasibility study for its Red Mountain confirms the positive economics for developing a high-grade underground gold mine at this gold project near Stewart in northwestern British Columbia. The proposed 1,000-metric-ton-per-day year-round operation is expected to average roughly 78,000 ounces of gold per year over the nearly six year mine-life considered in the feasibility study. Initial capital expenditure to fund construction and commissioning is estimated at C$135.7 million, with a life-of-mine cost of C$202.4 million. Life of project direct cash cost is estimated at US$539 per ounce of gold recovered; net of the silver by-product, costs drop to US$492/oz. At a gold price of US$1,250/oz and an exchange rate of C$1 to US76 cents, the Red Mountain is calculated to generate a post-tax net present value (5 percent discount) of C$104 million; an internal rate of return of 32 percent; and is expected to payback initial capital in 1.9 years. "This study demonstrates a high-margin, low-capex underground gold mine with a short development timeline, producing over 90,000 ounces of gold per year over the first two years of operation, with a life of mine average annual production of 78,000 ounces," said IDM President and CEO Robert McLeod. "With these positive results now in place, our highest priority is the ongoing exploration and resource expansion drilling adjacent to current reserves, with the objective of extending the potential mine life for Red Mountain." McLeod said the development of a mine at Red Mountain would be great for the economy of his home town of Stewart. ""The project enjoys significant support locally and regionally and our goal remains to have approvals in place for a shovel-ready project by mid-2018," said IDM Executive Chairman Michael McPhie.

Wellgreen M&I resource growth

Wellgreen Platinum Ltd. June 26 reported a roughly 10 percent increase in the measured and indicated resources at its Wellgreen nickel-platinum group metal-copper project in southwestern Yukon. Since the publication of a resource estimate in 2014, an additional 74 holes have been completed at Wellgreen. Incorporating the results from this work, Wellgreen now hosts 362 million metric tons of measured and indicated resource averaging 0.26 percent (2.08 billion pounds) nickel; 0.14 percent (1.09 billion lb) copper; 0.015 percent (121 million lb) cobalt; 0.23 grams per metric ton (2.69 million ounces) platinum; 0.24 g/t (2.84 million oz) palladium; and 0.04 g/t (468,000 oz) gold. Wellgreen said this roughly 10 percent increase over the 2014 resource estimate would have been closer to 25 percent if the same costs, metals prices and recoveries were used. The Inferred class of mineralization declined in tonnage by approximately 86 percent. Nickel grades, however,

see NORTHERN NEIGHBORS page 10

NOVAGOLD RESOURCES INC.

Drilling has outlined a deposit at Donlin containing 39 million ounces of gold in the measured and indicated resource category at an average grade of 2.2 grams per metric ton gold. Donlin Gold LLC – equally owned by subsidiaries of Novagold and Barrick – will have drills turning at the project this year, the first such program since 2011.

DEVELOPMENT

Back to Donlin Gold

With permitting nearly complete, partners carry out optimization drilling

By SHANE LASLEY

Mining News

If this year's US$8 million drill program is any indication, Barrick Gold Corp. and Novagold Resources Inc. are getting serious about building "the largest pure gold mine in the world" at their Donlin Gold project in Southwest Alaska.

"Donlin Gold's size, grade, production profile, exploration potential, mine life, community support and jurisdictional safety render it a unique asset in the gold industry," said Novagold President and CEO Greg Lang. "Both partners envision Donlin Gold to be a pacesetter in the mining sector and are completely aligned in their objectives to optimize the project."

This will be the first significant field program at the 40-million-ounce gold project since Donlin Gold LLC – equally owned by subsidiaries of Novagold Resources Inc. and Barrick Gold Corp. – completed a feasibility study in 2011 and submitted the project for permitting the following year.

Optimizing Donlin

The Donlin Gold mine project outlined in the feasibility study is projected to average roughly 1.5 million ounces annually during the first five years of operation and 1.1 million oz annually over a projected 27-year mine-life.

At US$1,200/oz. gold, the base case price used in the study, this operation is calculated to generate after-tax cash flow averaging US$949.5 million annually for the first five years and US$500.7 million annually over the life of the mine.

Under this scenario, the partners would be paid back the roughly US$6.7 billion needed to build the mine in 9.2 years.

While this project has been working its way through the permitting process, Barrick and Novagold have been studying ways to optimize the world-class gold project.

"The work focused on ways to capitalize on the flexibility inherent in Donlin Gold's unique characteristics, identifying opportunities such as employing modular construction, automation of certain mining activities and implementation of innovative ideas for infrastructure development and logistics, among others, which will continue to be thoroughly assessed," Lang informed shareholders on June 26.

The optimized execution plan resulting from this work is expected to push down the nearly US$7 billion in upfront capital needed to develop Donlin and potentially the operating costs.

"We are encouraged by the prospects to further optimize the Donlin Gold project, which has the potential to be the largest pure gold mine in the world – in one of the safest jurisdictions of the world," said Barrick President Kelvin Dushnisky.

Development decision

Following the 2017 field work, Barrick and Novagold will finalize an updated feasibility study for Donlin. With this information in-hand and the permitting nearly complete, a formal decision on developing a mine at the Alaska gold project will likely be made shortly thereafter.

This year's program, which will include both geological and geotechnical drilling, will collect information needed to inform and potentially implement the Donlin Gold upgrades.

"As permitting activities approach their conclusion, we believe that the approved field work will reaffirm Donlin Gold's status as the asset best positioned to capitalize on the resumption of the long-term bull market in gold," said Lang.

The environmental impact statement for Donlin, the key piece to the permitting process in the United States, is on pace to be finalized around March, 2018. It is expected that it will take the U.S. Army Corps of Engineers, the lead agency for the Donlin Gold EIS, another three or four months to write a record of decision.

All other permits needed for construction to begin are also expected to be issued by that time.

Donlin Gold also continues to advance permitting for a 312-mile pipeline to transport gas from Cook Inlet to the mine site. The partners are timing pipeline permits to coincide with the expected permits for mine development.

If all comes together according to plan, Donlin Gold LLC could be ready to begin developing the largest pure gold mine in the world by the end of next year. ●

With permitting nearly complete, Donlin Gold partners carry out optimization drilling. Read more in Mining News, page 7.

State approves plans for Jurassic exploration well at Kitchen Lights

The state has approved an amended development plan for the Kitchen Lights unit that could lead to an exploration well into the Jurassic at the offshore Cook Inlet unit.

The amended plan of development calls for operator Furie Operating Alaska LLC to drill either the Kitchen Lights Unit No. 4 or Kitchen Lights Unit No. 6-Deep Jurassic well by the end of the year. The amendment keeps an earlier provision, requiring the company to complete the Kitchen Lights Unit No. A1 well in the Corsair block by Nov. 30.

The original plan of development that Furie submitted to the state Division of Oil and Gas in October 2016 called for completing the KLU No. A1 well and either drilling a new

see **WELL APPROVAL** *page 15*

Walker adds HB 111 to call for special session; no action yet

Gov. Bill Walker added House Bill 111, the oil and gas credit and tax bill, to his special session call June 22, but as this issue of Petroleum News went to print there had been no legislative action.

The bill passed both House and Senate, but the versions are very different and are in conference committee.

The primary item on the call, the state's operating budget, passed both houses of the Legislature earlier June 22.

"I thank legislators for reaching a compromise on the operating budget to ensure government services continue after July 1," the governor said.

He noted that earlier June 22 "legislators indicated in conference committee their intent to correct the state's unsustainable

see **HB 111** *page 13*

EXPLORATION & PRODUCTION

KRU drilling down

ConocoPhillips reducing drilling work at Kuparuk, resuming 1H activities

By ERIC LIDJI

For Petroleum News

ConocoPhillips Alaska Inc. plans to reduce Kuparuk River unit drilling work this year.

The local subsidiary of the large international independent plans to drill approximately four new rotary wells and 16 coiled tubing drilling sidetracks at the main Kuparuk oil field this year, according to a recent plan of development. The company drilled eight new rotary wells and 20 coiled tubing drilling sidetracks at the Kuparuk field in 2016 and drilled seven new rotary wells and 20 coiled tubing drilling sidetracks at the field in 2015.

And the company is not making any firm drilling commitments at the four Kuparuk River unit satellites — West Sak, Tarn, Meltwater and Tabasco — this year, aside from the resumption of drilling activities at the previously announced 1H NEWS development.

A year-over-year reduction in drilling and workover activities at the four Kuparuk River unit satellites resulted in a small but notable decline in oil production. The satellites produced 24,900 barrels per day in 2016, down from 26,400 bpd in 2015.

One reason for the decline in new drilling activities planned for the coming year is the completion of initial development work at Drill Site 2S.

see **KRU DRILLING** *page 14*

PIPELINES & DOWNSTREAM

Tariff issues aired

Opening statements before RCA from Enstar, opponents in tariff hearing

By KRISTEN NELSON

Petroleum News

The Regulatory Commission of Alaska began a three-week hearing June 5 on Enstar Natural Gas Co.'s proposed tariff. A transcript from the first day of the hearing contained overviews from Enstar and other parties to the proceedings as they laid out in opening statements the case for and against increases in rates for moving natural gas. Enstar is the natural gas local distribution company for Southcentral Alaska and also provides bulk transmission services for other utilities and large customers: all are impacted by the new tariff proposals.

There are issues over the proposed rate and also issues over differences in treatment of different classes of Enstar customers.

Enstar

Matt Henry of Vinson & Elkins, representing Enstar, said the company keeps its rates low but needs those rates to be high enough to pay competitive wages to employees, recover investment in the system, attract new capital and provide customers with safe and reliable service.

Henry said Enstar's proposed rate, if approved by the commission, would be about 50 percent of

see **TARIFF ISSUES** *page 13*

EXPLORATION & PRODUCTION

Aurora calls for drilling

Company: Nicolai Creek, Three Mile Creek become uneconomic without investment

By ERIC LIDJI

For Petroleum News

Without further development, a pair of Cook Inlet fields operated by Aurora Gas LLC will become uneconomic within the next three years, according to company estimates.

In a pair of revised plans of development submitted to state authorities in early June, the Alaska-based independent said that the Three Mile Creek field would become uneconomic in early 2018 and the Nicolai Creek unit would become uneconomic in late 2020 or early 2021 unless Aurora or another owner undertakes new development work.

Aurora expressed interest in undertaking the work. But an ongoing bankruptcy proceeding has created uncertainty about what work might be done and who might do it.

According to the revised Nicolai Creek unit plan, the resolution to the current bankruptcy case "will be either purchase of the all membership ('stock') of the company by a new owner or shut-in and abandonment of the wells. Two prospective purchasers have made proposals for the purchase, but neither have made firm offers. If the sale of the

In filings with the U.S. Bankruptcy Court in Anchorage in April, Aurora proposed a liquidation sale running through October as a way to recover nearly $1.5 million in debts.

see **AURORA FIELDS** *page 15*

● GOVERNMENT

Trump: US on brink of net energy exports

By MATTHEW DALY

Associated Press

With U.S. exports of oil and natural gas surging, President Donald Trump says the U.S. is on the brink of becoming a net exporter of oil, gas and other resources.

The White House is launching its "energy week" with a series of events focused on jobs and boosting U.S. global influence. The events follow similar policy-themed weeks on infrastructure and jobs.

The previous weeks were largely overshadowed by ongoing probes into whether Trump campaign officials colluded with Russia to influence the 2016 election, as well as scrutiny over Trump's firing of James Comey as FBI director. Drawing fresh attention now is the Republican bid to scuttle President Barack Obama's health care law despite a rebellion within Senate GOP ranks.

Energy Secretary Rick Perry said June 26 the Trump administration is confident officials can "pave the path toward U.S. energy dominance" by exporting oil, gas and coal to markets around the world, and promoting nuclear energy and even renewables such as wind and solar power.

"For years, Washington stood in the way of our energy dominance. That changes now," Perry told reporters at the White House. "We are now looking to help, not hinder, energy producers and job creators."

DONALD TRUMP

The focus on energy began at a meeting between Trump and India's Prime Minister Narendra Modi, with U.S. natural gas exports part of the discussion. Trump was expected to talk energy June 28 with governors and tribal leaders, and he will deliver a speech June 29 at the Energy Department.

Trump has long used "dominance" to describe his approach to energy, and Perry and other administration officials have begun echoing the phrase as a short-hand for policies that "unleash" unfettered energy production on U.S. land and waters. Similarly, during his administration Obama spoke about an "all of the above" energy policy intended to reassure skeptics that he supported a wide range of U.S. energy production.

Trump signed an executive order in April to expand oil drilling in the Arctic and Atlantic oceans, reversing restrictions imposed by Obama. Trump has also pushed to revive U.S. coal production after years of decline. Coal mining rose by 19 percent in the first five months of the year as the price of natural gas edged up, according to Energy Department data.

U.S. oil and gas production have boomed in recent years, primarily because of improved drilling techniques such as fracking that have opened up production in areas previously out of reach of drillers.

Obama signed a law in December 2015 lifting a decades-old ban on most crude oil exports, resulting in millions of barrels of exports every month to China, Italy, the Netherlands and other countries. The U.S. began exporting liquefied natural gas to India, China, Brazil and other countries in February 2016.

Earlier in June, a U.S. tanker sent liquefied natural gas, or LNG, to Poland, the first delivery of U.S. gas to eastern or northern Europe.

Despite Trump's withdrawal from the global Paris climate accord, Perry said the U.S. remains committed to reducing greenhouse gas emissions that contribute to global warming.

"Instead of preaching about clean energy, this administration will act upon it," Perry said, calling nuclear power a key element to fight climate change.

Perry, a former Texas governor, said he strongly supported wind power in his state, but he hedged when asked whether he supports extension of a production tax credit for wind.

"I don't think the administration is going to be wildly supportive of government subsidies for sectors of the energy industry," he said. ●

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ON THE COVER

EXPLORATION & PRODUCTION

GOVERNMENT

Alaska - Mackenzie Rig Report

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

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 2K-04	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 2K-30	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

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

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

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

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
SDC Drilling Inc.			
SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Available

Central Mackenzie Valley

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Akita			
TSM-7000	37	Racked in Norman Well, NT	Available

The Alaska - Mackenzie Rig Report as of June 28, 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*

	June 23	June 16	Year Ago
United States	941	933	421
Canada	170	159	76
Gulf of Mexico	21	21	20

Highest/Lowest

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

*Issued by Baker Hughes since 1944

GOVERNMENT

GAO: Raising rates could hurt production

But federal revenue from production of oil, natural gas, coal on federal lands could increase if royalty rates go up, report says

By KRISTEN NELSON
Petroleum News

The United States Government Accountability Office released a report in June evaluating the impact of increasing federal royalty rates on onshore oil, gas and coal production.

For fiscal year 2016, GAO said, federal revenues were some $2.5 billion from production on federal lands onshore of oil, gas and coal, with some $2 billion of that amount from royalties.

The agency reviewed numerous studies and did an in-depth review of four by the Congressional Budget Office, the Council of Economic Advisers in the Executive Office of the President, a study prepared for the Department of the Interior's Bureau of Land Management and a coal report prepared by non-government researchers.

The studies looked at different increases from the current 12.5 percent royalty rate.

One study projected a production decrease of less than 2 percent if royalties were increased to 22.5 percent, based on fiscal year 2016 production data, while another found production impact could be negligible over 10 years if royalties were increased to 18.75 percent, particularly if the rate remained equal to or below the state and private royalty rate.

The CBO study noted the impact would increase over time because increased royalties would apply only to new leases and those would not go into production immediately.

The impact on coal production of an increase to a 17 percent royalty rate was projected by one study to be a decrease in production of up to 3 percent.

Stakeholders cited other factors which could influence the rate by which production might decline, including: market conditions; cost advantages of different resources; and regulatory burdens of production on federal land.

Studies projected that the net federal revenue increase from raising royalty rates could be between $5 million and $38 million per year, but for coal one study projected that raising the royalty rate to 17 percent might increase federal revenues by as much as $365 million per year after 2025 while another study suggested an additional $141 million per year.

Stakeholders told GAO that higher royalty rates could influence how much bidders were willing to pay in bonus bids, with some stakeholders telling the agency companies would likely offer lower bids if royalties were higher.

No change in decades

GAO said "federal onshore royalty rates for oil, gas, and coal production on federal lands have not changed in decades," so there is no recent data on the impact of federal changes.

The Mineral Leasing Act of 1920 set the royalty rate at not less than 12.5 percent of the amount or value of production for onshore oil and gas leases, GAO said, but until this January BLM regulations generally set a 12.5 percent fixed royalty rate. Oil and gas royalties are calculated based on wellhead value, with deductions or allowances taken after the royalty rate is applied.

Oil and gas production from federal onshore lands for fiscal year 2016 was some 157 million barrels of oil and 3.14 trillion cubic feet of gas, along with 295 million tons of coal, representing about 6 percent of total U.S. onshore oil production, 10 percent of gas production and 40 percent of coal production, resulting in net federal revenues of some $2.5 billion, some $2 billion, or 80 percent of that, from royalties for fiscal year 2016.

Looking at recent production, GAO said that between 2008 and 2016 onshore U.S. oil production increased 77 percent and natural gas production by 35 percent, with production from federal onshore acreage in that same period up 59 for oil and down 18 percent for natural gas.

U.S. coal production has declined since 2008, down 19 percent on federal acreage through 2015 and down 23 percent overall in that same period.

Royalty increase impact

GAO said stakeholders it interviewed indicated an increase in federal royalties could decrease production from federal lands because it would increase costs to producers, making production from federal lands less attractive compared to state and private lands. But stakeholders disagreed on the impact of federal royalty increases because of other factors influencing energy company decisions.

The agency said two studies, one by the Congressional Budget Office and one by Enegis LLC, modeled effects on oil and gas production from federal lands of different policy scenarios.

CBO concluded that raising the federal royalty rate for onshore oil and gas to 18.75 would lead to small or negligible reductions in production over a 10-year period, "particularly if the increased federal royalty rate remained equal to or below the royalty rates for production on state or private lands."

GAO said the current 12.5 percent royalty is the same or lower than rates charged by six states with 90 percent of federal oil and gas production in 2015 (Colorado, Montana, New Mexico, North Dakota, Utah and Wyoming).

The Enegis study found the demand for new federal competitive leases would generally decrease over 25 years if the royalty rate was raised to 16.67, 18.75 or 22.5 percent, unless prices rose, buffering companies from the impact of higher royalties. Production declines for the three increased royalty rates ranged from zero barrels to some 2.8 million barrels of oil per year, equivalent to some 1.8 percent of 2016 fiscal year onshore federal oil production; declines in gas production ranged from zero to 3.4 billion cubic feet year, less than 1 percent of onshore federal natural gas production in fiscal year 2016.

Other factors

GAO said stakeholders it interviewed identified several factors which could impact the extent of production changes due to royalty increases, including market conditions and prices, cost advantages of different resources and regulatory burden of federal development.

"BLM officials suggested that raising federal royalty rates is less likely to have a negative effect on production when oil and gas prices are high," GAO said, with an increase from 12.5 percent to 16.67 percent in royalty rates increasing the cost of production by some $2 a barrel (at oil prices in March of this year).

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Kay Cashman	PUBLISHER & EXECUTIVE EDITOR
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Judy Patrick Photography	CONTRACT PHOTOGRAPHER
Mapmakers Alaska	CARTOGRAPHY
Forrest Crane	CONTRACT PHOTOGRAPHER
Renee Garbutt	CIRCULATION MANAGER

ADDRESS
P.O. Box 231647
Anchorage, AK 99523-1647

NEWS
907.522.9469
publisher@petroleumnews.com

CIRCULATION
907.522.9469
circulation@petroleumnews.com

ADVERTISING
Susan Crane • 907.770.5592
scrane@petroleumnews.com

FAX FOR ALL DEPARTMENTS
907.522.9583

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● GOVERNMENT

Federal agencies slow methane rules opposed by industry

By MATTHEW DALY
Associated Press

The Trump administration is delaying two Obama-era regulations aimed at restricting harmful methane emissions from oil and gas production.

The Environmental Protection Agency said it is seeking a two-year delay for oil and gas companies to follow a new rule requiring them to monitor and reduce methane leaks from their facilities. The delay follows a 90-day pause ordered earlier this year.

EPA Administrator Scott Pruitt said the agency is reconsidering the 2016 rule, which he said may duplicate state rules that can achieve equivalent or better results in reducing methane emissions.

Meanwhile, the Interior Department is indefinitely postponing a separate regulation intended to reduce the amount of heat-trapping methane released into the atmosphere from oil and gas wells on federal lands.

A bid to overturn the rule failed unexpectedly in the Republican-led Senate in May, prompting Interior officials to promise to suspend, revise or rescind the rule.

Katharine MacGregor, acting assistant Interior secretary for land and minerals, said the methane rule imposes a "significant regulatory burden that encumbers American energy production, economic growth and job creation."

The Obama-era rule, finalized in November, "is expected to have real and harmful impacts on onshore energy development and could impact state and local jobs and revenue," MacGregor said, adding that states such as North Dakota, Colorado and New Mexico "could be hit the hardest."

Both impact methane

Kathleen Sgamma, president of the Western Energy Alliance, a trade association representing more than 300 companies, praised the twin moves on methane. The alliance and other oil industry groups challenged the methane regulations in court.

"Both rules vastly exceeded federal authority," Sgamma said in a statement. "The Trump administration is correcting that overreach from the prior administration, thereby saving jobs and supporting

see **METHANE RULES** *page 6*

EXPLORATION & PRODUCTION

Hilcorp gets two Pearl drilling permits

The Alaska Oil and Gas Conversation Commission has issued two more drilling permits for Hilcorp Alaska LLC to develop the proposed Pearl project at the Ninilchik unit.

On June 20, the AOGCC issued permits for the Pearl No. 3 and Pearl No. 6 stratigraphic test wells on private leases located near the boundary of the coastal Cook Inlet unit.

In recent permitting documents, Hilcorp announced plans to build the new Pearl pad to support a one-well program on a lease just beyond the southern boundary of the unit. The proposed pad would target an area south of the Susan Dionne-Paxton participating area.

The AOGCC issued a permit on June 13 for Hilcorp to drill the Pearl No. 1A well.

—ERIC LIDJI

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GAO REPORT

The Congressional Research Service report said negative effects on production from higher royalty rates could be limited to areas with marginal wells, those with low production rates or higher costs.

"A few stakeholders told us that the competitiveness of federal lands for development depends less on the royalty rate charged and more on the location of the best resources — such as areas with low exploration and production costs," GAO said. The agency noted that most areas with major U.S. tight oil and shale gas plays do not overlap with federal lands, with overlap estimated at: 9 percent for the Bakken, zero for the Eagle Ford, 9 percent for Haynesville, 6 percent for Marcellus/Utica, 39 percent for Niobrara and 15 percent for Permian.

Some stakeholders also told GAO that there is a higher regulatory cost for development on federal lands "and one stakeholder noted that an increase in federal royalty rates would decrease the competitiveness of federal lands versus state or private lands."

The agency said officials in Colorado and Texas said they have raised state royalty rates without significant production impact.

GAO said studies it reviewed indicated that raising royalties would raise revenues. "Some stakeholders we interviewed said any effects on federal revenue would depend on how increasing royalty rates for oil, gas, and coal would affect bonus bid revenue, while others said overall market conditions, among other factors, need to be considered."

For oil and gas, estimates of increased revenue range from $5 million to $38 million per year, some 0.7 percent to 5.2 percent of new royalties in fiscal year 2016.

The CBO study noted the impact would increase over time because increased royalties would apply only to new leases and those would not go into production immediately. That study found that 6 percent of royalties collected in 2013 were from leases issued in the previous 10 years, and estimated a revenue increase of $200 million over the first 10 years if royalties were raised from 12.5 to 18.75 percent, potentially increasing in the following decades, depending on market conditions.

The Enegis study found that net federal revenues would increase under their modeling by $125 million to $939 million over 25 years with royalties of 16.67, 18.75 and 22.5 percent. ●

Contact Kristen Nelson at knelson@petroleumnews.com

GOVERNMENT

EPA takes first step to recodify WOTUS

In late February President Donald Trump ordered a review of the new waters of the United States, WOTUS, definition implemented by the Environmental Protection Agency in 2015 under the Obama administration.

In late June EPA began the official process of re-codifying the WOTUS definition as it was prior to 2015, and as it has been administered under the Clean Water Act following a decision by the U.S. Court of Appeals for the 6th Circuit, which in October 2015 stayed the new definition. EPA is proposing to reinstitute the old definition as it works on a new long-term replacement.

In a June 28 statement, U.S. Sen. Lisa Murkowski, R-Alaska, said she had opposed the Obama administration rule because it would have been burdensome to Alaska.

She said she asked EPA Administrator Scott Pruitt "to carefully consider the impact that a new rule will have on Alaska, because two-thirds of our state is already considered wetlands."

Comments are being sought on the issue of re-codifying the status quo "as an interim first step pending a substantive rulemaking to reconsider the definition of 'waters of the United States' and the best way to accomplish it."

—KRISTEN NELSON

EXPLORATION & PRODUCTION

US drilling rig count rises by 8, to 941

The number of rigs exploring for oil and natural gas in the U.S. rose by eight the week ending June 23 to 941.

A year ago, just 421 rigs were active.

Houston oilfield services company Baker Hughes said 758 rigs targeted oil (up 11 from the previous week) and 183 targeted natural gas (down three).

Among major oil- and gas-producing states, Oklahoma added five rigs, North Dakota increased by three rigs, Louisiana gained two and California and Colorado were up one each.

Alaska declined by two while New Mexico and Utah declined by one apiece.

Arkansas, Kansas, Ohio, Pennsylvania, Texas, West Virginia and Wyoming were unchanged.

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

—ASSOCIATED PRESS

● GOVERNMENT

EPA proposes injection permit renewals

PETROLEUM NEWS

The U.S. Environmental Protection Agency said June 28 that it proposes to issue three underground injection control class I permits for disposal of non-hazardous fluids at Badami, Oooguruk and Prudhoe Bay. All are renewals of exiting permits.

Applicants are Savant Alaska LLC, a subsidiary of Glacier Oil & Gas Corp., Caelus Natural Resources Alaska LLC and BP Exploration (Alaska) Inc.

EPA has responsibility in Alaska for regulation of class I injection wells, which dispose of fluids into deep, naturally saline aquifers below any aquifers which could serve as current or future underground sources of drinking water, USDW, the agency said. Wastes which may be injected include treated domestic wastewater, drilling muds and cuttings, well workover fluids, melt and storm water, a small amount of facility water and produced water, and other exempt and non-exempt non-hazardous fluids.

The Savant permit is for injection of class I fluids at the Badami unit on the North Slope, an authorization which has existed since 1997. The draft permit allows for the use of up to two injection wells. EPA said Savant currently uses one well at the location to inject waste into geologic formations more than 7,000 feet below ground surface. EPA said it has previously determined that the aquifers do not meet criteria for USDW due to high natural salinity — greater than 10,000 milligrams per liter total dissolved solids.

The Caelus application is for permit reissuance at the Oooguruk drill site, a gravel island near the mouth of the Colville River, originally permitted in 2007. The draft permit would allow for use of up to two injection wells to inject fluids to a depth near 5,000 feet below ground surface to aquifers which EPA said it has previously determined do not meet USDW standards due to high natural salinity.

The BP permit is for the Prudhoe Bay unit grind and inject project, which has been authorized for class I injection since 2007. EPA said the wells were authorized as class II wells for disposal of oil production wastes from 1998 to 2007 and are integral to disposal of drilling waste reserve pits across the North Slope. The draft permit would allow the use of up to four injection wells to inject fluids to a depth of near 6,500 feet below ground surface; BP is currently using three wells. EPA said it has determined that the aquifers affected to not meet requirements of USDW due to natural salinity.

EPA is taking comments on the proposed issuance of the permits from June 30 through July 31, and will hold a public hearing July 20 if it receives specific written requests by July 14. ●

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METHANE RULES

American energy independence."

Even though the two rules are delayed, "industry will continue to increase methane capture rates as it has for the past three decades" through better technology and improved drilling techniques, she said.

Delaying the standards will increase smog and other dangerous air pollution, with irreversible harm to public health and the environment, said Mark Brownstein, vice president of the Environmental Defense Fund.

"The oil and gas industry tell us natural gas is a clean, low-carbon fuel, but industry lobbyists and lawyers then argue to remove the protections necessary to deliver on that claim," he said, adding that the Trump administration appears "only too happy to throw common sense out the window" to serve corporate interests.

"Disregarding the will of the people, the interests of taxpayers and legal safeguards — all in the name of doing the bidding of the oil and gas industry — is shameful," Brownstein said. ●

NORTH OF 60 MINING news

page 8 Freeman: new players kicking the tires of big Alaska metals projects

www.MiningNewsNorth.com The weekly mining newspaper for Alaska and Canada's North Week of July 2, 2017

NORTHERN NEIGHBORS

Compiled by Shane Lasley

IDM MINING LTD.

Underground drilling is testing expansion targets adjacent to the reserves at Red Mountain with the goal of extending the life of the mine proposed for this gold project in northwestern BC.

Red Mountain shows feasibility

IDM Mining Ltd. June 26 said the results of a feasibility study for its Red Mountain confirms the positive economics for developing a high-grade underground gold mine at this gold project near Stewart in northwestern British Columbia. The proposed 1,000-metric-ton-per-day year-round operation is expected to average roughly 78,000 ounces of gold per year over the nearly six year mine-life considered in the feasibility study. Initial capital expenditure to fund construction and commissioning is estimated at C$135.7 million, with a life-of-mine cost of C$202.4 million. Life of project direct cash cost is estimated at US$539 per ounce of gold recovered; net of the silver by-product, costs drop to US$492/oz. At a gold price of US$1,250/oz and an exchange rate of C$1 to US76 cents, the Red Mountain is calculated to generate a post-tax net present value (5 percent discount) of C$104 million; an internal rate of return of 32 percent; and is expected to payback initial capital in 1.9 years. "This study demonstrates a high-margin, low-capex underground gold mine with a short development timeline, producing over 90,000 ounces of gold per year over the first two years of operation, with a life of mine average annual production of 78,000 ounces," said IDM President and CEO Robert McLeod. "With these positive results now in place, our highest priority is the ongoing exploration and resource expansion drilling adjacent to current reserves, with the objective of extending the potential mine life for Red Mountain." McLeod said the development of a mine at Red Mountain would be great for the economy of his home town of Stewart. ""The project enjoys significant support locally and regionally and our goal remains to have approvals in place for a shovel-ready project by mid-2018," said IDM Executive Chairman Michael McPhie.

Wellgreen M&I resource growth

Wellgreen Platinum Ltd. June 26 reported a roughly 10 percent increase in the measured and indicated resources at its Wellgreen nickel-platinum group metal-copper project in southwestern Yukon. Since the publication of a resource estimate in 2014, an additional 74 holes have been completed at Wellgreen. Incorporating the results from this work, Wellgreen now hosts 362 million metric tons of measured and indicated resource averaging 0.26 percent (2.08 billion pounds) nickel; 0.14 percent (1.09 billion lb) copper; 0.015 percent (121 million lb) cobalt; 0.23 grams per metric ton (2.69 million ounces) platinum; 0.24 g/t (2.84 million oz) palladium; and 0.04 g/t (468,000 oz) gold. Wellgreen said this roughly 10 percent increase over the 2014 resource estimate would have been closer to 25 percent if the same costs, metals prices and recoveries were used. The inferred class of mineralization declined in tonnage by approximately 86 percent. Nickel grades, however,

see **NORTHERN NEIGHBORS** *page 10*

NOVAGOLD RESOURCES INC.

Drilling has outlined a deposit at Donlin containing 39 million ounces of gold in the measured and indicated resource category at an average grade of 2.2 grams per metric ton gold. Donlin Gold LLC – equally owned by subsidiaries of Novagold and Barrick – will have drills turning at the project this year, the first such program since 2011.

DEVELOPMENT

Back to Donlin Gold

With permitting nearly complete, partners carry out optimization drilling

By SHANE LASLEY
Mining News

If this year's US$8 million drill program is any indication, Barrick Gold Corp. and Novagold Resources Inc. are getting serious about building "the largest pure gold mine in the world" at their Donlin Gold project in Southwest Alaska.

"Donlin Gold's size, grade, production profile, exploration potential, mine life, community support and jurisdictional safety render it a unique asset in the gold industry," said Novagold President and CEO Greg Lang. "Both partners envision Donlin Gold to be a pacesetter in the mining sector and are completely aligned in their objectives to optimize the project."

This will be the first significant field program at the 40-million-ounce gold project since Donlin Gold LLC – equally owned by subsidiaries of Novagold Resources Inc. and Barrick Gold Corp. – completed a feasibility study in 2011 and submitted the project for permitting the following year.

Optimizing Donlin

The Donlin Gold mine project outlined in the feasibility study is projected to average roughly 1.5 million ounces annually during the first five years of operation and 1.1 million oz annually over a projected 27-year mine-life.

At US$1,200/oz. gold, the base case price used in the study, this operation is calculated to generate after-tax cash flow averaging US$949.5 million annually for the first five years and US$500.7 million annually over the life of the mine.

Under this scenario, the partners would be paid back the roughly US$6.7 billion needed to build the mine in 9.2 years.

While this project has been working its way through the permitting process, Barrick and Novagold have been studying ways to optimize the world-class gold project.

"The work focused on ways to capitalize on the flexibility inherent in Donlin Gold's unique characteristics, identifying opportunities such as employing modular construction, automation of certain mining activities and implementation of innovative ideas for infrastructure development and logistics, among others, which will continue to be thoroughly assessed," Lang informed shareholders on June 26.

The optimized execution plan resulting from this work is expected to push down the nearly US$7 billion in upfront capital needed to develop Donlin and potentially the operating costs.

"We are encouraged by the prospects to further optimize the Donlin Gold project, which has the potential to be the largest pure gold mine in the world – in one of the safest jurisdictions of the world," said Barrick President Kelvin Dushnisky.

Development decision

Following the 2017 field work, Barrick and Novagold will finalize an updated feasibility study for Donlin. With this information in-hand and the permitting nearly complete, a formal decision on developing a mine at the Alaska gold project will likely be made shortly thereafter.

This year's program, which will include both geological and geotechnical drilling, will collect information needed to inform and potentially implement the Donlin Gold upgrades.

"As permitting activities approach their conclusion, we believe that the approved field work will reaffirm Donlin Gold's status as the asset best positioned to capitalize on the resumption of the long-term bull market in gold," said Lang.

The environmental impact statement for Donlin, the key piece to the permitting process in the United States, is on pace to be finalized around March, 2018. It is expected that it will take the U.S. Army Corps of Engineers, the lead agency for the Donlin Gold EIS, another three or four months to write a record of decision.

All other permits needed for construction to begin are also expected to be issued by that time.

Donlin Gold also continues to advance permitting for a 312-mile pipeline to transport gas from Cook Inlet to the mine site. The partners are timing pipeline permits to coincide with the expected permits for mine development.

If all comes together according to plan, Donlin Gold LLC could be ready to begin developing the largest pure gold mine in the world by the end of next year. ●

NEWS NUGGETS

Compiled by Shane Lasley

Drills tap more GS oxide gold

Freegold Ventures Ltd. has released results from an additional 10 holes of its 27-hole oxide resource expansion drill program at the Golden Summit project about 25 miles north of Fairbanks, Alaska. On June 27, the company reported that hole GSDL 17-16 cut 69 meters averaging 1.14 grams per metric ton gold. The oxide portion of this this intercept was 54 meters, starting at a depth of 1.5 meters. GSDL 17-17 and GSDL 17-18, the two northernmost holes drilled during the program, both cut gold mineralization. Hole 18 cut 64.5 meters of 0.51 g/t gold from a depth of six meters. GSDL 17-13, reported by Freegold on June 22, cut 52.5meters averaging 0.56 g/t gold from a depth of 1.5 meters. In mid-June, the company reported results from the first 11 holes of this initial phase of 2017 drilling at Golden Summit. Highlights from those holes included 39 meters of oxidized material averaging 0.72 g/t gold in hole GSDL 17-10; and 56.5 meters averaging 0.51 g/t gold in GSDL 17-11. In 2016, Freegold published a preliminary economic assessment that evaluates a 20,000-metric-ton-per-day operation at Golden Summit – a 10,000 tpd heap leach facility to process the oxide material and 10,000 tpd bio-oxidation plant for the sulfide material. The area being considered for mining hosts 61.5 million metric tons of indicated resource averaging 0.69 grams per metric ton (1.36 million oz) gold; and 71.5 million metric tons of inferred resource of averaging 0.69 g/t (1.58 million oz) gold. The oxide portion of this deposit, which is found largely within the upper 60 meters of the overall resource, hosts 16.2 million metric tons of indicated resource averaging 0.66 g/t (345,000 oz) gold; and an inferred resource of 9.6 million metric tons averaging 0.59 g/t (183,000 oz) gold. The 27 holes completed during the 2017 spring program at Golden Summit were drilled at 50-meter spacing to determine if the oxide resource could be expanded to the north. The results from six holes are pending.

On June 27, the company reported that hole GSDL 17-16 cut 69 meters averaging 1.14 grams per metric ton gold.

—SHANE LASLEY

Contact North of 60 Mining News:

Publisher: Shane Lasley • e-mail: publisher@MiningNewsNorth.com
Phone: 907.229.6289 • Fax: 907.522.9583

Petroleum news

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Shane Lasley	PUBLISHER & NEWS EDITOR
Rose Ragsdale	CONTRIBUTING EDITOR
Mary Mack	CEO & GENERAL MANAGER
Susan Crane	ADVERTISING DIRECTOR
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Judy Patrick Photography	CONTRACT PHOTOGRAPHER
Forrest Crane	CONTRACT PHOTOGRAPHER
Renee Garbutt	CIRCULATION MANAGER
Mapmakers Alaska	CARTOGRAPHY

ADDRESS • P.O. Box 231647 Anchorage, AK 99523-1647

NEWS • 907.229.6289 publisher@miningnewsnorth.com

CIRCULATION • 907.522.9469 circulation@petroleumnews.com

ADVERTISING Susan Crane • 907.770.5592 scrane@petroleumnews.com

FAX FOR ALL DEPARTMENTS 907.522.9583

Several of the individuals listed above are independent contractors

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● COLUMN

Miners get busy in elephant country

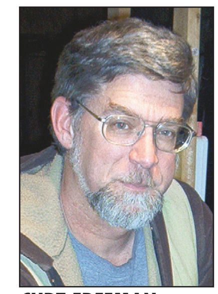
Exploration drilling and field prospecting programs, many of them driven by newcomers, have popped up across Alaska this summer

By CURT FREEMAN

Special to Mining News

The summer solstice has come and gone, but the Alaska mining industry has paid little attention to the decreased amount of daylight because it is high summer in the high latitudes, time to be out completing work programs that have been in the planning since last fall. Exploration drilling programs have sprouted in the Brooks Range, Interior, Alaska Range, Southeast, Southwest and the Alaska Peninsula. In addition, the sounds of tire-kicking are being heard over a wide area of the state with most of the interest focused on gold, silver, copper, lead and zinc prospects. Many of those thumping those tires are new to the Alaska mining scene, coming to elephant country to look for elephants. We will likely hear more from these new players later in the year.

The author



CURT FREEMAN

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column June 27. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his website is www.avalonalaska.com.

Western Alaska

Equal partners **NOVAGOLD RESOURCES** and **BARRICK GOLD** announced a US$8 million budget for project optimization at their 39-million-ounce Donlin gold project. The partners determined that a more cost-effective project execution plan could substantially reduce upfront capital costs related to mine construction and have approved a drill program designed to collect geologic and geotechnical data this year to accomplish that goal. On the permitting front, the U.S. Army Corps of Engineers is working with cooperating agencies to complete a final environmental impact statement, with anticipated publication in early 2018. Work also continues with state and federal agencies to advance all other required permits for the project.

COPPERBANK RESOURCES CORP. reported the start of a diamond drilling program on its 100 percent controlled Pyramid project located on Aleut Native Corporation lands on the Alaska Peninsula. The planned drilling program will comprise a minimum of 1,500 meters and will focused on areas of higher grade such as in the Main Zone around hole 11PY016 which returned 155 meters of 0.71 percent copper, 0.18 grams per metric gold and 0.018 percent molybdenum starting at 94 meters. This hole bottomed in 34 meters of 0.844 percent copper. This area also contains hole 12PY019, which intersected 70 meters at 0.717 percent copper and 0.1 g/t gold from 22 meters, including 42 meters at 1 percent copper and 0.16 g/t gold from 24 meters to 66 meters. The North Zone also will be further tested to verify the lateral extensions of the known mineralization particularly around hole 11PY007, which intersected 0.56 percent copper and 0.13 g/t gold over 104 meters starting from 6.0 meters.

REDSTAR GOLD CORP. reported initial results of its 2017 exploration efforts at its Unga gold project near Sand Point. Following a ground-based magnetics and induced polarization survey completed in April, the company recently completed an initial 12-hole, 2,287.8-meter drilling program. Drilling was performed along approximate 100-meter centers, with a goal of tracing Shumagin-style breccias/veining previously drilled at the Shumagin Gold Zone along strike to the southwest, as well as to complete additional infill drilling to further confirm continuity of mineralization. The Shumagin Gold Zone has now been traced by drilling for roughly 1,350 meters, an increase of 42 percent over known strike length at the end of 2016. Assays are pending on this work.

Interior Alaska

FREEGOLD VENTURES LIMITED reported initial results from its 27-hole oxide-zone core drilling program north of the current resource area at its Golden Summit gold project in the Fairbanks District. Significant results include 39 meters grading 0.72 g/t gold in hole GSDL17-10; 56.5 meters grading 0.51

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FREEMAN

g/t gold in hole GSDL17-11; 52.5 meters grading 0.56 g/t gold in hole GSDL17-13; and 54 meters grading 1.40 g/t gold in hole GSDL17-16. The 50-meter spaced drilling was designed to test the upper 70 meters of ground north of current resources. Hole GSDL 17-16, in which visible gold was noted in drill core, intersected a high-grade, east-west trending vein in an area previously untested for gold mineralization. In addition, holes GSDL 17-17 and 17-18, the northernmost holes drilled during this program, intersected intrusive mineralization in an area where intrusive mineralization has not previously been encountered. Additional assays are pending.

ENDURANCE GOLD CORP. announced that it has commenced its summer exploration program at its Elephant project. The planned programs include 20 line kilometers of magnetics and induced polarization surveys over the South Zone, North Zone and Central Zone. In addition, soil and rock sampling, trenching and prospecting will be conducted on the Elephant, Trout and Wolverine prospects. Results from the ground geophysical program will be used to plan a drill program, which the company hopes to commence in the fall. The combined targets cover over 6 kilometers of strike and include kilometer-scale gold in soil with values greater than 100 parts-per-billion gold with rock grab samples up to 11.98 g/t gold.

Endurance Gold Corp. also announced that it has signed an option to acquire 100 percent interest in nine claims adjoining the company's McCord gold project near Livengood and has staked an additional eleven new claims, bringing the property to 5,178 acres in size. The project has only been evaluated by the vendor for its placer gold potential. An previous auger drilling program discovered one location in the McCord Creek valley where the auger drilling recovered fine gold, gold-in-quartz, gold-in-oxide wad, and significant quantities of cinnabar in concentrates recovered from auger drill holes down to 20 feet in depth. The gold show limited wear, suggesting it was close to its original lode source. The company plans to evaluate concentrate samples collected by the vendor and conduct a soil sampling program on the newly acquired portions of the property. Prior programs completed by the company have identified seven gold and multi-element soil anomalies, the two largest of with values exceeding 10 ppb gold, are about 1,500-by-400 meters and 1,100- by-500 meters in size.

CONTANGO ORE, INC. announced updated mineral resource estimates from the Tetlin project, a joint venture with a wholly owned subsidiary of Royal Gold, Inc. The measured and indicated resources for the combined Main Peak and North Peak deposits were calculated with resource cones at a gold price of US$1,200 per ounce, with a cut-off grade of 0.5 g/t gold and at US$1,400 gold with a cut-off grade of 0.43 g/t gold. At the 0.5 g/t gold cut-off, the revised estimate includes a measured resource of 484,000 metric tons grading 6.25 grams of g/t gold, 16.73 grams per metric ton silver and 0.15 percent copper. Indicated resources at the same cut-off came in at 10,117,000 metric tons grading 3.51 grams per metric ton gold, 14.06 grams per metric ton silver and 0.6 percent copper. Adding in additional mineralized materials, which Canadian and Australian companies call inferred resources but which U.S. companies lump into the catch-all called "mineralized materials", the total gold resources at Tetlin, using the 0.5 g/t gold cut off comes to 15,650 metric tons grading 2.98 g/t gold, 14.68 g/t silver and 0.16 percent copper containing 1,502,000 oz. gold and 7,387,000 oz. silver. The new resource constituted a 59 percent increase in total gold resources over the previous resource estimates of early 2014. The companies indicated that summer 2017 efforts, which began in May, are targeted towards more exploratory prospects in the general area of the Main and North Peak deposits.

Northern Alaska

TRILOGY METALS INC. and funding partner South32 Limited reported the start of its Bornite deposit drilling program at its Upper Kobuk Mineral project, a business relationship owned and controlled by Trilogy and NANA Regional Corporation Inc. The US$10 million, 12,000-meter core drilling program will be focused on drilling the extensions of zones last drilled in 2013, including hole RC13-224 which intersected two mineralized intervals, starting at 513.3 meters and ending at 754.6 meters for a combined 236.0-meter composite interval with a weighted average grade of 1.90 percent copper.

Trilogy also announced that it has retained Ausenco Engineering Canada Inc. to complete a pre-feasibility study on its Ambler volcanogenic massive sulfide deposit, also part of the Upper Kobuk Mineral project, a business relationship owned and controlled by Trilogy and NANA Regional Corporation, Inc. The company also engaged Amec Foster Wheeler to complete mine planning and SRK Consulting (Canada) Inc. to complete tailings and waste design, hydrology and environmental studies. The pre-feasibility work is targeted for completion in early 2018. The company is proposing a 10,000 metric-tons-per-day, open- pit mining operation with a typical crush-grind-float flow-sheet producing significant tonnages of copper and zinc concentrates and lessor lead concentrate containing significant quantities of precious metals. This summer, the contractors will work with the company's team members to complete the site investigation work to determine the optimal location for the mill and power plant, tailing and waste design, and other supporting infrastructure and facilities.

GOLDRICH MINING COMPANY announced that Goldrich NyacAU Placer LLC has commenced mining at the Chandalar gold project in the Chandalar District. Mining of pay gravel is expected to continue through mid-September. The forecast for 2017 production is about 13,500 oz. of fine gold at a cost of roughly $700 per ounce. The company also plans to conduct a 122-hole sonic drill program expected to total 7,700 feet with an average hole depth of 63 feet. The drill plan is designed to further define mineralized placer material between Line 8.6 to Line 12 as well as test for potential mineralized material from Lines 13 to 17.5. Each line is about 500 feet apart and drill lines will be spaced roughly 250 feet apart.

Southeast Alaska

CONSTANTINE METAL RESOURCES LTD. announced commencement of a 7,000 meter, US$7 million program with two drills at its Palmer volcanogenic massive sulfide project near Haines. Inferred mineral resources at the project total 8.1 million metric tons grading 1.41 percent copper, 5.25 percent zinc, 0.32 g/t gold and 31.7 g/t silver. The majority of 2017 drilling is dedicated to discovery of new mineral deposits with the balance for expansion and upgrade of the existing South Wall-RW Zone resource, and geotechnical studies. Property-wide airborne electromagnetic geophysical surveying, geological mapping and prospecting work are also included in the summer exploration plans, data from which will be used to help guide future drilling. Priority exploration targets include the Cap, Nunatak, HG, and JAG prospects that collectively define a several kilometers long, stratigraphically linked corridor of mineralization that is parallel to the South Wall–RW Zone trend. ●

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NORTHERN NEIGHBORS

increased by 20 percent and copper grades fell by roughly 14 percent. Near-surface peridotite hosted mineralization remains open to the south in certain areas of the deposit and higher-grade mineralization remains open below and east of the eastern end of the resource pit. These areas will be the target of future exploration drilling. In the meantime, the company is looking to produce a higher-grade bulk concentrate from Wellgreen material and will continue its investigation into producing separate concentrates for the copper and nickel. "Our work thus far indicates separate concentrates could significantly improve the overall potential economics of the project and that work is intended to begin in the fall of 2017 and to be completed prior to the release of a new PEA (preliminary economic assessment) or advancing to a pre-feasibility study, as this information is expected to change the pit shape, mine plan and other factors," said Wellgreen President and CEO Diane Garrett. The company said the next step is to physically produce separate concentrates, which it plans to complete with a mini-pilot-plant during a second phase later this year.

WELLGREEN PLATINUM LTD.

Located just south of the Alaska Highway in southwestern Yukon, Wellgreen is a road-accessible project with 2.1 billion pounds of nickel; 1.1 billion lb copper; 121 million lb cobalt; 2.7 million ounces of platinum and 2.8 million oz palladium in the measured and indicated resource categories.

Benz set to drill Mel zinc-barite property

Silver Range Resources Ltd. June 22 provided an update on work at its South Kitikmeot gold project, which includes seven properties between Sabina Gold & Silver's Back River Project west to the historical Lupin Mine in Nunavut. In May, Silver Range completed ground geophysical surveys over the Billie and Holliday Zones at the Uist property. These zones were identified by Silver Range in 2016, where surface samples returned grades as high as 64 grams per metric ton gold. A magnetic survey mapped an iron formation on the property and a horizontal loop electromagnetic survey identified three conductive zones within the iron formation. Silver Range said these conductive targets will be tested by shallow drilling or trenching in a follow-up program. In early June, Silver Range staked the Qannituq, a property adjacent to Sabina's Llama deposit, where recent drilling cut 8.3 meters averaging 6.52 g/t gold about 300 meters lower than the current resource. Silver Range said Qannituq is underlain by the same group of metasediments that hosts gold mineralization at the Llama, Umwelt and Goose deposits at Back River. Silver Range is currently compiling geological and geophysical data in preparation for field work at Qannituq later this season.

Group Ten explores Yukon PGE claims

Group Ten Metals Inc. June 22 said it has begun 2017 exploration at its nickel-copper-platinum group elements properties in southwestern Yukon. This work, which is expected to be carried out in July, includes mapping, prospecting and surface sampling at the Ultra, Spy and Catalyst projects. The work at Spy, which is roughly 25 miles (40 kilometers) the Wellgreen nickel-PGE-copper project, will focus primarily on defining the orientation of the Spy ultramafic sill and sighting optimal locations for a potential drill program later this year. The broader program aims to further define known showings and test additional prospective ground and geophysical/geochemical anomalies across each of the three projects. In addition, the company is completing advanced due diligence on a number of properties it is considering for acquisition. This evaluation is focused on quality, undervalued assets in established, world-class districts of politically-stable jurisdictions with excellent access and infrastructure.

Silver Range adds to NU gold properties

Benz Mining Corp. June 21 said it plans to complete up to 8,000 meters of drilling this year at its Mel zinc-lead-barite property in southeastern Yukon. The primary objective of this program is to confirm and expand a resource estimate calculated for Mel in March. According to this estimate, the main zone at Mel hosts 5.28 million metric tons of inferred resource averaging 6.51 percent zinc, 1.86 percent lead and 45 percent barite. "The main goals are to confirm the continuity of grades and widths of mineralization within the Mel Main zone and to demonstrate areas with potential to expand the current resource, and secondarily to identify other targets within the property," said Benz Vice President of Exploration Michael Gareau. Slated to start mid-July, the initial phase of the company's 2017 program at Mel will include soil sampling, mapping, and excavator trenching designed to identify targets for 3,000 meters of drilling expected to start in August. Depending on the results from the first to phases, the company will drill another 5,000 meters this fall. ●

Oil Patch Bits

Expro secures contract extension from Apache


COURTESY EXPRO

Leading international oilfield services company Expro has secured a $10 million well services contract extension with Apache North Sea.

The contract covers a range of well services including slickline, cased hole services and pumping services, as well as support in delivering coiled tubing services.

Expro has worked with Apache since 2004 and after securing the initial well services contract in 2009, has now been awarded two further one-year extensions extending to 2019.

"Our 40 years of experience mean that we are ideally placed to support this comprehensive range of intervention related services, providing a safe and cost-effective approach to maximize incremental production from mature assets," said Gary Sims, Expro UK area manager.

Foss Maritime vessels receive safety award

The Chamber of Shipping of America has recognized 65 vessels of Foss Maritime and their subsidiary companies with the 2016 Jones F. Devlin award for outstanding safety records.

The Jones F. Devlin Award is one of two award programs CSA has sponsored since 1968. The award is given to self-propelled merchant vessels that have operated for two full years or more without a crewmember involved in a lost-time incident. It publicly recognizes the skill and dedication of the men and women who are responsible for safe vessel operations.

The 65 Foss vessels were recognized at the CSA Annual Safety Awards Luncheon held on June 7 in New Orleans. Altogether, the Foss and subsidiary company vessels achieved the equivalent of 549 years of incident-free operation. Fifty-three vessels had five or more years, and 20 vessels boasted 10 to 23 years without a lost-time injury.

"The number of years our vessels have received this award is a testament to how seriously we take safety at Foss," said John Parrott, Foss president and CEO. "The safety of our people motivates us every day to enhance our programs, training, resources and operations. We're proud to receive this award because it shows our commitment to safety compels all of us, in all aspects of our work, to do better."

For more information visit the CSA's website at www.knowships.org.

Foss christens third ice-class ocean tug


COURTESY FOSS

The final of three state-of-the-art Arctic class tugs, the Nicole Foss, was christened in June at the Foss Waterway Seaport in Tacoma, Washington. Built at the Foss Rainier, Oregon, shipyard, the Nicole is designed to operate in the extreme conditions of the far north, and will enter service this summer.

"It made me think of what has been accomplished at the Rainier Shipyard and the care that goes into each and every vessel. The craftsman of the men and women at Rainier rivals the best yards in the world, and these vessels reflect their desire to provide a world-class product to the mariners that will sail on them. The Nicole Foss is truly a job well done," said Scott Merritt, COO of Foss.

The Nicole Foss is ice class Do, meaning the hulls are designed specifically for polar waters and are reinforced to maneuver in ice. The first of the three Arctic tugs, the Michele Foss debut in 2015, and in her first year of operation lead the way in safely pioneering a new route across the North Slope, while operating in extreme conditions of first year ice a meter thick. The Denise has also continued to exceed expectations and will return to the far north this summer.

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

All of the companies listed above advertise on a regular basis with Petroleum News

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TARIFF ISSUES

the national average, citing as a reason an employee-to-customer ratio he called among the lowest in the nation.

Enstar's previous tariff was producing an overall rate of return of 6.49 percent, with an effective return on equity of 7.85 percent as compared to its last adjudicated return on equity of 12.55 percent, Henry said. The annual base rate increase requested is $11.8 million, increasing the typical residential bill by some $5.47 per month, he said — adding it was somewhat less now due to post-filing adjustments and concessions.

Henry said changes proposed by the Attorney General's Regulatory Affairs & Public Advocacy Section, RAPA, would return the company's revenue requirement to the level proposed in 2009. He said RAPA's proposed methodology for year-end rate base, a 13-month average, would potentially "artificially dilute" Enstar's rate base value.

Henry also said Enstar has unique challenges, among them that it operates a combined transmission and distribution system, and said risks and rewards must be evaluated on that basis.

RAPA

Jeffrey Waller, speaking for RAPA, noted that RAPA is the public advocate, not the consumer advocate, and has the job of representing the attorney general for the public. Its role is to make recommendations that follow the rules, makes sense and protect the public — but also protect the utility, he said.

On the comparison of Enstar's rates with those in the Lower 48, Waller said rates are set based on cost, not on comparison.

RAPA recommends using a 13-month average, which he said is the rule, with year-end the exception. And since Enstar doesn't come in very often for rate cases, a year-end rate would mean they could earn that for a very long time.

Waller covered a number of issues where RAPA has questions. On bonuses, for example, he said Enstar has to prove they should be in the rate base, and the commission has set out factors to be considered. RAPA also has concerns with a number of expenses, including charges for credit card processing, where RAPA questioned the number of customers with such transactions.

Cost of the Homer extension is also an issue: Waller said there are not enough people paying a dollar per mcf to cover the cost of service to Homer.

On the rate of return, Waller said 12.55 percent is a 15-year-old rate, and said while the rate has been adjudicated down it's not low enough yet. The change reflects what's happening to the cost of capital, he said.

JL Properties

Attorney Robin Brena of Brena, Bell & Clarkson, on behalf of JL Properties, which owns and manages substantial property in Anchorage, said they were the voice of the distribution system ratepayers in the hearing and said the goal should be a balance between the lowest reasonable rate for ratepayers and adequate revenue and return for the utility.

He said that in general JL Properties aligns with RAPA on revenue requirements, which for the most part would meet the lowest reasonable rate standard.

On credit card processing, Brena noted that in the last rate case the commission rejected credit card charges because the majority of the charges were not paid by the people using the service. He asked why he should be required to pay for someone else to use a credit card to pay their bill.

He said RAPA didn't look hard enough at issues around the Homer pipeline, most of the cost of which, $8.5 million out of $11.5 million, was paid through a state grant, with Enstar financing the rest based on a surcharge to be paid by Homer residents. Brena said the responsibility for a noneconomic line shouldn't be transferred to ratepayers in Anchorage.

He argued for more separation between Enstar's distribution and transportation businesses and called for fair allocation of costs between distribution and transportation customers.

Titan

Mark Figura of Rose & Figura, on behalf of Titan LNG LLC, said Titan, as a member of the middle-sized firm transport class, deserves fair, just, reasonable rates based on the service provided to them.

Titan operates the LNG plant at Point McKenzie and ships gas from Beluga to the LNG plant, 39 miles, but with postage stamp rates, the same for every user, pays for the entire line when it only uses the first 39 miles. He said Enstar doesn't have an integrated system, pointing to parts of the system which aren't connected, and said there are various exceptions to the postage stamp rates for short service because rates are established for each customer class.

Titan wants a rate based on the portion of the line it uses, which he said would be about 60 percent of the current and proposed rates.

Figura also noted that Enstar's gas sales have been essentially flat over the last four years, whereas volumes moved for transport customers have grown substantially, thus charges against the transport customers are worth more to Enstar than charges against gas customers.

Matanuska Electric Association

David Pease of Burr Pease & Kurtz, on behalf of Matanuska Electric Association, a large volume shipping customer of Enstar, said MEA has concerns about the significant rate increase sought for large-volume shippers, calling it an attempt to shift costs to those shippers. He noted that MEA and RAPA experts came up with about the same revenue requirement of some $79 million, contrasted to Enstar's revenue request of $94 or $96 million. While Enstar says its costs are going up, Pease said, the commission hasn't looked at Enstar's rate structure for quite a long time, and noted that the last stipulated revenue requirement was what he called "a black box settlement" where numbers were not really crunched.

He said if Enstar prevails MEA is looking at about a 40 percent rate increase, as opposed to distribution customers who are looking at a much smaller percent increase.

He noted that as Waller observed, the same people are actually paying the increase, because increases in transportation are largely to electric utilities and will be fed through to retail customers.

Homer Electric Association

Pamela Anderson of Perkins Coie, on behalf of Homer Electric Association, which receives natural gas at two gas-fired power plants served by Enstar, the Bernice Lake plant and the Soldotna plant, said HEA agrees with Titan that a key issue is postage stamp rates. Bernice Lake has a special contract and service agreement with Enstar for which it pays a flat fee, she said, while the Soldotna plant has mid-sized firm transportation service. The Soldotna plant, Anderson said, uses 10 miles of the pipeline that runs from the Enstar Kenai pipeline at the KBPL to the Soldotna plant.

The postage stamp rate requires Enstar customers to pay rates for the whole system, even when they use only a small portion.

She also questioned how much the design of Enstar's rates should be based on commission orders issued in the 1980s, the basis of Enstar's claims that its system is designed and operated as an integrated system and that customers generally benefit from the entire system.

One large change since the 1980s, Anderson said, is that Enstar now has a number of transportation-only customers, so no longer provides gas and transportation to all of its customers.

HEA also questions whether costs for the CINGSA bypass were prudently incurred and who should pay those costs if the commission allows Enstar to recover them.

HEA also questions whether cost of the 28-mile Anchor Point Pipeline, the South Peninsula Pipeline, connecting Ninilchik and Anchor Point should be included in the postage stamp rates.

Chugach Electric Association

Matt Singer of Holland & Knight, representing Chugach Electric Association, focused on the rate design portion of the case, specifically how transmission costs should be allocated between customer classes, and compared two cost allocation policies, one called seaboard and one called coincident peak or 3CP. Seaboard, he said, is named after a 1952 decision by the Federal Power Commission under which 50 percent of costs are allocated based on a customer's average volume and the other 50 percent based on use during peak demand.

Singer said the coincident peak method allocates costs based on demand during a three-day peak period.

He said Enstar argues for the seaboard methodology based on a 1987 decision of this commission and ignores that parties, many involved in this issue, entered into a settlement agreement adopting the coincident peak method which was approved by this commission in 2009.

He argued that the seaboard method is bad ratemaking policy — outdated, arbitrary and unfair.

A bedrock principle in cost allocation, Singer said, is that allocation should be tied to causation, and evidence will show, he said, that peak demand drives costs, and cost allocation should encourage conservation.

In contrast, he said, the seaboard method is outdated and has not been used by the Alaska commission since 1987.

And, he said, it would result in a 40 percent increase for Chugach and other members of the very large transportation class.

Municipal Light & Power

Dean Thompson of Kemppel, Huffman & Ellis, representing Municipal Light & Power, said the seaboard issue is important, as is the proposal to terminate ML&P's power plant transportation rate, and said ML&P agrees it is time to do something about the problem of having Enstar and Alaska Pipeline Co., its pipeline arm, regulated as a single utility entity.

He said ML&P, Chugach and MEA are aligned on the seaboard issue and said ML&P has been arguing the issue for several years, and said it is also an issue of classifying costs as either capacity- or volume-related.

The integrated system doesn't mean something inappropriate is happening, he said, but combined with seaboard it prompts money from local distribution company customers to move to pipeline customers, which then moves to utility customers who are sometimes the same. ●

Contact Kristen Nelson at knelson@petroleumnews.com

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HB 111

oil and gas tax credit system. That's why I am amending the call so legislators can complete work on House Bill 111."

The governor said it was necessary to "immediately address the subsidies we can no longer afford. It is the next critical component of a much needed compromise fiscal plan, and it must be addressed this year."

Walker said that with the reduction in the permanent fund dividend to $1,100, "we cannot continue to give out millions of dollars in subsidies to oil companies."

The conference committee on HB 111 has not met since and the House and Senate have been holding technical sessions, which do not require legislators to attend.

On HB 111, while there appears to be agreement on ending cash credits, the House favors an immediate tax increase while the Senate wants to wait for input from newly contracted consultants.

—KRISTEN NELSON

Contact Kristen Nelson at knelson@petroleumnews.com

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KRU DRILLING

Altogether, the Kuparuk River unit produced 103,000 barrels of oil per day in 2016, down from 104,600 bpd in 2015 and 110,700 bpd in 2014.

The new plan of development covers activity from August 2017 through July 2018.

Kuparuk

The annual plan of development for the Kuparuk River unit is broken into five parts: the Kuparuk participating area (the "main" Kuparuk oil field) and the four satellite fields.

The eight new Kuparuk wells were all at the Drill Site 2S development in the southwest of the unit. The 20 new sidetracks were spread throughout the unit, with a cluster of five sidetracks at Drill Site 1H, Drill Site 1G and Drill Site 1B at the eastern edge of the unit; a cluster of four sidetracks at Drill Site 1L at the south of the unit; a cluster of three sidetracks at Drill Site 2M and Drill Site 2K near the 2S development; a cluster of four sidetracks in the north of the unit at Drill Site 3O, Drill Site 3Q, Drill Site 3N and Drill Site 3H; and sidetracks at Drill Site 3G, Drill Site 3F, Drill Site 2X and Drill Site 2B.

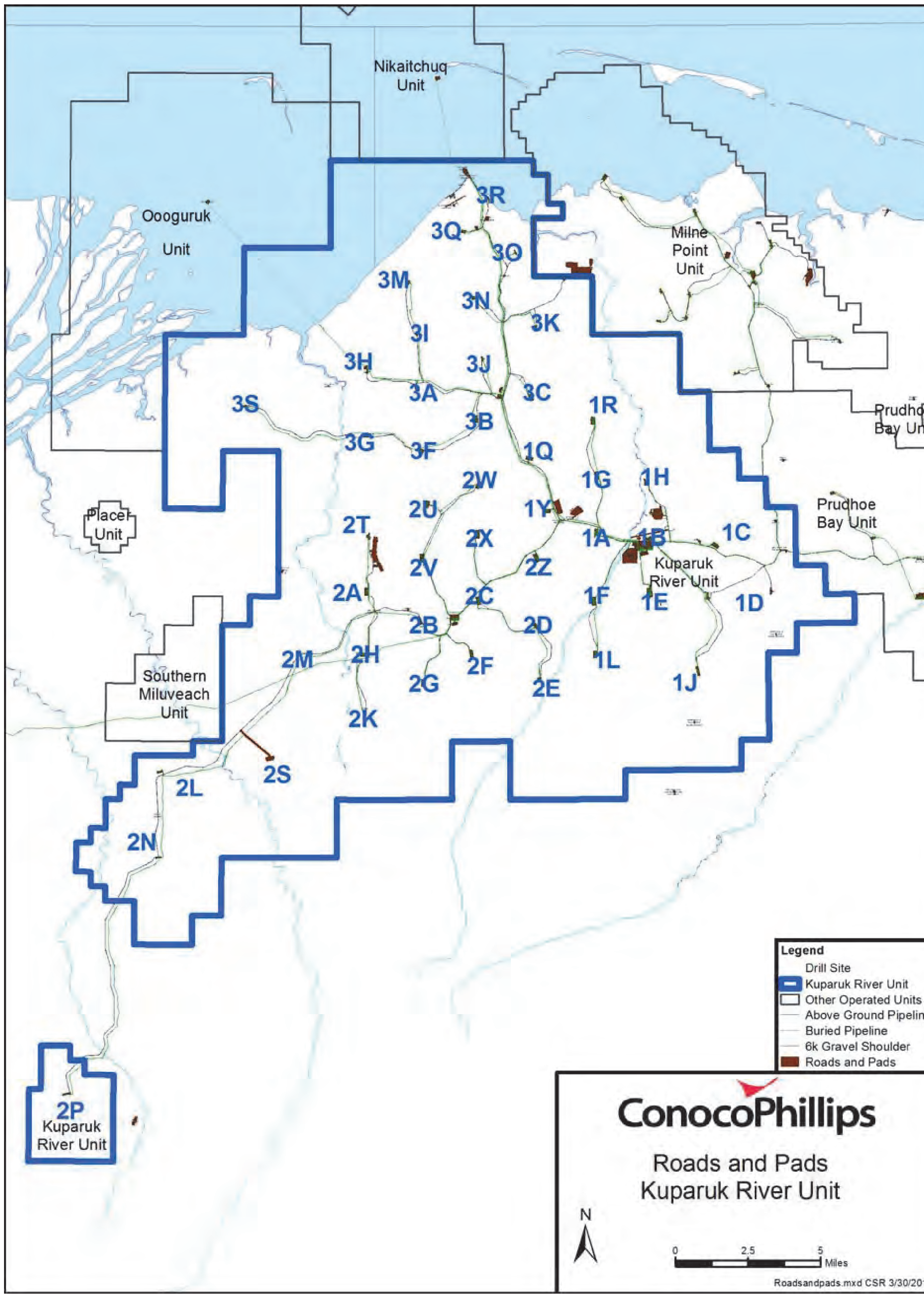
The program helped mitigate production declines over the past year. The Kuparuk participating area produced 78,100 bpd in 2016, down slightly from 78,200 bpd in 2015 and down from 83,200 bpd in 2014 and 85,700 bpd in 2013.

ConocoPhillips credited the sidetrack program, which included 55 laterals at the 20 sidetracks, with adding some 3,500 bpd in incremental oil production, similar to the incremental increase in oil production attributed to the 2015 sidetrack campaign.

The company credited a rig workover campaign with adding 1,600 bpd at the Kuparuk participating area and a non-rig workover program with adding an additional 10,700 bpd. By comparison, the 2015 workover program added 6,500 bpd from rigged activities and another 13,200 bpd from non-rig activities.

As of the end of 2016, ConocoPhillips was developing the Kuparuk participating area from 866 active development wells — 471 producers and 395 injectors — at 45 drill sites.

Through 2016, the field had produced 2.41 billion barrels of oil since operations began.



Going forward

ConocoPhillips plans to continue its recent strategy of using horizontal, multilateral and coiled tubing drilling sidetracks to access incremental reserves from existing wells.

The company has been selecting candidates using two recent 3-D seismic surveys — the Kuparuk West Sak survey from 2005 and the Western Kuparuk survey from 2011.

One reason for the decline in new drilling activities planned for the coming year is the completion of initial development work at Drill Site 2S. While the company is considering projects that would require new drill sites, it told the state it was not planning to develop any new drill site targeting the Kuparuk A and C sands before July 2018.

The company is also continuing its "infrastructure-led exploration" strategy, where it chooses potential developments near existing wells or available infrastructure. The strategy led directly to the development of Drill Site 2S in the southwest of the unit.

But the company is slowing the pace of some recent infrastructure-led exploration.

Over the past two years, ConocoPhillips drilled three wells into the Moraine interval at the Kuparuk River unit, including a pilot project from the paired 3S-620 producer and 3S-613 injector wells. "Results from special core analyses and reservoir performance from the 3S-620 producer well and 3S-613 injector well will guide future development plans for the Moraine interval," the company told state officials, as it had in

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WELL APPROVAL

development well in the Corsair block or re-entering the existing KLU No. 4 well, which is located in the North block (Kitchen Lights has four exploration blocks.).

The newly proposed KLU No. 6-Deep Jurassic well would be located in the Corsair block on ADL 389198. The proposed location is different from a KLU No. 6 well included in earlier plans. The old KLU No. 6 well has now been renamed KLU No. 13.

In pervious plans, Furie said it would drill the KLU No. 4 well to a depth capable of targeting the Sunfish Channel of the lower Tyonek formation. The company drilled and completed the well in the Northern block of the unit in 2013 and 2014 and said that the well "encountered potential oil and gas reserves." The company proposed deepening the well to target the Sunfish Channel in its previous plan of development in late 2015.

Earlier this year, Senior Vice President Bruce Webb said that Furie planned to drill the proposed KLU No.6-Deep Jurassic well to a depth of more than 20,000 feet using the Randolf Yost jack-up drilling rig, after the rig completing work on the KLU No. A1 well.

The Kitchen Lights unit is currently producing from two wells — the recently completed KLU No. A2-A well and the KLU No. 3 discovery well. The company needs to complete the KLU No. A1 well under the terms of a supply agreement with Enstar Natural Gas Co.

In pursuing new exploration, the amended plan of development drops a plan to complete a fourth development well at the Corsair block. The proposed well would have been drilled to the stratigraphic equivalent of the Sterling flow-tested zones in KLU No. 3.

—ERIC LIDJI

Contact Eric Lidji at ericlidji@mac.com

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AURORA FIELDS

membership is not successful, the wells will be shut-in and abandoned," Aurora wrote.

To give the company additional time to complete the bankruptcy proceedings, the state is giving Aurora until Oct. 1 this year to submit new plans for the west side Cook Inlet fields.

Aurora initially submitted plans of development for the two fields in October 2016 but quickly withdrew the plans and asked the state for an extension, citing the bankruptcy.

The revised plans, submitted in early June 2017, added little in the way of actual work plans, also a result of the uncertainty surrounding the bankruptcy. But the revised plans offered more information about the various paths that the upcoming year might take, including a potential sale of the company or of the assets, or abandoning the fields.

What needs to be done

The Three Mile Creek field is currently producing from one of three wells — Three Mile Creek No. 1. The well was producing only 186,000 cubic feet per day as of August 2016, down 10 percent from the year prior, according to company figures included in the plan.

The company suspended production from the Three Mile Creek No. 2 well in 2011, after equipment became lodged in the wellbore during maintenance activities. Attempts to resolve the problem in November 2013 and again September 2014 both failed. Given that plugging the well would require a rig workover, Aurora is considering plans to clean out and test the well prior to officially abandoning it, to make the most of unavoidable costs.

The company drilled the Three Mile Creek No. 3 well in November 2011 but subsequent completion activities were "very disappointing" and the well has never produced. The company wants to continue testing the well before approving abandonment plans.

In the revised plan of development, Aurora said it wants to proceed with the Three Mile Creek No. 2 and No. 3 plans this year, if it can secure a rig. If the work fails to resolve the issues with the two wells, the company intends to plug all three wells in mid-2018.

The Nicolai Creek unit was producing from six wells as of August 2016, according to the revised plan. The company is considering plans to convert the Nicolai Creek Unit No. 2 and Nicolai Creek Unit No. 9 wells into storage operation with 2.5 billion to 3 billion cubic feet of capacity, and also wants to remediate problems at the Nicolai Creek Unit No. 10 and Nicolai Creek Unit No. 11 wells. The company believes a proposed Nicolai Creek Unit No. 12 well could access a potential Nicolai Creek North accumulation.

Without the drilling, remediation or conversion, though, the company expects the unit to become uneconomic within three years and would abandon the unit in mid-2021.

Without the drilling, remediation or conversion, though, the company expects the unit to become uneconomic within three years and would abandon the unit in mid-2021. The results of the bankruptcy proceedings could expedite those plans, according to Aurora.

In filings with the U.S. Bankruptcy Court in Anchorage in April, Aurora proposed a liquidation sale running through October as a way to recover nearly $1.5 million in debts. ●

Contact Eric Lidji at ericlidji@mac.com

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KRU DRILLING

its previous plan of development, but offered no firm plans to conduct Moraine activities this year.

West Sak

West Sak is the largest of the four Kuparuk River unit satellites.

By the end of 2016, ConocoPhillips had drilled approximately 122 wells at the West Sak satellite from Drill Sites 1B, 1C, 1D, 1E, 1J and 3K. The company was operating 112 active wells — 58 producers, 52 water injectors and two water-alternating-gas injectors.

West Sak produced 13,701 barrels of oil and 13.9 million cubic feet of gas per day in 2016, down from 13,865 barrels of oil and 13.9 million cubic feet of gas per day in 2015.

ConocoPhillips did not drill any development wells at West Sak in 2016, focusing instead on "surveillance and optimization of existing wells," according to the development plan.

For the current year, the company is planning to "focus on existing developments" while studying a range of potential future developments. The largest project is the planned resumption of activities at the 19-well Drill Site 1H NEWS development. The company placed the project on hold last year after completing major infrastructure construction.

The company is also studying potential West Sak developments at the existing Drill Site 1D, 1C, 3K and 3N. The 1C program could include three new development wells at "lower-value" targets. The 3K and 3N programs will most likely be developed in phases.

The company is using recent drilling activities in the region to study a "potential major multi-well" Eastern NEWS development, which would require a new drill site.

The company is also considering potential Drill Site 3R development, which could require an expansion of the existing Drill Site 3R. Earlier this year, the company drilled and completed a pair of pilot wells — the 3R-101 producer and 3R-102 injector — at Drill Site 3R. The company is evaluating the project using a recently completed 3D seismic survey over 47 square miles in the northern end of the unit. The company acquired and licensed the survey in mid-2014 and processed a portion of the survey during 2016.

Tarn

By the end of 2016, ConocoPhillips had drilled 77 wells at the Tarn satellite from Drill Sites 2L and 2N and was operating 63 active wells — 39 producers and 24 injectors.

Tarn produced 8,400 barrels of oil and 16.7 million cubic feet of gas per day in 2016, down from 9,300 barrels of oil and 20.7 million cubic feet of gas per day in 2015.

After conducting a nine-well program in 2014 and a five-well program in 2015, the company did not drill at Tarn in 2016 but performed a workover to restore production from the 2N-333 well. The company is not planning any development drilling for this year and has no firm plans for future exploration in the Purple or Cairn intervals.

Meltwater

By the end of 2016, ConocoPhillips had drilled 19 wells at the Meltwater satellite from Drill Site 2P and was operating 16 active wells — nine producers and seven injectors.

Meltwater produced 1,326 barrels of oil and 10 million cubic feet of gas per day in 2016, down from 1,569 barrels of oil and 11.3 million cubic feet of gas per day in 2015.

The company did not drill any wells or sidetracks at the Meltwater satellite in 2016 and is not planning any wells or sidetracks this year. The company is evaluating a 2008 seismic acquisition to determine candidates for sidetracking or producer-to-injector conversion.

The company is not planning any exploration into the Cairn or Bermuda intervals.

The company completed two pigging operations at the Drill Site 2P produced oil line in 2016 and has scheduled future pigging activities at six-month to 12-month intervals.

Tabasco

By the end of 2016, ConocoPhillips had drilled 12 wells at the Tabasco satellite from Drill Site 2T and was operating five active wells — four producers and one injector. One producer was taken offline in 2016 due to a failed electronic submersible pump motor.

Tabasco produced 1,430 barrels of oil and 222,000 cubic feet of gas per day in 2016, down from 1,619 barrels of oil and 265,000 cubic feet of gas per day in 2015.

The company did not drill at the satellite in 2016 and is not planning to drill this year, but the company said work continues to identify potential locations for development wells. The company is also not planning any exploration activities at the satellite this year. ●

Contact Eric Lidji at ericlidji@mac.com