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This week's Mining News

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The weekly mining newspaper for Alaska and Canada's North

Week of May 7, 2017

NEWS NUGGETS

Compiled by Shane Lasley

KINROSS GOLD CORP.

Higher grade ore being fed to the mill at Fort Knox contributed to strong quarterly gold production at this mine near Fairbanks, Alaska.

Higher grades boost Fort Knox

Kinross Gold Corp. May 2 reported that its Fort Knox Mine near Fairbanks, Alaska, produced 93,038 ounces of gold during the first quarter, a nearly 6 percent increase over the 87,800 oz recovered there during the first three months of 2016. The company attributes the 5,238-oz increase to higher grade ore being fed through the mill. The mill at Fort Knox processed 2.93 million metric tons of ore averaging 0.75 grams per metric ton gold during the first quarter, compared to 3.2 million metric tons averaging 0.66 g/t during the same period last year. Additionally, 3.9 million metric tons of ore averaging 0.23 g/t was processed on the heap leap pad, compared to 7.5 million metric tons averaging 0.26 g/t during the first three months of 2016. The per-ounce cost of Fort Knox gold sold during the quarter was US$617, compared with US$708 during the same period last year. Kinross said this 13 percent cost reduction is primarily due to lower labor and contractor costs, and more ore mined relative to operating waste.

Red Dog PILT agreement finalized

The Northwest Arctic Borough and Teck Alaska, operator of the Red Dog Mine, May 3 announced that they have finalized a new 10-year payment in lieu of taxes agreement. Under the terms of the agreement, Red Dog would flow roughly US$20 million to US$26 million into the borough each year under the new agreement. Roughly US$14 million to US$18 million of these funds would be paid directly to the Northwest Arctic Borough each year, a payment that would be calculated on a percentage of Red Dog's fixed asset value. The agreement also includes the establishment of a new village improvement fund. Administered by the borough, with input from the 11 villages it encompasses, this fund would be earmarked for community programs, services and infrastructure. "This agreement is a good outcome for the borough and its residents. It will create additional revenue for services, projects, and long-term sustainability," said Northwest Arctic Borough Mayo Clement Richards. "It's taken several years, but we're pleased to have reached an agreement that will go some lengths to helping meet the needs of our residents, which comes at a critical time when state community revenue sharing dollars are being phased out." With the new PILT agreement in place, Red Dog is exempt from a severance tax adopted by the Northwest Arctic Borough assembly in 2009 and updated in 2015. With the new agreement, Teck has agreed to discontinue the legal action it took in opposition to the severance tax. "This agreement will provide enhanced resources for the region while also supporting Red Dog's ability to continue generating good jobs and local economic opportunity," said Red Dog General Manager Henri Letient. "We're pleased with

see **NEWS NUGGETS** *page 8*

ALASKA STATE LIBRARY, HISTORICAL COLLECTIONS

Beginning production in 1892, the Apollo gold mine on Unga Island is the first commercial hardrock mine in Alaska. Today, Redstar Gold is seeking new deposits of high-grade gold near this historic operation.

EXPLORATION

Early start at Unga

Redstar targets extension of high-grade gold outlined at Shumagin zone

By SHANE LASLEY

Mining News

Following up on its success in 2016, Redstar Gold Corp. has gotten off to an early start on expanding the high-grade gold zones at its Unga project in Southwest Alaska.

The nearly 60,000-acre Unga property blankets two high-grade gold trends – Apollo-Sitka and Shumagin – that each cut roughly six miles across Unga Island.

Apollo-Sitka hosts Apollo, a historic mine that produced roughly 150,000 ounces of gold from 1892 to 1913. Shumagin, a parallel structural trend about 2,000 meters to the northwest, has been Redstar's primary focus of exploration and is the starting point of the 2017 program.

"Based on the results and success from 2016, Redstar increased the drilled strike length of the Shumagin gold zone from approximately 300 meters to approximately 950 meters, and is now well-financed, excited, prepared and focused to execute a multi-million-dollar expansive exploration program to highlight the potential of the multiple gold zones with the Unga gold project, commencing firstly with the Shumagin gold zone," Redstar President and CEO Peter Ball. said.

2016 success

The seven holes drilled during the fall 2016 program an Unga targeted the expansion of high-grade gold mineralization over a roughly 750-meter stretch of the Shumagin zone.

The first two holes, 16SH019 and 16SH020, tested the potential of expanding the high-grade zone deeper and to the southwest, both holes of which tapped the targeted structure.

16SH020, the most southwesterly hole drilled so far in the Shumagin zone, cut three gold intervals, including 0.9 meters of 14.95 grams per metric ton gold and 2.67 g/t silver.

The other five holes successfully tapped high-grade mineralization below weakly mineralized breccia exposed at Bunker Hill on the northeast end of the Shumagin zone. Highlights from the drilling in this area include 1.5 meters of 16.97 g/t gold in hole 16SH022; 0.3 meters of 34.5 g/t gold in 16SH023; and 0.9 meters of 11.65 g/t gold in 16SH024.

"Shumagin has once again delivered double digit gold grades consistently in almost every drill hole," Ball said.

Overall, this program extended the drilled section of the Shumagin zone to 950 meters and provided a launching point for the robust 2017 exploration program now underway.

Tracing Shumagin southwest

Redstar kicked off its 2017 program at Unga in early April with a surface geophysical program designed to refine targets southwest of the Shumagin zone for a 5,000-meter drill program slated to start later this month.

This program, which is now complete, included 15.73 line-kilometers (9.77 miles) of magnetic and 8.75 line-kilometers (5.44 miles) of induced polarization surveys across the Shumagin zone and 54.44 line-kilometers (33.83 miles) of magnetic survey at Orange Mountain, a large zone of alteration about 3,000 meters to the southwest along the longer Shumagin structural trend.

This work included surveying well-known geological features and high-grade gold mineralization already identified at the Shumagin zone, which will help identify other deeper, hidden targets towards Orange Mountain, which is believed to be the hydrothermal center that fed gold-bearing fluids to the Shumagin trend.

Using the data from the survey, the Redstar team will look for the best untested structures for drilling between Shumagin zone and Orange Mountain.

"Our technical team is now finalizing a drill targeting exercise, which we anticipate to complete in the next week, allowing drilling to commence in May," Ball said on April 27.

In addition to drilling, Redstar plans to complete metallurgical work on the high-grade gold and silver mineralization across the Shumagin zone and continued exploration of the Apollo-Sitka trend this year. ●

Redstar Gold Corp. has gotten off to an early start on expanding the high-grade gold zones at its Unga project. See page 7.

Pentex sale deadline extended

The board of the Alaska Industrial Development and Export Authority during its April 27 meeting passed a resolution further extending the deadline for finalizing the terms for the sale of Pentex Alaska Natural Gas Co. to the Interior Gas Utility. The board had previously extended the deadline from March 31 to April 30 but has now moved the deadline to May

see **PENTEX SALE** *page 13*

Icewine well surface casing set

Accumulate Energy Alaska Inc. has completed the surface hole at the Icewine No. 2 well.

The local subsidiary of the Australian independent 88 Energy Inc. reached a depth of 2,978 feet on the onshore North Slope well on the night of April 27. The company cemented the surface casing and completed a test of its blowout preventer. The company is currently drilling the intermediate section of the well, between 3,000 and 10,710 feet.

The Icewine No. 2 well is located in the Franklin Bluffs region of the central North Slope, south of the Prudhoe Bay unit, along the trans-Alaska oil pipeline corridor.

—ERIC LIDJI

State OKs terminal purchase

The state of Alaska has approved a purchase and sale agreement transferring ownership of Tesoro's Terminal 1 at the Port of Anchorage to Petro Star Inc.

Petro Star is an Arctic Slope Regional Corp. subsidiary and ASRC said in a May 2 statement that Petro Star is now "one step closer to owning Terminal 1 at the Port of Anchorage." The companies said Tesoro would continue to operate Terminal 1 while Petro Star secures necessary state and federal permits.

see **TERMINAL PURCHASE** *page 12*

FINANCE & ECONOMY

Aurora to sell

Company wants to liquidate assets to pay off creditors in bankruptcy case

By ERIC LIDJI

For Petroleum News

Aurora Gas LLC wants to liquidate its assets to pay its creditors.

In a plan filed with the U.S. Bankruptcy Court in Anchorage in early April and amended toward the end of the month, the local independent producer proposed selling off its assets, including its properties on the west side of Cook Inlet, to pay its creditors.

Aurora believes a sale could come close to recovering the nearly $1.5 million it owes creditors. The proposed liquidation sale would run through the end of October 2017.

Aurora decided to liquidate its assets because its owner, Rieck Oil Co., "has been unable to attract new investors and has therefore declined to invest additional funds," according to the company. Over the past year, four prospective buyers have evaluated Aurora, according to the company, and one made a purchase offer in January 2016, "but it was declined as inadequate," Aurora noted in its amended plan. "However, that company and several others continue to express an interest in the debtor or its producing assets, and debtor believes that the most value can be obtained in this manner," Aurora noted.

Up and down

Aurora Power Resources Inc. and Orion Resources LLC created Aurora Gas in 1999 as a

see **AURORA SALE** *page 15*

GOVERNMENT

Back to Arctic OCS

Trump cancels Obama's Beaufort and Chukchi oil and gas lease withdrawals

By ALAN BAILEY

Petroleum News

On April 28 President Donald Trump issued an executive order canceling several of President Barack Obama's outer continental shelf land withdrawals from oil and gas leasing. The order, characterized as an America-first offshore energy strategy, also requires a review of the Bureau of Ocean Energy Management's outer continental shelf five-year lease sale plan and a review of the economic impacts of development restrictions associated with marine national monuments.

DONALD TRUMP

In Alaska, the order cancels the withdrawal of the Chukchi Sea and large areas of the Beaufort Sea from oil and gas leasing. The order also revokes the Northern Bering Sea Climate Resilience Area that Obama had implemented.

Trump has ordered the Department of the Interior to consider revising its lease sale program to include at least one sale per year in each of the Chukchi Sea, the Beaufort Sea and Cook Inlet. The president has also ordered the development of a streamlined approach to the permitting of offshore seismic surveys.

see **ARCTIC OCS** *page 14*

FINANCE & ECONOMY

Conoco production up

Recent projects continue to help North Slope oil production, prices also up

By ERIC LIDJI

For Petroleum News

ConocoPhillips Co. reported $99 million in adjusted earnings from its Alaska operations in the first quarter, an improvement over 2016 earning but down from recent quarters.

The most active producer in Alaska was helped by increased oil production and improved oil prices, but would have posted a loss without a large impairment and tax adjustments.

Companywide, ConocoPhillips reported $790 million in net income during the quarter.

The production trend should continue over the near term, if projects currently underway reach completion. The company said it had completed ice road construction at the GMT-1 pad at the Greater Mooses Tooth unit, which means that the project remains on track for a startup date in late 2018. The 1H NEWS drill site facility at the Kuparuk River unit is "ready for startup" at the end of this year. The company has also completed a 3-D seismic survey over the Greater Mooses Tooth unit, including its Willow discovery.

Asked whether the company was doing anything to promote increased production in the immediate future, Executive Vice President of Production, Drilling and Projects Alan J. Hirschberg cited a "continuous" program of rotary drilling and coiled tubing drilling "driven by different kinds of new technology that allow you to see where to drill."

Hirschberg was also asked about two liquefied natural gas projects in Alaska — the efforts to sell the

see **CONOCO PRODUCTION** *page 16*

● EXPLORATION & PRODUCTION

A more cautious approach to forecast

DOG commercial analyst explains state's new method of oil production forecasting used for developing DOR's revenue forecasts

By ALAN BAILEY
Petroleum News

The task of trying to predict future oil production in Alaska is a touchy issue, especially given the criticality of production volumes to the state's economy and the inherent uncertainties in any attempt to say what those future production levels might be. In the fall of 2016, for the first time, staff in Alaska's Division of Oil and Gas took on the role of production forecasting, a role previously carried out by external consultants. And, in preparing their forecast, the in-house analysts took a conservative approach to their task, arriving at somewhat lower projected oil volumes than have been previously forecast.

In a talk to the Alaska Support Industry Alliance on April 22 about how the division staff had prepared their forecast, Pascal Umekwe, a commercial analyst with the division, explained that previous production forecasts had consistently overestimated future oil production levels. The forecasts, which in the past have covered a 10-year timeframe, have been reasonably accurate for the first year but have been very wide of the mark, much too optimistic, by year 10, Umekwe said.

One issue that can arise is the possibility of including in the forecasts oil field development projects that do not, in reality, pan out. And trying to forecast up to 10 years into the future tends to exacerbate this problem, Umekwe suggested.

Three sources

The division's new methodology, as in previous methodologies, considers three sources of future oil production: continuing production from currently operational oil fields, expected production from new oil under development and potential production from developments that are under evaluation. But, whereas previous forecasts used a time horizon of 10 years for both the under development and under evaluation categories, the new methodology improves accuracy by shrinking the horizon to five years for under evaluation and to just one year for under development, Umekwe explained.

Moreover, in assessing future oil development the division analysts now use a more risk based approach, factoring in the probabilities of developments happening, rather than determining a single, predicted development path. And the methodology also considers the dependency of oil developments on the future price of oil, Umekwe said.

90 percent from existing fields

The foundation of the forecast consists of the projected future production from existing oil pools — this component of the forecast accounts for about 90 percent of the estimated, total future oil output. Division analysts obtained the data for this component of the forecast by conducting what is referred to as a decline curve analysis for each producing oil pool, using the known characteristics of each pool and

see **DOR FORECAST** page 6

contents

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Alaska - Mackenzie Rig Report

Alaska Rig Status

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
		North Slope - Onshore	
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Kuparuk, Mobilizing	ConocoPhillips
Dreco 1000 UE	16 (SCR/TD)	Prudhoe Bay S-101i, workover	BP
Dreco D2000 Uebd	19 (SCR/TD)	Alpine CD5-17	ConocoPhillips
AC Mobile	25	Standby	
OIME 2000	141 (SCR/TD)	Kuparuk, Stack Out	ConocoPhillips
	142 (SCR/TD)	Kuparuk 2K-32	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	Deadhorse	BP
AC Coil	CDR-3 (CTD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Deadhorse	Available
Mid-Continental U36A	3-S	Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Deadhorse	Available
Dreco 1000 UE	7-ES (SCR/TD)	Deadhorse	Available
Dreco 1000 UE	9-ES (SCR/TD)	Deadhorse	Available
Oilwell 2000 Hercules	14-E (SCR)	Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location	Available
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Deadhorse	Available
Oilwell 2000	33-E	Deadhorse	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Deadhorse	Available
OIME 2000	245-E (SCR-ACTD)	Kuparuk	Available
Academy AC electric CANRIG	105AC (AC-TD)	Deadhorse	Available
Academy AC electric Heli-Rig	106AC (AC-TD)	Deadhorse	Available
Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)		Available
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay	Available
Ideco 900	3 (SCR/TD)		Available
Parker Drilling Arctic Operating Inc.			
NOV ADS-10SD	272	Prudhoe Bay DS 18	BP
NOV ADS-10SD	273	Prudhoe Bay DSW-59	BP
		North Slope - Offshore	
BP			
Top Drive, supersized	Liberty rig	Inactive	BP
Doyon Drilling			
Sky top Brewster NE-12	15 (SCR/TD)	Spy Island, NIK North Mod	ENI
Nabors Alaska Drilling			
OIME 1000	19AC (AC-TD)	Oooguruk, Cold Stacked	Caelus Alaska
		Cook Inlet Basin – Onshore	
BlueCrest Alaska Operating LLC			
Land Rig	BlueCrest Rig #1	Anchor Point, drilling production section of H14	BlueCrest Alaska Operating LLC
Glacier Oil & Gas	Rig 37	West McArthur River Unit Workover	Glacier Oil & Gas
All American Oilfield LLC			
IDECO H-37	AAO 111	In All American Oilfield's yard in Kenai, Alaska	Available
Aurora Well Services			
Franks 300 Srs. Explorer III	AWS 1	Stacked out west side of Cook Inlet	Available
Saxon			
TSM-850	147	Stacked	Hilcorp Alaska LLC
TSM-850	169	Stacked	Hilcorp Alaska LLC
		Cook Inlet Basin – Offshore	
Hilcorp Alaska LLC			
National 110	C (TD)	Platform C, Stacked	Hilcorp Alaska LLC
	Rig 51	Steelhead Platform, Stacked	Hilcorp Alaska LLC
	Rig 51	Monopod Platform, Drilling	Hilcorp Alaska LLC
Spartan Drilling			
Baker Marine ILC-Skidoff, jack-up		Spartan 151, Stacked Seward	
Furie Operating Alaska			
Randolf Yost jack-up		Nikiski, OSK dock	Furie
Glacier Oil & Gas			
National 1320	35	Osprey Platform, activated	Glacier Oil & Gas
Kuukpik Drilling	5	King Salmon Platform	Hilcorp Alaska LLC

Mackenzie Rig Status

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
		Canadian Beaufort Sea	
SDC Drilling Inc.			
SSDC CANMAR Island Rig #2	SDC	Set down at Roland Bay	Available
		Central Mackenzie Valley	
Akita			
TSM-7000	37	Racked in Norman Well, NT	Available

The Alaska - Mackenzie Rig Report as of May 3, 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*

	April 28	April 21	Year Ago
United States	870	857	420
Canada	85	99	37
Gulf of Mexico	17	20	24

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

*Issued by Baker Hughes since 1944

● EXPLORATION & PRODUCTION

April ANS crude production holds level

Production averaged 566,234 bpd, up 0.2% from March average of 565,027 bpd; Cook Inlet production for March down 6% from February

By KRISTEN NELSON
Petroleum News

Alaska North Slope crude oil production averaged 566,234 barrels per day in April, up 0.2 percent from a March average of 565,057 bpd, a month-over-month increase of 1,177 bpd. Production this April is up 11.8 percent from April 2016, when ANS production averaged 506,441 bpd, but that comparison is based on an anomaly: ANS April 2016 production was down 6.9 percent from a March 2016 average of 543,735 bpd because of a power outage at Prudhoe Bay on April 24, 2016, which drove Prudhoe production down 14.5 percent month-over-month.

The largest April-over-March ANS increase this year was at the ConocoPhillips Alaska-operated Alpine field, which averaged 65,727 bpd in April, up 3.9 percent from a March average of 63,278 bpd, an increase of 2,449 bpd.

Alpine includes production from satellites at Fiord, Nanuq and Qannik.

Information for April is from the Alaska Department of Revenue's Tax Division which reports North Slope oil production consolidated by major production centers and provides daily production and monthly averages. More detailed data, including Cook Inlet and individual North Slope fields and pools, is reported by the Alaska Oil and Gas Conservation Commission on a month-delay basis.

AOGCC data for March shows 82 percent of Alpine field production from the main reservoir, with 13 percent from Fiord, 2.5 percent from Nanuq and 2.8 percent from Qannik.

The Kuparuk River field and Lisburne also had month-over-month production increases.

The ConocoPhillips-operated Kuparuk River field had the largest per-barrel increase, up 1,459 bpd, averaging 147,287 bpd in April, a 1 percent increase from a March average of 145,828 bpd, and a 4.2 percent year-over-year increase from April 2016 production of 141,307 bpd. Kuparuk includes satellite production from Meltwater, Tabasco, Tarn and West Sak, as well as from the Eni-operated Nikaitchuq field and the Caelus Alaska-operated Oooguruk field.

AOGCC data show Nikaitchuq averaged 21,473 bpd in March, up 4.4 percent, 905 bpd, from a February average of 20,568, and Oooguruk averaged 14,324 bpd in March, up 0.3 percent, 44 bpd, from a February average of 24,280 bpd.

Nikaitchuq production is down 15.6 percent from a March 2016 average of 25,442 bpd; Oooguruk is up 49.3 percent from a March 2016 average of 9,596 bpd.

Lisburne, operated by BP Exploration (Alaska) and a part of greater Prudhoe Bay, averaged 25,225 bpd in April, up 3 percent, 746 bpd, from a March average of 24,479 bpd.

Prudhoe, Endicott down

BP-operated Prudhoe and Hilcorp Alaska-operated Endicott had month-over-month production declines.

Endicott averaged 15,626 bpd in April, down 2.8 percent, 451 bpd, from a March average of 16,077 bpd, but up 51.2 percent from April 2016, when production averaged 10,231. Endicott includes production from satellites at Eider, Minke and Sag Delta, as well as volumes from the Badami field operated by Glacier Oil & Gas subsidiary Savant Alaska and from the ExxonMobil Production Co.-operated Point Thomson field.

AOGCC data show Badami averaged 912 bpd in March, up 2.7 percent, 24 bpd, from a February average of 888 bpd, but down 12.6 percent year-over-year from a March 2016 average of 1,044 bpd.

Point Thomson came online in April 2016, so year-to-date production data are not yet available.

The field averaged 6,513 bpd in March, up 779 percent, 5,772 bpd, from a February average of 9,253 bpd. Tax Division data for February show production volumes from Endicott in the 9,500-10,500 bpd range for most of the month, not far above averages prior to Point Thomson coming online and probably indicating that Point Thomson was not contributing much production. In March, by contrast, Endicott volumes were above 15,000 bpd for more than half the month, indicating fairly steady Point Thomson production, with comparable figures for April.

At BP-operated Prudhoe, April production averaged 312,369 bpd, down 1 percent, 3,026 bpd, from a March volume of 315,395 bpd. Prudhoe includes satellite production from Aurora, Borealis,

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DOR FORECAST

the analysts' judgement to project current production into the future. Unlike what has been done in the past, division staff conducted this analysis at the level of complete oil pools, rather than for individual wells within the pools.

The analysts developed hundreds of potential production profiles for each pool, before combining these profiles statistically using commercially available software, to obtain a mean and a range for the possible future production profiles. These results were then aggregated in a spreadsheet, to generate 90 percent confidence levels and a mean for the future production profile for the entire state.

The analysts then considered new oil under development, oil expected to originate from development projects slated to come online within the next year. Although many of these projects consist of in-field drilling, already sanctioned to be carried out, the analysts did not include drilling that they considered routine, drilling that would normally be conducted to sustain a field. While a greater-than-normal number of new wells in a field should correctly be considered as new development, the inclusion of routine drilling within the new development category would likely result in the double counting of oil produced as a consequence of this drilling, Umekwe said.

The inclusion of the under development production tranche adds a thin wedge of new production onto the projected production profile for existing oil pools.

Under evaluation

The under evaluation tranche of the production forecast forms a series of slightly thicker wedges on top of the under development category, with the start of each wedge representing a new development coming on line. For inclusion in the tranche, a project must have most features critical to success in place, including facility access and funding, and must be scheduled to come on line within the next five years.

Example projects in this under evaluation category include continuing drilling from the CD-5 pad in the ConocoPhillips Colville River unit; ConocoPhillips Greater Mooses Tooth 1 and Greater Mooses Tooth 2 developments; Hilcorp's Moose Pad development in the Milne Point unit; and ConocoPhillips' Moraine project in the Kuparuk River unit. Some projects within this category have currently been postponed. These consist of Caelus Energy Alaska's Nuna and Nuiqsut expansion projects in the Oooguruk field; Brooks Range Petroleum's Mustang project; additional drilling by Eni in the Nikaitchuq field; and ConocoPhillips' 1H NEWS project in the Kuparuk River unit.

Layering the under development and under evaluation tranches onto the decline curve data for existing pools suggests a future oil production decline rate of about 4 percent, compared with an historic decline rate of about 5.5 percent.

Future development

Moving into the longer term, there is a list of projects, some of which could result in large future production volumes, but which lie too far in the future and have too much associated uncertainty for inclusion in the division's official oil production forecast. It is possible to assess the potential impact of these projects by layering publicly available production estimates for the projects on top of the official forecast. And that impact would be significant. The projects in question consist of ConocoPhillips' Fiord West project; ASRC Energy's Placer project; Armstrong Energy's Pikka project; ConocoPhillips' Tofkat project; ConocoPhillips' Willow project, Hilcorp Alaska's Liberty project; major gas sales from ExxonMobil's Point Thomson field; Caelus' Smith Bay project; and the possibility of developing heavy oil in the Ugnu formation of the central North Slope.

In late April Paul Decker, DOG's resource evaluation manager, talked to Alaska's Senate Finance Committee about the various projects that fall into the state's under evaluation and future development categories. Petroleum News reported on Decker's talk in its April 30 issue. ●

Contact Alan Bailey at abailey@petroleumnews.com

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APRIL PRODUCTION

Midnight Sun, Orion, Polaris, Sag River, Schrader Bluff and Ugnu, as well as from the Hilcorp Alaska-operated Milne Point and Northstar fields.

AOGCC data show Milne Point averaged 21,687 bpd in March, up 10.4 percent from a February average of 19,652 and up 11.11 percent from a March 2016 average of 19,518 bpd, while Northstar averaged 7,874 bpd in March, up 41.8 percent from a February average of 5,553and up 42.9 percent from a March 2016 average of 5,510 bpd.

Cook Inlet down 6%

AOGCC data show Cook Inlet production averaged 13,177 bpd in March, down 6.2 percent from a February average of 14,042 bpd.

The largest percent and per-barrel increase was at the Glacier Oil & Gas-operated Redoubt Shoal field, which averaged 851 bpd in March, up 26.1 percent, 176 bpd, from a February average of 675 bpd.

Hilcorp Alaska's Trading Bay field averaged 1,663 bpd in March, up 3.24 percent, 52 bpd, from a February average of 1,611 bpd.

The only other Cook Inlet field with a month-over-month production increase was Hilcorp's Granite Point field, which averaged 2,481 bpd in March, up 0.9 percent from a February average of 2,458.

The largest month-over-month decline, 22.8 percent, was at Hilcorp's Middle Ground Shoal field, where a subsea pipeline supplying fuel gas has been shut in. The field averaged 1,348 bpd in March, down 399 bpd from a February average of 1,747 bpd.

Hilcorp's McArthur River field, Cook Inlet's largest, averaged 3,254 bpd in March, down 14.4 percent, 548 bpd, from a February average of 3,802 bpd.

Glacier Oil & Gas' West McArthur River field averaged 1,328 bpd, down 7 percent, 99 bpd, from a February average of 1,428 bpd.

Hilcorp's Swanson River field averaged 1,924 bpd in March, down 3.3 percent, 65 bpd, from a February average of 1,989 bpd.

BlueCrest's Hansen field, the Cosmopolitan project, averaged 146 bpd in March, down 2.53 percent, 4 bpd, from a February average of 150 bpd.

Hilcorp's Beaver Creek field averaged 181 bpd, down 1 percent, 2 bpd, from a February total of 183 bpd.

ANS crude oil production peaked in 1988 at 2.1 million bpd; Cook Inlet crude oil production peaked in 1970 at more than 227,000 bpd. ●

Contact Kristen Nelson at knelson@petroleumnews.com

NORTH OF 60 MINING news

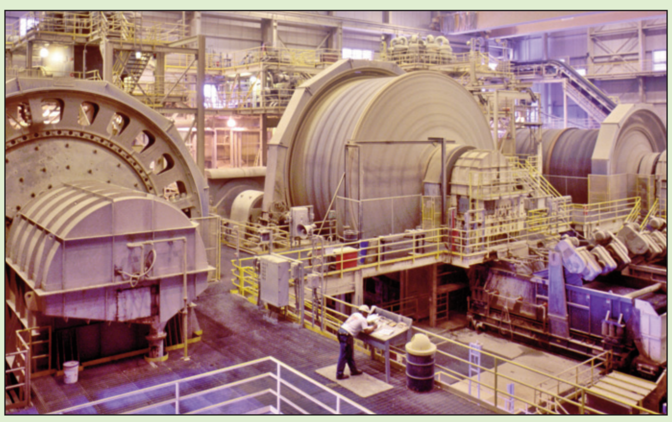
page 8 MSHA lays out guidelines to curb fatalities of miners working alone

www.MiningNewsNorth.com *The weekly mining newspaper for Alaska and Canada's North* **Week of May 7, 2017**

NEWS NUGGETS

Compiled by Shane Lasley

KINROSS GOLD CORP.



Higher grade ore being fed to the mill at Fort Knox contributed to strong quarterly gold production at this mine near Fairbanks, Alaska.

Higher grades boost Fort Knox

Kinross Gold Corp. May 2 reported that its Fort Knox Mine near Fairbanks, Alaska, produced 93,038 ounces of gold during the first quarter, a nearly 6 percent increase over the 87,800 oz recovered there during the first three months of 2016. The company attributes the 5,238-oz increase to higher grade ore being fed through the mill. The mill at Fort Knox processed 2.93 million metric tons of ore averaging 0.75 grams per metric ton gold during the first quarter, compared to 3.2 million metric tons averaging 0.66 g/t during the same period last year. Additionally, 3.9 million metric tons of ore averaging 0.23 g/t was processed on the heap leap pad, compared to 7.5 million metric tons averaging 0.26 g/t during the first three months of 2016. The per-ounce cost of Fort Knox gold sold during the quarter was US$617, compared with US$708 during the same period last year. Kinross said this 13 percent cost reduction is primarily due to lower labor and contractor costs, and more ore mined relative to operating waste.

Red Dog PILT agreement finalized

The Northwest Arctic Borough and Teck Alaska, operator of the Red Dog Mine, May 3 announced that they have finalized a new 10-year payment in lieu of taxes agreement. Under the terms of the agreement, Red Dog would flow roughly US$20 million to US$26 million into the borough each year under the new agreement. Roughly US$14 million to US$18 million of these funds would be paid directly to the Northwest Arctic Borough each year, a payment that would be calculated on a percentage of Red Dog's fixed asset value. The agreement also includes the establishment of a new village improvement fund. Administered by the borough, with input from the 11 villages it encompasses, this fund would be earmarked for community programs, services and infrastructure. "This agreement is a good outcome for the borough and its residents. It will create additional revenue for services, projects, and long-term sustainability," said Northwest Arctic Borough Mayo Clement Richards. "It's taken several years, but we're pleased to have reached an agreement that will go some lengths to helping meet the needs of our residents, which comes at a critical time when state community revenue sharing dollars are being phased out." With the new PILT agreement in place, Red Dog is exempt from a severance tax adopted by the Northwest Arctic Borough assembly in 2009 and updated in 2015. With the new agreement, Teck has agreed to discontinue the legal action it took in opposition to the severance tax. "This agreement will provide enhanced resources for the region while also supporting Red Dog's ability to continue generating good jobs and local economic opportunity," said Red Dog General Manager Henri Letient. "We're pleased with

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ALASKA STATE LIBRARY, HISTORICAL COLLECTIONS

Beginning production in 1892, the Apollo gold mine on Unga Island is the first commercial hardrock mine in Alaska. Today, Redstar Gold is seeking new deposits of high-grade gold near this historic operation.

EXPLORATION

Early start at Unga

Redstar targets extension of high-grade gold outlined at Shumagin zone

By SHANE LASLEY
Mining News

Following up on its success in 2016, Redstar Gold Corp. has gotten off to an early start on expanding the high-grade gold zones at its Unga project in Southwest Alaska.

The nearly 60,000-acre Unga property blankets two high-grade gold trends – Apollo-Sitka and Shumagin – that each cut roughly six miles across Unga Island.

Apollo-Sitka hosts Apollo, a historic mine that produced roughly 150,000 ounces of gold from 1892 to 1913. Shumagin, a parallel structural trend about 2,000 meters to the northwest, has been Redstar's primary focus of exploration and is the starting point of the 2017 program.

"Based on the results and success from 2016, Redstar increased the drilled strike length of the Shumagin gold zone from approximately 300 meters to approximately 950 meters, and is now well-financed, excited, prepared and focused to execute a multi-million-dollar expansive exploration program to highlight the potential of the multiple gold zones with the Unga gold project, commencing firstly with the Shumagin gold zone," Redstar President and CEO Peter Ball. said.

2016 success

The seven holes drilled during the fall 2016 program an Unga targeted the expansion of high-grade gold mineralization over a roughly 750-meter stretch of the Shumagin zone.

The first two holes, 16SH019 and 16SH020, tested the potential of expanding the high-grade zone deeper and to the southwest, both holes of which tapped the targeted structure.

16SH020, the most southwesterly hole drilled so far in the Shumagin zone, cut three gold intervals, including 0.9 meters of 14.95 grams per metric ton gold and 2.67 g/t silver.

The other five holes successfully tapped high-grade mineralization below weakly mineralized breccia exposed at Bunker Hill on the northeast end of the Shumagin zone. Highlights from the drilling in this area include 1.5 meters of 16.97 g/t gold in hole 16SH022; 0.3 meters of 34.5 g/t gold in 16SH023; and 0.9 meters of 11.65 g/t gold in 16SH024.

"Shumagin has once again delivered double digit gold grades consistently in almost every drill hole," Ball said.

Overall, this program extended the drilled section of the Shumagin zone to 950 meters and provided a launching point for the robust 2017 exploration program now underway.

Tracing Shumagin southwest

Redstar kicked off its 2017 program at Unga in early April with a surface geophysical program designed to refine targets southwest of the Shumagin zone for a 5,000-meter drill program slated to start later this month.

This program, which is now complete, included 15.73 line-kilometers (9.77 miles) of magnetic and 8.75 line-kilometers (5.44 miles) of induced polarization surveys across the Shumagin zone and 54.44 line-kilometers (33.83 miles) of magnetic survey at Orange Mountain, a large zone of alteration about 3,000 meters to the southwest along the longer Shumagin structural trend.

This work included surveying well-known geological features and high-grade gold mineralization already identified at the Shumagin zone, which will help identify other deeper, hidden targets towards Orange Mountain, which is believed to be the hydrothermal center that fed gold-bearing fluids to the Shumagin trend.

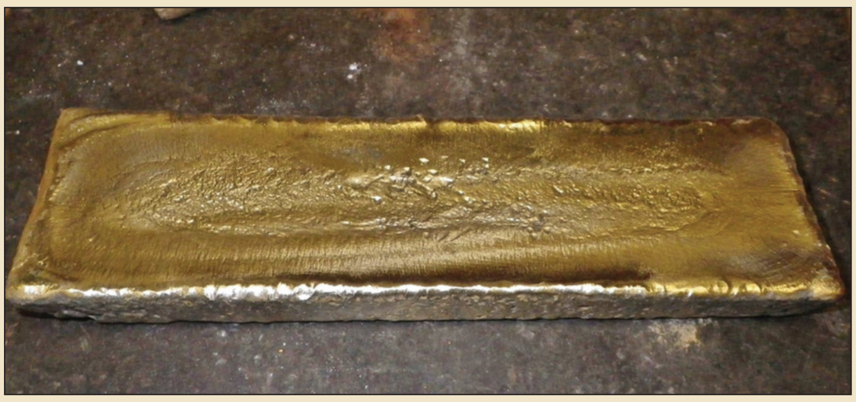
Using the data from the survey, the Redstar team will look for the best untested structures for drilling between Shumagin zone and Orange Mountain.

"Our technical team is now finalizing a drill targeting exercise, which we anticipate to complete in the next week, allowing drilling to commence in May," Ball said on April 27.

In addition to drilling, Redstar plans to complete metallurgical work on the high-grade gold and silver mineralization across the Shumagin zone and continued exploration of the Apollo-Sitka trend this year.

NORTHERN NEIGHBORS

Compiled by Shane Lasley



GOLDEN PREDATOR MINING CORP.

This bar contains 81.4 oz of gold recovered from processing 88 tons of bulk sample material from the Ace of Spades vein at the Golden Predator's 3 Aces project in eastern Yukon.

More drilling, added gold coming to 3 Aces

Golden Predator Mining Corp. May 3 said it is doubling the 2017 drill program at its 3 Aces gold project in southeast Yukon to 40,000 meters. Since the February start of the program, 6,900 meters of reverse circulation drilling has been completed at the Spades zone. This work has tested the depth and strike extensions of the high-grade gold found at the Ace of Spades vein, deeper stockwork mineralization found there, and initial targets at the Jack, Queen, Seven and Three of Spades targets. The company has also restarted the processing of the high-grade bulk sample material from the Ace of Spades following the refurbishment of the processing plant. In 2016, the company recovered 81.4 ounces of gold and 7.8 oz of silver from 88 short tons of this material. Daily head and tail assays collected from the plant since recommissioning indicate it is recovering more than 80 percent of the gold recovered by gravity with estimated throughput of 1.25 dry short tons per hour. Golden Predator said it has roughly another 670 short tons of Ace of Spades bulk sample material stockpiled that is slated to be processed within the next two months. The company plans to conduct additional bulk sampling under its existing permit in order to reconcile drill sample results to contained gold, and to establish the metallurgical characteristics of the various mineralized veins at 3 Aces.

TerraX expands new Yellowknife gold find

TerraX Minerals Inc. May 2 reported results from the first 22 holes of its 43-hole winter drill program at the Yellowknife City Gold Project. Six of the holes were drilled at Dave's Pond, a new discovery at the Northbelt property, a section of the expansive Yellowknife project that extends north from the Northwest Territories capital. TSO16-005, the discovery hole at Dave's Pond, cut 2.40 meters averaging 9.89 grams per metric ton gold. All six holes drilled at this target hit gold mineralization. Highlights include: 8.8 meters averaging 2.33 grams per metric ton gold in hole TSO17-015; 3.3 meters of 6.96 g/t gold in TSO17-016; 2.0 meters of 4.82 g/t gold in hole TSO17-017; and 1.9 meters of 13.96 g/t gold in hole TSO17-019. These holes have extended the Dave's Pond discovery to 400 meters along strike. "The high grade multi-gram gold intersections confirm the continuity of the Dave's Pond structure along strike," said TerraX CEO Joseph Campbell. "The consistency of the mineralization along strike and at depth leaves this area open for expansion when drilling at Dave's Pond resumes in July 2017. Dave's Pond will provide a high grade addition to the adjacent bulk tonnage Sam Otto Main Zone target, which is sub-parallel and 300 meters to the west of Dave's Pond." The remaining 16 holes for which assays have been received were drilled in portions of the Mispickel target covered by Walsh Lake and requiring winter

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Petroleum news

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SAFETY

MSHA concerned about lone miners

Five miners lost their lives while working alone at mines in the United States during the first quarter of 2017, prompting the U.S. Department of Labor's Mine Safety and Health Administration to launch a campaign to raise awareness of the dangers miners may face when working in isolation.

There were eight mining fatalities in the U.S. during the first three months of this year, five of which were miners who were working alone.

MSHA began to become concerned about these unaccompanied miners when two such workers died in underground operations over a 24-hour span at the end of January. Both were working alone in restricted areas of underground mines and were discovered missing when they were unaccounted for at the end of their shifts.

Three more such fatalities over the next two months raised this concern, prompting the federal safety administration to issue and re-iterate best practices for both mine operators and miners working alone.

Among the guidelines for operators, MSHA advises:

- Make an assessment to determine if the task can be safely completed by a miner working alone.
- Provide training to assure the miner can safely complete the task while alone.
- Provide the unaccompanied miner with limits to work that can be completed while alone.
- Know where the miner will be at all times.
- Establish and follow routine communication procedures.
- Account for miners working alone at intervals appropriate to the job assignment.
- Account for all miners at the end of each; assignment and shift.

For the unaccompanied miner:

- Determine if you have the skills to safely complete the task alone.
- Inform a responsible person where you will be working and traveling in the mine.
- Identify and correct hazards, if hazards can't be corrected, inform supervisor.
- Don't take shortcuts.
- Follow established communication procedures.
- Use established check-in/check-out procedures to assure you are accounted for.

"Mine operators should have procedures in place so they can account for the whereabouts of every miner at the beginning of the shift, while they are working and at the end of the shift," said Patricia Silvey, deputy assistant secretary for operations, MSHA.

"They should assess whether a particular task can be safely completed by a miner working alone, and always follow established communication practices."

The focus on miners working alone will include MSHA inspectors and training specialists engaging miners and mine operators in "walk and talks" during regular inspection visits. These talks will emphasize accounting for all workers at all times and provide operators with best practices for working alone.

—SHANE LASLEY

continued from page 7

NEWS NUGGETS

this outcome which was achieved through cooperation and constructive dialogue between Red Dog, the Northwest Arctic Borough and NANA." Red Dog was developed through an innovative operating agreement between Teck and NANA, an Alaska Native regional corporation owned by the Iñupiat people of northwest Alaska. NANA owns the land that holds the deposits at Red Dog and the mine's mill facilities, and receives 30 percent of the net proceeds from the operation.

Palmer road extension considered

Bureau of Land Management April 28 announced a 30-day public comment period on a request from Constantine Metal Resources Ltd. to extend the planned road at its Palmer project near Haines by 800 feet. Last year, Constantine gained approval to build 2.5 miles of new road that will provide access to the Glacier Creek deposit at Palmer. This authorization by BLM allows for up to 40 acres of ground disturbance to carry out exploration on their federal claims. The extension requested by Constantine would involve about 0.5 acres of disturbance, which would be within the 40 acres originally permitted. The extension would provide access to the Mental Health Trust lands the company leased from Alaska. While within the total area already authorized and bonded for disturbance, BLM is requiring further public, stakeholder, and agency review, including a National Environmental Policy Act analysis for the road extension. The public comment period on Constantine's proposed plan ends on May 28. The proposed road plan modification can be reviewed and commented on at https://eplanning.blm.gov/epl-front-office. Comments may also be submitted to the BLM Glennallen Field Office, Attn: Constantine, P.O. Box 147, Glennallen, AK 99588. ●

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Located 25 miles northeast of Fairbanks, Fort Knox is the largest gold producing mine in Alaska. During 2016, Fort Knox celebrated two milestone events, the seven-millionth-ounce of gold produced and the 20-year anniversary of commercial operations.

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NORTHERN NEIGHBORS

drilling. The goal of this reconnaissance drilling was to identify which structures, based on shearing, alteration and mineralization, have the potential to host high-grade gold similar to the Mispickel discovery. One holed drilled at Mispickel last year cut 8.0 meters of 60.6 g/t gold. TerraX said two of the four areas require follow-up. Two holes drilled in North Structure cut wide zones of anomalous gold and discrete areas of visible shearing, mineralization and alteration. TerraX believes these two holes indicate the potential for discovery of high grade shoots on the mineralized shear zones. Similar indicators were identified in a new structure 400 meters west of Mispickel. Of the 21 holes for which assay results are pending, 15 holes were drilled at the Sam Otto , Banting Lake and Jackson Lake areas of the Northbelt property and six holes were drilled to test the high-grade Con Shear and New Vein targets at Southbelt, the section of YCGP that extends south from Yellowknife.

AGNICO EAGLE MINES LTD.

Agnico Eagle is looking for enough ore at its Meadowbank Mine to feed the mill until mid-2019, when the company expects to begin processing ore from Amaruq, a satellite deposit about 30 miles away.

Agnico advances two new Nunavut mines

Agnico Eagle Mines Ltd. April 27 reported continued strong gold production from its Meadowbank Mine in Nunavut and good progress at Amaruq and Meliadine, two advanced gold projects in the territory. Meadowbank produced 85,370 ounces of gold during the first quarter, an 18 percent increase over the 72,311 oz recovered during the same period last year. While the gold production was up due to high-grade ore, Agnico Eagle CEO Sean Boyd said the amount of ore processed by the mill was less than expected due to challenging winter conditions at the mine. Meadowbank currently has enough reserves to last until about mid-2018. The company is currently studying areas to extend the mine-life into 2019, which is when the neighboring Amaruq project is expected to come online. Amaruq is to be developed as a satellite to Meadowbank, which lies about 50 kilometers (31 miles) to the southeast. Going into 2017, Amaruq hosted 16.9 million metric tons of open pit indicated mineral resource averaging 3.88 grams per metric ton (2.1 million ounces) gold; and 4.9 million metric tons of open pit inferred mineral resource averaging 4.81 g/t (763,000 oz) gold. Additionally, the property hosts 6.8 million metric tons of underground inferred mineral resource averaging 6.22 g/t (1.4 million oz) gold. The company anticipates it will have the permits for Amaruq by mid-2018 and production is currently forecast to begin in the second half of 2019. The initial plan calls for the production of roughly 2 million oz of gold between 2019 and 2024, with pre-mining activities starting in 2018 at the Whale Tail deposit. Amaruq is expected to average 396,000 oz of gold annually in years two through six. The Amaruq ore will be hauled to the Meadowbank mill, which is expected to operate at 9,000 metric tons per day. A road connecting Amaruq to Meadowbank is currently under construction and is expected to be completed by the end of this year. “We're currently about 40 kilometers or so along of the planned 64-kilometer road,” Boyd reported. Roughly US$78 million will be spent on capital costs at Amaruq in 2017, primarily on completion of the road, additional technical studies, and the procurement of materials and equipment for the 2018 construction season. Additionally, the company is planning to invest US$22 million this year on a 75,000-metre drill program at Amaruq. Roughly 17,900 meters has been drilled since this program began in April. Much of the drilling has targeted Whale Tail, the initial deposit to be developed at Amaruq. The highlight of this work came in hole AMQ17-1109, which cut 4.2 meters of 10.9 g/t gold from a depth of 139 meters. This intercept is just below the shallower part of the pit, suggesting a potential to increase the depth of the western part of the Whale Tail pit. To date, the Whale Tail deposit has been defined over at least 2,300 meters along strike and to a depth of 732 meters. The company is also drilling V Zone, a potential second source of ore at Amaruq.

At Meliadine, another Nunavut gold project about 25 kilometers (15 miles) from the town of Rankin Inlet, Agnico said it is on schedule to begin production in the second half of 2019. Meliadine is expected to produce roughly 5.3 million oz of gold over a 14-year span. This only represents about half of the reserves and resources identified there. In the first quarter of 2017, approximately 1,200 meters of underground development was completed, which is slightly ahead of schedule. Construction activities are progressing well with the commissioning of the concrete batch plant underway and the completion of full camp facilities expected by the end of May. “We're well positioned for a strong season of construction and development this year,” Boyd said.

Seabridge raises $22M to explore KSM, Iskut

Seabridge Gold Inc. April 28 announced the closing of a C$22 million flow-through financing. As a result, Seabridge issued 1.1 million flow-through shares at C$20 each, which is a 27.7 percent premium to the closing price on the day the offering was announced. Under Canada’s Income Tax Act, a flow-through financing allows mineral exploration companies to transfer their exploration expenses to individual investors that purchase the shares. Most exploration companies do not generate revenues, so they do not need the tax write off, however, the flow-through investor can apply his portion of the exploration expense to reduce or eliminate his tax liability. The exploration company must spend the flow-through dollars raised on a qualifying mineral project in Canada within two years of closing the financing. Seabridge is using the money raised with this financing to fund the 2017 exploration program at its KSM and Iskut projects in northwestern British Columbia. Seabridge Chairman and CEO Rudi Fronk noted that “This year’s exploration program includes drilling some of the most exciting targets in our history. We also aim to continue to improve the prospective economics of our KSM project.” Four of the zones at the KSM project – Kerr, Sulphurets, Mitchell and Iron Cap – contain 2.2 billion metric tons of proven and probable reserves averaging 0.55 grams per metric ton (38.8 million oz.) gold, 0.21 percent (10.2 billion pounds) copper, 2.6 g/t (183 million oz.) silver, and 42.6 parts per million (207 million lbs.) molybdenum. These reserves support a 53-year mine that would average 540,000 oz. of gold, 156 million lbs. of copper, 2.2 million oz. of silver, and 1.2 million lbs. of molybdenum annually, according to a prefeasibility study published in September. Iskut, about 30 kilometers (19 miles) northwest of KSM, is an earlier staged gold-silver project acquired by Seabridge in 2016. Seabridge closed a separate C$15.7 million financing in mid-April.

Goldcorp drills outlying gold targets at Coffee

Goldcorp Inc. April 26 reported preliminary results from the 2017 drill program at its Coffee gold project in the Yukon. Drilling began in March with two reverse circulation rigs at the Supremo T8-9 and Arabica targets. Supremo T8-9 is located about 200 meters east of the planned Supremo open-pit mine. Results from 17 holes were available by the end of the first quarter. Highlights from these holes include 10.66 meters of 1.88 grams per metric ton gold from a depth of 51.82 meters and 15.24 meters of 1.38 g/t gold from 59.44 meters. Results from Arabica, which is located about 1,500 meters east of the planned Supremo pit, are pending. Goldcorp acquired the Coffee property by buying out Kaminak Gold Corp. early in 2016. Prior to the acquisition, Kaminak published a feasibility study that details an open-pit, heap-leach gold operation at Coffee producing 184,000 ounces of gold annually over a 10-year mine life at all-in sustaining costs of US$550/oz. Goldcorp completed roughly US$15 million of exploration at Coffee in 2016 and plans to test a number of targets within a 10-kilometer radius of the planned mine with core drilling this summer. Goldcorp has also submitted the environmental socioeconomic assessment application for Coffee in the first quarter, kicking off the permitting process for developing a mine at the project. The company said First Nation and community consultation activities are progressing, along with the review and optimization of the feasibility study and planning for upgrades to site infrastructure. Goldcorp expects permitting and construction to take about four years, with commercial production targeted for 2021. ●

EXPLORATION & PRODUCTION

Off-road closure for Upper Foothills

The Upper Foothills is no longer open for off-road travel, effective immediately, the Alaska Department of Natural Resources' Division of Mining, Land and Water said in a May 3 release.

The division said snow pack deterioration in the area is widespread, with large swaths of vegetation visible. While snow quality can be good in localized areas and may support tundra travel, snow cover varies across the area, and with air temperatures continuing to warm and clear skies, the sun is further compromising the snow pack.

The closure was effective at 10 a.m. May 3, and the division said all off-road travel in progress must be completed within 72 hours.

The division said it would consider travel extensions on a case-by-case basis, but with exceptions requiring prior approval of an authorized representative of the division.

The western and eastern coastal areas are still open for off-road travel.

The division said summer off-road travel may begin July 15, but applies only to holders of valid permits with specific project approval. Such approval is limited to vehicles approved by the division for summer off-road travel.

—PETROLEUM NEWS

ENVIRONMENT & SAFETY

PHMSA OKs restart of Anna platform

The Pipeline and Hazardous Materials Safety Administration has approved Hilcorp Alaska's plan to restart oil production from the Anna platform in the Cook Inlet. In an April 27 letter to Hilcorp, Chris Hoidal, PHMSA'a western region director, said that his agency had reviewed a restart request from Hilcorp, together with supporting documentation, and had decided to approve Hilcorp's plan.

Hilcorp had shut down the platform following the appearance of some spilled oil on the sea surface after people on the platform had felt a jolt to the platform's structure. Initially the company suspected a leak in the subsea oil pipeline that runs between the Bruce and Anna platforms — the company shut in the Anna platform and the subsea pipeline, and displaced oil in the pipeline with seawater.

However, pressure testing of the line and a subsequent inspection of the pipeline by divers showed that the line was in fact intact. An investigation determined that the spilled oil had come from the Anna platform's fuel gas flare system during a repair to the system. Ice floating in Cook Inlet had hit the platform and caused the jolt, which had no connection with the oil spill.

Hilcorp has said that it has taken corrective measures to prevent another oil spill during operations on the flaring system.

—ALAN BAILEY

GOVERNMENT

Supreme Court declines polar bear case

The Supreme Court of the United States has declined to take up a court case in which a number of organizations have appealed against the U.S. Fish and Wildlife's designation of critical habitat for the polar bear. In a May 1 order the court denied a petition to hear the case, thus causing a Court of Appeals for the 9th Circuit opinion upholding the habitat designation to stand.

The federal District Court in Alaska rejected the critical habitat designation in a 2013 ruling.

Fish and Wildlife issued the polar bear critical habitat designation in November 2010, following the 2009 listing of the animals as threatened under the terms of the Endangered Species Act. The designation covered 187,157 square miles, including a vast offshore area; barrier islands and spits; and polar bear denning habitat along Alaska's northern coast.

Worried about the possible impact of the habitat designation on economic activity, organizations including the state of Alaska, the Alaska Oil and Gas Association, the American Petroleum Institute, Arctic Slope Regional Corp. and the Inupiat Community of the Arctic Slope appealed the designation in federal court.

The federal District Court in Alaska rejected the critical habitat designation in a 2013 ruling. But in February of this year the 9th Circuit reversed that decision, upholding Fish and Wildlife's broad view that critical habitat should include all territory containing critical habitat features, and not just land that the bears currently use. In June the 9th Circuit declined a request by the appellees to hold an en banc hearing in the case. The appellees subsequently requested the Supreme Court to pick up the case, a request that has now been denied.

—ALAN BAILEY

NATURAL GAS

RCA approves Furie gas supply for CEA

The Regulatory Commission of Alaska has approved Chugach Electric Association's new gas supply agreement with Furie Operating Alaska.

The agreement, which ends on March 31, 2033, entails an interruptible supply that goes into effect immediately and a firm supply of about 1.8 billion cubic feet per year starting on April 1, 2023. The firm supply guarantees a minimum daily rate of 5 million cubic feet of gas per day. Under the agreement, Chugach Electric has the option of increasing the firm supply by up to 1.8 billion cubic feet per year. And the utility can purchase additional firm deliveries of up to 2 million cubic feet per day, beginning in year seven of the contract.

The minimum price of gas under the interruptible supply would increase from $5.75 per thousand cubic feet in year one of the contract to $6.25 per mcf in 2033. The price of firm gas supplies would start at $7.16 per mcf in 2023, increasing to $7.98 in 2033.

The gas would presumably originate from Furie's Kitchen Lights gas field, offshore in Cook Inlet. The gas would be delivered from the gas field to the Kenai Beluga Pipeline on the Kenai Peninsula, or from gas that Furie holds in storage in the Cook Inlet Natural Gas Storage Alaska facility.

In approving the gas sales agreement, the commission said that the agreement is consistent with the commission's statutory obligation to recognize the benefit of a utility achieving a diversified portfolio of gas supplies with different pricing mechanisms from different suppliers. Currently Chugach Electric obtains most of its gas from Hilcorp Alaska. Moreover, the Furie agreement is consistent with a need to assure the public of a reliable service by the utility, the commission said.

"The Furie GSA has the effect of diversifying Chugach's gas supply while retaining flexibility as to gas volumes and pricing," the commission said.

—ALAN BAILEY

GOVERNMENT

No Senate Finance HB 111 CS yet

As Petroleum News closed out this issue the Alaska Senate Finance Committee had cancelled three meetings on House Bill 111, probably indicating that work was continuing on a committee substitute for the Senate Resources CS on which the committee has taken testimony since it was introduced April 24.

Senate Resources made substantial changes to the version of the bill, crafted by House Finance, which passed the House April 11. The House version of the bill made multiple changes in the state's oil and gas tax system, which is based on provisions in Senate Bill 21 which was passed in 2013. Members of the majority in the Senate have indicated that they are not interested in broad-based changes to the state's oil and gas tax system.

SB 21 fixed issues in the previous system, ACES — Alaska's Clear and Equitable Share — which were problematic at high oil prices, with the state taking such a large share of profits that companies pulled back on investments.

SB 21, however, proved problematic at low oil prices, with the state's share of profits falling off substantially. And credits built into the system to encourage investment in the state grew beyond what the state could afford at low oil prices.

Fixes to the credit issue began last year with HB 247, but legislators limited the focus of that bill to Cook Inlet, leaving the issue of North Slope credits unresolved.

Industry representatives told Senate Finance that the Senate Resources CS still represented a tax increase, and expressed concern that various aspects of the CS needed to be specified in statute, not left to be determined by regulations.

—KRISTEN NELSON

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TERMINAL PURCHASE

The state required the sale of Terminal 1 to preserve competition in the fuel market when Tesoro sought to purchase most of Flint Hill's fuel storage assets in Anchorage and Fairbanks.

Tesoro's acquisition of Flint Hills' wholesale marketing and logistics assets in Anchorage and Fairbanks was announced in November 2015. The transaction was expected to close within 60 days, subject to completion of transition, planning and requested consents and approvals.

A consent decree between the state and Tesoro last June allowed the company to go ahead with the purchase of the wholesale and logistics assets in Anchorage and Fairbanks, subject to the sale of one of its existing terminals in Anchorage. In addition to the 580,000-barrel capacity former Flint Hills Anchorage terminal it was acquiring, Tesoro also owned two storage facilities at the port, Terminal 1 with 220,000 barrels of capacity and Terminal 2 with some 660,000 barrels of capacity.

"This is an excellent opportunity for Petro Star, and gives customers in this area of the state another choice when it comes to purchasing quality fuel and receiving superior service," Rex A. Rock Sr., ASRC president and CEO, said in a May 2 statement.

Doug Chapados, president and CEO of Petro Star, said, "Petro Star has been looking for ways to expand into the largest fuel market in the state for quite some time. Until now, we did not have storage or fuel distribution facilities in Southcentral; Terminal 1 gives us both as well as access to the Port of Anchorage for receiving barge deliveries."

The state required Tesoro to divest some of its facilities in the June 2016 agreement which then-Attorney General Craig Richards reached with Tesoro. The consent decree followed a six-month investigation by the Alaska Department of Law, which determined that Tesoro's acquisition of Flint Hills' tank farm would limit the ability of competitors to import fuel through the port and impair competition in some fuel markets, including gasoline.

"Alaska has some of the highest fuel costs in the country. With the loss of Flint Hills, our goal in requiring the sale of Terminal 1 is to increase and encourage competition for the sale of fuel by bringing a new competitor into this market," Alaska Attorney General Jahna Lindemuth said in a statement. "We are happy to see that Petro Star, the only other commercial refiner in Alaska, will have an opportunity to expand into Southcentral Alaska and provide new competition for fuel."

—KRISTEN NELSON

Petroleum news

Oil Patch Bits

Afognak sets annual Youth Charity Golf Tournament

On June 29 Afognak Native Corp. will host its second annual Afognak Youth Charity Golf Tournament at the Anchorage Golf Course, located at 3651 O'Malley Road. Proceeds from the annual charity golf tournament allow the Native Village of Afognak and the Native Village of Port Lions Tribes to support youth development programs, such as the Dig Afognak camp, after-school and Alutiiq week cultural activities, Alutiiq language lessons, and culturally based preschool activities, all of which strengthen Ag'wanermiut "our community." This year Afognak is excited to announce that it will host a special celebrity guest at the charity golf tournament, Notah Begay III.

NOTAH BEGAY III

Notah Begay III, Golf Analyst for NBC Sports and the Golf Channel, is one of the only Native American golfers to play on the PGA Tour. A member of the Navajo Nation, he attended Stanford University, where he was a three-time All-American and teammate of Tiger Woods. He was a member of Stanford's 1994 NCAA Division I Men's Golf Championship team. After graduation, Begay turned professional in 1995. In 1998, Begay shot a 59 in the second round of the Nike Tour Dominion Open, to join the few to ever shoot a 59 in a professional tournament.

There is still opportunity for golfers and sponsors to participate in the 2017 Afognak Youth Charity Golf Tournament. Teams of four or individual ad-hoc players can register for the tournament. Interested golfers and sponsors should contact Ana Fisk at 907-244-4377 or afisk@alutiiq.com. Sponsorship and entry forms are available online at https://www.afognakgolf.com/.

Fluor awarded offshore compression platform FEED by BP

Fluor Corp. announced April 24 that it was selected by BP Trinidad and Tobago to perform the front-end engineering and design for the Cassia compression project off the east coast of Trinidad and Tobago. Fluor booked the undisclosed contract value into backlog in the first quarter of 2017.

Fluor's scope includes the design of a new offshore gas compression platform, new connecting bridge and modifications to the existing Cassia hub. The platform will compress gas produced from the existing Cassia platforms.

"Fluor has 50 years of experience developing some of the world's most complex offshore projects, including several BP facilities in Trinidad and Tobago," said Mark Fields, president of Fluor's energy and chemicals business in the Americas. "In addition, our Stork division currently provides maintenance, modification and asset integrity services to BP's offshore assets there. With a focus on maximizing local content, we will deliver a safe, reliable and capital efficient solution to BP."

"As the project advances, Fluor will use its integrated solution model to support the project," said John Harrower, executive director of offshore operations for Fluor. "Benefits of this model include an improved design through fabrication and maintenance team engagement in the design process, reduced costs through the global sourcing of major equipment and improved execution through Fluor and Stork's extensive in-country experience and use of local resources."

FEED activities are expected to be completed in 2017 with first gas expected in 2020.

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

● ALTERNATIVE ENERGY

Biomass energy helps rural communities

Federal-state-NGO group facilitates projects that provide clean, efficient heating using sustainable, often local timber resource

By ALAN BAILEY
Petroleum News

For the past couple of years a coalition of federal agencies, state agencies and non-profit organizations has been facilitating the development of biomass systems for the heating of buildings, especially in rural Alaska. The group, called the Alaska Wood Energy Development Task Group, obtains funding from the U.S. Forest Service and the state of Alaska and is linked to the Alaska Energy Authority's biomass program.

The group provides biomass outreach and education to Alaska's communities, as well as providing technical support to the communities, Cady Lister, AEA chief economist, told the AEA board on April 27.

High-efficiency furnace

A biomass system consists essentially of a high-efficiency wood furnace that heats water that can be fed into building heating systems. Dan Smith, AEA assistant biomass program manager, told the board that in a biomass furnace the wood is incinerated rapidly and at a high temperature: As a consequence of the complete burning of the fuel the furnace exhaust is largely free of particulate emissions and has somewhat similar particulate content to the exhaust from a natural gas furnace.

Feedstock for a biomass system can consist of split logs, wood pellets or wood chips.

Smith commented that the source of timber for a biomass system depends on the location of the community that is using the system. Often, based on forestry inventories developed by the Alaska Department of Natural Resource, a community can use a percentage timber harvest, typically within five miles of the community. One community is using wood recovered from the cutting of fire breaks in a forested region.

A biomass system provides renewable energy in the sense that it consumes timber which is actively growing but which would eventually decompose naturally if not harvested. And, although the up-front cost of a system can be high, the cost of the fuel remains within the community, while the use of the system also creates some local employment.

Identifying communities

Lister commented that a regional energy planning project that AEA had conducted last year had helped identify communities where biomass energy will work, with this community identification forming the first step in biomass implementation. Having conducted outreach to communities with biomass potential, the task group can conduct pre-feasibility studies for the communities, with AEA and Forestry Commission staff evaluating the engineering of prospective projects, analyzing project economics and preparing the beginnings of business plans.

Given the critical importance of village commitment to a project, the next step in an individual community is to wait for a community energy champion to emerge, to drive the project. Biomass projects require much hands-on work, with a need for involvement of many people in the community, Lister explained.

Once a community commits to a project, the next step is to establish funding sources and develop a business plan, and an operations and maintenance plan for the community. Funding for construction has become more challenging this year because of the demise of AEA's Renewable Energy Fund, Lister said.

Successful implementation

As an example of a successful biomass implementation, Lister cited a two-boiler, cord wood system that has been implemented in Thorne Bay school on Prince of Wales Island. The system has saved the school sufficient money to enable the school to build a greenhouse that uses biomass heating. That greenhouse provides fresh food for the school and for a local restaurant, while the splitting of logs for the system by parents and school students earns funds that support school activities such as sports team travel.

The Galena biomass development is another exciting project, Lister said. This has come on line recently, following development delays resulting from flooding in the village. The system involves a locally operated wood chip business, the only remote chip business of its type in the world. The chips feed a biomass boiler that has replaced a steam heating system that had reached the end of its useful life. The new system supplies heat to 14 buildings in the village and has displaced the annual consumption of 200,000 gallons of heating fuel. AEA provided a $3.2 million grant for the furnace system, with the additional loans funding the required support infrastructure.

Another successful project has involved the installation of a wood pellet boiler at Ketchikan Airport, where about 100 tons per year of locally produced wood pellets are replacing 20,000 gallons of heating fuel, Lister said. ●

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PENTEX SALE

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The planned sale comes as part of the Interior Energy Project, a project to provide a greatly expanded supply of affordable natural gas to the city of Fairbanks and its surrounds. Pentex, currently owned by AIDEA, owns utility Fairbanks Natural Gas, as well as a liquefied natural gas facility near Port MacKenzie on Cook Inlet and a trucking operation for shipping LNG to Fairbanks. The concept behind the sale of Pentex to IGU, the other Fairbanks gas utility, is to enable the establishment of IGU as a single, consolidated utility in Fairbanks, with IGU also owning and operating the Cook Inlet LNG plant and the LNG trucking operation.

Gene Therriault, IEP team leader, told the board that significant headway is being made in preparing the sale documentation but that the documentation would not be finalized by the end of April.

Closure of the Pentex sale depends also on the establishment of a new Cook Inlet gas supply at a workable price for boosting the LNG production for Fairbanks. So far a gas supply agreement, being negotiated by IGU, remains elusive. However, Pentex currently has a gas supply agreement with Hilcorp Alaska that provides gas for FNG's existing customers in Fairbanks. Given that the Hilcorp supply agreement terminates on March 31, 2018, the AIDEA resolution passed on April 27 also contained a provision approving a new agreement between Pentex and IGU. That agreement enables Pentex, rather than IGU, to negotiate for a new gas supply contract that would at least assure continuing supplies for those existing customers. The Pentex negotiations could start any time after May 1, although Pentex and AIDEA would also keep IGU fully informed about what is happening.

—ALAN BAILEY

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Enviros challenge Trump's OCS order

A group of environmental organizations have filed suit in the federal District Court in Alaska, suing President Donald Trump and two of his officials over the president's executive order cancelling President Barack Obama's withdrawal of certain areas of the outer continental shelf, including the Chukchi Sea and much of the Beaufort Sea, from future oil and gas leasing. The organizations claim that the Outer Continental Shelf Lands Act does not grant the president the authority to revoke the withdrawals and that Trump's order exceeds the president's constitutional and statutory authority.

As part of their suit, the organizations have sued Secretary of the Interior Ryan Zinke and Secretary of Commerce Wilbur Ross. Zinke and Ross have authority over the implementation of the various federal statutes that relate to Trump's order, including OCSLA, the Marine Mammal Protection Act and the Endangered Species Act.

OCSLA does not authorize the president to re-open withdrawn areas and there is no other source of authority that permits the president to reverse or undo a land withdrawal conducted under OCSLA, the organizations have told the court. Consequently, the president's action has exceeded his authority and is in violation of the doctrine of separation of powers, the organizations wrote.

—ALAN BAILEY

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ARCTIC OCS

Reconsider regulations

The order requires a reconsideration by the Bureau of Safety and Environmental Enforcement of regulations introduced by the Obama administration for offshore oil drilling safety, including the Arctic drilling rule. Other regulations to be reconsidered include a proposed offshore air quality rule and a tightening in 2016 of the regulations relating to offshore facility decommissioning liabilities. The president also wants expedited consideration of applications for the authorization of incidental harassment to marine mammals during offshore operations, and a review of NOAA's guidance for assessing the impacts of anthropogenic sound on marine mammals.

The order also addresses the designation of marine sanctuaries that might prevent offshore resource development. Trump requires the secretary of commerce to account for energy resources, including fossil fuel and renewable energy, within any area earmarked for sanctuary establishment or expansion, prior to taking action over a sanctuary designation. The president also requires a review of existing marine sanctuaries designated in the past 10 years, to take into account the opportunity cost of not developing any energy or mineral resources that lie inside the sanctuaries.

"The energy and minerals produced from lands and waters under federal management are important to a vibrant economy and to our national security," Trump wrote in his order. "Increased domestic energy production on federal lands and waters strengthens the nation's security and reduces reliance on imported energy."

The Alaska congressional delegation lavished praise on Trump's order.

"After the last administration spent eight years systematically closing off access to the Arctic, this executive order puts us back on track to explore and ultimately produce the prolific resources in that region. Alaskans broadly support offshore development in the Arctic," said Sen. Lisa Murkowski. "And I strongly believe that over time, today's order will provide substantial benefits by putting our state on a better path to create jobs, generate new revenues, refill the trans-Alaska pipeline system, and strengthen our leadership in the Arctic."

Land withdrawals

When making his withdrawals of lands within the Beaufort Sea and Chukchi Sea from future oil and gas leasing, President Obama did not withdraw a 2.8 million acre strip of territory in the Beaufort Sea, immediately north of the Beaufort Sea coast. That territory, which is prospective for oil and gas and in some areas relatively close to the existing North Slope oil infrastructure, includes the Liberty oil field that Hilcorp Alaska proposes to develop, and leases into which Eni US Operating Co. plans to drill, immediately north of the Nikaitchuq field.

For the land withdrawals, Obama relied on section 12(a) of the Outer Continental Shelf Lands Act, which states "the president of the United States may, from time to time, withdraw from disposition any of the unleased lands of the outer continental shelf." The act is silent regarding the circumstances under which a land withdrawal of this type may be reversed, neither stating that a withdrawal is permanent nor indicating that a reversal is possible.

Obama's December 2016 order setting up a Northern Bering Sea Climate Resilience Area, covering about 112,300 square miles of ocean in the northern Bering Sea, established the involvement of local communities in the planning of shipping routes, fishing restrictions and oil spill contingency planning in the region. The locals are particularly concerned about the potential impacts of oil spills on subsistence harvesting, as vessel traffic in the region increases. Obama's order involved the withdrawal of land from oil and gas leasing in the more northerly part of the resilience area, in BOEM's Norton basin planning area and part of the Matthew-Hall planning area.

Lease sale plan

Any revisions to BOEM's five year lease sale plan for the Alaska outer continental shelf will presumably require the agency to invoke its formal procedure for plan development, including the development of a new environmental impact statement for the revised plan. Similarly, changes to offshore drilling rules by the

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ARCTIC OCS

Bureau of Safety and Environmental Enforcement would require the agency to activate its formal rule making procedures, under the terms of the Administrative Procedures Act.

BSEE introduced new, more stringent offshore drilling safety regulations, including the Arctic drilling rule, in response to the Deepwater Horizon disaster in the Gulf of Mexico. While environmentalists have lauded the tightened regulations, there has been push back from the oil industry and the pro-resource development lobby on whether the regulations present too much of an impediment to offshore industrial activity. One bone of contention, for example, is the requirement, in the event of a well blowout, to be able to drill a relief well within the same open water drilling season as the drilling of the problem well, and to have a back-up drilling rig available for the relief well drilling. While this requirement adds significant cost to offshore exploratory drilling, some in industry have argued that modern well capping technology reduces the urgency of relief well drilling.

Permitting frustration

There has been frustration in the oil industry and among Alaska lawmakers around the often lengthy process for preparing federal permits for oil and gas activities. The incidental harassment authorizations that Trump wants expedited relate to the protection of marine mammals such as seals and whales under the terms of the Marine Mammal Protection Act.

Both the Beaufort Sea and the Chukchi Sea have significant oil and gas potential, with the Chukchi Sea thought likely to be a world-class oil and gas province. However, exploration and development in these remote regions would be very challenging from an economic perspective at today's oil prices.

On May 1 Secretary of the Interior Ryan Zinke followed up on Trump's executive order by signing a secretarial order directing the BOEM to develop a new OCS five-year lease sale plan.

"We will conduct a thorough review of the outer continental shelf for oil and gas exploration and listen to state and local stakeholders," Zinke said. "We also will conduct a thorough review of regulations that were created with good intentions but have had harmful impacts on America's energy security." ●

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AURORA SALE

vehicle to pursue small natural gas fields in Cook Inlet overlooked by larger companies.

Aurora eventually developed five fields — Nicolai Creek, Lone Creek, Moquawkie, Kaloa and Three Mile Creek. The company also drilled 17 wells, re-entered four existing wells and worked over another 10 wells. Today, the company operates 19 wells, including 10 producing wells. The company also owns three miles of flowlines and 21 miles of gathering lines. The company has produced 29 billion cubic feet since 2001.

In early 2002, after bringing the Nicolai Creek unit into production, the owners of Aurora sought out a partner to help fund a range of development work throughout the west side of Cook Inlet, and eventually signed a deal with the Tulsa-based Kaiser-Francis Oil Co.

Kaiser-Francis agreed to invest $25 million for acquisitions, drilling, workover and other investments. Between 2003 and 2005, Aurora produced more than 4 billion cubic feet gas per year, with production peaking in November 2003 at 20 million cubic feet per day.

"After 2005, the lower-risk, high volume opportunities based on existing data were exhausted," leading to less productive opportunities, according to the amended plan.

As a result, in 2007, Kaiser-Francis began to market its stake in the company. But several negotiations fell through over the following few years. Aurora sold the deep rights on certain leases to Apache Alaska Corp. in 2012, but Apache never developed the leases.

A pair of unsuccessful development wells in 2013 prompted Kaiser-Francis to stop investing any significant capital into Aurora and to try once to sell its share of the company. In early August 2015, Rieck Oil Inc. acquired Aurora Gas LLC outright.

Two projects

In its amended plan, Aurora blamed its financial troubles on two recent projects.

The first involved disposing of cuttings from the two 2013 wells. According to Aurora, Kaiser-Francis was responsible for these costs, under the terms of the sales agreement.

A delay in the project nearly tripled its estimated $300,000 price to $870,350.19, although subsequent deals over the course of the closing and bankruptcy proceedings have reduced the total amount to $415,000. According to Aurora, Kaiser-Francis is withholding payment until a related matter with Cook Inlet Region Inc. is resolved.

The second project involved working over the Kaloa No. 2 well. Aurora began the $1.065 million project shortly after Rieck Oil acquired the company in mid-2015. A group of creditors filed an involuntary bankruptcy petition against Aurora in early May 2016.

According to Aurora, both projects should have been eligible for state tax credits totaling some 40 percent of the amount of the outstanding invoices. The company applied for the credits in April 2016. "However, the State subsequently asked for proof of payment of some of these costs, which Aurora was unable to provide. Thus, Aurora withdrew the application before it was rejected on the grounds of non-payment, with the plan to resubmit it when a payment plan was in place," the company wrote in its plan. "Tax credits which are owed by the State of Alaska were not paid in 2016 and their timely payment in the future is doubtful due to state budget issues and political complications."

Since filing for bankruptcy protection, Aurora has been operating at a loss. In addition to its financial problems, Auroras has been encountering various technical problems at its properties over the past six months, leading to declines in production. To meet its contractual obligations, the company bought gas from Furie Operating Alaska LLC.

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CONOCO PRODUCTION

Kenai LNG plant in Nikiski and to build an LNG project from the North Slope.

Reiterating previous statements from ConocoPhillips, Hirschberg said that the Kenai LNG facility "might have more value to others," adding that potential buyers had already expressed interest. Describing the shortcomings of the facility, he said that the facility had "started up in the late 1960s" and that "the area has sort of run out of gas to feed it."

Although the Cook Inlet natural gas market faced supply shortages as recently as 2009, the arrival of many new players since that time has changed market dynamics. Hilcorp Alaska LLC is currently supplying most utility demand in the region, and several smaller independents have publicly blamed those contracts for slowing regional exploration.

The Kenai LNG plant is also thought to require considerable upgrades to crucial components in order to remain a reliable system for the long term. And, although the plant was pioneering when it was commissioned, it is now much smaller than rival plants.

In the past year, ConocoPhillips sold its major Cook Inlet properties — the North Cook Inlet unit that traditionally supplied the Kenai LNG plant and the Beluga River unit.

On the Alaska LNG project, Hirschberg reiterated support for current plans.

Production, prices up

The recent production bump from the CD-5 pad at the Colville River unit and the Drill Site 2S project at the Kuparuk River unit continue to reap benefits for ConocoPhillips.

The company produced 191,000 barrels of oil equivalent per day in Alaska during the first quarter of this year, equal to overall production rates from the first quarter of 2016 and up from 187,000 barrels of oil equivalent per day during the fourth quarter of 2016.

Given the sale of its natural gas properties, the combined figures obscure a noteworthy increase in oil production. ConocoPhillips produced 175,000 barrels of oil per day in Alaska during the first three months of this year, up from 170,000 barrels per day during both the first quarter (year over year) and fourth quarter (quarter over quarter) of 2016.

By comparison, the company produced 176,000 barrels of oil per day from its Lower 48 properties during the first quarter of the year. During the first quarter of 2016, the company produced 32,000 barrels per day more in the Lower 48 and it did in Alaska.

The company also produced 15,000 barrels of natural gas liquids per day, up from 14,000 barrels per day in the first quarter of 2016 and equal to the fourth quarter of 2016.

ConocoPhillips produced just 7 million cubic feet of natural gas per day in Alaska during the first quarter of the year, down from 38 million cubic feet per day in the first quarter of last year and down from 16 million cubic feet per day in the fourth quarter of last year.

In the first quarter, Alaska accounted for nearly 12 percent of total company production, 29 percent of total oil production and less than 1 percent of total gas production.

Although still low by historic standards, oil prices are also improving for ConocoPhillips.

The company reported an average sales price of $52.09 per barrel from its Alaska operations during the first quarter, up from $32.54 per barrel in the first quarter of 2016.

The Alaska prices, which includes natural gas liquids, is higher than the average price the company realized for Lower 48 and Canadian crude oil, but lower than the average price from its European and North African, and its Asia Pacific and Middle East segments.

ConocoPhillips also reported an average Alaska natural gas price of $3.53 per thousand cubic feet, down from $4.84 per thousand cubic feet during the first quarter of 2016.

Deferred taxes

ConocoPhillips reported $6 million in earnings before income taxes from its Alaska operations during the quarter, which translated to a loss of $11 million after income taxes.

But the company also reported an impairment of $174 million and a $64 million deferred tax adjustment, which together combined for a $110 million adjustment in the quarter.

The company reported an effective income tax rate of 295.2 percent for its Alaska operations during the quarter, down to 111.9 percent including taxes other than income taxes, likely the result of the deferred adjustment. The company reported an adjusted effective income tax rate of 44.9 percent for its Alaska operation, which was lower than the rates for Canada (50.9 percent) and Europe and North Africa (67.8 percent) but higher than the Lower 48 (36.1 percent) and Asia Pacific and Middle East (36.6 percent).

ConocoPhillips reported $228 million in capital expenditures and investments in Alaska during the quarter, down from $320 million spent in the first quarter of last year. The spending would have been higher this year if the company had not deferred plans to drill the proposed Putu No. 1 exploration well, which is now pending a regulatory decision.

The capital spending in Alaska during the first quarter was higher than any other segment except for the Lower 48, where the company spent $325 million during the quarter.

The company also reported $234 million in depreciation, depletion and amortization expenses during the quarter, up from $207 million in the first quarter of last year. ●

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AURORA SALE

As of late April 2017, Aurora was producing between 1 million and 1.5 million cubic feet per day, which was enough to meet a 1 million cubic feet per day commitment to Tesoro.

In the most recent internal estimates, from February 2017, Aurora had 3.2 billion cubic feet in gross reserves, which could result in an additional 500,000 to 1 million cubic feet per day increase in production, pending some $850,000 in various maintenance work.

In addition to its producing properties, Aurora leases a small amount of acreage throughout the Cook Inlet region. The recent financial difficulties prevented the company from making its annual payments on the leases. The status of these leases is unresolved.

Aurora also owns 439 miles of 2-D seismic data over its acreage and other acreage nearby and 24 square miles of 3-D seismic data over Nicolai Creek and Moquawkie. The company also owns licenses to more than 3,100 miles of 2-D seismic data in the region. ●

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