



page 4 Q&A: Johnson for credit changes, cautious on further tax changes

This week's Mining News



NEWS NUGGETS
Compiled by Shane Lacey

Orca buys Ucore's REE plant
Ucore Resources Inc. July 31 announced that it has entered into an agreement to sell Super Ig-Orca to Orca Holdings LLC and then lease back the rare earth separation plant from Orca, a Ketchikan, Alaska-based enterprise. Under the terms of the agreement, Orca will pay Ucore \$25 million for Super Ig-Orca and then lease the plant back to Ucore over a 3-year term at an annual lease rate of 15 percent. At the option of either party, the lease may be terminated upon the payment by Ucore of the purchase price at any time after the first year of the term. Ucore will set which designed Super Ig-Orca, for the balance outstanding under a joint venture agreement to pursue rare earth separation, tailings processing and catalytic converter recycling applications. "This is a non-additive financing arrangement which leverages a significant asset for forward development," said Ucore President and CEO Jim McKenzie. "The plant has an innovative modular design which can be modified for multiple purposes, whether at an existing location in Utah or at an expandable footprint for rare earth output in Alaska or elsewhere. We look forward to making this remarkable development platform." Prior to the agreement, Orca owned 34.5 million Ucore shares, or about 12.8 percent of the company.

Great start at Palmer
First holes show westward expansion of resource; tap 10 oz/t at Nunatak

By SHANE LACEY
Mining News

From wide zones of high-grade copper and zinc, a resource expansion drilling to a discovery hole with grades worthy of being compared to Greens Creek, Constatine Metals Resource and Downs Metals & Mining's 2017 drill program at the Palmer volcanogenic massive sulfide project in Southeast Alaska is off to a great start.

After investing US\$22 million into Palmer over the previous four years, Downs Metals & Mining Alaska Ltd. carried a 49 percent joint venture interest in the project in January.

The newly formed Palmer JV decided to expand on the scope of this year's drill program to include discovery drilling at some of the high-grade volcanic massive sulfide prospects identified across the wider Palmer property to the ongoing resource expansion drilling at South Walk-RW, a VMS deposit rich in copper and zinc.

"2017 marks an exciting new chapter for the Palmer project and our shareholders as we commence a major drill program to test some of the many high-quality prospects at Palmer," said Constatine President and CEO Garfield McVeigh. "With the four holes of this program coming long sections of high-grade copper, zinc and silver, this hole at the Palmer story is off to a great start."

High showing about 425 meters southeast of hole 17-29 is a prospect associated with Nunatak that will likely see further exploration this year. Samples collected at the hole returned up to 20 percent zinc, 10.4 percent lead, 5.1 g/t silver and 0.73 g/t gold.

Cap-MS, another silver-rich massive sulfide target area about 1,000 meters northwest of Nunatak is also slated for drilling this year. Two holes (Previous drilled at Cap-MS 23.2 meters of 134 g/t silver and 90.6 meters of 31 g/t silver).

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Teck adjusts to Qanaiyiq ore
Teck Resources Ltd. April 25 reported the Red Dog Mine in Northwest Alaska produced 127,800 metric tons of zinc during the first quarter, a sixteen percent drop compared to the same period last year. The company attributed this drop to challenges of processing the higher grade but more complex ore from Qanaiyiq, the new pit at Red Dog. During the first quarter, ore from Qanaiyiq pit was introduced to the mill performance was adversely affected by these metallurgically complex ores, particularly the highly oxidized material from the surface. During the second quarter, Teck lowered the amount of Qanaiyiq ore processed, which resulted during the first quarter. Qanaiyiq ore is expected to become less oxidized as the pit is deepened, and Teck expects to make more of this higher grade material in the lead as it gains more experience with this ore. While zinc production in the second quarter had production increased 17 percent compared to last year primarily due to higher grades, Teck anticipates producing 475,000 to 500,000 metric tons of zinc and 110,000 to 115,000 metric tons of lead at Red Dog in 2017.

Drill program at Palmer project in Southeast Alaska is off to a great start. Read more in North of 60 Mining News, page 7.

Malamute files contingency plan for Umiat; no immediate drilling

Malamute Energy Inc. the new operator of the Umiat oil field, adjacent to the Colville River on the eastern side of the National Petroleum Reserve-Alaska, has filed a revised oil spill contingency plan for the potential field development. The plan envisages the possibility of drilling up to nine new wells in the field, but Malamute says that drilling would not start before the end of 2018, at the earliest.

Malamute acquired leases for the field early this year as part of the fallout from the bankruptcy of Linc Energy, a subsidiary of which previously operated the field. The revised contingency plan appears to involve relatively minor modifications to Linc's plan. Malamute will require approval from the Alaska Department of Environmental Conservation for the

see **UMIAT PLAN** page 15

Revenue Commissioner Hoffbeck resigns

Revenue Commissioner Randy Hoffbeck has resigned, effective Aug. 17. In a July 31 letter of resignation to Gov. Bill Walker Hoffbeck said "I feel that it is time for me to complete the call to ministry God has placed on my heart."

In announcing the resignation Walker noted that Hoffbeck had retired from government service to enter the ministry and was volunteering for a medical ministry to Kenya when Walker asked him to join the administration.

Deputy Commissioner Jerry Burnett will serve as interim



RANDY HOFFBECK

see **HOFFBECK** page 14

FINANCE & ECONOMY

Conoco earnings rise

Production increases, higher prices and lower tax rate yield rise in profits

By ERIC LIDJI

For Petroleum News

ConocoPhillips Co. reported adjusted earnings of \$167 million from its Alaska operations in the second quarter, triple its earnings from a year ago on higher production and prices.

The largest independent exploration and production company in the world is expecting even greater production increases in the near future. The company has completed facilities at the 1H NEWS development at the Kuparuk River unit and expects to bring the project online as scheduled by the end of this year. The company has also completed "key infrastructure components" at the GMT-1 development at the federal Greater Mooses

The Alaska capital-spending program accounted for 22.4 percent of the \$1.02 billion spent across all segments in the second quarter this year, up from 16.1 percent of \$1.13 billion spent companywide in the second quarter of last year.

Tooth unit and expects the project to come online as schedule in late 2018.

The company credited "increased efficiency" at the two projects with contributing to a decline in capital spending relative to operating cash flow

see **CONOCO EARNINGS** page 16

EXPLORATION & PRODUCTION

Cosmo drilling to stop

BlueCrest says state has failed to pay tax credits that are owed to the company

By ALAN BAILEY

Petroleum News

BlueCrest Energy is curtailing its development drilling program in the Cosmopolitan oil field off the southern Kenai Peninsula, Benjamin Johnson, BlueCrest president and CEO, told Petroleum News Aug. 1. The drilling suspension results from the state withholding \$75 million to \$100 million in cashable tax credit payments owed to the company, Johnson said. The halt to the drilling will likely go into effect around Sept. 1.

"We're going to finish drilling what we're doing right now. It's not an immediate shutdown,"



BENJAMIN JOHNSON

JUDY PATRICK

Johnson said, adding that oil production from the field will continue using wells that have been completed thus far.

A number of oil companies operating in Alaska have earned cashable tax credits from the state for exploration and development work. However, because of the state's fiscal crisis resulting from low oil prices, Gov. Bill Walker has vetoed tax credit payments beyond minimum payments mandated

by the tax credit laws.

Alternative funding?

Johnson said that his company hopes to find an

see **BLUECREST DRILLING** page 15

GOVERNMENT

WOTUS redefinition out

Proposal follows Trump's order to review Obama admin regulations for US waters

By ALAN BAILEY

Petroleum News

On July 27 the Environmental Protection Agency filed a notice in the Federal Register stating the agency's intent to roll back the definition of the waters of the United States, or WOTUS, to the definition that predated a version introduced by the Obama administration in 2015. The notice, which triggers a public comment period for the change, comes as a first step in meeting the requirements of an order issued by President Trump in February of this year, the agency says.

The presidential order required a review of the regulations introduced in 2015, "showing due regard for the roles of Congress and the states under the constitution," and particularly consider-

The WOTUS definition is of critical importance in the permitting of projects that impact wetlands and waterways, because the definition determines which projects become subject to federal jurisdiction and federal permitting.

ing the opinion of Supreme Court Justice Scalia in a 2006 court case involving the interpretation of WOTUS rules.

Critically important

The WOTUS definition is of critical importance in the permitting of projects that impact wetlands

see **WOTUS REDEFINITION** page 15

● GOVERNMENT

DOT begins EIS on CAFE standards

Starts process of reviewing federal fuel efficiency standards for passenger cars and light trucks following March order by Trump

By **ALAN BAILEY**
Petroleum News

Following an order in March by President Trump to review future standards for road vehicle fuel efficiency, on July 26 the U.S. Department of Transportation announced a proposal to prepare an environmental impact statement for the preparation of standards for new passenger cars and light trucks for model years 2022 to 2025.

The proposal comes as part of a statutory requirement that the secretary of transportation must implement a regulatory program for motor vehicle fuel economy. The mandate was originally designed to help reduce U.S. dependence on foreign oil but has subsequently become part of U.S. efforts to minimize carbon dioxide emissions from the use of fossil fuels.

Under the statutes, DOT has to prescribe standards, commonly known as corporate average fuel economy, or

CAFE standards, at least 18 months prior to the first model year to which the standards apply. The standards must maximize fuel economy within the limits of what is technically feasible.

The 2012 rule

In April 2012, under the Obama administration, DOT

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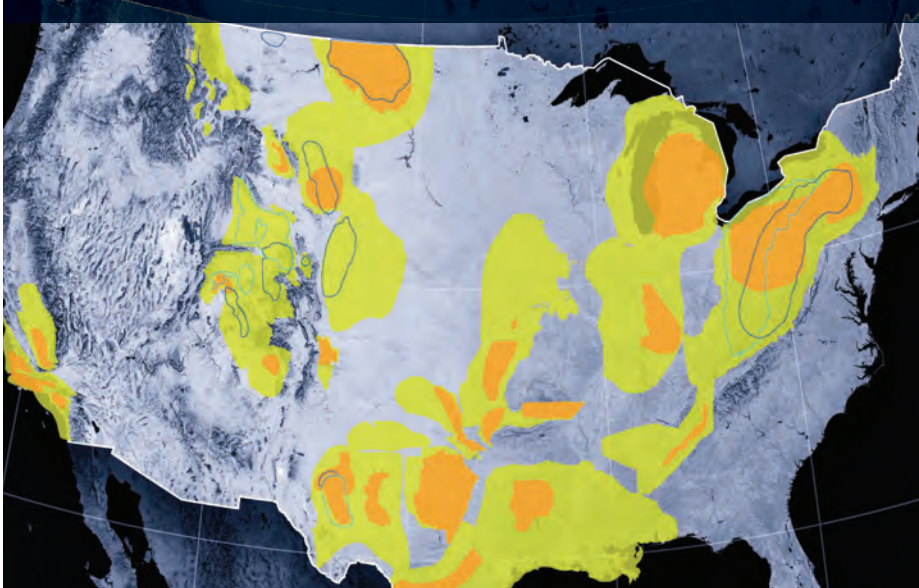
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11 Court remands renewable fuel standard

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GOVERNMENT

Johnson: Credit system changes warranted

Freshman says she's enjoying House Resources, cautions pending advisory group against making changes just because of group's formation

By STEVE QUINN

For Petroleum News

House Rep. DeLena Johnson had her sights set on a seat on the House Resources Committee since the Palmer Republican got elected. Having served two terms as the Palmer mayor, Johnson says she wanted the challenge of being immersed in resource development discussions. She got exactly that. Not long after lawmakers gavelled in, the House Resources Committee introduced House Bill 111, which ultimately ended exploration credits, allowing companies to carry forward the expenses against their taxes upon the beginning of production. Johnson shared thoughts on her first year in office with Petroleum News.

Petroleum News: I realize it comes down to a caucus vote, but what drove your interest in starting your first term on the Resources Committee?

Johnson: I'm a near lifelong Alaskan and we are a resources state. We talk

about revenue and increasing revenue, so to me, we have to increase our production of the variety of resources that we have. To me, looking at the budget and looking at Alaska, Resources was the obvious place for trying to make sure we do something where we can make a difference.

Petroleum News: It's considered to be one of the tougher assignments, certainly for freshmen but sometimes even for those who have served several years because of the heavy lifting that comes with that committee. Were there any surprises or maybe it was that difficult?

Johnson: I don't think there were any immediate surprises because being in the minority I knew the committee would be focused on raising oil taxes. I don't think there is any secret to it.



REP. DELENA JOHNSON

I think I was a little surprised that we were starting off with topics like invasive species and the wolf buffer. I didn't see those coming. I did see what ended up being HB 111 coming. I knew that some version of that would be brought forward. We fought all the way through that to keep the tax burden minimized as much as possible in the minority.

Petroleum News: What about the volume? It piles up pretty quickly in Resources. The size of the binders you folks bring to the committee are pretty daunting, if also heavy.

Johnson: It does pile up. I have a great staff (Linda Hay) and that makes a big difference.

Linda has been involved in many aspects of resources. She's been a committee aide for years. I was blessed to have her on a team. That helped with the volume of work. I don't think you can overwhelm someone too much if they know what they are doing, so that was a tremendous help. I think it also helps being an elected official before because there is a tremendous amount of paper coming through. The truth is there was a lot to learn for me, the verbiage, the language and all of those things very specific to that very committee. It was a big learning curve. I felt like I had a lot of background in many ways, but there was a lot more to add.

So I'm pretty appreciative of getting to jump right into things. I think our voice in that committee made a difference in the final outcome of the oil tax bill this year. I finally voted for HB 111. From the first thing put in front of me — the first version of that — there was no way that I ever anticipated being a yes vote on that. The process served that bill pretty well. I don't love it. I don't think anyone does. It was the process and I ended up voting for it.

Petroleum News: So what drove your vote on HB 111? Was it the compromise, the end product? Or was it the case of the cash credits dragging down the state?

Johnson: When I talked to people in my district, one of the things they generally agreed upon was we had to deal with the cash credits in the middle of our budget issues. We had to address that because it was getting too high. That's one of the things that drove my interest in Resources,

too. We also had a lot of these small companies in my district, these small service companies. I didn't want to see them hurt either. That was foremost on my mind. My thought was, and I think other people too, was we were going to address some of the payoffs of those credits. It saddens me that we are only paying the minimum on that. Addressing the cashable credits is what really drove my vote on HB 111 and my interest in staying with it until the end.

Petroleum News: Obviously many are not pleased that a large amount of payment on the credits applied for still remains unpaid. Does that concern you even as that debt will not grow?

Johnson: You bet it concerns me. There are people out there who put money into developing a field based on the good faith and the word of our Legislature in Alaska. It's our full faith that they operated under. It concerns me very much that even though we had a minimum in the agreement, I don't believe that's the understanding they went in with, so I certainly have concerns. You make those kind of promises, well a promise made is a debt unpaid. This is a debt that Alaska needs to pay. I believe it's hurting our credit rating. We need to pay more than the minimum.

Petroleum News: During the conference committee, Rep. Pruitt tried to add \$20 million to the credit pay down. Even at \$20 million when nearly \$1 billion will be owed by next year, is that important?

Johnson: I was pleased that he did that. The minimum sends a message. We are not really interested in getting this off the books. We aren't really interested in getting those people paid off. I was pleased that he brought that up in the conference committee. I was disappointed that it didn't go anywhere. I was pleased that he put it out there to be recognized. We can't quit recognizing that it is having an effect on our small businesses throughout the state. As we stop talking about that, then it becomes another thing that maybe we pay or maybe we don't pay. Well we don't want that to happen because those are people inside Alaska that it's happening to.

Petroleum News: The object of credits see JOHNSON Q&A page 13

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Alaska - Mackenzie Rig Report

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

Alaska Rig Status

North Slope - Onshore

Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Kuparuk 2G-15	ConocoPhillips
Dreco 1000 UE	16 (SCR/TD)	Standby	
Dreco D2000 Uebd	19 (SCR/TD)	Alpine CD5-316	ConocoPhillips
AC Mobile	25	Standby	
OIME 2000	141 (SCR/TD)	Kuparuk, Stack Out	ConocoPhillips
	142 (SCR/TD)	Kuparuk Summer Maintenance	ConocoPhillips
TSM 7000	Arctic Fox #1	Stacked	

Hilcorp Alaska LLC			
	Rig No.1	Milne Point	Hilcorp Alaska LLC

Nabors Alaska Drilling			
AC Coil Hybrid	CDR-2 (CTD)	Deadhorse	BP
AC Coil	CDR-3 (CTD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Deadhorse	Available
Mid-Continental U36A	3-S	Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Deadhorse	Available
Dreco 1000 UE	7-ES (SCR/TD)	Deadhorse	Available
Dreco 1000 UE	9-ES (SCR/TD)	Deadhorse	Available
Oilwell 2000 Hercules	14-E (SCR)	Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location	Available
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Deadhorse	Available
Oilwell 2000	33-E	Deadhorse	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Deadhorse	Available
OIME 2000	245-E (SCR-ACTD)	Kuparuk	Available
Academy AC electric CANRIG	105AC (AC-TD)	Deadhorse	Available
Academy AC electric Heli-Rig	106AC (AC-TD)	Deadhorse	Available

Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)		Available
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay	Available
Ideco 900	3 (SCR/TD)		Available

Parker Drilling Arctic Operating Inc.			
NOV ADS-10SD	272	Prudhoe Bay DS 18	BP
NOV ADS-10SD	273	Prudhoe Bay DSW-59	BP

North Slope - Offshore

BP			
Top Drive, supersized	Liberty rig	Inactive	BP

Doyon Drilling			
Sky top Brewster NE-12	15 (SCR/TD)	Spy Island, NIK North Mod	ENI

Nabors Alaska Drilling			
OIME 1000	19AC (AC-TD)	Oooguruk	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
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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) Rig 51 Rig 51	Platform C, Stacked Steelhead Platform, Stacked Monopod Platform, Drilling	Hilcorp Alaska LLC Hilcorp Alaska LLC 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	Granite Point Platform	Hilcorp Alaska LLC

Mackenzie Rig Status

Canadian Beaufort Sea

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

Central Mackenzie Valley

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

The Alaska - Mackenzie Rig Report as of Aug. 2, 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*

	July 28	July 21	Year Ago
United States	958	950	463
Canada	220	206	119
Gulf of Mexico	23	23	19

Highest/Lowest

US/Highest	4,530	December 1981
US/Lowest	404	May 2016

*Issued by Baker Hughes since 1944

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Congratulations

Hats off to Eni!



Congratulations to Eni on BOEM's recent approval of its Nikaitchuq North exploration program for this coming winter. Nikaitchuq North will be the first Alaska exploration project operated by Eni in a decade, and although the Italian major's subsidiary needs other approvals, the federal agency's approval is considered the most significant.



Whitney Grande,
Alaska Eni representative

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Afognak Leasing LLC	Computing Alternatives	Lynden Transport
Air Liquide	CONAM Construction	Mapmakers of Alaska
Alaska Dreams	Construction Machinery Industrial	MAPPA Testlab
Alaska Earth Sciences	Crowley Solutions	Maritime Helicopters
Alaska Frontier Constructors (AFC)	Cruz Construction	Nabors Alaska Drilling
Alaska Marine Lines	Denali Universal Services (DUS)	NANA WorleyParsons
Alaska Railroad	Dowland-Bach Corp.	NEI Fluid Technology
Alaska Rubber & Rigging Supply	Doyon Anvil	Nordic Calista
Alaska Steel Co.	Doyon Associated	North Slope Telecom
Alaska Textiles	Doyon Drilling	Northern Air Cargo
Alaska West Express	Doyon, Limited	Northern Solutions
Alpha Seismic Compressors	Equipment Source Inc. (ESI)	NRC Alaska
American Marine	exp Energy Services	Olgoonik Corp.
Arctic Catering & Support Services	EXPRO Group	PENCO
Arctic Controls	Fairweather	Petroleum Equipment & Services
Arctic Fox Environmental	Flowline Alaska	Petro Star Lubricants
Arctic Slope Telephone	Fluor	PND Engineers Inc.
Assoc. Coop (ASTAC)	Foss Maritime	PRA (Petrotechnical Resources of Alaska)
Arctic Wire Rope & Supply	Fountainhead Hotels	Price Gregory International
Armstrong	Fugro	Resource Development Council
AT&T	GCI Industrial Telecom	SafeVision, LLC
Automated Laundry Systems & Supply	Global Diving & Salvage	STEELFAB
Avalon Development	GMW Fire Protection	Sourdough Express
BELL & Associates	Greer Tank & Welding	Tanks-A-Lot
Bombay Deluxe	Guess & Rudd, PC	The Local Pages
BP	Inspirations	Udelhoven Oilfield System Services Inc.
Brenntag Pacific	Judy Patrick Photography	Unique Machine
Brooks Range Supply	Kuukpik Arctic Services	Usibelli
Calista Corp.	Last Frontier Air Ventures	Volant Products
Carlile	Lounsbury & Associates	Waste Management
Certek Heating Solutions	Lynden Air Cargo	
CH2M	Lynden Air Freight	



NEWS NUGGETS

Compiled by Shane Lasley



The SuperLig One pilot plant has pioneered the use of molecular recognition technology to separate the 16 tightly interlocked rare earth elements, such as those found at the Bokan Mountain project in Southeast Alaska.

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Ucore Rare Metals Inc. July 31 announced that it has entered into an agreement to sell SuperLig-One to Orca Holdings LLC and then lease back the rare earth separation pilot plant from Orca, a Ketchikan, Alaska-based enterprise controlled by Ucore advisory board member Randy Johnson. Under the terms of the agreement, Orca will pay Ucore of US\$2 million for SuperLig-One and then lease the plant back to Ucore over a 3-year term at an annual lease rate of 15 percent. At the option of either party, the lease may be terminated upon the payout by Ucore of the purchase price at any time after the first year of the term. Ucore will set aside US\$1 million to pay IBC Advanced Technologies, which designed SuperLig-One, for the balance outstanding under a joint venture agreement to pursue rare earth separation, tailings processing and catalytic converter recycling applications. "This is a non-dilutive financing arrangement which leverages a significant asset for go-forward development", said Ucore President and CEO Jim McKenzie. "The pilot plant has an innovative modular design which can be modified for multiple purposes, whether at its existing location in Utah, or as the expandable framework for rare earth output in Alaska or elsewhere. We look forward to working with Orca to optimize and generate maximum value from this remarkable development platform." Prior to the agreement, Orca owned 34.5 million Ucore shares, or about 12.8 percent of the company.

Teck adjusts to Qanaiyaq ore

Teck Resources Ltd. April 25 reported the Red Dog Mine in Northwest Alaska produced 127,800 metric tons of zinc during the first quarter, a sixteen percent drop compared to the same period last year. The company attributed this drop to challenges of processing the higher grade but more complex ore from Qanaiyaq, the new pit at Red Dog. During the first quarter, ore from Qanaiyaq pit was introduced to supplement declining grade ore from the Aqqaluk pit. However, mill performance was adversely affected by these metallurgically complex ores, particularly the highly oxidized material near the surface. During the second quarter, Teck lowered the amount of Qanaiyaq ore processed, which resulted in an increase over the 102,500 metric tons of zinc produced during the first quarter. Qanaiyaq ore is expected to become less oxidized as the pit is deepened, and Teck expects to include more of this higher grade material in the feed as it gains more experience with this ore. While zinc production is down, second quarter lead production increased 17 percent compared to last year, primarily due to higher grades. Teck anticipates producing 475,000 to 500,000 metric tons of zinc and 110,000 to 115,000 metric tons of lead at Red Dog in 2017.

see NEWS NUGGETS page 10



From a vantage point near the silver-rich Cap-HG target area, Constantine Metals President and CEO Garfield MacVeigh and Vice President of Exploration Darwin Green investigate some of the exploration targets at the Palmer VMS project near Haines, Alaska.

EXPLORATION

Great start at Palmer

First holes show westward expansion of resource; tap 10 oz/t at Nunatak

By SHANE LASLEY
Mining News

From wide zones of high-grade copper and zinc in resource expansion drilling to a discovery hole with grades worthy of being compared to Greens Creek, Constantine Metals Resource and Dowa Metals & Mining's 2017 drill program at the Palmer volcanogenic massive sulfide project in Southeast Alaska is off to a great start.

After investing US\$22 million into Palmer over the previous four years, Dowa Metals & Mining Alaska Ltd. earned a 49 percent joint venture interest in the project in January.

The newly formed Palmer JV decided to broaden the scope of this year's drill program to include discovery drilling at some of the high-grade volcanogenic massive sulfide prospects identified across the wider Palmer property to the ongoing resource expansion drilling at South Wall-RW, a VMS deposit rich in copper and zinc.

"2017 marks an exciting new chapter for the Palmer project and our shareholders as we commence a major drill program to test some of the many high-quality prospects at Palmer," said Constantine President and CEO Garfield McVeigh.

With the four holes of this program cutting long sections of high-grade copper, zinc and silver, this chapter of the Palmer story is off to a great start.

World-class potential

With the South Wall-RW resource at 8.1 million metric tons and growing, Constantine and Dowa are now investigating the district-scale potential of the 108,000-acre Palmer property.

Jim Franklin, a VMS authority who advises some 50 companies exploring these metals-rich deposits around the globe, believes Palmer could be a world-class VMS district.

"The chances of this (Palmer) being a camp, as opposed to a one-off, are excellent," he said. "I'll bet you can develop three deposits in the area eventually, and maybe this fits a 'camp-scale' model of one giant deposit (larger than 30 million metric tons), one or two middle sized deposits (6 to

The discovery hole at Nunatak, CMR17-89, cut 9.2 meters of massive barite-sulfide averaging 312 grams (10 troy ounces) per metric ton silver and 0.9 g/t gold.

15 million metric tons) and a bunch of smaller, 1- to 5-metric-ton deposits."

To begin exploring this camp-scale potential, Constantine and Dowa drilled Nunatak, a prospect about 3,000 meters south of the South Wall-RW deposit.

The discovery hole at Nunatak, CMR17-89, cut 9.2 meters of massive barite-sulfide averaging 312 grams (10 troy ounces) per metric ton silver and 0.9 g/t gold.

This intersection is approximately 50 meters below a surface showing where a continuous chip sample returned 127 g/t silver over 4.7 meters.

Constantine said this high-grade silver intercept confirms the potential for Palmer to host significant precious metal mineralization, which is characteristic of other VMS deposits in the region, such as Hecla Mining's Greens Creek, one of the largest and lowest cost primary silver mines in the world.

Jag, a showing about 425 meters southeast of hole 17-89 is a prospect associated with Nunatak that will likely see further exploration this year.

Samples collect at Jag have returned up to 20 percent zinc, 10.4 percent lead, 537 g/t silver and 0.73 g/t gold.

Cap-HG, another silver-rich massive barite sulfide target area about 1,000 meters northwest of Nunatak, is also slated for drilling this year.

Two holes previous drilled at Cap cut 23.2 meters of 134 g/t silver and 90.6 meters of 31 g/t silver.

Westward expansion

While testing Palmer's wider potential, drilling continues to find new areas to expand the copper-

see PALMER DRILLING page 9

NORTHERN NEIGHBORS

Compiled by Shane Lasley



AGNICO EAGLE MINES LTD.

Agnico Eagle now expect the Vault zone at its Meadowbank gold mine to provide enough ore to last the Nunavut operation through the end of 2018 and the company is investigating the potential of further extension into 2019.

Agnico builds on Nunavut platform

Agnico Eagle Mines Ltd. July 26 reported positive results from its Meadowbank gold mine and two development projects in Nunavut. The Meadowbank Mine produced 95,289 ounces of gold in the second quarter, a nearly 32 percent increase over the 72,401 oz produced during the same period last year. The company now expects to extend production at Meadowbank through the end of 2018 and is evaluating opportunities to further extend production into 2019. Any such extensions would bridge the gap between the end of Meadowbank mining and the expected start of production at Amaruq, a satellite deposit that will be trucked to the Meadowbank mill facilities for processing. Agnico, which has been working closely with the Nunavut Impact Review Board and the Nunavut Water Board on the Amaruq permitting, expects open pit mining to begin at Whale Tail in the third quarter of 2019 followed by the V Zone pit in 2020. The company currently expects to produce 2 million ounces of gold between 2019 and 2024, which represents less than half of the currently known mineral resource base. Initial capital costs to develop Amaruq are estimated to be roughly US\$330 million. At the end of 2016, Amaruq hosted 16.9 million metric tons of open pit indicated mineral resource averaging 3.88 grams per metric ton (2.1 million oz) gold; 4.9 million metric tons of open pit inferred mineral resource averaging 4.81 g/t (763,000 oz) gold; and 6.8 million metric tons of underground inferred mineral resource averaging 6.22 g/t (1.4 million oz) gold.

Agnico began a planned US\$22-million, 75,000-meter drill program at Amaruq in February. The 36,000 meters of drilling completed during the second quarter focused primarily on infilling the Whale Tail and V Zone mineral resources, which was completed near the end of May. Drilling since the end of May has focused on exploration to extend the Whale Tail deposit at depth, particularly on the western side. The drilling at V Zone has identified high-grade gold intercepts just below the proposed pit outline. Hole AMQ17-1199 cut 10.4 meters of 20.4 g/t gold from a depth of 225 meters. AMQ17-1216, drilled 100 meters to the northeast, cut 3.1 meters of 20.6 g/t gold from a depth of 193 meters. This year's drilling has also identified a new area south of the V Zone pit with the potential to extend the resource to the southeast at depth. AMQ17-1368 cut 3 meters of 30.1 g/t gold only 80 meters northeast of the Whale Tail pit. AMQ17-1370, cut the same structure about 175 meters to the east, returning 6.1 g/t gold over 5.9 meters. A new mineralized area has also been identified 200 meters west of V Zone. AMQ17-1266 cut 15.8 g/t gold; AMQ17-

see **NORTHERN NEIGHBORS** page 10

• COLUMN

Majors drive mineral industry revival

Alaska sees front end of supply, demand cycle after four-year downturn in exploration, development slowed pace of new discoveries

By **CURT FREEMAN**

Special to Mining News

At a recent mining industry panel discussion at the Western States Land Commissioners Association meeting in Anchorage, I was asked if the recent upturn in activity in the Alaska mining industry was a function of commodities prices or a growing worldwide recognition of Alaska's enormous mineral potential. I answered that I thought neither factor was driving the Alaska mineral industry revival: commodities prices have been steady or rising slowly over the last year and Alaska's mineral potential is well recognized across the industry.

I feel the invigorated Alaska mining industry is seeing the front end of a simple supply and demand cycle, driven largely by steady or increased production of commodities that coincides with the four-year exploration and development downturn that has resulted in fewer new deposits discovered, developed and put into the production pipeline. In short, new resources have not been added to the resource pool at anywhere near the rate they are being depleted. My favorite mineral economist, Richard Schodde of MinEx Consulting, recently quantified these worldwide trends by showing that over the past 20 years, exploration discovery rates have dropped for virtually all commodities. During that same period, major and intermediate producers have refocused their capital on mine and mill plant improvements, cutting exploration budgets to near zero. As a consequence, the proportion of discoveries made by junior mining companies grew to a whopping 70 percent. However, the capital pool available to junior companies dried up and the total number of discoveries plummeted, both in terms of total resource size and resource quality. Yeah, yeah, yeah, so what does this have to do with Alaska's mineral industry revival?! A quick look at who is doing the exploring in Alaska this summer will answer the question: more than 60 percent of the announced exploration budgets for Alaska for 2017 are being contributed by major producing companies. At the same time, major and intermediate producing companies are actively seeking new acquisitions in Alaska, several of which will likely become public before the end of the year. Junior exploration company expenditures remain down or flat relative to the past several years. It seems clear that both major and intermediate producers have recognized that the shovel-ready deposits that junior explorers use to discover and advance to the acquisition phase are simply not being discovered or developed. The producers have been forced to conduct

The author

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CURT FREEMAN

their own generative exploration and/or acquire existing prospects at an earlier stage than has been the norm in the past. Macro-economics 101: often ignored but always in play!

Western Alaska

SOLITARIO EXPLORATION & ROYALTY CORP. announced that it has completed its acquisition of **ZAZU METALS CORP.** and with it, the Lik lead-zinc-silver deposit near Red Dog. Solitario now holds a 50 percent operating interest in the Lik deposit with Teck Resources Ltd. owning the other 50 percent. Solitario acts as the project manager. At a 5 percent cut-off grade, indicated open pit resources at South Lik stand at 16.85 million metric tons grading 8.0 percent zinc, 2.7 percent lead and 50 grams-per-metric-ton silver. Indicated open pit resources at North Lik stand at 0.44 million metric tons grading 10.0 percent zinc, 2.8 percent lead and 59 g/t silver. At a 7 percent cut-off grade, indicated underground resources at South and North Lik stand at 17.29 million metric tons grading 8.1 percent zinc, 2.7 percent lead and 50 g/t silver. At a 5 percent cut-off grade, inferred open pit resources at South Lik stand at 0.74 million metric tons grading 7.7 percent zinc, 1.9 percent lead and 13 g/t silver. Inferred open pit resources at North Lik stand at 2.13 million metric tons grading 8.9 percent zinc, 2.9 percent lead and 46 g/t silver. At a 7 percent cut-off grade, inferred underground resources at South and North Lik stand at 5.34 million metric tons grading 8.7 percent zinc, 2.7 percent lead and 38 g/t silver.

QUATERRA RESOURCES INC. announced that it has commenced a core drilling program of between two and four holes at the Groundhog copper prospect, a 40,000-acre property situated in an established copper porphyry belt 200 miles southwest of Anchorage. Quaterra has an

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Petroleum NEWS

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PALMER DRILLING

and zinc-rich South Wall-RW deposit.

By 2015, Constantine and Dowa have outlined 8.125 million metric tons of inferred resources in the averaging 5.25 percent (940.4 million pounds) zinc, 1.41 percent (252.6 million lb) copper, 0.32 grams per metric ton (83,600 ounces) gold and 31.7 g/t (8.3 million oz) silver.

Most of this resource is located within South Wall, which consists of three VMS zones that run nearly vertically through Mount Morlan; the balance is found in RW, a fault separated section of this same mineralization lying at the top of the mountain.

Three of the first holes of the 2017 program, drilled in poorly tested area along the western edge of South Wall, cut wide intervals of massive sulfide rich in copper and zinc.

Highlights from the South Wall expansion holes include:

- 45.4 meters grading 2.5 percent copper, 7.4 percent zinc, 39 g/t silver and 0.3 g/t gold in hole CMR17-82;
- 18.7 meters grading 2.3 percent copper, 6.9 percent zinc, 33 g/t silver and 0.3 g/t gold in hole CMR17-84; and
- 14.3 meters grading 0.4 percent copper, 7.6 percent zinc, 45 g/t silver, 0.3 g/t gold in hole CMR17-86.

Constantine said these intersections dramatically

increase the width and grade of mineralization in this area and indicate excellent potential for further westward expansion of the South Wall resource.

“The new South Wall intercepts will enhance the resource and demonstrate the ability of the South Wall to produce thick intersections that build tonnes quickly,” said MacVeigh. “The new Nunatak drill discovery shows great potential and we look forward to further advances in both areas in the current drill program.”

If the first four holes are any indication, the 2017 program could go a long way toward confirming the world-class potential of Palmer.

“We are excited to have such a successful start to this year’s drilling,” said MacVeigh. ●

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FREEMAN

option to purchase a 90 percent interest in Groundhog. The program is operated by **CHUCHUNA MINERALS CO.**, an Alaska company jointly owned by **KIJKI CORP.**, the Alaska Native village corporation for the community of Nondalton, and Alaska Earth Sciences, an Anchorage-based mineral exploration company. Holes will be sited to test several shallow IP anomalies identified by historic surveys and 16.5 kilometers of new induced polarization geophysical surveys during late June and July. The holes are widely spaced across the property forming an equilateral triangle with sides of about 4.5 kilometers. Two of the holes will test anomalies under shallow Tertiary volcanic cover and one hole will test an anomaly under glacial till. These are the first holes drilled in the area. The property is located on State of Alaska claims covering the northern extension of a 10-kilometer (six miles) wide north-northeast trending structural zone that hosts a number of porphyry copper-gold prospects, including the Pebble porphyry copper, gold and molybdenum project, which is about three miles south of the Groundhog claim boundary. Regional magnetic data suggest that geology similar to that at Pebble extends under cover for an additional 30 kilometers (18.6 miles) northeast from the Pebble deposit.

COPPERBANK RESOURCES CORP. announced that a second drill rig has been added to the diamond drilling program being conducted on its 100 percent controlled Pyramid project located on **ALEUT NATIVE CORP.** lands on the Alaska Peninsula. The addition of a second rig will significantly increase the previously planned 1,500-meter drill program planned for the project and will allow one rig to focus on each of the two main zones of mineralization, the North and South zones.

Interior Alaska

FREEGOLD VENTURES LTD. announced additional results from its 27-hole oxide-zone core drilling program north of the current resource area at its Golden Summit gold project in the Fairbanks District. Significant results include 67.5 meters grading 0.41 grams-per-metric-ton gold in hole GSDL17-23 and 70.5 meters grading 0.82 g/t gold in hole GSDL17-26. The 50-meter spaced drilling was designed to test the upper 70 meters of ground north of current resources. In addition to drilling, an induced polarization geophysical survey was completed to the west of current resources, defining a 1,500-meter-by-300-meter resistivity anomaly associated with anomalous gold, bismuth and tungsten in soils.

Freegold Ventures Ltd. also announced commencement of a core drilling program at its Shorty Creek copper-gold project in the Livengood District. The Hill 1835 prospect, discovered in 1985 but on which limited drilling was done in 1989-1990,

was drilled in 2015 and 2016. Significant results include hole SC 16-01 intersected 434.5 meters grading 0.36 percent copper including 207 meters grading 0.45 percent copper and hole SC 16-02 which intersected 409.6 meters grading 0.29 percent copper including 93.5 meters grading 0.38 percent copper with both holes ending in mineralization. The 2016 drill program successfully confirmed the presence of a copper-gold-molybdenum porphyry system at Shorty Creek, with an alteration/mineralization footprint that covers an area of about 10 kilometers (six miles) in diameter. The airborne and ground magnetic surveys have identified a number of magnetic highs, which appear to be coincident with copper mineralization. Mineralization on Hill 1835 was intersected in drill holes to a minimum depth of 500 meters and remains open in all directions. Mineralization consists of sulfide-bearing quartz stockwork veining and disseminated sulfide within strong secondary biotite alteration and anhydrite primarily situated within a flysch unit intruded by quartz feldspar porphyry sills and/or dykes. Disseminated and fracture-controlled pyrite, pyrrhotite, chalcopyrite, arsenopyrite and bornite have been identified (along with numerous secondary oxide minerals) in drill core. Four additional targets (Hill 1890, Hill 1870, Steel Creek and Quarry) were identified by airborne magnetics and electromagnetic geophysics, ground induced polarization geophysics and soil sampling. The 2017 program will focus on further expanding the mineralization at Hill 1835 and initial drill testing of the Steel Creek and Quarry targets. Additional ground magnetic and geochemical surveys were undertaken at Steel Creek in 2016. The Steel Creek anomaly measures 700 meters by 2,000 meters and

is associated with a strong magnetic signature similar to Hill 1835. At the Quarry prospect, located roughly five kilometers, three miles) east of Hill 1835, a 10 kilometer long northeast trending airborne magnetic high is associated with stockwork veined quartz-feldspar porphyry. Ground magnetics and soil geochemistry were completed over a small portion of the 1,000-meter-by-10,000-meter anomaly and soil geochemistry returned both strong copper and molybdenum values.

Alaska Range


MILLROCK RESOURCES INC. announced that it has commenced a field program at its Liberty Bell project, located in the Bonfield Mining District. The program is funded by a subsidiary of **KINROSS GOLD CORP.** The project targets distal skarn gold deposits and possibly porphyry copper-gold deposits. Geology and setting of a small known gold deposit at Liberty Bell are similar to the recently discovered Peak gold deposit near Tok, Alaska. The field program will consist of 16 sampling days with 10 soil

samplers and geologists collecting a target of 5,000 soil samples to characterize the surface geochemistry, in addition to mapping and prospecting.

Southeast Alaska

COEUR MINING INC. reported second-quarter 2017 production results from its Kensington mine. The mill processed 163,163 tons of ore, a slight increase over the year-previous period. The mine produced 26,424 ounces of gold grading 0.17 oz. per ton gold with an average recovery of 93.2 percent, a significant grade decrease over the year-previous period, primarily because of lower head grades in the current second quarter due to mine sequencing. Higher grades, recoveries and production are anticipated for the remainder of 2017. The company also indicated that development of the decline into the high-grade Jualin deposit is progressing with initial production from Jualin anticipated for late 2017. The company indicated that it expects full-year 2017 production from the mine to total 120,000 to 125,000 ounces of gold. ●


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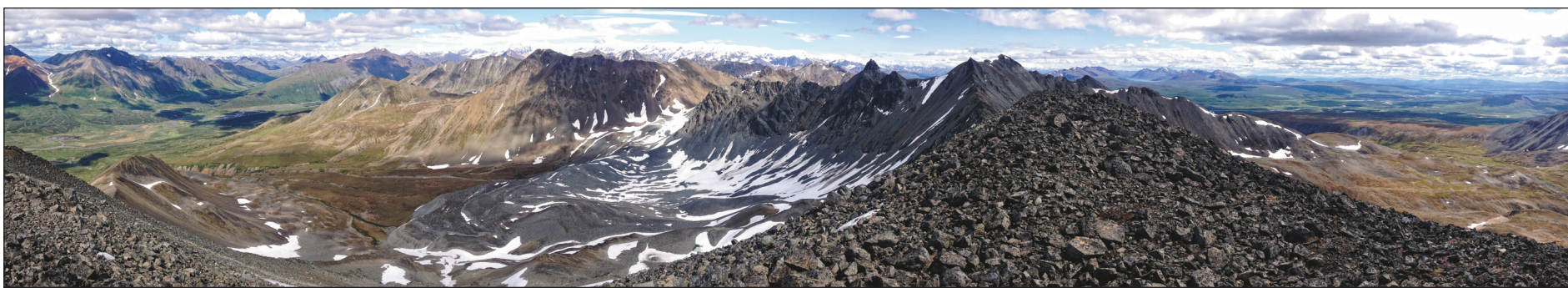




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KYLE NEGRI, COURTESY MILLROCK

A panoramic view of the Stellar copper-gold project on the southern slopes of the Alaska Range. Stellar hosts a number of copper-gold targets that extend westward to the high-grade copper prospects and deposit on the neighboring Caribou Dome property.

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NEWS NUGGETS

Millrock set to drill Stellar

Millrock Resources Inc. July 26 reported that it has closed the sale of the

Stellar copper-gold project to Vista Minerals Pty Ltd. Upon completion of the deal, Vista successfully merged with Coventry Resources, which owns an option on Caribou Dome, a high-grade copper project bordering Stellar. Coventry simultaneously announced that

it had successfully raised AU\$5.5 million to further exploration on the now merged property. Upon closing of the three-way deal, Millrock owns a 10.6 percent of Coventry Resources, which is to be renamed Polaris Minerals Ltd. With the transactions complete, Polaris will fund a major drilling campaign at Stellar and additional surface exploration work at Caribou Dome. The program, which will be operated by Millrock, will see two rigs drilling roughly 3,000 meters at the high-grade Zackly copper-gold skarn deposit. The main objective of the 20-hole program is to bring the historical copper-gold resource at Zackly to a point that it meets JORC standards,

the Australian standard for reporting exploration results that is similar to Canada's NI 43-101. The secondary objective is to discover strike extensions of the deposit which are inferred to exist from induced polarization geophysical surveys conducted in 2016. Drilling is planned to commence in mid-August. Further induced polarization surveys and geological mapping will be undertaken at Zackly and the nearby Mars copper-gold porphyry target. Field work will also be done at Caribou Dome. Millrock will earn a 10 percent management fee and is entitled to certain milestone payments if a resource of significant size is delineated at Stellar. ●

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NORTHERN NEIGHBORS

1387 cut 9 meters of 4.3 g/t gold; and AMQ17-1394 cut 3.1 meters of 8.6 g/t gold in this area. Drilling at Whale Tail has both confirmed and extended resources at the western end of the pit area. AMQ17-1303 cut three intercepts: 4.4 meters of 8.6 g/t gold from 15 meters; 6.3 meters of 6.9 g/t gold from 33 meters; and 5.5 meters of 5.8 g/t gold from 107 meters. Other nearby holes cut similar mineralization. The Whale Tail deposit has been defined for more than 2,300 meters along strike and to a depth of 732 meters. In addition to exploration, Agnico is investing roughly US\$78 million on capital costs at Amaruq in 2017, primarily on completion of the all-weather exploration road, technical studies and acquiring materials and equipment for the 2018 construction season.

Agnico also reported that construction and development activities at its Meliadine gold project remain on schedule and on budget. The estimated capital budget for 2017 is unchanged at \$360 million. The 2017 program includes: underground mine development; 26,500 meters of drilling; detailed engineering; new camp; and continued construction on the process plant, power plant, and multi-

service buildings.

More Premier results

Ascot Resources Ltd. July 28 reported additional high-grade gold results from its extensive drill program a Premier, a large property near Stewart British Columbia that blankets the historic Premier Mine, which produced 2.1 million ounces gold and 44.9 million oz starting in 1918. The company said drilling at Northern Lights, a zone just northwest of the historical mine areas at Premier, continues to deliver good results. P17-1366, drilled in a subzone of Northern Lights known as Ben, cut 1.2 meters of 190.5 grams per metric ton gold, within a 30.57-meter interval averaging 8.57 g/t gold. P17-1334, also drilled within the Ben subzone, cut 1 meter of 99.6 g/t within a 6.5-meter intercept grading 17.3 g/t gold. P17-1313 cut an 11.9-meter intercept in another subzone below Ben grading 10.31 g/t gold, including cut 1 meter of 70.7 g/t gold. P17-1269, a previously reported hole in this area, cut 0.5 meter of 1,135 g/t gold within a 16.15-meter intercept averaging 36.31 g/t gold. These results are from a 120,000-meter drill program planned for Premier this year. So far, Ascot has completed more than 55,133 meters of drilling in 2017 and has seven rigs turning on the property. ●

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● PIPELINES & DOWNSTREAM

Appeals court remands renewable fuel standard

DC Circuit says EPA erred in considering demand side factors in setting standards for transportation fuel blends for 2014 to 2016

By **ALAN BAILEY**
Petroleum News

The U.S. Court of Appeals for the District of Columbia has in part upheld a series of appeals against standards set in 2015 by the Environmental Protection Agency for the blending of renewable fuels such as corn ethanol in transportation fuels in the United States. The standards in question apply to years 2014 to 2016. A further rule published in December 2016 set the standards for 2017.

Several organizations had appealed the 2015 rule on various grounds. However, the court dismissed all of the challenges to the rule except one, a challenge that EPA, when setting the renewable fuel standards, had improperly considered factors relating to the demand for renewable fuel rather than just renewable fuel supply constraints. The court has remanded the rule to EPA for reconsideration.

The Renewable Fuel Standard

The Renewable Fuel Standard, introduced in 2007 as a component of the Clean Air Act and the Energy Independence and Security Act to address concerns about carbon emissions from the use of fossil fuels, requires EPA to publish standards for the use of renewable fuels as a component of liquid transportation fuels. However, the standards have proven controversial, especially since the renewable fuels are often more expensive to produce than fossil fuels.

By far the most common fuel component designed to meet the renewable fuel standard is ethanol, typically corn ethanol, that is added to gasoline. Other types of renewable fuels consist of cellulosic biofuel, generated from plant material, and biomass-based diesel fuel, produced for example from vegetable oil. EPA places the onus on fuel importers and refiners to ensure that sufficient renewable fuel is used to meet the renewable fuel standards, the concept being that, with sufficient renewable fuel in the fuel mix, fuel blenders, distributors and

users will end up meeting the required standards.

Constraints

The idea is to gradually increase the proportion of renewable fuels in the transportation fuel mix. But there are constraints in the rate to which this can be achieved. For example, gasoline engines cannot operate with more than a certain proportion of ethanol mixed with the gasoline, an issue that has led to a “blendwall,” typically set at 10 percent. Moving the proportion of renewables above this blendwall requires the use of forms of renewable fuel other than ethanol. Possibilities include advanced biofuels such as cellulosic biofuels.

The other constraint relates to the availability of renewable fuel supplies in sufficient volume to meet the renewable fuel standards. Under the statutes, EPA is allowed to consider supply constraints, if necessary setting the standards lower than the statutory targets. And, in its 2015 rule, EPA did set standards somewhat below targets set by statute, citing the lack of availability of sufficient quantities of advanced biofuels and of total renewable fuels.

Supply side only

But in determining the renewable fuel volume requirements the EPA inadmissibly considered fuel demand side factors in addition to supply side constraints, the court found. As a consequence, the court has remanded the 2015 rule back to EPA.

The supply side constraints consider the volumes of renewable fuel that can realistically be supplied to the fuel importers and refiners that are responsible for meeting the renewable fuel standards. Demand side factors consist of parameters relating to consumer demand for renewable fuels, including factors such as the availability of vehicles that are able to use renewable fuels and the number of retail outlets that can offer renewable fuel blends. ●

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FINANCE & ECONOMY

Trading under Andeavor, Andeavor Logistics

Tesoro Corp. and Tesoro Logistics LP have begun trading under Andeavor and Andeavor Logistics with the opening of the New York Stock Exchange Aug. 1. The new ticker symbols are ANDV and ANDX; previous ticker symbols, TSO and TLLP, have been retired, the companies said.

“Our name change to Andeavor acknowledges the significant progress” in transforming the company, Greg Goff, chairman, president and CEO of Andeavor said in a statement.

Andeavor is an integrated marketing, logistics and refining company with more than 3,200 retail stations and ownership in two logistics businesses, Andeavor Logistics LP and Western Refining Logistics LP.

Andeavor operates 10 refineries with combined capacity of some 1.2 million barrels per day in the midcontinent and western United States.

Andeavor Logistics operates primarily in the western and midcontinent regions where it owns and operates a network of crude oil, refined products and natural gas pipelines. It also owns and operates crude oil and refined products truck terminals, marine terminals and storage facilities, along with natural gas processing and fractionation complexes.

—PETROLEUM NEWS

continued from page 2

CAFE STANDARDS

and the Environmental Protection Agency jointly issued standards for light vehicles for model years 2017 and beyond. Because the statutes do not allow DOT to set standards for more than five model years at a time, the new standards were only enforced for model years 2017 to 2021, with a second phase of standards, for model years 2022 to 2025 being proposed but not enforced. The 2012 regulations enforced light vehicle fleet-wide fuel consumption requirements in the range of 40.3 to 41.0 miles per gallon for model year 2021. The regulations proposed a standard of 48.7 to 49.7 miles per gallon in model year 2025.

According to DOT’s new notice, published in the Federal Register, in the 2012 rule the federal agencies had committed to a mid-term evaluation of the standards, given that the proposed standards for 2022 to 2025 had not been formally mandated. That evaluation was completed in November 2016, with EPA issuing a final determination in January.

Reconsideration

A few days after Trump’s March statement EPA Administrator Scott Pruitt and Transportation Secretary Elaine Chao announced a reconsideration of the January final determination for model years 2022 to 2025. The newly announced EIS comes as part of that

redetermination. Trump characterized his March order as part of his policy of stimulating U.S. industry by reducing “industry-killing” regulation.

At this stage the agencies are accepting comments on the scope of the EIS for the reconsideration. The agencies say that, as in previous CAFE standards, they anticipate specifying fuel consumption limits in relationship to the footprints of vehicles: A vehicle’s footprint consists of the product of its wheelbase and track width — the larger the footprint, the higher the likely fuel consumption.

Several alternatives

DOT says that in its draft EIS the agency is considering several alternatives, including an indefinite continuation of the CAFE standards set for 2021. Other options will include ranges of possibilities for the upper and lower bounds for fuel consumption. An analysis of the alternatives will consider several parameters, including the environmental impacts of fuel usage and the cost to manufacturers and consumers of stringent standards, DOT’s Federal Register notice says. The environmental evaluation will consider impacts of vehicle emissions on air quality, including impacts on carbon dioxide concentrations in the atmosphere and on climate change, the document says. ●

Contact Alan Bailey
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EXPLORATION & PRODUCTION

BP to expand four Prudhoe Bay pads

BP Exploration (Alaska) Inc. wants to expand four existing drilling pads at the Prudhoe Bay unit to improve drilling rig access to existing wells at the onshore North Slope unit.

In four separate requests in mid-July, the company asked state oil and gas officials for permission to add 0.9 acres to E pad, 1.4 acres to F pad, 0.5 acres to K pad and 0.9 acres to R pad. All four pads are located along the central part of the northern edge of the unit.

The expansions are designed to allow larger drilling rigs to safely access existing wells at the four pads, according to BP, which suggests sidetracking or workover operations.

“Expansions using ice pads will be the preferred method to provide drilling rig access and utilized whenever possible,” the company explained in its application. “However, due to the specific requirements of the drilling rig schedule and the limited off road travel season, some well work will need to be completed when ice pads are not an option.”

The projects would involve adding 6,000 cubic yards of gravel at E pad, 11,000 cubic yards of gravel at F pad, 5,000 cubic yards of gravel at K pad and 6,500 cubic yard of gravel at R pad. The work would occur between August 2017 and March 2022.

The state Division of Oil and Gas is taking comments on the proposal through Sept. 1.

—ERIC LIDJI

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• EXPLORATION & PRODUCTION

July ANS production down 11% from June

Average 436,290 bpd, with biggest drops at Lisburne, Prudhoe Bay, both areas where BP has turnarounds scheduled over the summer

By **KRISTEN NELSON**
Petroleum News

July Alaska North Slope crude oil production averaged 436,290 barrels per day, down 11.1 percent from a June average of 490,758 bpd, a drop of 54,468 bpd. The largest volume drop was at the BP-operated Prudhoe Bay field, the Slope's largest, which averaged 220,106 bpd in July, down 17.6 percent, 47,136 bpd, from a June average of 267,242 bpd.

A maintenance turnaround was scheduled at the field this summer, "focused on piping replacements, facility maintenance, vessel repairs and other improvement projects" at Gathering Center 1, BP Exploration (Alaska) spokeswoman Dawn Patience told Petroleum News in May.

Prudhoe volumes averaged more than 250,000 bpd at

the beginning of July, with production beginning to drop at mid-month and falling below 200,000 bpd beginning July 23; the field averaged 113,099 bpd July 31.

July information comes 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.

Volumes for Prudhoe Bay include satellite production from Aurora, Borealis, 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 for June show Milne Point averaged 19,604 bpd that month, up 8.1 percent, 1,475 bpd, from

a May average of 18,129 bpd, while Northstar averaged 7,593 bpd in June, up 7 percent, 493 bpd, from a May average of 7,100 bpd.

The largest percentage drop, 35.9 percent, was at the BP-operated Lisburne field. Patience told Petroleum News in an Aug. 1 email that Lisburne was also undergoing planned maintenance.

Lisburne production averaged 14,950 bpd in July, down 8,387 bpd from a June average of 23,337 bpd. Lisburne includes volumes from Niakuk, Point McIntyre and Raven.

Kuparuk

The ConocoPhillips Alaska-operated Kuparuk River field also had a month-over-month decline, averaging

see **PRODUCTION** page 14



Oil Patch Bits



Denton joins AECOM Alaska as senior mining engineer

AECOM said July 24 that Stephen Denton has joined its team, bringing with him more than 40 years of experience in mining, consulting and construction. Steve is a third-generation Alaskan, and second generation graduate of the University of Alaska Fairbanks, School of Mines.

Denton spent more than half of his career at Usibelli Coal Mine Inc. near Healy, Alaska. During his tenure at Usibelli he held various upper management and vice president positions. In these roles, Denton was responsible for performing various functions which included design, permitting and management for new mine startups, coal process facility construction, interna-

tional coal sales and marine coal export facility operation.

More recently, as an independent contractor he has worked on a number of projects throughout Alaska in public works and roads, marine facilities, exploration, permitting, mine development and operations, and construction. He also has significant project experience working on remote projects in the Arctic as well as experience working with Alaska Native corporations on natural resource development projects.

Denton is well known throughout the industry statewide and is affiliated with a number of professional organizations including the Alaska Resource Development Council, the Alaska Miners Association and the American Exploration and Mining Association.

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JOHNSON Q&A

is to incentivize production. With these credits now tied to production, do you see it as an incentive to produce?

Johnson: It will incentivize production. They are not getting any kind of tax reduction if there is no production. It's going to have an effect. I don't think we know what affect it's going to have on exploration. I think there are some real questions on what affect it's going to have. We didn't even have any modeling. It went through the Senate process too. I have got confidence there were some good eyes on it, too, so we'll see what's going to happen.

Petroleum News: Speaking of modeling, the Legislative Budget & Audit Committee hired three consultants to complete some modeling. How do you think that may or may not help if the discussion of oil taxes comes back next year?

Johnson: Sadly enough, I don't think it's if. I guess it goes back to being on Resources. It's constantly changing. I'm waiting to hear the statement, "we have to change oil taxes because we want to promote stability." I am waiting for that statement to be made. That's the most ridiculous statement, and I know it's going to come. I expect that's part of HB 111 — the working group. Those experts can be part of that working group. I hope having that working group doesn't telegraph any message. I don't believe just because you have a working group that you have to make immediate changes. It's good to have those people, the better off you're going to be in making predictions.

Petroleum News: There isn't a prescribed number of people or even a prescribed breakdown of who should be on it other than presiding officers appointing co-chairs. Would you like a seat on that panel?

Johnson: Absolutely, I would love a seat on that working group.

Petroleum News: As you learned about the state's tax structure, either through general presentations or discussions on HB 111, what are your take-aways from the structure now?

Johnson: We have royalties and taxes. We have a tendency to entwine those. We have to keep that royalty discussion, as the owner of the resource, separate from the tax discussion because I think it's a beginning of confusion when you mix those together. We have a tax structure that's evolved and I do think it's very complicated and it gets more and more complicated instead of simpler when we try to do these quote-unquote fixes to them.

Petroleum News: We keep hearing how complicated, but as you bring a fresh set of eyes, is it as complicated or not as complicated as we're led to believe?

Johnson: I like to focus on the idea that we have a royalty share. The royalty share is going to fund the state. The tax is complicated to me. From my experience with legislation, legislation that evolves from one thing to another and you add on patches and fixes, that's where it starts getting complicated. I think that is what we are going to find, even in HB 111. We don't know the effects of incentives or even the ringfencing piece. We don't know what the effect of those are going to be. Not only have we not seen it modeled, but we haven't seen it working in the real world. That's the real model. When you have that many moving parts it gets com-

plicated, so yes I do think our tax structure is complicated. There are lots of moving parts and they are not necessarily parts working together to make a finely tuned machine.

Petroleum News: The roles of the royalties and the roles of taxes are different. Should they remain that way or should they be mixed as a way of addressing the budget deficit?

Johnson: I think the role of Alaska as a royalty state is completely different than the taxes. When you are a government entity and you're talking about taxes, that's a whole different hat that you're wearing than the royalty piece. People will talk about the government take, but we are no different than the private owners elsewhere who get mineral rights of their land. It will add an entire layer of complexity of you try to add the royalties and the taxes as a single piece.

Petroleum News: Let's switch gears to AKLNG. You've had some presentations and you're receiving updates. What is your overall view of the project as you understand it now?

Johnson: I really want to see us advance the sale of LNG for export. I'm concerned about the Lower 48 getting into export. We are in a global market. I think the stars have aligned in a way. The secretary (Interior Secretary Ryan Zinke) is very pro-development and the president (Trump) is very pro-development.

So on the one hand, we are very close to getting a FERC certificate. Hopefully that will happen this year. I would like to see a solid LNG project go forward, there is no question about that. I don't think we should stop when we are so close to getting the FERC process finished.

Petroleum News: What would you like to hear next from AGDC (the Alaska Gasline Development Corp.)?

Johnson: The next thing I would like to hear is that they have signed an agreement that is more than a memorandum of understanding with a customer. I want to hear they have a solid 100 percent customer. That would be great news.

Petroleum News: You've getting periodic updates about every two weeks from AGDC. Have those helped you, especially in your first year? Prior to your election, there's been recurring criticism that the communication gap is too wide.

Johnson: I don't know what was happening before so I can't speak to that comparatively at all. But I appreciate that they were clearly trying to be more interactive, no question about that. I appreciate that. There are so many different pieces and moving parts of the LNG project and attempts in Alaska. There is a whole bunch of things you need to know for background. That's what I tried to do is get that background. I think I accomplished that.

Petroleum News: Not too long ago, Interior Secretary Ryan Zinke visited Alaska, touting the state's resource development projects. Did that give you an optimism, his visiting so early into the new administration?

Johnson: I was encouraged when I heard the president wanted to see a large infrastructure project and then Zinke came to Alaska and is from a western state (Montana). It's encouraging that he's got an Alaskan (former Natural Resources Commissioner Joe Balash) working for him. To me, it's encouraging. Maybe finally the stars have aligned with some resource development in Alaska. It's not just a few people from Alaska talking about it, but actually having the executive

branch and having the president talking about it. We've really been stalled on a lot of projects for quite some time now, certainly the last eight years, so this is a good step and is promising for us, I believe.

Petroleum News: You mentioned the hiring of Joe Balash. Have you ever met Joe or are you familiar with his work?

Johnson: I met him when he was working for Gov. Parnell. He knows Alaska's Department of Natural Resources and when you have someone who knows that much and that person is close to the secretary of the Interior, that's a big deal.

Petroleum News: Were you concerned at all that Secretary Zinke placed calls to Alaska senators and linked Alaska projects to the healthcare bill?

Johnson: I don't know what all those conversations were. I don't want to see anything interfering with our resource development, no matter what the situation is. I just don't know enough about that. I certainly don't think it makes sense to tie resources and healthcare vote together. I really expect our positive resource development to overtake that.

Petroleum News: So you've got one year under your belt, what do you look for in the coming year?

Johnson: Well, Resources and State Affairs are my primary committees, though I'm on the Energy Committee too. My hope with the advisory group is that we don't scare off folks or anybody looking to invest. I do believe we are going to have some discussion next year on oil tax policy. I don't know that it's going to change significantly. I don't know that it's going to happen. I'm going to want to be front and center to keep anything from coming apart. We had a good compromise this year and I'm hoping it gets left alone

for a year. While it may get discussed some more, I'm hoping we don't have a big oil tax rewrite. I think we need time to let things happen. Even the last oil tax change (HB 247 last year), we barely had a chance to go into effect January of 2017 and by February we were looking at HB 111.

Petroleum News: What should the goal be with a tax system? Some say the goal should be that it needs to be an affordable system, but that definition then becomes subjective. It can mean within the production tax system itself or it's to include corporate income tax and royalties.

Johnson: One of the things that you have to consider is the market conditions. They and the circumstances are always changing. If you could make predictions of what the market is doing, you'd be very rich, even if you could do it for a year out. To think we are going to have one structure that is going to always be the same and be the definitive answer, probably not so much. The royalties need to be separated.

We have to remember royalties are not a tax. The tax structure does need to be simplified, I don't think there is any question about that. How that is done is a whole study in itself. I'm a proponent of production and increasing our revenues through increased production and not looking to increase taxes to increase revenue. If we can get production up, we will have an increase in revenue. It's still income to the state. My preference is to see it come through a royalty, not to figure out exactly how to make sure the taxes that come fit for what we need in a budget. That doesn't make a whole lot of sense to me. ●

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FINANCE & ECONOMY

BP plans for low oil-price future

Company executives say company is moving ahead with new business efficiencies while carefully managing capital expenditure

By **ALAN BAILEY**

Petroleum News

BP is continuing to implement business efficiencies and carefully manage its capital spending to accommodate an expected continuation of relatively low oil prices, company executives said during a second quarter 2017 earnings call on Aug. 1. BP Group Chief Executive Bob Dudley said that he expected unit production costs this year to be more than 40 percent lower than in 2013.

"Around 75 percent of these cost reductions are from efficiency, so these should be sustainable in the longer term," Dudley said. "Beyond this we are pushing ahead with some really transformational changes as we digitize the business at pace. This stretches from subsurface modeling to wells construction to plant operations and all the way to electronic procurement."

Petroleum News has previously reported that improved operational efficiencies coupled with the use

of computer technology to analyze field data have helped maintain oil production levels in the BP-operated Prudhoe Bay field, despite a cutback in the number of drilling rigs that BP operates on the North Slope.

Dudley said that BP's current cost projections do not fully take into account cost savings from some new technologies, including the use of sensors and automation in drilling operations.

Capital expenditure targets

Brian Gilvary, BP Group chief financial officer, said the company did not anticipate an annual capital expenditure above \$17 billion through to 2021 and that the company "will be very disciplined about that." However, if oil prices remain at about \$50 per barrel, capital expenditure in 2018 would likely be closer to \$15 billion. Capital spending at this lower level would not materially impact BP's growth objectives. However, \$15

billion does not represent a capital expenditure floor and the company would continue to drive higher levels of capital efficiency if oil prices remain structurally lower, Gilvary said.

Dudley said that, although BP would seek to further optimize its capital expenditure at Brent crude prices below \$50 per barrel, in the first half of 2017 BP's organic cash flows were comfortably in balance at a \$50 oil price level. And, although there is always the potential for geopolitical events to trigger oil price spikes, BP is planning for an oil price around \$50 over the next five years, with a target breakeven price well into the \$30s. With U.S. shale oil becoming the swing producer in the global oil industry, a continuing oil price around \$50 will continue to drive the industry's cost structure lower, Dudley said. ●

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PRODUCTION

132,901 bpd in July, down 1.8 percent, 2,394 bpd, from a June average of 135,295. ConocoPhillips Alaska spokeswoman Natalie Lowman told Petroleum News in May that the company had "no significant turnarounds planned at Kuparuk this season."

Kuparuk volumes include 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 aver-

aged 19,270 bpd in June, down 18.2 percent, 4,298 bpd, from a May average of 23,569 bpd, while Oooguruk averaged 11,881 bpd, down 5.7 percent, 720 bpd, from a May average of 12,601 bpd.

Alpine, Endicott

Both ConocoPhillips-operated Alpine and Hilcorp-operated Endicott had month-over-month increases in volume.

Alpine averaged 58,604 bpd in July, up 3.9 percent, 2,190 bpd, from a June average of 56,414 bpd. There was a turnaround at Alpine scheduled for mid-June, and the field was down completely for two days then, with steady volumes in

July.

Alpine production includes satellites at Fiord, Nanuq and Qannik.

Production at Endicott averaged 9,729 bpd in July, up 14.9 percent, 1,259 bpd, from a June average of 8,470 bpd.

Endicott volumes include Eider, Minke and Sag Delta, as well as the Glacier Oil & Gas subsidiary Savant Alaska-operated Badami field and the ExxonMobil Production-operated Point Thomson field.

AOGCC data show Badami averaged 867 bpd in June, up 0.2 percent, 2 bpd, from a May average of 865 bpd, while Point Thomson averaged 280 bpd in June, down 90.7 percent, 2,713 bpd, from a May average of 2,993 bpd. July Tax Division volumes for Endicott would appear to indicate that Point Thomson was operating marginally most of July, with total Endicott volumes only rising to the 10,000-14,000 bpd for about a third of the month. The Point Thomson facilities are capable of producing 10,000 bpd, and Endicott production prior to Point Thomson startup in April 2016 was averaging some 8,000 bpd.

Cook Inlet up 4%

AOGCC data show crude oil production from Cook Inlet averaged 13,259 bpd in June, up 4.1 percent from a May average of 12,740 bpd.

The Hilcorp-operated Middle Ground Shoal field is still down completely, with smart pigging scheduled for two lines in July, at which point the company can coordinate with regulators on production

restart, Hilcorp spokeswoman Lori Nelson told Petroleum News in June.

Hilcorp's Beaver Creek averaged 177 bpd in June, up 10.1 percent from a May average of 160 bpd.

Granite Point, also operated by Hilcorp, averaged 2,239 bpd, up about 1 percent, 21 bpd, from a May average of 2,218 bpd.

The BlueCrest-operated Hansen field, the Cosmopolitan project, averaged 189 bpd in June, up 27.6 percent, 41 bpd, from a May average of 148 bpd.

Hilcorp's McArthur River field, Cook Inlet's largest, averaged 4,850 bpd in June, up 18.7 percent, 766 bpd, from a May average of 4,084 bpd.

Redoubt Shoal, operated by Glacier Oil & Gas, averaged 925 bpd in June, up 6.3 percent, 55 bpd, from a May average of 870 bpd.

Hilcorp's Swanson River field averaged 1,914 bpd in June, down 5.9 percent, 119 bpd, from a May average of 2,033 bpd, while the company's Trading Bay field averaged 1,976 bpd, up 10.4 percent, 187 bpd, from a May average of 1,789 bpd.

Glacier Oil & Gas' West McArthur field averaged 988 bpd in June, down 31.1 percent, 446 bpd, from a May average of 1,434 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. ●

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HOFFBECK

commissioner.

"I will always consider it as an honor and a privilege that I had the opportunity to work with Governor Walker, Lieutenant Governor Mallott, fellow commissioners, and the incredible staff at the Department of Revenue. But as time goes on I realize I need to refocus my life on the call God has put

on my heart; that I can no longer tell God, 'Just a minute. I am almost done here.'"

Hoffbeck has more than 30 years of experience in tax administration, valuation and appraisal of real estate. He retired from government service in late 2012 to complete his master of divinity degree, which he completed in October 2014. Walker asked him to join the administration in late 2014.

—PETROLEUM NEWS



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UMIAT PLAN

plan changes. DEC requires comments on the plan by Aug. 28.

The fact that Malamute has now filed a revised Umiat contingency plan for approval presumably confirms the company's intent to drill in the field. However, clarification of what wells the company plans to drill and when the drilling may take place will presumably depend on the company filing a plan of development for the field. When Petroleum News went to press Malamute had not responded to a request for further information about the situation.

Large but remote field

Although the Umiat field was discovered by the U.S. Navy in 1946 and is one of the larger undeveloped fields in Arctic Alaska, the field has yet to be developed, pri-

marily because of its remote location, many miles from the nearest road or oil infrastructure. About 100 miles of Arctic tundra lie between the field and the corridor of the Dalton Highway and the trans-Alaska oil pipeline.

But the field reservoir contains relatively valuable light oil. And the reservoir lies within the Nanushuk formation, a rock unit that has attracted much interest of late because of major oil finds in the formation in the Colville River Delta region. The reservoir rocks at Umiat are relatively shallow and partially within the permafrost zone, factors which, while enabling relatively shallow drilling, also present challenges in that the oil is relatively cold for production and transportation.

Over a number of years consultancy firm Ryder Scott Co. has conducted several assessments of the field. In the latest of these assessments, conducted in 2015 after the 2014 fall in oil prices, the consultancy estimated a 50 percent probability of nearly 99 million barrels of oil being economically recoverable and a 10 percent chance of more than 154 million recoverable barrels. Based on

previous assessments, the total volume of oil in place in the field appears to be substantially higher than these recoverable volumes.

Linc completed two wells in the field as part of its evaluation of the field's potential. The second of these wells, a horizontal well completed in early 2014, achieved a sustained flow rate of 250 barrels per day of oil and a peak rate of 800 barrels per day. Linc said that the use of gas drive could push the production rate as high as 2,000 barrels per day.

Development plans

At various times Linc proposed different development plans for the field. Although one plan envisaged the drilling of approximately 150 development wells from 13 drilling pads, a more recent plan, published in October 2015, involved drilling 35 wells from five pads.

—ALAN BAILEY

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WOTUS REDEFINITION

and waterways, because the definition determines which projects become subject to federal jurisdiction and federal permitting. The definition tends to be controversial because it raises issues regarding the extent of federal jurisdiction within states and the relative rights of federal and state authorities to manage lands within the borders of the United States. The situation is particularly touchy in Alaska because of the state's myriad rivers, streams, lakes and wetlands.

Federal jurisdiction over waterways is simple in principle in that most people agree that the federal government can regulate navigable waters that are capable of supporting interstate commerce. But

where do the waters of the U.S. end and local or state waters begin? Water flowing into those more obvious U.S. waters can carry contaminants from other water bodies that are less clearly federal. Under the 2015 EPA rule, tributaries to the more obvious U.S. water bodies, as well as wetlands adjacent to these tributaries and navigable waters impounded behind dams are all subject to federal jurisdiction.

Regulatory confusion

Confusion over exactly where waters of the U.S. end and state waters begin has inevitably led to litigation, with individual federal decisions over the scope of water permitting being challenged through the courts. In fact, the 2015 rule is currently subject to a stay invoked by the U.S. Court of Appeals for the 6th

Circuit as a consequence of an appeal against that rule. EPA says that it wants to revoke the stayed rule.

When an earlier dispute over federal water jurisdiction reached the U.S. Supreme Court in 2006, the justices did little to settle the water-borne confusion when they failed to reach a majority decision, instead publishing two distinct opinions on the subject. Trump's February order referred to one of these opinions, the opinion expressed by Justice Scalia. Scalia argued for a relatively narrow definition of WOTUS, restricting the federal waters to streams, oceans, rivers and lakes, and excluding temporary water bodies and wetlands. An alternative opinion expressed by Justice Stevens took a broader view, arguing that pollution in wetlands adjacent to tributaries of navigable waters could impact the navigable

waters.

Attempted clarification

Following the 2006 court case, federal agencies took to issuing guidance on how they would interpret the meaning of WOTUS, while still relying on WOTUS regulations that mostly dated back to 1977. The 2015 WOTUS rule was an attempt to achieve regulatory clarity, albeit with a very broad view of the WOTUS definition. The Trump administration clearly now wants to establish a much narrower definition. The proposed rule rolling back the 2015 definition is the first step of a two-step process. The second step will involve rolling out a new WOTUS definition. ●

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BLUECREST DRILLING

alternative source of funding for continuation of the drilling, in which case the drilling will resume. The company operates its own drilling rig at Cosmopolitan and will park the rig at the field once the drilling stops. The cessation of drilling will impact several hundred jobs, primarily on the Kenai Peninsula, Johnson said.

BlueCrest invested more than \$400 million of its own funds in the field development program but based its economics on cost-sharing offered by the state, Johnson said. The full development program at the field could involve the drilling of more than 20 new wells over a seven-year timeframe, he said.

"This project has a tremendous amount of value. It offers the opportunity for years and years of good, viable drilling to develop the hundreds of millions of barrels of oil in the ground," Johnson said. "But we relied on the state's commitment that they were going to participate in the funding in the project."

The company has built one of the largest production facilities on the Kenai Peninsula, using state-of-the-art technology for environmental protection, he commented.

Directional drilling

Although the field reservoir lies offshore under the waters of Cook Inlet, the field is being developed using extreme directional drilling from an onshore pad near Anchor Point. Oil production began in April 2016 from a converted exploration well, the Hansen 1AL 1. But continuing development of the field required an especially powerful drilling rig, capable of drilling directionally to measured depths of up to 24,000 feet. The idea has been to penetrate the field reservoir horizontally at a vertical depth of about 7,000 feet.

Given the compartmentalized nature of the reservoir, field development also requires hydraulic fracturing of the wells to open up impervious barriers in the reservoir rocks. However, unlike in a shale oil play, where regular drilling and fracking are required to maintain oil production, each of the Cosmopolitan wells will be produced in a conventional manner over an extended period of time.

New drilling rig

BlueCrest commissioned the construction of a suitable rig with a 750-ton top drive and a 7,500-pounds-per-square-inch drilling mud system. The company

obtained financial assistance in the form of a \$30 million loan from the Alaska Industrial Development and Export Authority for the acquisition and construction of the rig.

In November last year the company used the new rig to start drilling a first development well, the Hansen 16 well. Drilling of that well was finished in March and BlueCrest has hydraulically fractured the well. The company is still assessing the results of the fracking operation and has yet to complete the well for production, Johnson told Petroleum News. The company started drilling a second development well, the Hansen 14

well, in March and is currently drilling a long horizontal lateral section of that well. ●

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CONOCO EARNINGS

over the past four quarters.

Earning and taxes

ConocoPhillips reported earning \$215 million in revenue before income taxes from its Alaska operations during the second quarter, up from \$6 million during the first quarter and \$98 million during the second quarter of 2016. Income taxes and other tax adjustments brought the earnings down to \$167 million in the second quarter, up from \$99 million during the first quarter and \$54 million during the second quarter of 2016.

The earnings made Alaska the second most profitable segment for ConocoPhillips after its Asia Pacific and Middle East seg-

ment, which earned \$212 million during the quarter.

All told, ConocoPhillips reported \$178 million in adjusted earnings, reflecting a \$72 million loss in the Lower 48 and a \$215 million loss in its corporate segment.

The company reported an effective income tax rate of 7.4 percent in Alaska during the second quarter, up from negative 50.1 percent during the second quarter of 2016. With other taxes, the company reported a 32.2 percent tax rate in Alaska in the second quarter, up from 15.5 percent during the second quarter of 2016. The company also reported a 22.3 percent adjusted effective income tax rate in Alaska during the second quarter, up from negative 28.5 percent during the second quarter of 2016. The adjusted rate in Alaska is lower than all major operating regions except the negative

83.2 percent rate in Canada.

Asked about the impact of recent tax changes in Alaska, ConocoPhillips' Executive Vice President of Production, Drilling and Projects Al Hirschberg said that the changes made so far "really don't have any significant impact on us and so haven't had an impact on our plans in Alaska with what's happened so far." But, he added, ConocoPhillips continues to watch the debate and is "pretty sensitive to the fiscal regime up there."

Hirschberg credited Senate Bill 21 with allowing the company to increase its capital spending in Alaska and to devote a greater portion of its total capital spending to Alaska in recent years. "And if the tax regime changes, we would, of course, have to reevaluate that," Hirschberg added. "We have forward projects where we have control of the pace."

ConocoPhillips spent \$229 million on capital expenditures and investments in Alaska during the second quarter, up from \$228 million in the first quarter and \$183 million in the second quarter of 2016. The Alaska capital-spending program accounted for 22.4 percent of the \$1.02 billion spent across all segments in the second quarter this year, up from 16.1 percent of \$1.13 billion spent companywide in the second quarter of last year.

The company reported \$216 million in depreciation, depletion and amortization expenses in Alaska in the second quarter, down from \$235 million in the same period last year.

Production and prices

ConocoPhillips produced 184,000 barrels of oil equivalent per day in Alaska in the second quarter, down quarter-over-quarter for maintenance but up year-over-year.

The company produced 179,000 boe per day in the second quarter of 2016 and 191,000 boe per day in the first quarter of

this year. Alaska accounted for 12.8 percent of total company production of 1.437 million boe per day during the quarter, up from 11.5 percent in the second quarter of 2016.

The growth in Alaska production came despite sharp declines in natural gas production.

ConocoPhillips produced 169,000 barrels of oil per day in Alaska in the second quarter, up from 163,000 bpd in the second quarter of 2016 and down from 175,000 bpd in the first quarter of this year. By comparison, the company produced 179,000 bpd in the Lower 48 and 136,000 bpd in Europe and North Africa. All told, ConocoPhillips produced 590,000 bpd in the second quarter.

The company also produced 14,000 bpd of natural gas liquids from its Alaska operations during the second quarter of the year, down from 15,000 bpd in the first quarter and up from 11,000 bpd during the second quarter of 2016.

The company produced only 7 million cubic feet of natural gas per day in Alaska during the second quarter, even with the first quarter but down from 27 million cubic feet per day during the second quarter of 2016, reflecting the end of liquefied natural gas sales.

ConocoPhillips reported an average realized price of \$49.95 per barrel for Alaska crude oil during the second quarter, down from \$52.09 in the first quarter and up from \$44.39 during the second quarter of 2016. Alaska crude oil prices include natural gas liquids.

The company reported a natural gas price of \$1.43 per thousand cubic feet, down from \$3.53 per mcf in the first quarter and \$4.82 during the second quarter of 2016. The sharp decline in prices reflects the end of Cook Inlet natural gas production for the company. ●

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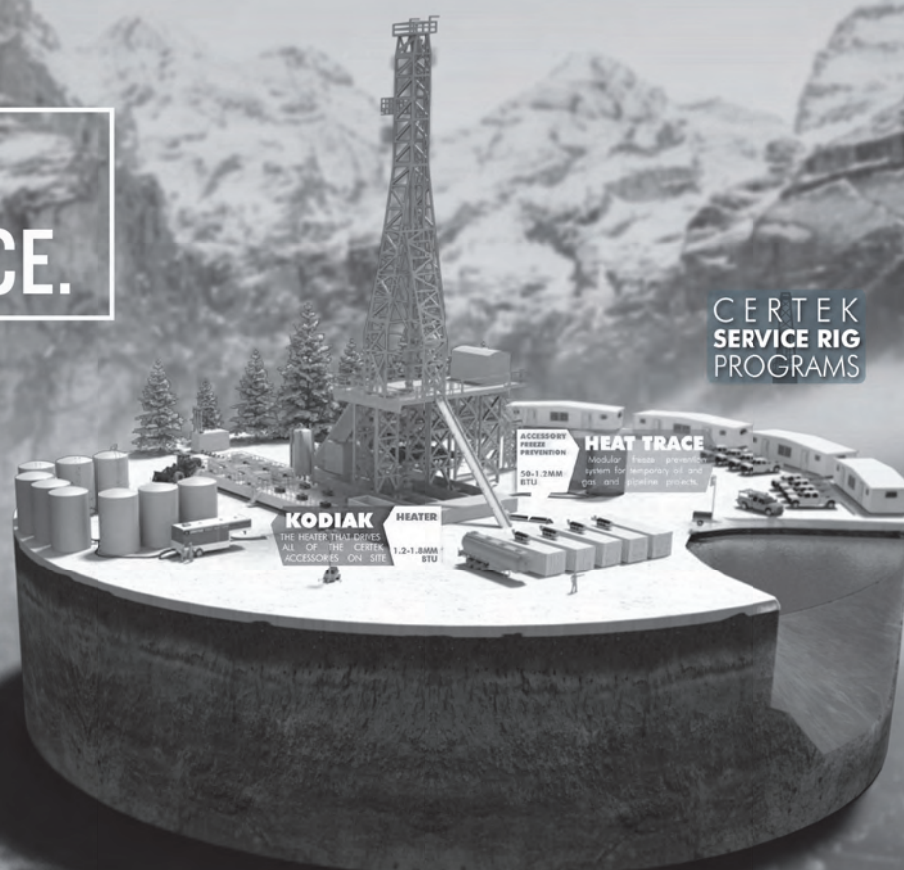


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