



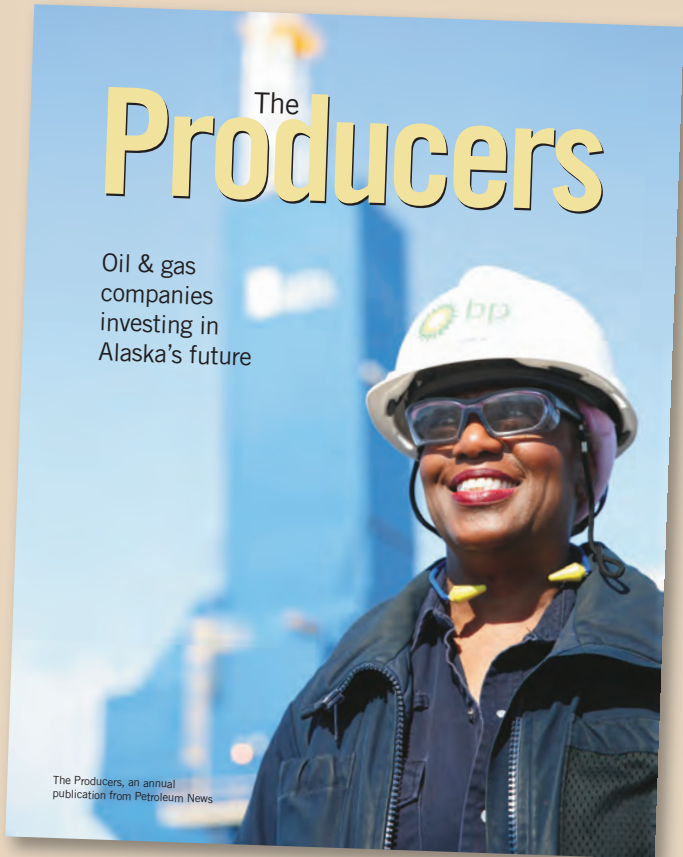
page 7 Zinke's Alaska advisor delivers strong message from Interior

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## 2017 Producers released



## Rumors of Great Bear closing false; Oil Search staffing up

Rumors of Great Bear Petroleum Operating LLC closing its doors are false, and probably stem from the Anchorage-based company letting go some of its technical people, Pat Galvin, Great Bear's chief commercial officer and general counsel, recently told Petroleum News.

"Great Bear currently holds outstanding cashable tax credit certificates worth approximately \$44 million. The state has previously purchased tax credits from Great Bear worth tens of millions, with the most recent purchase of approximately \$5 million this past August from the appropriation approved by the Legislature this summer," Galvin said.

As a result of the unpaid tax credits and difficulties bor-

see **INSIDER** page 14

## IGU Pentex decision set Dec. 5

The Interior Gas Utility has moved the date for its decision on whether to purchase Pentex Natural Gas Co. from Nov. 28 to the IGU board meeting on Dec. 5. During its Nov. 7 meeting the IGU board had indicated a Nov. 28 decision date but, as reported by the Fairbanks Daily News-Miner, the date was later set to Dec. 5. Jomo Stewart, CEO of IGU, has told Petroleum News that the idea is to allow time for public meetings concerning the purchase in Fairbanks and North Pole on Nov. 21 and 28.

The Alaska Industrial Development and Export Authority currently owns Pentex, which owns gas utility Fairbanks Natural Gas, a liquefied natural gas plant near Point Mackenzie, and a trucking operation for the shipment of LNG

see **PENTEX DECISION** page 14

## EXPLORATION & PRODUCTION

# More prospects located

ConocoPhillips says new seismic technique reveals some new potential oil traps

By **ALAN BAILEY**

Petroleum News

By using a new seismic survey technique ConocoPhillips has identified new untested potential oil traps on Alaska's North Slope, Al Hirshberg, the company's executive vice president for drilling and projects, commented during the company's annual analyst and investor meeting on Nov. 8.

Matt Fox, ConocoPhillips executive vice president for exploration and technology, told the meeting that the company's Willow discovery in the northeastern NPR-A had enabled the calibration of seismic techniques to specifically search for simi-

*"But every one of them we've drilled so far has had oil in it, so we're hopeful that several of these Willow lookalikes will deliver additional production," Fox said.*

lar prospects.

"When we did that we could see a lot of follow up potential on the seismic structures and the sediments that look the same size as Willow, many of them right across that area," Fox said.

ConocoPhillips has said that the Willow discovery, announced in January of this year, may hold

see **MORE PROSPECTS** page 16

## EXPLORATION & PRODUCTION

# First oil at 1H NEWS

Conoco's Bruner says 2nd CD5 expansion planned, 10 more wells, first oil in 2019

By **KRISTEN NELSON**

Petroleum News

There is tremendous opportunity for ConocoPhillips on the North Slope, but there are challenges and capital is scarce, Lisa Bruner, the company's vice president of North Slope operations and development, told the Resource Development Council's annual conference Nov. 15 in Anchorage.

An example of both opportunity and challenge is 1H NEWS, the Northeast West Sak development at 1H pad in the Kuparuk River unit. The company took the opportunity of the conference to announce



LISA BRUNER

the startup, on Nov. 4, two months early, of viscous oil production from 1H NEWS.

Bruner said 1H NEWS, which involves in-fill wells in the West Sak field, was sanctioned in 2015. But in 2016, when oil dropped to \$28 a barrel, the project was significantly challenged, was put on hold and teams working on it went back to the drawing board.

She said ConocoPhillips went back to work on the project early this year, with facilities installed through the last winter season and drilling beginning in August.

see **FIRST OIL** page 15

## FINANCE & ECONOMY

# Oil price continues climb

Questions over what's fueling price uptick, what it may mean for Alaska industry

By **ALAN BAILEY**

Petroleum News

Continuing from what had already been characterized in mid-October as a bull market for oil, the oil price has maintained its upwards trajectory. Brent crude passed \$60 per barrel on Oct. 27 and reached a peak of \$64.26 on Nov. 6, according to data from oilprice.com. Since then the price has slightly declined but has remained comfortably above the \$60 level. According to data from the Alaska Department of Revenue, the price of North Slope crude has quite closely tracked the Brent price. But does this price trend represent a sustained

*According to various media sources, the drivers of the price rise remain a subject for debate, thus suggesting continuing uncertainty over where the price may go from here.*

price rise? And what do the new price levels mean for the Alaska oil and gas industry?

## Subject for debate

According to various media sources, the drivers

see **OIL PRICE** page 16



GOVERNMENT

# Continued questions over AOGCC bonding

Briefings in Aurora Gas bankruptcy case question the \$3.6 million in bonding the commission requires for Nikolai Creek wells

By **ALAN BAILEY**  
*Petroleum News*

**A**head of a bankruptcy court hearing on Nov. 17 there have been court filings, questioning an order by the Alaska Oil and Gas Conservation Commission, requiring Aurora Exploration to post a \$3.6 million surety bond if the company is to purchase the Nikolai Creek gas field from Aurora Gas. Aurora Gas and Corri Feige, a previous director of Alaska’s Division of Oil and Gas, have filed briefs, supporting Aurora Exploration’s position, opposing the high bonding level.

The bonding requirement would cover the cost of plugging and abandoning all of the gas field’s six wells, assuming a cost per well of \$600,000. In the past, the commission has imposed a bond of \$100,000 for a single well, and a bond of \$200,000 for all of an operator’s wells in Alaska. The commission’s regulations allow the

imposition of a higher bond than \$200,000, if the commission sees fit.

AOGCC originally imposed a \$6 million bond for Nikolai Creek, but with an alternative possibility involving Aurora Exploration having a lower bonding level if the company plugged and abandoned some other Aurora Gas wells that Aurora Exploration had no interest in purchasing. Following a hearing, the commission reduced the bonding level in the order to \$3.6 million and removed the alternative remedy — the judge in the bankruptcy court had already kicked out the order as contravening bankruptcy law because of the alternative remedy in the order.

**Purchase arises from bankruptcy**

Aurora Exploration’s proposed purchase of Nikolai Creek arises from the bankruptcy of Aurora Gas. As part of bankruptcy proceedings, Aurora Gas is trying to dis-

pose of its assets and has agreed to sell Nikolai Creek to Aurora Gas. To take over as operator of Nikolai Creek, Aurora Exploration needs approval from both the Alaska Department of Natural Resources and the AOGCC. The company has agreed terms with DNR for provisions for the eventual restoration of surface lands at Nikolai Creek but has hit an impasse over the AOGCC bonding requirement.

Aurora Exploration has said that the bonding requirement would render the field uneconomic. And if the purchase of the field falls through, Aurora Gas does not have the financial resources to plug and abandon the Nikolai Creek wells. Consequently, the state would presumably have to pick up much or all of the plugging and abandonment costs. And, since there is no other purchaser for the field, the field would close, precluding the possibility of achieving maximum gas recovery.

see **BONDING QUESTIONS** page 3

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## ● FINANCE &amp; ECONOMY

# EIA estimates US crude at 9.3 million bpd

Agency says Brent expected to average \$53 this year, \$56 in 2018; WTI forecast at almost \$5 below Brent in 2018; had been \$2 lower

By KRISTEN NELSON  
Petroleum News

West Texas Intermediate crude oil prices are forecast to be some \$5 per barrel lower than Brent in 2018, the U.S. Energy Information Administration said in its November Short-Term Energy Outlook.

“Brent crude oil prices averaged almost \$58 per barrel in October, the highest monthly average since June 2015, as global oil stocks have fallen by an estimated 400,000 barrels per day over the past six months,” EIA acting Administrator John Conti said in a statement accompanying the November release.

EIA expects Brent spot prices to average \$56 per barrel in 2018, up from an expected \$53 per barrel average this year.

WTI prices averaged \$2 per barrel lower than Brent through the first eight months of 2017, and then averaged \$6 per barrel lower in September and October, a spread EIA said it expects to see continue through the first quarter of 2018, with a narrowing to \$4 per barrel in the second half of 2018.

EIA said WTI crude oil differentials with Brent are near their widest for the year, with the WTI Cushing-Brent spread at \$6.09 on Nov. 2 and the WTI Midland-Brent spread at \$5.84 on that date. By comparison, the Light Louisiana Sweet-Brent spread was 34 cents Nov. 2.

## Transportation costs

EIA said the spread between WTI Cushing and Brent “likely reflects the transportation costs associated with bringing light sweet crude oil from Cushing, Oklahoma, to the U.S. Gulf Coast and the costs to export the crude oil to the marginal market.” Since LLS is produced in the Gulf of Mexico, “it competes with global waterborne crude oils without the same transportation costs faced by inland crude oil and, as a result, trades closer to Brent prices.”

The agency said pipeline expansions in recent years have increased crude flows into Cushing from Canada and the Bakken, contributing to relatively high crude oil stocks in the region. Increased output from the Permian basin in West Texas and New Mexico also flows into Cushing, while new pipeline connectivity has allowed more Permian barrels to flow directly to the Gulf Coast.

New pipeline capacity is expected to be brought online in the first quarter of 2018, but until then EIA said it expects Brent to remain some \$6 per barrel higher than WTI, with the spread expected to narrow to \$4 per barrel in the second half of the year, as a 400,000 barrel per day line from Midland to Sealy is expected to come online by the second quarter, increasing Permian flows to the Gulf Coast. EIA said the 200,000 bpd Diamond line from Cushing to Memphis,

Tennessee, scheduled for completion by the end of this year, could also begin to reduce stocks in Cushing.

## US production up

EIA said that U.S. crude oil production is estimated to have averaged 9.3 million bpd in October, down 90,000 bpd from September.

“Despite lower production in the Gulf of Mexico during October, mainly attributed to Hurricane Nate, total U.S. crude oil production averaged 9.3 million barrels per day for the month,” Conti said. “Our forecast continues to expect overall U.S. production to average 9.9 million barrels per day for all of 2018,” he said.

Gulf of Mexico production averaged 1.4 million bpd in October, EIA said, down 260,000 bpd from September.

The agency said it continues to forecast U.S. crude oil production to grow, with the average for 2017 expected to be 9.2 million bpd, growing to 9.9 million bpd in 2018, which would be the highest annual average production for the U.S.,

see EIA OUTLOOK page 4

continued from page 2

## BONDING QUESTIONS

### Aurora Gas: no precedent for increase

In its new filing, dated Nov. 8, Aurora Gas told the bankruptcy court that for decades transfers of field operatorships in Alaska have taken place upon submission of an application and the posting of a \$200,000 surety bond. The adequacy of this bonding has never been the subject of testimony, discussion or estimation in any past application for a change of field operatorship, Aurora Gas wrote. And, since the AOGCC had previously only required Aurora Gas to post a \$200,000 bond for all of its wells, including the Nicolai Creek well, why was the commission now requiring a major increase in the bond amount, especially since the bonding statutes and regulations have not changed since those Aurora Gas bonds were originally imposed, Aurora Gas asked. There are no other bonds of this magnitude imposed on oil and gas operators in the state and, thus, there is no precedent for this new bonding requirement, the company said.

Moreover, by issuing a revised version of a bonding order that the bankruptcy court had already declared illegal, AOGCC is in contempt of court, Aurora Gas argued.

### Feige: no order required

Feige told the court that there has

been no past occasion in which, for a transfer of well operatorship, the AOGCC has issued a bonding order of the type issued for the Nikolai Creek wells. A change of operator requires the new operator to file with the AOGCC a standard form, signed by both the old and the new operators, along with a \$200,000 bond. The AOGCC handles the form administratively, without issuing an order, Feige wrote.

Moreover, the only well surety bonds that the AOGCC has required in excess of \$200,000 have been well-specific bonds issued in conjunction with enforcement orders following regulation violations, she wrote.


In June the AOGCC held workshops to discuss potential changes to the commission’s bonding practices. But proposed changes have not been implemented and the oil industry has expressed concerns about the proposals. The AOGCC has not scheduled any follow up workshops or hearings, Feige said.

Feige also commented that the AOGCC has a statutory mandate to prevent hydrocarbon waste. A requirement for a bond that causes economic condemnation of the gas field creates a waste of known gas reserves, she said. Aurora Exploration is managed by respected and credible professionals who meet all of the state’s requirements to function as an operator, she wrote. ●


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## GOVERNMENT

# USCG Arctic Shield 2017 program ends

*This year's operations have included search and rescue, accident prevention activities and participation in training exercises*

By **ALAN BAILEY**  
Petroleum News

The U.S. Coast Guard has closed down its Arctic Shield 2017 operations, the agency announced Nov. 7. Arctic Shield, which began in 2009, involves deploying assets and personnel in the Arctic region during the open water season, in response to increased maritime activity in the region in recent years. This year's program began on July 1.

## Search and rescue

During the program the Coast Guard

*The Healy, the Coast Guard's medium-sized icebreaker, deployed from its base in Seattle to patrol the Bering, Chukchi and Beaufort seas in support of maritime domain awareness; search and rescue; community relations; partnership building; and scientific research, the Coast Guard said.*

conducted 20 search and missions, saving 16 lives and providing assistance to 23 other people, the Coast Guard said. These

responses include the medevac of an injured crew member from a Chinese research vessel near Nome; the rescue of two people from a sinking 23-foot skiff in Norton Sound; and the rescue of six lost hunters on Saint Lawrence Island, the agency said.

From the perspective of marine accident prevention, Coast Guard personnel conducted 29 bulk liquid facility inspections; 33 commercial fishing vessel safety examinations; 53 gold dredge examinations; and 12 commercial vessel inspections. Coast Guard personnel visited 41 remote villages, mainly in the Yukon-Kuskokwim Delta region, to instruct more than 4,000 children in water safety, as part of the state of Alaska's "Kid's Don't Float" campaign.

In conjunction with local, state, federal and tribal agencies, Coast Guard personnel participated in multiple search and rescue training exercises; the Arctic Guardian oil spill seminar and equipment deployment in Utqiagvik; and in a mass rescue table top exercise in St. Paul.

## Forward deployment

For this year's operations the Coast Guard deployed two Jayhawk helicopters and crews to Kotzebue, to enable more

rapid response and more complete coverage for incidents in remote regions of Alaska. The Sherman, a 378-foot cutter normally home ported in Honolulu, was home ported in Kodiak to support open water operations in the Arctic region, while the Maple, a 225-foot buoy tender home ported in Sitka.

The Healy, the Coast Guard's medium-sized icebreaker, deployed from its base in Seattle to patrol the Bering, Chukchi and Beaufort seas in support of maritime domain awareness; search and rescue; community relations; partnership building; and scientific research, the Coast Guard said.

"The Coast Guard is dedicated to ensuring the protection of the Arctic maritime environment and all those who depend upon it," said Rear Adm. Michael McAllister, Coast Guard 17th District commander. "Our crews recognize and respect the sensitive environmental characteristics of the region and partner with Northern Alaskan communities to advance our shared interests in maritime safety and security." ●

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## EIA OUTLOOK

surpassing the 9.6 million bpd record set in 1970.

## Natural gas

EIA is forecasting U.S. dry natural gas production to average 73.4 billion cubic feet per day this year, up 0.6 bcf per day from 2016. The 2018 level is forecast to be 5.5 bcf per day higher than this year.

The Henry Hub spot natural gas price averaged \$2.88 per million Btu in October, down 10 cents from September.

Natural gas exports and consumption are both expected to grow in 2018, contributing to a forecast Henry Hub spot price averaging \$3.10 per million Btu in 2018, up from \$3.01 this year.

Liquefied natural gas exports increased in October over September, but

despite growing export demand front-end futures prices remained in a narrow trading range, EIA said.

## Bonding

EIA said U.S. exploration and production companies issued \$3.6 billion in high-yield bonds in October, "the largest amount issued during any month in 2017." The agency said that Bloomberg data shows companies rated by at least one rating agency as below investment grade issued more bonds through October than in all of 2016.

"Many U.S. oil companies have been expanding drilling programs and development expenditures this year, and borrowing costs remain at levels similar to those when crude oil prices were more than \$100 (per barrel)," EIA said. ●

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• UTILITIES

# ARCTEC plans reliability organization

Seeking facilitator for formation of Railbelt Reliability Council to oversee reliability standards and integrated resource planning

By **ALAN BAILEY**  
*Petroleum News*

The Alaska Railbelt Cooperative Transmission and Electric Co. has notified the Regulatory Commission of Alaska that it has issued a request for proposal, seeking a facilitator for the formation of a Railbelt Reliability Council for the Alaska Railbelt electricity transmission grid. Although initially aimed at the adoption and enforcement of reliability standards for the grid, the council could eventually morph into becoming an independent or unified system operator for the Railbelt electrical system, ARCTEC told the commission.

In October the Railbelt electricity utilities told the commission that they were consolidating the two existing sets of reliability standards that apply to the grid and moving towards enforcement of unified standards. ARCTEC, with four of the six Railbelt utilities as members, was originally formed to advance the concept of having a system operator for the Railbelt.

## Significant progress

The utilities have been making significant progress in pooling their power generation and transmission assets, to minimize the cost of electricity for consumers. Another initiative in the works is the potential formation of a single transmis-

sion company to operate the Railbelt power transmissions system. The formation of a single operator to oversee policies and rules and to coordinate the pooling of power on the grid, is a tricky issue involving questions of who should have governance authority over the operator entity.

For this initial foray into the establishment of a unifying authority for the grid, ARCTEC says that the governance structure for the proposed council should include all of the Railbelt utilities and other stakeholders with appropriate technical and financial capability. Potential stakeholders include the RCA, the Alaska Energy Authority, the Renewable Energy

Alaska Project, the Building Owners and Managers Association, the Alaska Independent Power Producers Association and regional economic development councils, according to ARCTEC's request for proposal.

The council's initial scope of authority would likely include regional electricity grid reliability and regional integrated resource planning. The intent is to develop an agreed governance structure and functional description for the council by March 1, 2018, the request for proposal says. ●

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• NATURAL GAS

# AGDC inks MOU with PetroVietnam Gas

By **KRISTEN NELSON**  
*Petroleum News*

In a second announcement coming from President Donald Trump's recent Asian trip, the Alaska Gasline Development Corp. said Nov. 12 that it signed a memorandum of understanding with PetroVietnam Gas in Hanoi, setting forth the basic principles to collaborate on

potential opportunities of LNG supply from AGDC to serve LNG import projects in Vietnam.

This follows agreements signed Nov. 9 in Beijing (see story in Nov. 12 issue of Petroleum News) with China Petrochemical Corp., or Sinopec, CIC Capital Corp. and the Bank of China.

AGDC said the PetroVietnam Gas agreement was signed in Hanoi by executives of AGDC and PVGAS in

the presence of Trump and Vietnam President Tran Dai Quang.

PVGAS is a subsidiary of state-owned PetroVietnam and is developing LNG receiving and regasification terminals in Vietnam to provide natural gas to newly built and proposed power plants and existing gas users.


AGDC President Keith Meyer said the agreement


see **AGDC SIGNING** page 11

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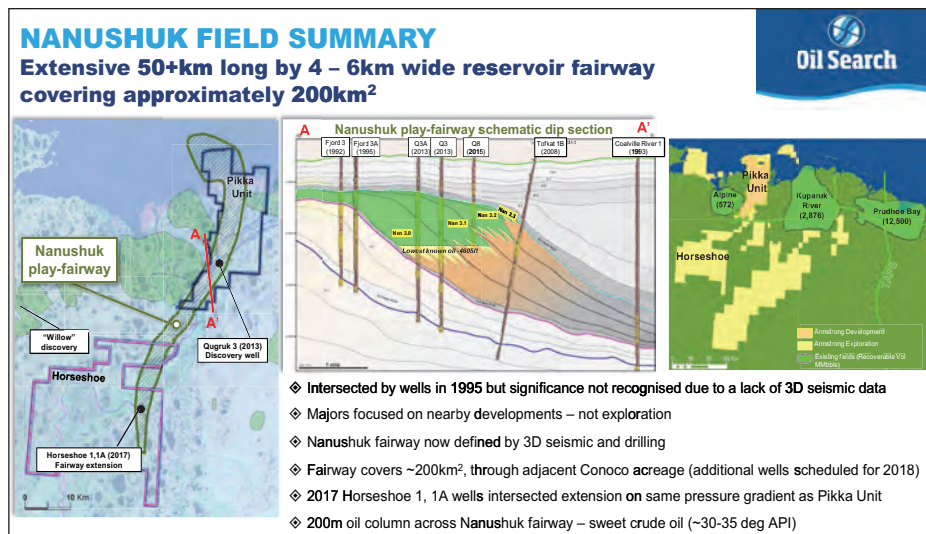
## ● EXPLORATION &amp; PRODUCTION

# How Oil Search views Nanushuk development

Papua New Guinea-company funding acquisition from cash; looks to project financing for development; 500 million barrels initially

By KRISTEN NELSON

Petroleum News



As reported in the Nov. 5 issue of Petroleum News, Oil Search is in the process of acquiring a portion of Armstrong Energy and GMT Exploration's Pikka and Horseshoe assets for \$400 million. Oil Search, which operates in Papua New Guinea, said that amount is for an estimated discovery of some 500 million barrels of oil.

Oil Search will fund 2018 capital expenditures of some \$50 million and become operator in June. The company has the right to acquire the remainder of Armstrong and GMT's Pikka and Horseshoe and related

*The company told analysts that the \$4 billion for 500 million barrels would be the first phase of development, producing out of Nanushuk, with first oil expected in 2023.*

exploration assets for \$450 million.

In a Nov. 1 analysts' presentation, Oil Search pegged the development cost at an estimated \$4 billion for the 500 million barrel resource size. The company said it would use project financing and estimated that its equity funding requirement would be \$300 million to \$400 million, payable over a three-year construction period. It said country stability and maturity of the industry made project financing for Alaska projects readily available.

## Funding from cash position

Oil Search said its current liquidity is some \$2 billion, \$1.2 billion in cash and \$850 million in undrawn corporate facilities, with the initial \$400 million purchase funded from surplus cash.

The company, which operates oil fields in Papua New Guinea and is a partner in the PNG LNG project, said the Alaska purchase would be funded from its existing cash position; there would be no requirement to raise equity.

Repsol, which has partnered with Armstrong and GMT, holds a 49 percent interest in Pikka and Horseshoe. Repsol said in March after drilling of the Horseshoe wells that they extended by 20 miles the play found at Pikka and said it believed the Pikka-Horseshoe resource could be 1.2 billion barrels, with a production rate which could approach 120,000 barrels per day.

Depending on the size of the accumulation, the acquisition cost ranges from \$3.10 per barrel to \$1.30 per barrel of discovered resource, Oil Search said.

The company told analysts that the \$4 billion for 500 million barrels would be the first phase of development, producing out of Nanushuk, with first oil expected in 2023.

*Appraisal drilling would take place in 2018, followed by front-end engineering and design in 2019, a final investment decision in 2020 and first oil in 2023.*

## Appraisal drilling

Appraisal drilling would take place in 2018, followed by front-end engineering and design in 2019, a final investment decision in 2020 and first oil in 2023.

A single appraisal well is planned for 2017-18, Oil Search said, with three to six appraisal wells planned for 2018-19.

Development would take place from three drill sites, with an estimated 60 producers and 60 injectors and a single processing facility; exploration would be ongoing, the company said. ●

Contact Kristen Nelson  
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## NEWS NUGGETS

Compiled by Shane Lasley



TRILOGY METALS INC.

The Bornite camp served as headquarters for roughly US\$17 million of exploration and pre-feasibility work at Bornite and Arctic, two high-grade metals deposits about 200 miles west of the Dalton Highway in Northwest Alaska.

### PFS, scoping pave road to Arctic

Trilogy Metals Inc. Nov. 10 filed a National Instrument 43-101 technical report that supports the April resources estimate for the Arctic project in Northwest Alaska. At a 0.5 percent copper-equivalent cut-off grade, the April estimate outlines 36 million metric tons of in-pit indicated resources averaging 3.07 percent (2.44 billion pounds) copper, 4.23 percent (3.36 billion lb) zinc, 0.73 percent (581 million lb) lead, 0.63 grams per metric ton (728,000 ounces) gold and 47.6 g/t (55 million oz) silver. Trilogy said this resource is sufficient to support the upcoming Arctic pre-feasibility study, which is slated for completion in the first quarter of 2018. "Arctic is pretty special – we predict it will be one of the highest grade open pit copper projects in the world," said Trilogy Metals President and CEO Rick Van Nieuwenhuyse. "Arctic is also located in the geographic center of a 100-kilometer- (60 miles) long belt containing over two dozen known grade polymetallic deposits and occurrences. It is not hard to envision a central milling concept with the other deposits potentially feeding the mill beyond the mine life at Arctic."

The Arctic Mine being considered in the PFS, along with dozens of other minerals deposits and prospects in this metals rich region of Northwest Alaska, would be accessed by the Ambler Mining District Industrial Access Project, a proposed road that would extend 211 miles west from the Dalton Highway. The U.S. Bureau of Land Management is currently working on an environmental impact statement and is collecting public input for the proposed road to the Ambler district. A series of meeting to collect public input on the road proposal kicked off in the Northwest Alaska village of Allakaket on Nov. 13. A total of 11 meetings are scheduled – nine in communities near the proposed road, a Nov. 16 meeting in Fairbanks and a Nov. 20 meeting at the Dena'ina Center in Anchorage. "With the Ambler Mining District Industrial Access Project now in the formal permitting process and public scoping meetings taking place, it is exciting to see the Ambler Access Road finally taking shape," said Van Nieuwenhuyse.

### Final holes test Pyramid edges

CopperBank Resources Corp. Nov. 14 reported results for the final seven holes of a 13-hole diamond drill program carried out this year at its Pyramid Copper project on the Alaskan Peninsula. Hole DDH 17PY037, which is entirely outside the historical resource, cut 331.6 meters of 0.31 per-

see NEWS NUGGETS page 8

## PUBLIC POLICY

# War on mining is over

Zinke's Alaska advisor delivers strong message from Interior Department

By SHANE LASLEY  
Mining News

When Steve Wackowski asked his superiors at the U.S. Department of Interior office in Washington D.C. for a message to deliver at the Alaska Miners Association's annual convention in Anchorage, their response put an exclamation point on a clear shift in federal policy since President Donald Trump took office – "The war on mining is over."

This does not mean the United States' mining sector has a new federal ally, but it does indicate that the Bureau of Land Management, National Park Service and other agencies under the DOI banner are willing to grant mining due consideration on federal multi-use lands.

Wackowski, who was sworn in as Interior Ryan Zinke's senior advisor for Alaska affairs in May, delivered this message during a Nov. 8 presentation at the AMA convention.

Alaska's main terminal to the Interior offices in Washington D.C. said Zinke has made it clear that it is the department's sacred duty to be stewards of the public lands under its domain and that the mining sector is held to the highest safety and environmental standards on those lands.

"But with that comes another priority given to us by our President – that is to remove the burdensome and unnecessary regulations that seem to have been written to put mining out of business," said Wackowski.

### Changing perception

Due to onerous policies, mining and mineral companies familiar with the landscape tend to sidestep federal lands in Alaska – especially those lands that fall under Interior Department agencies.

Mining executives, however, have been reluctant to publically express this discontent because of needing to deal with the Department of Interior and other federal agencies as a normal course of business – no matter whether it is state, federal or Alaska Native lands in which they are exploring or developing.

"Personally, we avoid working on federal lands," one such mining representative told Mining News.

This is particularly true at the exploration stage, according to a mining executive.

"Working on federal lands in Alaska is way more difficult than working on state lands, in terms of getting permits for exploration," he said.

Wackowski, a lifelong Alaskan and Air Force veteran that understands minerals increasingly important role in modern devices and America's military arsenal, has a personal reason to want to change this perception.

"I never want my sons to have to go fight for someone else's resources," he said.



STEVE WACKOWSKI

Wackowski and Zinke, both U.S. military veterans who have deployed overseas, have witnessed the environmental and social costs of resource extraction in foreign lands and have a shared belief that America would be better served to source a larger share of its resources on domestic soil.

"Particularly with oil and gas, we view energy dominance as a priority that will provide for a safer world (and

a more healthy American economy," he said.

Being an Alaskan and knowing the resource riches his home state has to offer, this conviction is especially strong for Wackowski.

### Reworking management plans

Wackowski sees a reworking of BLM's land management plans as one area the Interior Department can help make it easier for miners to do business on federal lands in Alaska.

"We understand that we have challenges with some of our land management plans," he said.

BLM is responsible for the management of 6.5 million acres in the federal government's Eastern Interior planning area, a roughly 30-million-acre, triangle-shaped expanse of eastern Alaska that stretches from the Yukon Territory border to a point about 240 miles into the interior of the state. This New York State-sized expanse blankets most of five historic mining districts – Fortymile, Goodpaster, Fairbanks, Circle and Tolovana (Livengood) – that have produced roughly 21 million ounces of gold and is known to host a broad range of other minerals.

A management plan finalized just before President Obama left office would place roughly 74 percent of BLM-administered lands in this minerals rich section of Alaska's Eastern Interior region off limits to mining for decades to come.

Wackowski, who visited with miners during a July trip to the Fortymile District, witnessed firsthand the livelihood family-run operations dig out of the ground in the district.

Aside from the large tracts land the pending Eastern Interior Management Plan puts off limits, Wackowski said the 1,500-page document is far too cumbersome for placer miners, mineral exploration companies and Alaska Native corporations trying to do business on BLM lands in the area.

"That is part of what we are going to try to address – to make it a little more simple and a little easier to do business on our federal lands," he said.

### Permitting Ambler Road

Permitting a road into the metals-rich Ambler Mining District is a high priority item for the Interior Department, according to Wackowski.

BLM is the lead agency for permitting the pro-

see WAR ON MINING page 9



## NORTHERN NEIGHBORS

Compiled by Shane Lasley



ROCKHAVEN RESOURCES LTD.

The results from a nearly 16,000-meter drill program completed this year at Rockhaven Resources' Klaza project will be incorporated into an updated resource estimate for this road accessible gold-silver project in southern Yukon.

### Rockhaven taps more high-grade gold, silver

Rockhaven Resources Ltd. Nov. 14 said the assay results from an additional 15 holes drilled this year continue to confirm and expand upon the high-grade gold and silver mineralization at the company's Klaza project in southern Yukon. Results from drilling in the West Klaza zone include 2.69 meters of 8.91 grams per metric ton gold and 452 g/t silver in hole 419; 2.26 meters of 8.54 g/t gold and 674 g/t silver in hole 412; and 1.01 meters of 6.18 g/t gold and 441 g/t silver in hole 414. Highlights from drilling in the Main Klaza zone include 7.41 meters of 3.77 g/t gold and 24.7 g/t silver in hole 389; 1.36 meters of 21.13 g/t gold and 116 g/t silver in hole 392; and 9.52 meters of 1.2 g/t gold and 22.1 g/t silver in hole 427. The Klaza zone is one of eleven main vein systems identified in the core of the Klaza property. The central and western parts of the zone and adjacent subsidiary structures have been traced over a combined 1,400 meters strike length and to a depth of 325 meters. Rockhaven has drilled 10,300 meters at the Klaza zone since the last resource was calculated at the end of 2015. "Drilling in 2017 has successfully expanded the area of mineralization and further confirmed the exceptional continuity of high-grade gold and silver veins within the Klaza Zone," said Rockhaven CEO Matt Turner. "We are currently revising the geological model for this zone and anticipate an updated resource estimate in early 2018." The 2017 program at Klaza included 15,922 meters of drilling in 96 holes. Assays are pending from 25 holes drilled this year.

### Brucejack gold costs low, heading lower

Pretium Resources Inc. Nov. 10 reported that it produced 82,203 ounces of gold and 83,233 oz of silver at its Brucejack Mine during the third quarter.

see **NORTHERN NEIGHBORS** page 9

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## NEWS NUGGETS

cent copper 0.12 grams per metric ton gold and 0.02 percent molybdenum. This intercept started from a depth of 7.3 meters and ran to the bottom of the hole. This hole was drilled to verify the orientation of the mineralization between the three mineralized zones at Pyramid – Main, North and West. CopperBank said the long intercept proves a link between the North and Main zones, and the copper mineralization is of a higher grade than in the West zone. Hole 17PY038, drilled in the North zone, cut 50 meters of 0.31 percent copper 0.24 g/t gold and 0.01 percent molybdenum. Hole 17PY039, drilled between the three zones, cut 56 meters of 0.34 percent copper and 0.08 g/t gold. Hole 17PY040, drilled to test outcropping chalcocite mineralization located south of the North zone, cut 302 meters of 0.1 percent copper, 0.06 g/t gold and 0.01 percent molybdenum. Hole 17PY041, drilled into the core of the West zone, cut 80.2 meters averaging 0.33 percent copper 0.02 g/t gold and 0.01 percent molybdenum. Hole 17PY042, which tested an eastern extension of the North zone, cut 240.9 meters averaging 0.12 percent copper, 0.04 g/t gold and 0.03 percent molybdenum. Hole 17PY043, which tested a potential northern extension of the West zone, cut 32 meters of 0.15 percent copper, 0.01 g/t gold and 0.01 percent molybdenum. The 3,690-meter drill program completed this year was designed to verify the extensions of known mineralization within the deposit and to validate a historical resource estimate calculated in 2013. "The 2017 drilling campaign at Pyramid has achieved its goal of confirming the presence of significant copper mineralization as well as identifying the extension of higher grade zones falling outside of the historical resource envelope. With these results now in hand, we expect an updated resource estimate to be completed in the coming months," said CopperBank Executive Chairman Gianni Kovacevic. "The data acquired as part of this most recent drill program has significantly increased our understanding of the deposit and will additionally help define a follow-on work program at Pyramid in 2018." The 2013 estimate outlined 122.5 million metric tons of inferred resource averaging 0.41 percent (1.1 billion pounds) copper, 0.1 grams per metric ton (389,000 ounces) gold and 0.021 percent (56.7 million lb) molybdenum.

### Royal Gold nears earn-in at Peak

Contango ORE Inc. Nov. 10 reported that Royal Gold Inc. has invested US\$28.7 million into the Peak Gold project in eastern Alaska, which nears the US\$30 million required to earn a 40 percent joint venture interest in the project. Once Royal Gold has earned its interest, Contango ORE will pay 60 percent of the expenditures at Peak Gold, formerly known as the Tetlin project, and Royal Gold will pay 40 percent. Contango ORE recently raised US\$1.2 million through the exercise of 124,999 warrants issued in 2013. The holders of these warrants were offered a 5 percent discount to exercise the warrants early, providing Contango ORE with additional financial

flexibility. In unrelated transactions, 260,000 warrants were exercised in a cashless exercise at their original US\$10 exercise price, leaving 196,000 warrants outstanding. Contango ORE now has US\$16 million in cash with no debt, enough to cover its share of joint venture capital and overhead expenses for the foreseeable future.

The phase III program at Peak Gold, completed in mid-October, included eight holes offsetting the previously announced West Peak Extension area. While five of these holes intersected gold bearing mineralization, the thickness was not comparable to the earlier drilling that piqued interest in this zone just north of the Main Peak deposit. Contango ORE said future drilling at Peak West will depend upon final interpretation of the data by the joint venture's exploration team. Two holes were also drilled near the North Peak area, assays are pending.

The Peak Gold exploration team also completed systematic stream sediment sampling program at Noah, a 75,400-acre block of state mining claims east of the Tetlin Village leased claims where the Peak zones are located. Contango said the sampling has identified three areas with anomalous gold or gold-copper stream sediments. "The exploration team will continue to focus on identifying additional mineral resources that can add to our already defined mineral resources at Main Peak and North Peak, while advancing our understanding of these gold and gold-copper anomalies in the Noah block. We are encouraged by the Noah block stream sediment sampling results and will see our understanding of this exciting area advancing in the 2018 exploration season," said Contango ORE President Brad Juneau.

### Fort Knox on pace for 400,000 oz

Kinross Gold Corp. Nov. 8 reported that its Fort Knox Mine near Fairbanks, Alaska, produced 101,077 ounces of gold during the third quarter, a roughly 8 percent decrease from the 110,396 oz recovered during the same period last year. The company attributes the decrease to lower tonnage stacked on the heap leach pad. The Fort Knox mill processed 3.23 million metric tons of ore averaging 0.78 grams per metric ton gold during the quarter, compared to 3.27 million metric tons averaging 0.68 g/t last year. Additionally, 6.09 million metric tons of ore averaging 0.26 g/t gold was processed on the heap leach pad, compared to 9.51 million metric tons averaging 0.26 g/t during the third quarter of 2016. The per-ounce cost of Fort Knox gold sold during the third quarter was US\$641, a 14 percent drop from the US\$743 production cost of sales during the same period last year. Kinross attributes the lower production costs largely to a decrease in operating waste mined and lower contractor costs as the site began to transition more of its maintenance in-house. During the first nine months of 2017, Fort Knox produced 285,933 oz of gold, down about 2 percent from the 292,465 oz during the first three quarters of 2016. Considering the fourth quarter is typically the highest gold producing month for Fort Knox, the Interior Alaska mine is on pace to produce just under 400,000 ounces of gold in 2017. ●



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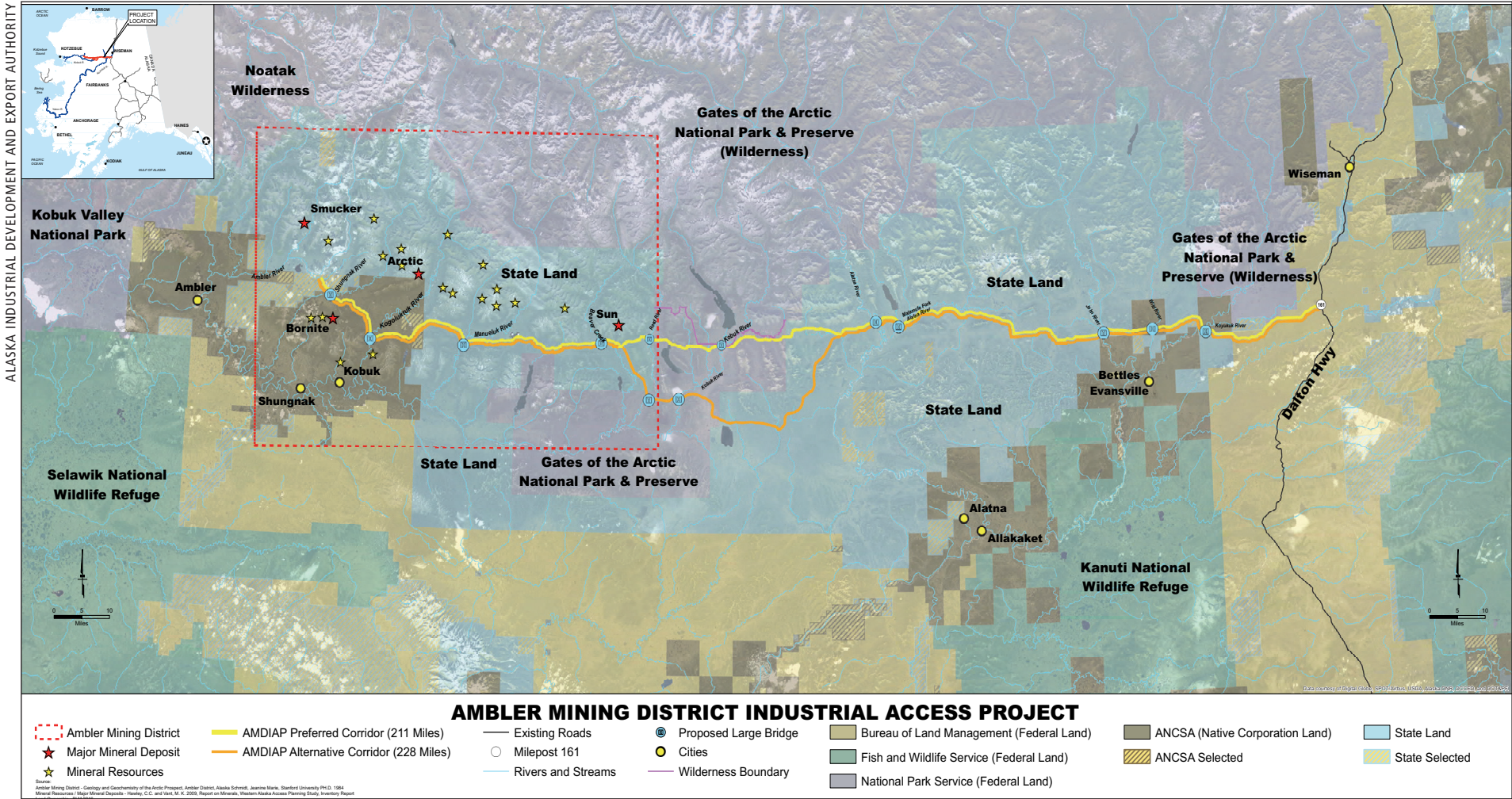
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## WAR ON MINING

posed Ambler Road, which would extend west 211 miles from the Dalton Highway to the Ambler district.

The Upper Kobuk Mineral Projects – an expansive minerals property being advanced under a partnership between Trilogy Metals Inc., South32 Ltd. and NANA Regional Corp. – lies at the western end of the proposed road.

UKMP hosts dozens of high-grade copper and multi-metal deposits and prospects.

The most advanced is Arctic, a volcanogenic massive sulfide deposit with 2.44 billion pounds copper, 3.36 billion lb zinc, 581 million lb lead, 728,000 ounces gold and 55 million oz silver.

“It is a spectacular deposit – 40 million tonnes roughly of 5 percent copper-equivalent,” said Trilogy President and CEO Rick Van Nieuwenhuysse.

Trilogy is currently finalizing a pre-feasibility study that will detail the plans to mine Arctic.

*“The war on mining is over, so please help us find a way to help you guys out.”*  
–Steve Wackowski, senior advisor for Alaska affairs, U.S. Department of Interior

The concentrates produced from such a mine will need to be shipped to refineries for further processing, which is where the need for the Ambler Road comes in.

In 2015, Trilogy and the Alaska Industrial Development and Export Authority entered into a memorandum of understanding that paves the way for the quasi-state-owned development authority to advance the Ambler Road.

A similar agreement to build the Delong Mountain Transportation System, a road and port facility linking the Red Dog zinc-lead mine to world markets, has proven to be a good investment for AIDEA and the state.

Ideally, the Ambler Road and Arctic Mine would be completed about the same time. To keep the road side of this on schedule, AIDEA submitted applications for

rights-of-way, permits and related authorizations needed for the road in 2016.

BLM is currently working on an environmental impact statement and is collecting public input for the proposed Ambler Road, formally known as the Ambler Mining District Industrial Access Project.

The public comment period for the Ambler Road ends on Jan. 31.

### The war is over

Wackowski said that he has witnessed firsthand the high-wage jobs Alaska mines have to offer and the Interior Department under the Trump Administration is dedicated to do what it can to support more of these jobs.

“Engage with us to let us know how we can get more good paying jobs like that here in this state and across the nation,” Alaska’s advisor to Secretary Zinke offered.

He closed his presentation by reaffirming the truce called at the beginning.

“The war on mining is over, so please help us find a way to help you guys out,” he said. ●

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## NORTHERN NEIGHBORS

Commercial production at this northwestern British Columbia operation began on July 1 and during the first month of operation the mill feed was predominantly from low-grade stockpiles and development muck. As the mine ramp-up progressed, more stope ore was fed directly to the mill which improved production results. The mill processed 261,262 metric tons of this material during the quarter, which equates to roughly 2,840 metric tons per day. The material processed averaged 10.5 grams per metric ton gold and recovery was 96.5 percent. We continue to review the mill process to optimize recoveries. With the mill now exclusively processing stope ore, gold production has increased. Pretium said all of the main operating units in the mill building are performing as expected, and the plant is consistently operating at or above nameplate capacity of 2,700 metric tons per day. The company sold 55,413 oz of gold at US\$1,281/oz during the third quarter,

see **NORTHERN NEIGHBORS** page 10

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Snow still clings to the high alpine terrain during the July ramp-up of commercial production at Pretium Resources Brucejack gold mine in northwestern British Columbia.

PRETIUM RESOURCES INC.

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## NORTHERN NEIGHBORS

generating US\$71 million in revenue. The company also received US\$300,000 from the sale of 19,846 oz of silver during the quarter. Production costs for the three months ended Sept. 30 were US\$33.9 million. Pretium also incurred US\$1.8 million in selling costs and US\$1.1 million in royalty expense during the quarter. Total cash costs for the third quarter were US\$656/oz of gold sold. Pretium expects that higher sales will bring these costs down during the final quarter of 2017. The all in sustaining costs per ounce of Brucejack gold sold during the third quarter were US\$788.

Pretium's 2017 regional grassroots exploration program was designed to follow-up on priority areas identified on the Brucejack property as far as 20 kilometers (12.5 miles) east of the Brucejack Mine. Prospecting, sampling, surveying and mapping completed as part of the program were delayed due to the late snow melt. Results from the field work will be used to refine drill targets for 2018.

## TerraX explores gold potential at Eastbelt

TerraX Minerals Inc. Nov. 13 said surface sampling has significantly expanded Duck Lake zone at Eastbelt, one of three large land packages that make up the company's Yellowknife City Gold project immediately adjacent to the capital of

Northwest Territories. In July, TerraX reported that surface sampling had identified flat dipping quartz veins ranging up to 1 meter thick exposed over a strike length of at least 500 meters at Duck Lake. The highest grade samples collected from Duck Lake during this initial prospecting were 20.3 grams per metric ton and 19.35 g/t gold. Further prospecting and mapping programs have extended the gold mineralization associated with the Duck Lake structures 2,000 meters south of the Duck Lake discovery into the main granite intrusive areas and 3,000 meters east into a narrow neck of granite intrusion. TerraX said "flat" stacked veins in close proximity with granite intrusions identified at Duck Lake are similar to the Lamaque style deposits in Val d'Or, Quebec. TerraX geologists collected 159 outcrop grab samples at Duck Lake – 31 quartz vein samples (flat veins) hosted in granites with grades up to 1.21 g/t gold; 34 composite quartz vein and granite samples with grades up to 6.19 g/t gold; 26 granite samples proximal to quartz veins with grades up to 1.09 g/t gold; and 68 flat veins within metamorphic sediments with grades up to 35.4 g/t gold. TerraX plans to analyze the detailed mapping that was carried out during the prospecting at Duck Lake, with the goal of identifying intrusive centers and the more favorable intrusive rock types for gold mineralization. This work will be assisted by airborne magnetic, radiometric and electromagnetic surveys which were carried out this summer, along with lake sediment and biogeochemical surveys completed this fall. ●

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• FINANCE & ECONOMY

# Oil price surge might be short term

*Up on economic growth, fear of instability; sharp increases since mid-June; prices still below 2014 peaks; US pumps at record rate*

By **CARLO PIOVANO & DAVID KOENIG**

Associated Press

**O**il prices have jumped by about one-third since the summer on signs of stronger economic growth around the world and fear of instability in the Middle East.

So far, however, the run-up isn't setting off alarm bells. Prices remain far below their 2014 peaks. And U.S. producers are pumping at a record rate, leading some experts to bet that the higher prices won't last long.

At midday Nov. 13, Brent crude, the benchmark international price, was down 27 cents to \$63.25, while the standard for U.S. oil was up 10 cents to \$56.84.

## Slightly higher inflation

Those are sharp increases since mid-June — about 35 percent for U.S. crude, nearly 40 percent for Brent.

"That means slightly higher inflation, but we're not talking about unmanageable prices," said Diane Swonk, chief economist of DS Economics. "If it got back to \$100 a barrel, then we would have a real problem."

Swonk said discretionary spending by consumers seems to be holding up despite the increase that has already shown up at the pump. In her mind and those of other economists, we are in better shape to manage higher energy prices for many reasons including a stronger economy and job growth.

Still, consumers will feel the effect, even if it's less dramatic than price spikes in 2008 and 2014. In the U.S., the average price for a gallon of regular gasoline has risen 30 cents since early July.

## Higher fuel price impacts

*continued from page 5*

## AGDC SIGNING

with PVGAS "fits very well with AGDC's broader marketing program and recently announced deal with Sinopec, which leaves a portion of the Alaska LNG production capacity with AGDC for sale in regional Asian markets such as Vietnam."

Duong Manh Son, president and CEO of PVGAS, said: "Alaska's market proximity and enormous resource base present an attractive opportunity for PVGAS to provide stable and secure gas supply to Vietnamese industrial users and citizens, and upstream investment opportunities for a bright long-term future."

No timelines were noted in the statement on the PVGAS MOU.

In its Nov. 9 announcement on what it called a joint development agreement with China, AGDC said that under that agreement "the parties have agreed to work cooperatively on LNG marketing, financing, investment model and China content in Alaska LNG, and get a periodic result by 2018." ●

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Higher fuel costs show up in all kinds of things consumers buy, but some industries are particularly vulnerable. For airlines, for instance, jet fuel rivals labor as the biggest cost — each accounts for about one-third of all expenses.

Helene Becker, an analyst for Cowen and Co., said that with oil in the mid-\$60s, she expects airlines to attempt to raise ticket prices. If fuel prices continue to rise, she said, the airlines will cut back on plans to increase flying next year. That could tighten the supply of airline seats, driving prices yet higher.

Andrew Kenningham, chief global economist at Capital Economics in London, said however that the impact of

higher oil prices on companies and households will be limited because for the year as a whole, average oil prices are up only slightly over 2016.

"So far the price moves have not been huge, so the economic impact shouldn't be that large," Kenningham said. He called the increase in average prices for 2017 "trivial" compared with the collapse from around \$115 to less than \$30 a barrel that occurred between mid-2014 and early 2016.

## Rise began this summer

Crude prices began rising this summer as positive signs rolled in for the world's biggest energy-hungry economies: the

U.S., Europe and China. Prices were also influenced as expectations grew that OPEC would continue to limit production next year, and on rising tension between Saudi Arabia and Iran.

Saudi Arabia, the world's biggest oil producer, is in the midst of an internal power struggle. Its ambitious crown prince, Mohammad bin Salman, has ordered the arrests of rivals, and some think he could take a tougher line against Iran, Saudi Arabia's rival for pre-eminence in the Middle East. That raises uncertainty about future oil supplies from the oil-rich region.

see **PRICE SURGE** page 12

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Winner—Erik Stark



## PRICE SURGE

Meanwhile, higher prices are encouraging U.S. com-

The drilling frenzy in the U.S. could frustrate OPEC's

"It is most likely that oil prices will drop back," Kenningham said. "Investors continue to anticipate that prices will drop." ●



# Oil Patch Bits



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Prior to joining Global, Rose spent many years with NC Machinery for Caterpillar, most recently as Washington equipment sales and rental manager. During his tenure, he was responsible for the overall P&L of the sales and rental departments in Washington state, managing inventory levels between \$30 million to \$50 million per year. He created and implemented dealer efficiency tools and programs that are still in use at the company today.

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

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EXPLORATION & PRODUCTION

US drilling rig count up by 9 to 907

The number of rigs drilling for oil and natural gas in the U.S. increased by nine the week ending Nov. 10 to 907.

That's up from the 568 rigs that were active a year ago.

Houston oilfield services company Baker Hughes said 738 rigs targeted oil (up nine from the previous week) and 169 targeted natural gas (no change).

Among major oil- and gas-producing states, Oklahoma gained six rigs, New Mexico increased by four and Alaska and Utah each gained one.

Texas lost two rigs and West Virginia decreased by one.

Arkansas, California, Colorado, Louisiana, North Dakota, Ohio, Pennsylvania and Wyoming were unchanged.

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

—ASSOCIATED PRESS

FINANCE & ECONOMY

IEA: US oil and gas ‘resurgence’ expected

ASSOCIATED PRESS

Oil will continue growing as a source of energy for over two decades, with the U.S. set to become the undisputed leader in crude and gas production, the International Energy Agency said Nov. 14.

The report from the Paris-based agency will come as grim news for officials attending global climate talks in Bonn, Germany, as they grapple with ways to contain carbon emissions. Scientists earlier in the week said that emissions of the heat-trapping gas rose this year after three years of not growing.

The IEA said oil production will be driven by continued growth in energy-hungry industries. Though solar power is set to become the cheapest source of new electricity generation and the boom years for coal are over, oil and gas will continue to meet the bulk of the world's energy needs, the IEA said.

Oil demand is forecast to keep rising until 2040, with natural gas growing by a sharp 40 percent.

A more widespread use of electric cars will not be enough to consign oil to the past, said IEA Executive Director Fatih Birol.

“It is far too early to write the obituary of

oil, as growth for trucks, aviation, petrochemicals, shipping and aviation keep pushing demand higher,” said Birol.

Total energy demand is expected to have grown by 30 percent by 2040 — and would be growing twice that without efforts to improve energy efficiencies.

The price of oil has risen over 30 percent since June to a two-year high of around \$57 a barrel in New York trading amid evidence of stronger economic growth around the world. But analysts expect the price to not rise much further in coming months as the U.S. ramps up production.

The IEA echoed that view, saying it expects the U.S. to see a resurgence in its oil and gas industries and become the world's biggest net exporter by the end of the 2020s. Asian countries will become the biggest net importers of oil and gas, taking in 70 percent of imports by 2040 as their economies expand at a fast clip.

Environmental activists decried the IEA forecasts as discounting any efforts by countries to limit emissions as part of the Paris Agreement on climate change.

“None of its core scenarios for the future of energy provide a reasonable chance that the world will avoid climate catastrophe,” said Adam Scott, senior advisor at Oil Change International. ●

EXPLORATION & PRODUCTION

Division set to release East Umiat seismic

Alaska's Division of Oil and Gas has announced that within 30 days it will release to the public the data from the East Umiat 3-D seismic surge conducted by PGS Onshore Inc. a number of years ago. The release comes as a consequence of terms associated with exploration tax credits enacted in 2003 by the Alaska Legislature. Companies in receipt of tax credit certificates for seismic surveying have to file the resulting data with the Department of Natural Resources — the agency can then release the data to the public after 10 years.

The survey was conducted on state land near Umiat, on the eastern side of the National Petroleum Reserve-Alaska.

—ALAN BAILEY

ENVIRONMENT & SAFETY

Produced water spill at Kuparuk CPF3

ConocoPhillips Alaska had a produced water spill at Central Production Facility 3 at the Kuparuk River field Nov. 15. In a situation report the Alaska Department of Environmental Conservation's Division of Spill Prevention and Response said the spill was discovered at 10:40 a.m. Nov. 15 and involved an unknown volume of produced water, a mixture of saline water and a small amount of crude oil.

The agency said a mechanical component at the coupler at the booster pump of the produced water tank failed and said the booster pump has been isolated.

Liquid product will be recovered by suction and recycled or disposed. Solid products including frozen ice and gravel will be sent to a grind and inject facility.

The agency said ConocoPhillips does not anticipate any significant impact to their production of crude oil.

The product stayed on the pad and the agency said cleanup of released product will be conducted through an approved plan with analytically verified cleanup levels.

—PETROLEUM NEWS



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## PIPELINES & DOWNSTREAM

### Critic of terminal wins costly port race

An outspoken critic of a proposed oil-by-rail terminal in Vancouver, Washington, won a port commissioner race that may shape the project's future.

The Columbian newspaper reports that Kris Greene, who was backed by project developers, conceded the election late Nov. 9 to Don Orange in the Port of Vancouver commissioner's race.

The race drew more than \$1 million in cash and in-kind contributions. It has been seen by some as a referendum on Vancouver Energy's project along the Columbia River that would handle about 360,000 barrels of crude oil a day.

Orange captured 65 percent of the vote to Greene's 35 percent as of the afternoon of Nov. 9.

Supported by environmental groups, Orange campaigned on ending the port's lease with Vancouver Energy. The lease allows for changes by either party every 90 days.

—ASSOCIATED PRESS

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### INSIDER

rowing for exploration in a still uncertain oil price market, the independent can't drill as planned this winter and thus had to lay off several technical people.



PAT GALVIN

### Great Bear first brought Oil Search to Alaska

Another rumor about Great Bear being the first oil company to bring Oil Search officials to Alaska proved true.

About three years ago Galvin led a helicopter tour of the North Slope and Great Bear's acreage there.

Oil Search's top executive for Alaska, Keiran Wulff, the company's current executive general manager for exploration and new business; confirmed his predecessor headed up the Oil Search group that Galvin introduced to the North Slope.

Wulff told PN Nov. 13, that Oil Search had "reviewed" Great Bear's opportunity "but we had no interest in pursuing it further at that time."

(Note: Oil Search said in a Nov. 1 statement that, among other things, its deal with Armstrong included the giant Nanushuk discovery — and the Hue shale.)

Oil Search's decision to turn down a deal with Great Bear was about a year before it became evident that since 2014 Great Bear, which entered the Alaska oil scene in 2010 seeking shale oil plays on the North Slope, had

changed its exploration strategy to a more conventional approach.

In April 2016 Galvin told a Senate hearing the company was first going after more conventional oil prospects in its acreage, to lay the starting infrastructure for a potential future shale oil program

### Connection between ASX firms Oil Search and Otto Energy?

The recent deal between Armstrong and Oil Search begs the question: Is there any link between Oil Search and Otto Energy, part owner of Great Bear

Other than the fact both companies are listed on the Australian Securities Exchange, none whatsoever, Wulff told PN.

Otto, by the way, closed the purchase of Great Bear's minority working interest owner Borealis in October 2015.

Wulff told PN, "We don't know Otto apart from knowing they are from Australia and we have no common interests."

### Oil Search increase staff in Anchorage office

Word is Oil Search is keeping most of the small staff Armstrong had based in its Anchorage office.

Wulff had this to say on the subject of additional staff: "Oil Search intends to base its operations, development, community relations, government affairs, and support teams in Anchorage. We will build up the work force to meet the work program demands. I would imagine that we will have between 30 (and) 50 by year end to support the ... (upcoming winter) drilling program and if all goes well we will build appropriately from there to support the development but it is our intention to have a strong local presence which is the model for Oil Search."

—KAY CASHMAN

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### PENTEX DECISION

by road to Fairbanks. The idea of selling Pentex to IGU is to form a single, consolidated gas utility in Fairbanks, together with the LNG supply arrangements for the city. The consolidated business would expand the LNG plant, to increase the supply of gas for distribution in Fairbanks, with funding for the expansion to come from AIDEA's Interior Energy Project, a project to bring affordable energy to Fairbanks and the surrounding Interior. The idea is also to encourage the use of natural gas in the city, to improve air quality.

IGU has expressed concerns about some of the terms in Pentex sale documentation which AIDEA has approved. Stewart has confirmed that members of the IGU and AIDEA board are meeting to resolve outstanding issues associated with the sale agreement.

—ALAN BAILEY

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## FIRST OIL

The 19-well development, with four producers, cost some \$400 million to develop and involved a 9.3-acre expansion of the existing 1H drilling pad.

“1H NEWS is an exciting project for us,” ConocoPhillips Alaska President Joe Marushack said in a press release. “Viscous oil is more challenging to produce, but state-of-the-art technologies are allowing us to pursue projects like this that put more oil in the pipeline.” He called the project another example of what the company does well, “bringing good projects online safely with new production and revenues for Alaska.”

It is the largest investment in viscous oil at Kuparuk since 2004, ConocoPhillips said.

### Horizontal multilaterals

1H NEWS will be developed with horizontal multilateral wells supported by vertical injectors.

Bruner said the first pentalateral well is online at 1H NEWS, and is the first rotary-drilled pentalateral with access to all laterals, provided through junctions installed at each lateral which give the company access with coiled tubing drilling to clean out any sand which accumulates over time. In addition to being online two months ahead of schedule it is also under budget, with the \$400 million cost \$60 million under the initial estimate.

The well is still cleaning up, Bruner said, but is likely to be the highest producing well out of West Sak. There were a couple of historic West Sak wells which peaked at more than 5,000 barrels per day, she said, and the new pentalateral is believed to be on its way to that, with more than 29,000 feet of horizontal section.

Estimated peak gross production at 1H NEWS will be 8,000 bpd, expected next year.

### Legacy fields

At a Nov. 8 ConocoPhillips analyst and investor meeting, Al Hirshberg, ConocoPhillips executive vice president of production, drilling and projects, said the company is undergoing a renaissance in legacy assets in Alaska, with increased capital to pursue infrastructure-led programs around the company’s core position.

Bruner called the company’s legacy fields its bread and butter and said while they are not easy fields to run because of aging infrastructure, they provide needed infrastructure for infill drilling and optimization.

She said coiled tubing drilling at Kuparuk accounts for more than 22 percent of production there, some 19,000 bpd, with 130 CTD wells drilled since 2009.

The company is also seeing results from rotary drilling, with two of the longest wells at Kuparuk, more than 25,000 feet lateral, as well as the first pentalateral well at West Sak.

### CD5 extension

Bruner said ConocoPhillips completed the first extension of CD5, CD5X, in the 2017 winter season, increasing from 15 to 33 wells, with 22 currently online and no footprint expansion. CD5 was expected to produce at some 16,000 bpd when it came online in October 2015, but is currently producing at 28,000 bpd, with the top two producing wells in the state.

ConocoPhillips will be doing a second

expansion, CD5X2, she said, with 10 more well slots added and no footprint expansion. First oil from CD5X2 is planned for June 2019, with drilling to begin after Greater Mooses Tooth 1 is finished.

### Fiord West

Fiord West was discovered more than 15 years ago, Bruner said, but development was challenged because a new drill site couldn’t pass economic muster.

But ConocoPhillips has a new extended reach drill rig being built, due to begin drilling in 2020, and with that rig the company can access Fiord West from an existing drill site. A small bit of gravel will be added to CD2 at Alpine, she said, and the Fiord West resource will be drilled from there.

First oil is planned for August 2021, with peak Fiord West production estimated at 20,000 bpd.

The company sees at least 10 years of opportunity for extended reach drilling, another billion dollars of investment

around existing fields, she said.

With the current rigs wells can reach 18,000 to 28,000 feet; the ERD rig will have a reach of 33,000-plus feet.

### Exploration drilling

Bruner said 2018 will be the company’s largest Alaska exploration program since 2002, with up to five exploratory wells planned, four in the National Petroleum Reserve-Alaska and one on state acreage, with as many as seven bottom hole locations. A seismic program is also planned.

The wells are all in permitting, she said, so it’s not possible to say how many will be drilled. Three are at the previously announced Willow discovery, two appraisal wells and one exploration well; there is an exploration well planned in the Colville River unit; and another south of Alpine.

### Safety

Bruner also updated the RDC audience on ConocoPhillips’ safety focus, saying that when the company operates safely it

operates efficiently.

In 2009-11, she said, too many people were getting hurt on the job. In 2012 the company instituted what it called an “incident-free culture” with a focus on leadership behaviors.

And there was a step change, she said, with total recordable incident rates down substantially.

But we’re not done, she said: we’re still hurting people, so it’s time for another step change.

This time around, she said, the goal is to create a learning organization. Bruner said the focus is on being less surprised by human error and spending more time learning. The goal is that everyone goes home without being hurt, she said, and the job is to learn from the people doing the work every day.

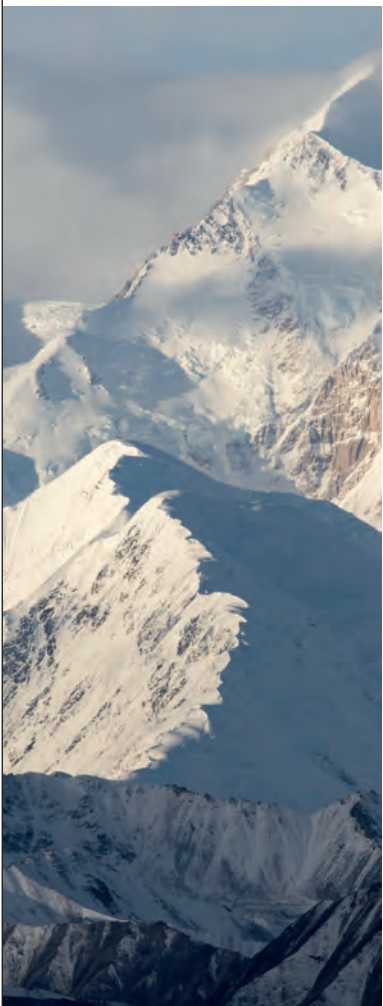
We’re not going to be error free, she said, but we can be incident free. ●

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## OIL PRICE

of the price rise remain a subject for debate, thus suggesting continuing uncertainty over where the price may go from here. According to a Nov. 12 report by Bloomberg, global oil supplies have been tightening, with speculation mounting that the Organization of Petroleum Exporting Countries will continue beyond March its policy of limiting oil production.

A sustained era of low oil prices in the last few years has, in part, been attributed to an excess of oil stocks held in storage. According to data from the Energy Information Administration, global crude oil stocks have declined somewhat since March of this year but remain relatively high. The EIA forecasts that stock levels will increase somewhat in the coming months.

### Increasing demand

However, as reported previously in Petroleum News, the EIA has also predicted a significant increase in oil demand in the coming years. The International Energy Agency, in its latest World Energy Outlook, has predicted a continuing growth in oil demand, albeit at a slowing rate as improving fuel efficiency and electrification make inroads into fuel usage. The IEA also thinks that U.S. oil production will surge ahead, particularly as a result of shale oil production.

One factor that seems to be impacting the current oil price is political instability,

particularly in the Middle East. There have been concerns over oil supplies from northern Iraq, following an independence referendum in Iraqi Kurdistan and Iraqi forces subsequently taking control of Kirkuk. And heightened tension between Saudi Arabia and Iran have been causing worries about the possibility of an escalation of military action in the region. Commentators have speculated on the extent to which these concerns have driven the recent oil price surge, and the extent to which market fundamentals have been behind the price movement.

Statements made in analyst calls and investor presentations have shed some light on how oil companies operating in Alaska are handling the oil price situation.

### ConocoPhillips: no price prediction

During a Nov. 8 analyst and investor meeting ConocoPhillips executives explained their strategy for dealing with current oil price trends. Commenting that “predicting price is useless but scenario planning is priceless,” Matt Fox, executive vice president for strategy, exploration and technology, explained that his company has adjusted its resource portfolio to achieve the diversification necessary to adapt to different oil price situations.

Al Hirshberg, executive vice president production, drilling and projects, said that ConocoPhillips now has a resource inventory of 15 billion barrels with a cost of supply of less than around \$50 per barrel. The company is seeking ways to reduce costs for a further 23 billion barrels that

have a higher cost of supply.

He said that the 15 billion barrel low cost of supply portfolio consists of three tranches: conventional oil in legacy positions with established infrastructure; unconventional shale oil; and a tranche that includes liquefied natural gas and oil sands. The first of these tranches, which includes ConocoPhillips’ Alaska operations, provides medium-scale chunks of profitable production. Unconventional assets provide opportunities for flexible, short-cycle investments. And the LNG and oil sands assets provide continuing low-decline production that can dilute the capital needed per unit of output.

### Sustaining price below \$40

Fox said that currently the ConocoPhillips resource base requires an oil price below \$40, simply to sustain current production levels. Sustained production requires investment of about \$3.5 billion per year, available as cash from operations. And the company anticipates being able to achieve all of its financial targets at a \$50 oil price — the company’s plans should not require significant adjustment if the price remains in the \$45 to \$55 range, Fox said.

Given the need to accommodate the unpredictable price future, a sustained rise in the oil price above \$55 would not trigger an increase in long-term capital commitments, but would require careful management of potential inflation in production costs, Fox said. Oil prices below \$45 for an extended period, on the other hand, would cause the company to capture deflation in costs and possibly exercise capital flexibility, even at the expense of a drop in oil production. However, ConocoPhillips does not anticipate having to drop its production levels, unless the oil price falls below \$40 per barrel for a sustained period, Fox said.

In Alaska, ConocoPhillips has reduced the estimated cost of its Greater Mooses Tooth 2 project by about 10 percent since last year, thus reducing the cost of supply from the project by about 15 percent, Hirshberg said. The company continues to seek cost reduction opportunities through

possibilities such as the use of longer lateral wells and the debottlenecking of production facilities, he said.

Referencing the company’s Willow discovery in the National Petroleum Reserve-Alaska, Fox commented that, following appraisal drilling in the discovery, ConocoPhillips anticipates conducting an evaluation of how to best develop the find. Depending on what makes best economic sense, the company could extend its Alaska production flat over 20 years or grow the production level, he said.

### BP plans for \$50

Obviously each company has its own view on where oil prices may be heading and on how to address oil price uncertainty. During the World Petroleum Congress in July BP CEO Bob Dudley commented that his company is planning on \$50 oil for the next five years. Although on a daily basis the oil market is in balance, world inventory levels remain high, Dudley said.

On Oct. 31 during a quarterly results analyst call Brian Gilvary, BP chief financial officer, said that BP expects global oil inventory levels to continue to edge lower. OPEC has been successful in maintaining planned oil production cuts, but non-OPEC production is expected to increase, Gilvary said. He said that BP has succeeded in maintaining its cash flow and dividend payments at a Brent oil price averaging some \$52 per barrel. The cash balance point for the company has sat at about a \$42 oil price, but with a \$49 price needed for full dividend payout.

In an August earnings call Dudley said that in the first half of 2017 BP’s organic cash flows had been 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 of about \$50 over the next five years, with a target breakeven price well into the \$30s, Dudley said. ●

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## MORE PROSPECTS

300 million barrels of recoverable oil. The discovery involves a subtle stratigraphic trap in the Nanushuk formation, a rock unit that has become associated with major new oil discoveries on the North Slope. A stratigraphic trap involves a situation where hydrocarbons become trapped underground because of rock strata geometry that results from the manner in which the strata were formed.

Fox cautioned that, with the involvement of stratigraphic traps, there is no guarantee that the new prospects actually hold oil.

“But every one of them we’ve drilled so far has had oil in it, so we’re hopeful that several of these Willow lookalikes will deliver additional production,” Fox said.

### Compressive seismic imaging

The new seismic technique that ConocoPhillips is pioneering is called compressive seismic imaging, a technique which the company says it invented and which the company has patented. The company has been using the technique for

about five years around the world, with demand for use of the method increasing as the company’s geoscientists have become aware of the technique’s capabilities, Hirshberg said.

In a conventional seismic survey, multiple seismic traces from multiple shots targeting the same subsurface region are stacked together, to amplify the sound echoes from subsurface rock structures while dampening out the background noise in the sound recordings. Apparently ConocoPhillips’ new technique involves the use of a sophisticated mathematical process to combine data from multiple seismic shots — similar mathematics are used in the medical field for the processing of magnetic resonance imaging, or MRI, a technique used to create images of the internal structures of people’s bodies.

The mathematical processing of the seismic data reveals detail finer than the resolution achievable from conventional seismic techniques. There is a 10-fold increase in the definition and resolution that can be obtained from the same raw seismic data, Hirshberg said. ●

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