Petroleum news

page 5 Q&A: Kawasaki: five-term Democrat says oil taxes warrant scrutinizing

Vol. 22, No. 14 • www.PetroleumNews.com A weekly oil & gas newspaper based in Anchorage, Alaska Week of April 2 2017 • $2.50

This week's Mining News

NORTH OF 60 MINING news

page 10 Freeman is cautiously optimistic Ambler Road will finally be built

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

NEWS NUGGETS

Compiled by Shane Lasley

Murkowski: rising foreign mineral reliance puts U.S. security at risk

U.S. Sen. Lisa Murkowski, R-Alaska, March 28 held a hearing before the Senate Committee on Energy and Natural Resources to examine the United States' increasing dependence on foreign sources of minerals and the opportunities we have to rebuild and improve the domestic supply chain. The hearing touched on numerous issues, including permitting delays, which create a significant obstacle to economically viable domestic mineral production. Referring to data recently published by the U.S. Geological Survey, Murkowski, who chairs the energy and resources committee, pointed out that during 2016 the U.S. imported at least 50 percent of its supply of at least 50 minerals and 100 percent of its supply of 20 minerals, including many that are essential components of defense, medical, energy, electronic, and other advanced technologies. "Instead of lessening our dependence, we are actually increasing our dependence — we're not making headway on this issue," she said. According to USGS data, China is a major source of roughly half of the 50 minerals for which the U.S. is at least 50 percent import reliant. Among the growing list of minerals for which the U.S. is fully import reliant are critical and strategic minerals such as rare earth elements, manganese and niobium; and important technology minerals such as graphite and yttrium. Murkowski underscored the economic and national security risks associated with this import reliance. "Our foreign mineral dependence is a threat to our ability to create jobs in America," Murkowski said. "It threatens our growth, our competitiveness, and our national security. It may seem abstract right now, for some who are not responsible for managing a supply chain. But there will come a day when it will become real for all of us — when we simply cannot acquire a mineral, or when the market for a mineral changes so dramatically, that entire industries are affected." During the hearing, Murkowski explained how the federal government can do more to shore up U.S. mineral security. "Some agencies have begun to wake up to the threats posed by our foreign mineral dependence," Murkowski said. "Yet, on the whole, the federal government is not paying anywhere near enough attention. Executive agencies are not as focused or as coordinated as they need to be. And they do not have the direction or authority they need to make lasting progress to restore our mineral security." The Alaska senator theorizes that many Americans have an "immaculate conception" idea about everyday products and do not think about the minerals that go into them or where those minerals come from. "So much of this is education," she said. "We don't make the connection to where our minerals fit in with our daily lives."

SHANE LASLEY

SEN. LISA MURKOWSKI

Rhyolite raises acquisition funds

Rhyolite Resources Ltd. March 27 closed a C$1.6 million financing, which provides the owner of the Paxson gold project in Interior Alaska working capital and funds to potentially acquire new exploration properties. The financing involved the issuance of 16 million units at C10 cents each. Each unit consists of one share and half a purchase warrant, with each whole warrant exercisable into an additional Rhyolite share at C15 cents for two years. Rhyolite said it is evaluating new geological and geophysical data from Paxson, which is about 30 miles southwest of the town

see NEWS NUGGETS page 12

PURE NICKEL INC.

An outcrop rich in platinum group metals and nickel at the Man project in the Wrangellia terrane, a geological region of Alaska prospective for PGMs. A new tool developed USGS has identified other prospective regions of the Far North state, including previously unknown regions of the Brooks Range.

CRITICAL MINERALS

Critical potential

New USGS tool discovers fresh critical minerals hunting grounds in Alaska

By SHANE LASLEY

Mining News

Exploration companies familiar with Alaska already know the Far North state is a great place to look for critical minerals such as rare earth elements, platinum group metals, cobalt and tin. A new report published by the U.S. Geological Survey, however, indicates that Alaska may be richer in these and other minerals vital to the United States than previously realized.

Working alongside the Alaska Division of Geological & Geophysical Surveys, USGS developed a new geospatial tool that integrated and analyzed a massive load of geologic information and used this data to estimate the resource potential for six deposit types that host a large array of critical minerals.

After crunching all the data, this tool turned up new and expanded areas of Alaska with the potential for these minerals that are vital to modern living but that the United States depends upon foreign countries for more than half of its supply.

"Some of the areas that showed high potential were already known, but many of these areas had not previously been recognized," explained Sue Karl, an Alaska-based USGS research geologist and lead author of the study. "Areas identified by this method that have high resource potential based on limited data indicate both understudied and underexplored areas that are important targets for future data collection, research investigations and exploration."

New REE hunting grounds

The geospatial tool worked particularly well for identifying new areas of Alaska to explore for rare earth elements, or REEs, a group of 16 minerals that possess unique characteristics that make them important ingredients to many high-technology devises used by both civilians and the military.

While their high-tech applications makes them vital to the wellbeing of the United States, the fact that more than 90 percent of these metals come from China elevates their status to critical.

Ucore Rare Metals' Bokan Mountain project at the southern tip of Prince of Wales Island in Southeast Alaska has already been identified as one potential domestic source of rare earths. USGS' geospatial tool, however, has identified eight large swaths of the northern part of the state worth checking out.

A stretch of Southeast Alaska, extending 200 miles northwest from Bokan Mountain, is known to host additional rare earth prospects such as Salmon Bay at the northern end of Prince of Wales Island. While this region is worthy of additional exploration, it does not light up USGS' Alaska REE potential map like some other areas of the state.

A 15,000-square-mile region at the west end of the Alaska Range, an area that includes Mount Estelle and the Revelation Mountains, however, did light up the map with high-potential areas. While this area contains a few small known REE occurrences, these do not account for the high potential the new USGS geospatial tool has given to a large portion of this region — a sign this area is exceedingly underexplored and a great place to hunt for rare earths.

The other regions identified as having high REE potential are:

• Northern Alaska Range, an area arcing about

see CRITICAL POTENTIAL page 13

New USGS tool discovers fresh critical minerals hunting grounds in Alaska. Read more in North of 60 Mining News, page 9.

BlueCrest completes Cosmo well

BlueCrest Alaska Operating LLC has used its new drilling rig to complete the first of its development wells in its Cosmopolitan oil field and has started the drilling of a second well, Benjamin Johnson, BlueCrest president and CEO, told the Alaska House Finance Committee on March 22. Johnson said that the new well is the longest extended reach well ever drilled in the Cook Inlet basin and has resulted in thousands of feet of new net oil pay in the Cosmopolitan field.

see COSMO WELL page 14

Furie, feds ending legal battle

Furie Operating Alaska LLC and the federal government have jointly asked a federal judge to dismiss their longstanding legal case over a Jones Act violation and fine.

The company and a group of federal agencies and officials led by the U. S. Department of Homeland Security filed a stipulation on March 24 dismissing their claims and counterclaims against the other, and each agreeing to pay their own costs.

see LEGAL BATTLE page 14

GVEA rejects Delta wind proposal

In another skirmish in an ongoing battle over the desirability or otherwise of connecting wind power into the Alaska Railbelt electrical power grid, Fairbanks utility Golden Valley Electric Association has rejected an interconnection request from Delta Wind Farm Inc. Delta Wind Farm already has a small 2-megawatt wind system at Delta Junction connected to Golden Valley's transmission system. But the wind farm company, owned by Alaska Environmental Power LLC, wants to

see WIND PROPOSAL page 19

NATURAL GAS

REI closing down

Unable to purchase Cook Inlet gas at competitive price for LNG exports

By ALAN BAILEY

Petroleum News

Resources Energy Inc., a Japanese company that has been pursuing the potential exporting of liquefied natural gas from the Cook Inlet basin, is closing its Alaska operations. Mary Ann Pease, the company's Alaska vice president, told Petroleum News on March 28 that the company has been unable to secure a supply of gas at a price that would enable Cook Inlet LNG to be competitive in today's global LNG market.

"Resources Energy has been funded by a family-owned private business in Japan and they have made the decision that, given current market conditions, they did not want to continue with sponsorship of this," Pease said.

REI's concept had been to build a 1 million ton-per-year LNG plant near the existing port at Point MacKenzie, across Knik Arm from Anchorage, to process about 160 million cubic feet per day of Cook Inlet gas.

REI, a business formed with the primary intention of supplying Alaska LNG to Japanese gas and power utilities, has also been supported by a consortium of Japanese businesses that have provided technical expertise and in-kind services. But, with the company's prime investor pulling from the project, the project has come to an end.

see REI CLOSURE page 15

ENVIRONMENT & SAFETY

Cook Inlet field shut-in

Hilcorp slows pipeline gas leak by reducing pressure in subsea fuel gas line

By ALAN BAILEY

Petroleum News

In response to a continuing natural gas pipeline leak under Cook Inlet, Hilcorp Alaska has shut in its Middle Ground Shoal oil field, the company has announced.

"Shutting in wells and idling lines and equipment in very cold temperatures creates a known risk of freeze up and potential rupture," Hilcorp said March 25. "Warmer ambient temperatures now permit a safer shut in process of the wells along with the associated lines and equipment."

The shut-in procedures were completed over the weekend of March 26, company spokeswoman Lori Nelson told Petroleum News in a March 27 email.

With the gas pipeline operating at a reduced pressure of just 65 pounds per square inch, the leakage rate is now estimated to be in the range of 85,000 to 115,000 cubic feet per day, Nelson said.

Gas flow had been slowed

Having discovered a breach in the pipeline that supplies fuel gas to the field's offshore platforms, the company had already stopped non-essential operations on the platforms, so that the pressure in the fuel line could be reduced. The company had been reluctant to completely shut-in the field. Given the cold winter conditions in the inlet, stopping the flow of oil through the subsea oil export line from the field

see PIPELINE LEAK page 18

PIPELINES & DOWNSTREAM

Trump(eting) merits of XL

US president ends nine years of stalling and clears way for Keystone project

By GARY PARK

For Petroleum News

After nine years of being put through the United States regulatory, legislative and legal grinder, TransCanada has secured a Presidential Permit for its Keystone XL pipeline.

DONALD TRUMP

RUSS GIRLING

But the road ahead is far from certain for the US$8 billion project.

Standing behind President Donald Trump in the White House, TransCanada Chief Executive Officer Russ Girling was invited to follow the president's own glowing assessment that after "waiting for a long, long time (this is) a great day for American jobs and a historic moment for North America and energy independence."

Trump declared XL will be an "incredible pipeline, the greatest technology known to man, or woman."

"This announcement is part of a new era for American energy policy that will lower costs for American families ... reduce our dependence on foreign oil (apparently rolling Canadian heavy crude into his evaluation of what constitutes U.S. oil) and create thousands

see KEYSTONE XL page 18

● NATURAL GAS

Legislators hear from AGDC board members

Three members up for confirmation answer questions in House, Senate; communication an issue, as are costs, viability of project

By KRISTEN NELSON
Petroleum News

Three legislative committees held confirmation hearings March 24 and 27 for Alaska Gasline Development Corp. board members, and legislators voiced some of the same concerns, including communication between the board and the Legislature, whether the Alaska LNG project is viable and what the costs would be.

Hugh Short, vice chairman of the board, was reappointed; Warren Christian and David Wight are new appointments.

Continuing board members include two commissioners, board Chair Dave Cruz and Joey Merrick, the board's secretary-treasurer, both of whose terms are up in 2020. Commissioners on the board are Heidi Drygas, Department of Labor and Workforce Development, and Marc Luiken, Department of Transportation and Public Facilities.

Christian was appointed in 2016 to fill a term which expires in 2018; Short and Wight, also named in 2016, fill full five-year terms which expire in 2021.

AGDC enabling legislation specifies that the governor appoint members who bring experience in finance, pipeline construction and operations, gas marketing and large project construction management.

AGDC enabling legislation specifies that the governor appoint members who bring experience in finance, pipeline construction and operations, gas marketing and large project construction management.

Trinidad and Tobago

Wight was president and CEO of Alyeska Pipeline Service Co. from 2000 to 2006 and prior to that was president and chairman of BP Amoco Energy Company Trinidad and Tobago from 1992 to 2000, at a time that company developed and constructed a liquefied natural gas facility.

Wight said Trinidad and Tobago has some similarities to Alaska — it's isolated, it's an island and didn't have a lot of use for its natural gas. The company had a declining oil operation and he was interested in seeing if he could grow the business. Wight said he met a man who had problems with natural gas supply, got together with the government and Amoco took the leadership role. He said it took one group to take the lead, and that's what he thinks the state is doing here.

On the issue of how much money the state would have to put in, Wight said he thinks Alaska should minimize state ownership but make it big enough to drive investment. Trinidad and Tobago was in for 10 percent of the initial project, he said, but after that devoted its funds to other needs such as infrastructure.

There are four natural gas owners on the North Slope, and Wight said he thinks that if four groups are trying to market gas separately it will make it much more difficult to reach an economic outcome.

Headed in right direction

Christian, president of Doyon Associated LLC, was previously president and general manager of ASRC Energy Services' Houston Contracting Co. He said he has specialized in Arctic pipeline construction and is on the technical committee for AGDC.

He said he believes the Alaska LNG project is heading in the direction that the Wood MacKenzie report recommended — with third-party tolling, third-party financing and a possible federal tax exemption.

Asked how firm AGDC's plans were to purchase the ConocoPhillips LNG plant at Nikiski, Christian said that at this point AGDC isn't going to put in an offer on the plant.

On the issue of the in-state gas line project, ASAP, Christian said he believes only one pipeline will be built. AGDC looked at different sizes of lines — 36-inch (the proposal for ASAP), 42-inch and 48-inch — and Christian

see AGDC BOARD page 15

contents

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Alaska - Mackenzie Rig Report

The Alaska - Mackenzie Rig Report as of March 29, 2017.
Active drilling companies only listed.

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

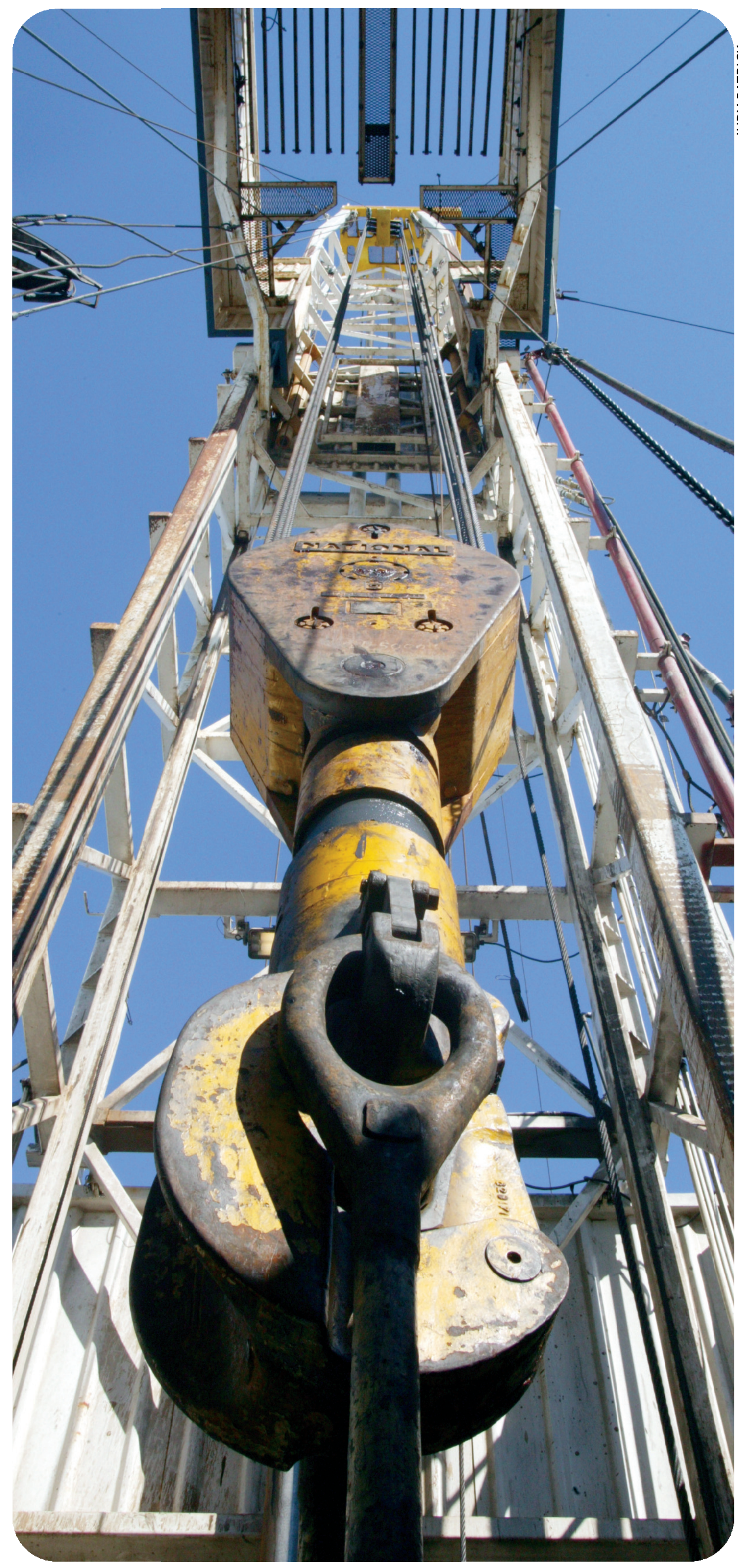
This rig report was prepared by Marti Reeve

Alaska Rig Status

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
		North Slope - Onshore	
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Milne Point, Cold Stack	Hilcorp
Dreco 1000 UE	16 (SCR/TD)	Standby	
Dreco D2000 Uebd	19 (SCR/TD)	Alpine CD3-111A	ConocoPhillips
AC Mobile	25	Standby	
OIME 2000	141 (SCR/TD)	Kuparuk, Stack Out	ConocoPhillips
	142 (SCR/TD)	Kuparuk 3R-1021	ConocoPhillips
TSM 7000	Arctic Fox #1	Prudhoe Bay Horse Shoe #1	Armstrong
Hillcorp Alaska LLC			
	Rig No.1	Milne Point	Hilcorp Alaska LLC
Nabors Alaska Drilling			
AC Coil Hybrid	CDR-2	Deadhorse	BP
AC Coil	CDR-3 (CTD)	Kuparuk	ConocoPhillips
Dreco 1000 UE	2-ES (SCR-TD)	Deadhorse	Available
Mid-Continental U36A	3-S	Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Deadhorse	Available
Dreco 1000 UE	7-ES (SCR/TD)	Deadhorse	Available
Dreco 1000 UE	9-ES (SCR/TD)	Deadhorse	Available
Oilwell 2000 Hercules	14-E (SCR)	Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Mustang location	Available
Oilwell 2000 Canrig 1050E	27-E (SCR-TD)	Deadhorse	Available
Oilwell 2000	33-E	Deadhorse	Available
Academy AC Electric CANRIG	99AC (AC-TD)	Deadhorse	Available
OIME 2000	245-E (SCR-ACTD)	Kuparuk	Available
Academy AC electric CANRIG	105AC (AC-TD)	Deadhorse	Available
Academy AC electric Heli-Rig	106AC (AC-TD)	Deadhorse	Available
Nordic Calista Services			
Superior 700 UE	1 (SCR/CTD)		Available
Superior 700 UE	2 (SCR/CTD)	Prudhoe Bay	Available
Ideco 900	3 (SCR/TD)		Available
Parker Drilling Arctic Operating Inc.			
NOV ADS-10SD	272	Prudhoe Bay DS 18	BP
NOV ADS-10SD	273	Prudhoe Bay DSW-59	BP
		North Slope - Offshore	
BP			
Top Drive, supersized	Liberty rig	Inactive	BP
Doyon Drilling			
Sky top Brewster NE-12	15 (SCR/TD)	Spy Island SP12-FM3	ENI
Nabors Alaska Drilling			
OIME 1000	19AC (AC-TD)	Oooguruk, Cold Stacked	Caelus Alaska
		Cook Inlet Basin – Onshore	
BlueCrest Alaska Operating LLC			
Land Rig	BlueCrest Rig #1	Anchor Point, running casing on H14 well	BlueCrest Alaska Operating LLC
Glacier Oil & Gas			
	Rig 37	West McArthur River Unit Workover	Glacier Oil & Gas
All American Oilfield LLC			
IDECO H-37	AAO 111	In All American Oilfield's yard in Kenai, Alaska	Available
Aurora Well Services			
Franks 300 Srs. Explorer III	AWS 1	Stacked out west side of Cook Inlet	Available
Saxon			
TSM-850	147	Stacked	Hilcorp Alaska LLC
TSM-850	169	Stacked	Hilcorp Alaska LLC
		Cook Inlet Basin – Offshore	
Hilcorp Alaska LLC			
National 110	C (TD)	Platform C, Stacked	Hilcorp Alaska LLC
	Rig 51	Steelhead Platform, Stacked	Hilcorp Alaska LLC
	Rig 51	Monopod Platform, Drilling	Hilcorp Alaska LLC
Spartan Drilling			
Baker Marine ILC-Skidoff, jack-up		Spartan 151, Stacked Seward	
Furie Operating Alaska			
Randolf Yost jack-up		Drilling KLU A-2	Furie
Glacier Oil & Gas			
National 1320	35	Osprey Platform, activated	Glacier Oil & Gas
Kuukpik Drilling	5	King Salmon Platform	Hilcorp Alaska LLC

Mackenzie Rig Status

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



JUDY PATRICK

Baker Hughes North America rotary rig counts*

	Mar. 24	Mar. 17	Year Ago
United States	809	789	464
Canada	185	276	55
Gulf of Mexico	18	19	27

Highest/Lowest

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

*Issued by Baker Hughes since 1944

● ENVIRONMENT & SAFETY

Alaska challenges for wetlands mitigation

Changes in interpretation of requirements, requiring mitigation in same part of state, have left Alaska without statewide provider

By TIM BRADNER
For Petroleum News

Like a lot of federal environmental rules, wetlands mitigation in Alaska will likely be under review by President Donald Trump's new administration. Regulations affecting access to national parks and wildlife refuges have already been stripped away, and new agency chiefs in Washington are now setting their sights on provisions of the Clear Air and Clean Water acts.

Avoiding or mitigating the effects of development on wetlands is a core part of the federal Clean Water Act and is likely to remain unless Congress changes the law, which would be a long and drawn-out process.

In the meantime, however, the state director of the Alaska's sole statewide provider of wetland mitigation services, Brad Meiklejohn at The Conservation Fund, says he welcomes a review of the program and believes steps can be taken now, under current authority of the U.S. Army Corps of Engineers, to make the Alaska program more efficient for developers and, most important, to add certainty.

Requirements long standing

Requirements to mitigate, or offset, the loss of ecologically important wetlands have been around a long time, beginning with President George H. Bush's 1980's pledge of "no net loss" of the nation's wetlands due to construction. The Clean Water Act assigns the U.S. Army Corps of Engineers the task of administering the act's Section 404 dredge-and-fill permits, which carry with them the mitigation responsibility.

Alaska, of course, has vast wetland areas that, unlike in the Lower 48, are minimally damaged by development activity. The Clean Water Act is national in scope, however, so a key goal of the state's congressional delegation for years has been to foster a program that fits Alaska.

Alaska was virtually exempted, thanks to Sen. Ted Stevens, until 2008, when a stricter interpretation of the program was applied in the state. The Army Corps has administrative flexibility, however, and from 2008 to 2014 many mitigation projects, most involving repair of damaged habitat or protection of relatively small, sensitive areas, were done in many parts of the state.

Developers would arrange with a group like The Conservation Fund to find and purchase wetlands to offset the wetlands taken in a development project. Because the scope of the program was statewide there were many options for projects, and they were quite affordable.

Stricter interpretation

In 2014, however, stricter interpretation of rules went into effect requiring the mitigation projects to be in the same part of the state, and preferably the same watershed, as the project causing impacts.

"This has created real problems because there are very few impaired wetlands on the North Slope that can be purchased for restoration," Meiklejohn said.

His first suggestion for improving the program is to return to a statewide scope, which would allow, as an example, money paid for wetlands restoration for a North Slope oil and gas project to be used to repair streams damaged by historic placer mining in the Fortymile River area of eastern Alaska. It's a project the U.S. Bureau of Land Management would welcome.

A statewide scope would also aid Donlin Gold with its proposed large gold mine in southwest Alaska, which could affect up to 8,000 acres of wetlands. There are ample wetlands in the Yukon-Kuskokwim region, but few that have been damaged.

The Corps does allow permanent preservation of wetlands to serve as a form of mitigation, although one that is less preferable. In this case, the agency has sometimes required a demonstration that an area faces a threat.

Inholding purchases

Meiklejohn suggests that evaluating the level of threat is highly subjective. "It's a difficult standard at best, however, because who's to say that in 100 years population pressures may cause, for example, a private inholding in a national park to be developed. The only way to eliminate threat and guarantee permanent protection is for someone like us to purchase the inholding," Meiklejohn said.

The Conservation Fund has done this in many several places, one being a land parcel purchased and added to Chugach State Park near Anchorage. However, the group got caught when the Corps changed its interpretations and turned down four proposals in Northwest Alaska, in Cape Krusenstern National Monument, Kobuk Valley National Park and the Selawik National Wildlife Refuge, because there was no demonstrated threat, and because they were outside the North Slope, where projects

see **WETLANDS RULES** *page 8*

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Kay Cashman	PUBLISHER & EXECUTIVE EDITOR
Mary Mack	CEO & GENERAL MANAGER
Kristen Nelson	EDITOR-IN-CHIEF
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Forrest Crane	CONTRACT PHOTOGRAPHER
Tom Kearney	ADVERTISING DESIGN MANAGER
Renee Garbutt	CIRCULATION MANAGER

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

NEWS
907.522.9469
publisher@petroleumnews.com

CIRCULATION
907.522.9469
circulation@petroleumnews.com

ADVERTISING
Susan Crane • 907.770.5592
scrane@petroleumnews.com

FAX FOR ALL DEPARTMENTS
907.522.9583

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CORRECTION

BSEE confirmed approval of Eni unit

The article titled "Beaufort drilling" in the March 26 issue of Petroleum News incorrectly stated that the federal Bureau of Ocean Energy Management had sent a letter to Eni U.S. Operating Co. confirming approval of a new unit, the Harrison Bay Block 6423 unit, in the Beaufort Sea. It was, in fact, the federal Bureau of Safety and Environmental Enforcement that sent the letter to Eni.

Petroleum News apologizes for any confusion.

● GOVERNMENT

Kawasaki: Oil taxes warrant scrutinizing

Fairbanks Democrat cut his teeth on resources with four terms served on House committee before moving on to House Finance

By STEVE QUINN

For Petroleum News

When House Rep. Scott Kawasaki first arrived in Juneau 10 years ago, he was the lone Democrat sitting on the Special Committee on Oil & Gas as well as Resources. It came at a time when Gov. Sarah Palin was pushing for a new way to market North Slope gas and new tax system to replace one she believed was crafted under a cloud of corruption. Today, the Fairbanks Democrat sits on the House Finance Committee with four terms as a Resources member under his belt, service he considers handy as his committee considers House Bill 111, another oil tax bill. Now in his sixth term, the Fairbanks Democrat shared his thoughts on the bill, the series of tax legislation he's seen and the prospects of building a natural gas pipeline.

Petroleum News: How did spending time on the Special Committee on Oil and Gas and Resources help with your role on finance?

Kawasaki: Let me tell you a funny story first. My freshman year, I'm a Democrat coming in. We had 17 Democrats and 23 Republicans. We get to choose which committee we wanted to be on. Everybody wanted to be on Health and Social Services. All the Democrats. Nobody wanted to be on oil and gas. I'm jumping up and down saying I want to be on oil and gas. It's such an interesting, important topic and I want to learn. So I got to be on the oil and gas committee, and resources my freshman year. I received a great learning experience. It was a fascinating and important topic.

Petroleum News: You weren't completely alone as a Democrat or from the Interior, right?

Kawasaki: (Fellow finance member David) Guttenberg was on Resources but not on Oil & Gas. Jay Ramras was, but he was a Republican.

Petroleum News: And that helped with finance?

Kawasaki: Of course the direct amount of money from the oil industry is the greatest single contributor to our general fund budget. It represents anywhere from 60 percent to 80 percent in some years of our general fund budget. It's really important to get the right situation, the right finances available.

Petroleum News: There are some who believe that because there is more oil in the pipeline, at least year over year, and because there are some pretty sizable finds out there, even if production is 10 years out, that SB 21 is doing what it's designed to do. So how do you respond to that?

REP. SCOTT KAWASAKI

Kawasaki: If you look at the history, many of the finds that are currently in development were previously at least in the plan of development (POD) stage. Some were sanctioned. Some were partially sanctioned. Most of those were already there and we expected them to go, so I don't know if it's causation or correlation. Certainly taxes are a part of it, but the economics of a project can stand on their own.

Petroleum News: You've been in office for 10 years. Why do you suppose this topic comes up every year, certainly every two years at the least?

Kawasaki: It comes up every year. I'll tell you what. When I was sitting on the oil and gas committee as a freshman, we paid out roughly $50 million on cashable oil credits. This next year they are anticipating I think $900 million in cashable tax credits. That is a 2000 percent increase since the time I started 10 years ago. It's a big number. It's a number we have to look at and not because we are in a time of great danger within our own deficits. I think it's fair.

Petroleum News: Now that $900 million, it's not what's in the budget right?

Kawasaki: That's what's owed.

Petroleum News: Some members of your caucus would like to see that debt paid down, comparing it to having a 30-year mortgage if just the minimum is paid. So where do you see yourself on this issue?

Kawasaki: I get it when a company says that we need some sort of certainty, especially the little guys who are saying "we need some certainty on this, we are a junior company we are not like the majors and we don't have a lot of cash so we use this to offset risk." So I do understand where they are coming from. But from a financial aspect and from a financial committee member aspect, it's really tough to say we are going to pay out these oil tax credits that are fairly generous, at the same time we are cutting education, cutting social services, cutting public safety. It's a real challenge. That's why it has to be looked at and reviewed.

Petroleum News: So what would you like to see from HB 111, either in numbers or practice?

Kawasaki: I think there needs to be a real good look at tax credit reform general. I think HB 111 gets us in that direction. I think there are some parts of the bill dealing with the overall oil tax structure that really we should deal with on its own.

I think what I would like to see coming out of this legislative session this year is a plan that really looks at oil taxes in its entirety. Right now we are juggling budgets, we are jugging things like Uber, Real ID and smoking in public places.

Q AND A

I think we need a year where we focus on oil taxes and bring in consultants because the world has changed. The economics on oil and gas has changed. I think it's fair that we take a closer look, a slower more methodical look at our entire oil and gas tax regime.

Petroleum News: So what would you like to accomplish this year in the first year of the two-year session?

Kawasaki: I think the first major goal over this two-year session is to try to stop our bleeding when it comes to our cashable credits and our future net operating loss credits. Both can devastate our budget not only this year but in subsequent future years as well. On the Finance Committee, we are really concerned about the deficit. We know we can't erase the deficit in year one, but how are we going to reduce the deficit five, 10, 15 years down the road so we don't pass on massive deficits to our children? That's why I think there is a value in reviewing the oil tax system and overall tax regime.

Petroleum News: There are some who say this may be your last real crack at it for having stability. There are some who don't view Alaska as stable; others say the oil companies requested some of the changes. Shouldn't that be the theme that you weave through any changes you might make?

Kawasaki: I think that's true. There is something to be said about having something stable so it's a signal to industry that this is a stable tax regime. At the same time, I don't think SB 21 or HB 247 last year added anything. I think we keep doing these small, piecemeal taxes and credits. HB 247 was a small piece. I would rather have gone back to the drawing board and done a larger revision instead of coming back every year with a smaller revision.

Petroleum News: You heard testimony from the industry. Was there anything that resonated with you that had you think I need to give this further thought?

Kawasaki: One company, Great Bear Petroleum, is in a different situation. They are not a major. They are not an explorer, but they have great potential. His criticism of the bill was how there would be unequal footing on tax credits between majors and new entrants. So his argument was that it treats incumbents on a better level than it treats the new entrants. As a (first-time) candidate I thought about that. Incumbents have more power than new candidates in the field. That's the way the system is. I can see his argument for wanting to try and make it so there is some sort of parity and some sort of equality when it comes to credits. Cashable credits in particular — and the net operating loss credits.

Petroleum News: Are you hearing anything from the bill sponsors — Rep. (Geran) Tarr and Rep. (Andy) Josephson — that give you similar pause?

Kawasaki: With the bill coming over from the Resources Committee rather quickly they did a lot of hard work and a lot of heavy lifting and they did a lot of diligent time on it. From the Finance perspective there are some complexities in the bill that, while even as I spent a lot of years on Resources, I don't even understand and will have to learn more about before I feel more comfortable with it. One such aspect is the preapproval process for the credits and some of the disclosure requirements and how those impact DNR and the Department of Revenue. I can understand some of the basics on the financial parts like the floor and where the credits come in but the rest is still a little complex to me still. It will get reconciled, though.

Petroleum News: Let's talk about the gas line and AGDC. The prospects of the AKLNG project don't seem very strong among lawmakers from both parties. So, at this point, what is your 30,000-foot

see **KAWASAKI Q&A** page 17

GOVERNMENT

Alaska Oil and Gas Conservation Commission report: March 2017

•The Alaska Oil and Gas Conservation Commission on March 3 reduced (Other Order 116) the amount of a fine that it had previously charged against Hilcorp Alaska LLC for regulatory violations at the Milne Point unit, as reported in the March 12 issue of Petroleum News. The eventual $200,000 came down from an earlier total of $720,000.

On March 22, the AOGCC issued (Other Order 117 and Other Order 118) two $80,000 fines against Hilcorp Alaska LLC for activities at the Milne Point unit, as reported in the March 26 issue of Petroleum News. The final amounts of both were increased from preliminary fines of $75,000. The commission fined the company for changing approved work procedures and performing well cleanouts without an approved contingency plan.

•On March 7, the AOGCC approved (Area Injection Order No. 2C.043) a request from ConocoPhillips Alaska Inc. to continue water injections at the Kuparuk River Unit No. 1B-04 well. The company reported a tubing by inner annulus pressure communication in October 2016 while injecting natural gas. The communication was not observed during a 30-day water-alternating-gas test, and subsequent mechanical integrity testing in January 2017 convinced the commission of the integrity of the well for water injections.

•On March 10, the AOGCC approved (Conservation Order 341F.004) a request from BP Exploration Alaska Inc. to waive Rule 7(a) in Conservation Order 341F for the Prudhoe Bay Unit 07-15B sidetrack at the Prudhoe Bay unit. The rule required "an open- or cased-hole neutron log to be run, in certain portions of the pool, on newly drilled wells prior to sustained production for the purpose of gas-oil contact." A slickline neutron tool was unable to reach the gas-oil contact in the sidetrack, but neutron logs recorded from several nearby wells provided enough information to satisfy the needs of the commission.

•On March 15, the AOGCC approved (CO 730) a request from BlueCrest Alaska Operating LLC to drill and complete the Hansen H-14 oil well and also approved (CO 729) a request from BlueCrest to drill the Hansen H-14L1 lateral within the same section of a previously producing well. The proposed well and lateral would be in the same section as the existing Hansen 1A-L1 lateral and the Hansen H-16 well at the Cosmopolitan unit in the southern Kenai Peninsula near Anchor Point.

The two conservation orders exempted the company from the spacing requirements for development drilling, which were unnecessary given that BlueCrest is the sole lessee.

The commission also approved drilling permits for both wells on March 17.

•The AOGCC has scheduled a public hearing (CO-17-009) on April 18 to consider a request from BP Exploration (Alaska) Inc. for permission to repair production casing leaks and tubing leaks in the PBU G-11B producer, PBU 15-48C producer and PBU Y-24 injector at the Prudhoe Bay unit remedial inner annulus cement squeeze procedures.

•The AOGCC has scheduled three public hearings (CO-17-006, CO-17-007 and CO-17-008) on April 20 to consider a proposal to waive certain requirements for workovers at the fields of the Prudhoe Bay unit, the Kuparuk River unit and the Colville River unit.

—ERIC LIDJI

● GOVERNMENT

AOGCC hears comments on fracking regulations

Industry, public have different views on a proposed public comment period for permit applications for hydraulic fracturing

By ALAN BAILEY
Petroleum News

During a public hearing on March 23 the Alaska Oil and Gas Conservation Commission heard opposing views on a proposed change to state hydraulic fracturing regulations, a change mandating 10-day public comment periods for permit applications for fracking wells. The proposed regulation change came in response to a request by Bob Shavelson, executive director of Cook Inletkeeper, and followed an earlier public hearing on the topic, held Dec. 15.

During the March hearing it became evident that members of the public who are pushing the public comment concept have markedly different perspectives on the topic than does the Alaska oil and gas industry.

A right to know

Testimony from the public argued that, given what people see as the potential hazards associated with the hydraulic fracturing of wells, the public has a right to know what is proposed in a fracking operation, especially since people living near the operation have local knowledge of salient issues such as the nature and locations of local drinking water resources. And there was general criticism of the relatively short 10-day comment period that the commission has proposed, given that the typical comment period in a state public process is 30 days.

And there was general criticism of the relatively short 10-day comment period that the commission has proposed, given that the typical comment period in a state public process is 30 days.

Shavelson, in testimony to the commission, also argued that the proposed regulation is too vague and that it needs to spell out factors such as the timing of public posting of an application relative to the timing of a commission decision on the application; the obligation of the commission to consider public comments; and the recourse available to a commenter if comments are ignored.

Shavelson also questioned a provision within the proposed regulation change that allows a company to redact from the public version of an application any information that the company views as business confidential. What is to stop a company redacting so much information that a public review of the application becomes meaningless, Shavelson asked.

Additional time and cost

Industry representatives, including officials from ConocoPhillips, BlueCrest Energy and the Alaska Oil and Gas Association expressed concern that a public comment period would add needless time and cost to the hydraulic fracturing permitting process. The representatives argued that the commission has very rigorous hydraulic fracturing regulations that have already undergone an exhaustive public review process. The commission has the appropriate technical expertise to enforce these regulations and has demonstrated in the past that the regulations have effectively protected groundwater — adding a public comment period to the permitting process would not improve the process's effectiveness, the industry argues.

Joshua Kindred, environmental counsel for the Alaska Oil and Gas Association, also commented that some members of the public simply oppose hydraulic fracturing in general and that opening a public comment period for these people will simply result in general statements that hydraulic fracturing is bad and dangerous. While, on the one hand it is difficult to see what benefit there might be to people making comments on permits, the comment period will introduce costly permitting delays, Kindred said. And would the public comment process open a door to litigation over the permits, he wondered.

Commissioner perspective

Commissioner Hollis French summed up, from his perspective, the situation regarding the commission's proposal.

French said that, given the oil industry's universal opposition to the public comment concept, the commission is "going into the teeth of their (the industry's) opposition." He said that he would carefully monitor the permitting process over the next year or so, to see how the revised regulations play out, ensuring that the public has meaningful opportunities for comment on permit applications. And if industry were to abuse the use of the redaction provisions, the commission would likely take steps to address that issue, he said.

He said that he somewhat agrees with the industry view that comments on hydraulic fracturing permit applications could become a proxy debate over the pros and cons of the hydraulic fracturing process in general. French said that he would monitor comments submitted on permit applications, to assess whether the comments are pertinent to particular applications, or whether the comments express general anti-fracking views.

With regard to the 10-day comment period, versus the possibility of a 30-day period, French said that, given that it typically takes the commission about 10 days to process a permit application, setting a 10-day period should enable public commenting without slowing down the permitting process.

"I think that's a fair balance between the industry's need to move ahead with their plans and the public's right to have some idea of what's going on," he said, also commenting that the commission would look at the comment time period if 10 days turns out to be insufficient.

French also commented an oil company has to give landowners near to a proposed fracking operation advance notice of the planned fracking. Commissioner Dan Seamount pointed out that, regardless of the regulations, anyone can comment on anything that the commission is doing. ●

Contact Alan Bailey at abailey@petroleumnews.com

continued from page 4

WETLANDS RULES

being mitigated were located.

The Conservation Fund had already purchased the properties, and the group is now stuck, having spent about $2 million but now without the ability to offset the credits sold to developers. The restrictions have also increased the cost of the mitigation, mainly because of the scarcity of offset projects within the region of the wetlands impact.

"Our average cost had been about $5,500 per acre for the North Slope," under the old rules, Meiklejohn said. "It's much more expensive for us to operate under the new rules." Costs up to $45,000 per acre have been reported by state officials.

No statewide provider

"From 1998 to 2013 we had a well-functioning, efficient program and we got a lot of good things done. We were able to offset over 200 wetlands impacts and pool them to focus on some large restoration projects," Meiklejohn said.

Because of the uncertainties and its financial exposure, The Conservation Fund is increasingly cautious and no longer willing to offer mitigation for many projects, Meiklejohn said. This leaves Alaska without a functioning statewide mitigation service provider.

Meanwhile, one project The Conservation Fund is proud of is its restoration of the Eklutna River north of Anchorage, a $7 million project that will require removal of an old, unused dam from an abandoned hydro project. The work to remove the dam will be done by October 2017. It is being done with Eklutna Inc., the local landowner, and will result in the rehabilitation of the river as a salmon stream.

Meiklejohn said that more flexibility, certainty and transparency in the Alaska program would improve its effectiveness, and affordability, and make more restoration projects like that at the Eklutna River possible. ●

Contact Tim Bradner at timbradner@gmail.com

NORTH OF 60 MINING news

page 10 Freeman is cautiously optimistic Ambler Road will finally be built

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

NEWS NUGGETS

Compiled by Shane Lasley

Murkowski: rising foreign mineral reliance puts U.S. security at risk

U.S. Sen. Lisa Murkowski, R-Alaska, March 28 held a hearing before the Senate Committee on Energy and Natural Resources to examine the United States' increasing dependence on foreign sources of minerals and the opportunities we have to rebuild and improve the domestic supply chain. The hearing touched on numerous issues, including permitting delays, which create a significant obstacle to economically viable domestic mineral production. Referring to data recently published by the U.S. Geological Survey, Murkowski, who chairs the energy and resources committee, pointed out that during 2016 the U.S. imported at least 50 percent of its supply of at least 50 minerals and 100 percent of its supply of 20 minerals, including many that are essential components of defense, medical, energy, electronic, and other advanced technologies. "Instead of lessening our dependence, we are actually increasing our dependence — we're not making headway on this issue," she said. According to USGS data, China is a major source of roughly half of the 50 minerals for which the U.S. is at least 50 percent import reliant. Among the growing list of minerals for which the U.S. is fully import reliant are critical and strategic minerals such as rare earth elements, manganese and niobium; and important technology minerals such as graphite and yttrium. Murkowski underscored the economic and national security risks associated with this import reliance. "Our foreign mineral dependence is a threat to our ability to create jobs in America," Murkowski said. "It threatens our growth, our competitiveness, and our national security. It may seem abstract right now, for some who are not responsible for managing a supply chain. But there will come a day when it will become real for all of us — when we simply cannot acquire a mineral, or when the market for a mineral changes so dramatically, that entire industries are affected." During the hearing, Murkowski explained how the federal government can do more to shore up U.S. mineral security. "Some agencies have begun to wake up to the threats posed by our foreign mineral dependence," Murkowski said. "Yet, on the whole, the federal government is not paying anywhere near enough attention. Executive agencies are not as focused or as coordinated as they need to be. And they do not have the direction or authority they need to make lasting progress to restore our mineral security." The Alaska senator theorizes that many Americans have an "immaculate conception" idea about everyday products and do not think about the minerals that go into them or where those minerals come from. "So much of this is education," she said. "We don't make the connection to where our minerals fit in with our daily lives."

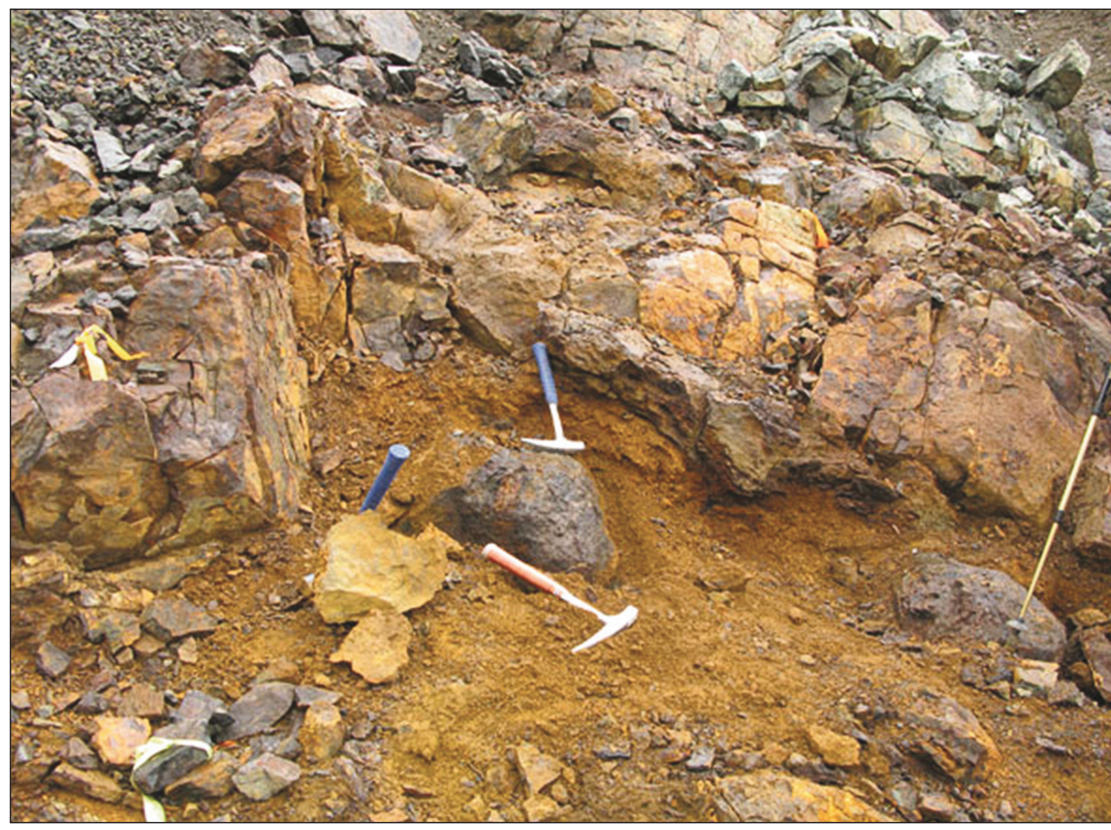
SHANE LASLEY

SEN. LISA MURKOWSKI

Rhyolite raises acquisition funds

Rhyolite Resources Ltd. March 27 closed a C$1.6 million financing, which provides the owner of the Paxson gold project in Interior Alaska working capital and funds to potentially acquire new exploration properties. The financing involved the issuance of 16 million units at C10 cents each. Each unit consists of one share and half a purchase warrant, with each whole warrant exercisable into an additional Rhyolite share at C15 cents for two years. Rhyolite said it is evaluating new geological and geophysical data from Paxson, which is about 30 miles southwest of the town

see **NEWS NUGGETS** *page 12*



PURE NICKEL INC.

An outcrop rich in platinum group metals and nickel at the Man project in the Wrangellia terrane, a geological region of Alaska prospective for PGMs. A new tool developed USGS has identified other prospective regions of the Far North state, including previously unknown regions of the Brooks Range.

CRITICAL MINERALS

Critical potential

New USGS tool discovers fresh critical minerals hunting grounds in Alaska

By SHANE LASLEY

Mining News

Exploration companies familiar with Alaska already know the Far North state is a great place to look for critical minerals such as rare earth elements, platinum group metals, cobalt and tin. A new report published by the U.S. Geological Survey, however, indicates that Alaska may be richer in these and other minerals vital to the United States than previously realized.

Working alongside the Alaska Division of Geological & Geophysical Surveys, USGS developed a new geospatial tool that integrated and analyzed a massive load of geologic information and used this data to estimate the resource potential for six deposit types that host a large array of critical minerals.

After crunching all the data, this tool turned up new and expanded areas of Alaska with the potential for these minerals that are vital to modern living but that the United States depends upon foreign countries for more than half of its supply.

"Some of the areas that showed high potential were already known, but many of these areas had not previously been recognized," explained Sue Karl, an Alaska-based USGS research geologist and lead author of the study. "Areas identified by this method that have high resource potential based on limited data indicate both understudied and underexplored areas that are important targets for future data collection, research investigations and exploration."

New REE hunting grounds

The geospatial tool worked particularly well for identifying new areas of Alaska to explore for rare earth elements, or REEs, a group of 16 minerals that possess unique characteristics that make them important ingredients to many high-technology devises used by both civilians and the military.

While their high-tech applications makes them vital to the wellbeing of the United States, the fact that more than 90 percent of these metals come from China elevates their status to critical.

Ucore Rare Metals' Bokan Mountain project at the southern tip of Prince of Wales Island in Southeast Alaska has already been identified as one potential domestic source of rare earths. USGS' geospatial tool, however, has identified eight large swaths of the northern part of the state worth checking out.

A stretch of Southeast Alaska, extending 200 miles northwest from Bokan Mountain, is known to host additional rare earth prospects such as Salmon Bay at the northern end of Prince of Wales Island. While this region is worthy of additional exploration, it does not light up USGS' Alaska REE potential map like some other areas of the state.

A 15,000-square-mile region at the west end of the Alaska Range, an area that includes Mount Estelle and the Revelation Mountains, however, did light up the map with high-potential areas. While this area contains a few small known REE occurrences, these do not account for the high potential the new USGS geospatial tool has given to a large portion of this region — a sign this area is exceedingly underexplored and a great place to hunt for rare earths.

The other regions identified as having high REE potential are:

• Northern Alaska Range, an area arcing about

see **CRITICAL POTENTIAL** *page 13*

NORTHERN NEIGHBORS

Compiled by Shane Lasley

Dolly Varden, Hecla work together in BC

Dolly Varden Silver Corp. March 27 said it is collaborating with Hecla Mining Co. to carry out an airborne geophysical survey covering Dolly Varden's Big Bulk copper-gold project and Hecla's neighboring Kinskuch silver project in northwestern British Columbia. Hecla will serve as operator for the geophysical survey. "Cooperative effort between companies working in a region is a good way to keep exploration costs down while still achieving the exploration goals," said Dolly Varden President and CEO Gary Cope. The ZTEM (Z-Axis tipper electromagnetic) survey being flown over the properties detects the natural fields of the Earth as a source of transmitting energy, which is particularly well suited for identifying area of high sulfide mineralization. Dolly Varden is porphyry and skarn prospect comparable to those identified at IDM Mining's Red Mountain property and Hecla's Kinskuch is a volcanogenic massive sulfide silver property with similarities to its Greens Creek property in Alaska.

Millrock discovers new Willoughby data

Millrock Resources Inc. March 23 said it has acquired additional exploration information for Willoughby, a high-grade gold-silver project in the Golden Triangle District of British Columbia that Millrock acquired in 2016. This data, which was never submitted to the British Columbia Department of Energy and Mines for assessment purposes, was documented in a 1996 internal report for Camnor Resources Ltd. Titled "Report on the 1996 program and recommendations for further work, Willoughby property, Stewart area, British Columbia, Skeena Mining Division," this exploration report for Willoughby was authored by Camnor senior geologist David Visagie and was subject to quality control protocols. Exploration by Camnor in 1996 consisted of 31 surface holes, 40 meters of underground drifting and 30 underground drill holes. This work included the delineation of a high-grade core at Willoughby's North zone which is roughly 30 meters long and has an average thickness of about three meters. The best intercept of the 1996 program was an underground hole targeting the North zone that averaged 3.85 ounces per ton gold, 77.91 oz/t silver and 4.83 percent zinc over 3.5 meters. Another underground hole at North cut five meters of 0.64 oz/t gold and 1.96 oz/t silver. Surface drilling in 1996 also cut 7.9 meters of 0.2 oz/t gold and 2.19 oz/t silver at the Lower Ice Fall zone; and 11.7 meters of 0.25 oz/t gold and 0.05 oz/t silver at the Wilby zone. "The Willoughby tenures are host to numerous zones of mineralization, and while the grade is high, each appears to have limited extent. Nevertheless, we view these numerous zones as possible indicators of a more significant deposit at depth — hopefully with similar grade. Alpine glaciers that characterize the upper reaches of the mountains have receded rapidly since the last serious exploration effort in 1996. We look forward to prospecting the rocks that have been uncovered over the past two decades," said Millrock President and CEO Greg Beischer.

Victoria secures heavy equipment for Eagle

Victoria Gold Corp. March 28 said it has entered into an agreement with Finning (Canada), a division of Finning International Inc., to supply the mining fleet for its Eagle Gold mine project in the Yukon. A feasibility study completed in 2016 outlines plans for two open-pit mines with in-valley leach pads that is anticipated to produce 190,000 ounces of gold annually over 10 years of mine life. The Caterpillar mining fleet Finning is to supply this operation will include two 6040FS hydraulic shovels, 11 785D (150 ton) off-high-

see **NORTHERN NEIGHBORS** *page 12*

Petroleum news

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Shane Lasley	PUBLISHER & NEWS EDITOR
Rose Ragsdale	CONTRIBUTING EDITOR
Mary Mack	CEO & GENERAL MANAGER
Susan Crane	ADVERTISING DIRECTOR
Heather Yates	BOOKKEEPER
Marti Reeve	SPECIAL PUBLICATIONS DIRECTOR
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Forrest Crane	CONTRACT PHOTOGRAPHER
Tom Kearney	ADVERTISING DESIGN MANAGER
Renee Garbutt	CIRCULATION MANAGER
Mapmakers Alaska	CARTOGRAPHY

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

NEWS • 907.229.6289
publisher@miningnewsnorth.com

CIRCULATION • 907.522.9469
circulation@petroleumnews.com

ADVERTISING
Susan Crane • 907.770.5592
scrane@petroleumnews.com

FAX FOR ALL DEPARTMENTS
907.522.9583

Several of the individuals listed above are independent contractors

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● COLUMN

Feds open comment period for Ambler EIS

Public review may signal real progress for industry toward gaining access to mineral-rich lands of remote Alaska mining district

By CURT FREEMAN
For Mining News

With the opening late last month of a public comment period for the environmental impact statement on the proposed Ambler Mining District Industrial Access Project, I am cautiously optimistic that this time, Sisyphus will get the boulder up the hill.

As a lowly graduate student at the University of Alaska Fairbanks back in 1979, I helped a crew from Anaconda Minerals color township-size blocks on a huge paper map of the Brooks Range. At the time, Anaconda and numerous other mining companies were actively exploring the Ambler Mining District, an area long known even then for having significant potential to host gold, silver, copper, lead and zinc mineralization.

At the time, what became the Alaska National Interest Lands Conservation Act was being hotly debated by the U.S. Congress, and a request came in from the Alaska congressional delegation: They needed to know where the most prospective mineral lands were in Alaska so these lands could be kept out of the numerous conservations units then being considered. Hence, I sat up late nights with some of the most experienced exploration geologists then working in Alaska, they, doing the thinking, me, coloring townships red for high mineral potential, orange for moderate mineral potential and yellow for low mineral potential. Also clearly marked on these colorful thematic maps were the most cost-effective access routes that would allow roads or railroads to be pushed into the southern Brooks Range. At last, the maps were done and they went to Washington, along with a raft of other information provided by the mining industry. I remember naively thinking "Now they will understand, and they will make sure the world-class potential of the Ambler District will remain open to mineral entry." In the end, many of the highly prospective mineral trends were

see **FREEMAN** *page 11*

The author

CURT FREEMAN

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

continued from page 10

FREEMAN

closed to mineral entry, despite or perhaps because of, the info the mining industry supplied. Equally damaging was the clever gerrymandering of access routes that made it nearly impossible to gain access to those few areas left open to mineral development.

I, and many others, have spent our careers waiting for this particular boulder to get pushed over this particular hill. I am hoping that this time, Sisyphus has enough help from all of us to get that rock over the hill!

Western Alaska

NORTHERN DYNASTY MINERALS LTD. announced that its wholly-owned subsidiary, Alaska-based Pebble Limited Partnership and the U.S. Environmental Protection Agency have filed a joint motion in federal court to extend a stay of proceedings to May 4 in ongoing litigation under the Federal Advisory Committee Act. The company has made substantial progress in recent discussions with the EPA and intends to continue negotiating the matter directly, rather than through mediation.

COPPERBANK RESOURCES CORP. announced that it has secured Alaska engineering firm, DOWL, to provide initial infrastructure planning for an area that is roughly four kilometers (2.5 miles) from the Pyramid copper-molybdenum-gold project on lands on the Alaska Peninsula owned by The Aleut Corp. DOWL will assist in developing a rough order-of-magnitude understanding for several components of conceptual infrastructure, including potential port site locations, on-site power generating options, and supporting road networks. Inferred mineral resources at the project total 122 million metric tons, grading 0.41 percent copper, 0.02 percent molybdenum, and 0.10 grams per metric ton gold. The Pyramid deposit is still open in most directions and to depth. CopperBank also is evaluating additional drilling programs that will increase the current resource, particularly around hole PY11-16 that returned 155 meters, grading 0.71 percent copper, 0.18 g/t gold and 0.018 percent molybdenum and bottoming in 34 meters of 0.844 percent copper.

Interior Alaska

INTERNATIONAL TOWER HILL MINES reported a reduction in previously announced all-in sustaining costs at its Livengood gold project. The revisions are designed to conform with World Gold Council guidelines relating to all-in sustaining cost calculations. The effect of the error was to reduce the estimated all-in sustaining cost to $976 per ounce from the previously released $1,247 per ounce. This resulted in an all-in cost reduction from $1,263 per ounce to $1,247 per ounce.

CONTANGO ORE INC. reported initial 2017 drilling results from its Tetlin gold project, a joint venture with operator Royal Alaska LLC. The currently ongoing drilling is designed to extend open-ended mineralization at the North Peak prospect and drill initial holes in other prospects prior to the spring thaw. Significant new results from the North Peak zone include hole 16312, which returned 29.12 meters grading 7.12 g/t gold; hole 163313, which returned 28.04 meters grading 8.80 g/t gold and an additional 5.36 meters grading 3.2 g/t gold; hole 16317, which returned 7.62 meters grading 8.72 g/t gold; and hole 16320, which returned 6.62 meters grading 7.81 g/t gold. Initial results have expanded the known mineralization at North Peak and prompted the joint venture to delay release of its planned mineral resource update until the results of winter drilling are compiled. The company indicated that it plans to explore other undrilled prospects this summer that are near the Main Peak and North Peak resource areas, focusing on resistivity and magnetic anomalies that have similar characteristics to known resource zones. The company also announced that the joint venture has staked about 68,000 additional acres of State of Alaska lands adjacent to the Tetlin project, the new claims now referred to as the Noah prospect. Targeting was based on drilling results at Tetlin, the re-interpretation of proprietary geological, geophysical, and geochemical data, and interpretation of recently released public geological, geochemical and airborne geophysical data provided by the Alaska Division of Geological and Geophysical Surveys. The joint venture plans to begin initial exploration at Noah this summer.

Alaska Range

MILLROCK RESOURCES INC. said it has entered into an option to joint venture agreement with an affiliate of **KINROSS GOLD CORP.** concerning the Liberty Bell gold project in the western Bonnifield District. Kinross can earn a 70 percent joint venture interest by providing US$5.0 million in exploration funding and property maintenance over five years, paying up to US$145,000 in management fees if Millrock manages exploration programs throughout the duration of the agreement, and paying advanced minimum royalties totaling US$145,000 over the five-year period. The project consists of claims owned outright by Millrock and other claims upon which it holds an option to purchase a 100 percent interest from **BOOT HILL GOLD INC.**, a private Alaska firm. A small gold deposit is known to exist on the property, and this mineralization appears to be a distal gold-bearing pyrrhotite skarn. Exploration plans for 2017 were not announced.

COVENTRY RESOURCES announced plans for 2017 at its Caribou Dome copper project in the Valdez Creek District. The company indicated that as part of a previously announced scoping study, re-interpretation of the three-dimensional geological model is now underway, incorporating the results from previous drilling as well as recently compiled structural information. The company expects the scoping study will be completed shortly. Plans for 2017 will be guided by the scoping study but are expected to include a ground geophysics survey over the new Senator prospect, which was identified by a 2016 soil sampling program. The Senator prospect covers five kilometers, or 3.1 miles, of strike over prospective sedimentary rocks in the far northeast end of the project. The new prospect is more than 11 kilometers, or 6.82 miles, northeast of the main Caribou Dome deposit. Assay results from the 2016 soil sampling program at the Senator prospect included a five-kilometer, or 3.1-mile, wide zone of highly anomalous copper results, with soil samples assaying up to 0.17 percent copper. Select rock chip samples from areas of outcropping sediment-hosted mineralization returned up to 12.1 percent copper.

Northern Alaska

TRILOGY METALS INC. reported a significant step in advancing permitting for the Ambler Mining District Industrial Access Project. The Notice of Intent initiating the permitting process under the National Environmental Policy Act for the preparation of an environmental impact statement was published by the Bureau of Land Management, the lead federal agency for the EIS. This notice initiates the public scoping process, with comments due by May 30, 2017. The EIS will evaluate construction and operation of a 211-mile-long industrial access road originating at the Dalton Highway and ending at the Ambler River. Construction of the AMDIAP would provide surface access to significant deposits of copper, lead, zinc, gold and silver, including the Arctic volcanogenic massive sulfide deposit and the Bornite copper carbonate deposit, both of which are part of the Upper Kobuk Mineral project, a business relationship owned and controlled by Trilogy and **NANA REGIONAL CORPORATION INC.**

Trilogy also said it intends to undertake a pre-feasibility study on the high-grade Arctic deposit, using information collected in 2015 and 2016, along with data that will be generated in 2017. A budget totaling US$7.1 million was approved for 2017 and will focus mainly on the Arctic PFS with an anticipated completion date of early 2018. The PFS will include an updated resource model, geotechnical pit-slope stability studies, hydrology, waste rock characterization, and metallurgy, all of which are based on in-hand data. The remaining 2017 field work includes studies related to determining the placement of all site facilities, including the ore-processing facility (crushing and milling), the waste rock

see **FREEMAN** *page 12*

Contact North of 60 Mining News:

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

continued from page 11

FREEMAN

and tailings disposal areas, water storage ponds and supporting road infrastructure. The partners also will continue environmental baseline data gathering.

GOLDRICH MINING CO. posted a forecast for 2017 estimated production as provided by its joint-venture partner NyacAU, LLC at the Chandalar placer gold mine in the Brooks Range. Estimated 2017 production will total about 14,100 ounces of fine gold at a cost of roughly US$700 per ounce. This compares to actual production of 3,857 oz. and 8,227 oz. of fine gold in 2015 and 2016, respectively, and a 2016 cost of about $960 per ounce. The 2017 forecast assumes 120 days of plant operation, averaging 19 hours a day, with a processing rate of 308 bank cubic yards per hour. In 2016 the plant operated about 15 hours per day at a processing rate of 183 yards per hour. Goldrich and NyacAU are making modifications to the plant to increase efficiency and plan to complete upgrades by the end of May. Total plant capacity after modifications is expected to increase to 400 yards per hour. The partners also approved a 122-hole sonic drill program, totaling 7,700 feet of drilling with average hole depth of 63 feet. The drill plan is designed to further define mineralized placer material between Line 8.6 and Line 12, as well as test for potential mineralized material from Line 13 to Line 17.5. The lines are roughly 500 feet apart.

Southeast Alaska

UCORE RARE METALS, INC. announced that it has entered an option to purchase agreement with IBC Advanced Technologies, Inc. The $650,000 option expires on March 14, 2019 and gives Ucore the right to purchase the outstanding shares of IBC in exchange for cash consideration totaling $10,000,000 and a grant of 10,000,000 units, each unit consisting of one common share of Ucore plus a warrant worth one half of a common share of Ucore. Upon the execution of the option, IBC key personnel will receive performance incentives and payments totaling 7 percent of annual earnings before interest, taxes, depreciation and amortization for each of the first 5 years of operations subsequent to the execution of the option. The option gives Ucore access to IBC's Molecular Recognition Technology (MRT) for the mining industry, with an existing customer base spanning several continents and including several major mining companies. This technology also was used with promising results during testing of Ucore's Bokan rare earth project on Prince of Wales Island. ●

continued from page 10

NORTHERN NEIGHBORS

way trucks and other auxiliary mining equipment. The total cost of this fleet will be roughly US$50 million. A deposit is being made upon signing with further payments due upon delivery. "Through this agreement, we were able to secure more favorable pricing and terms than estimated in our recent feasibility study and we have managed to further derisk the Eagle Gold project without compromising our strong balance sheet," explained Victoria Gold President and CEO John McConnell. The first equipment is expected to arrive at the Eagle project later this year and the full fleet should be delivered by fall 2018. Victoria and Finning have further agreed to identify opportunities for used auxiliary Caterpillar equipment as well as delivery date guarantees. ●

continued from page 9

NEWS NUGGETS

of Tok. Over the past two years, the Alaska Division of Geological and Geophysical Surveys has released the airborne geophysical data for the region and recently new results from a geological survey completed over the area in 2016, including additional samples taken from 2011 drill core collared on the Paxson property. Highlights from this drilling include 21 meters averaging 1.9 grams per metric ton gold in hole WG11-01; 23.1 meters of 3.5 g/t gold and 100.1 meters of 1 g/t gold in WG11-02; and 69 meters of 1.7 g/t gold in WG11-12. ●

continued from page 9

CRITICAL POTENTIAL

220 miles west from Tok;

•Yukon-Tanana, a large swath of Interior Alaska extending from the Yukon-Alaska border to the Roy Creek REE prospect north of Fairbanks;

•Kuskokwim-White Mountains, which stretches about 500 miles southwest from Yukon-Tanana;

•Kokrines-Hodzana, a 200-mile-long area of Interior Alaska just north of the Yukon River that includes known REE hunting grounds such as Ray Mountains and Kokrines Hills;

•Darby Hogatza, an area of known uranium and REE occurrences arcing 200 miles east from the Seward Peninsula; and

•Porcupine, an area centered on Spike Mountain in far northeastern Alaska.

The same areas that show promise for REEs are also great places to look for uranium, according to the data churned out by the new USGS geospatial tool.

Critical mineral-bearing granites

For the most part, specialized granites containing tin, indium, tungsten, titanium, tantalum and fluorspar can be found in the same regions of Alaska as you would seek REEs.

The United States is near 100 percent import-reliant on all of these critical metals except for tin, in which case it imports roughly 80 percent of what it needs.

Tin and indium are important ingredients for architectural glass, flat screens, solar cells, semiconductors, smartphones, lead-free solders and alloys for superconductors.

Tungsten and titanium are primarily used for high-strength metals alloys.

Tantalum is an important ingredient for automotive electronics, mobile phones, personal computers, and light but high-performance glass lenses.

Fluorspar is used to make specialty glass, ceramics, and enamelware.

All of the areas that are good hunting grounds for REEs also happen to be good places to explore for these minerals found in specialized granites, with the exception that in Southeast Alaska the REE region is centered on Prince of Wales Island, whereas the best place to look for specialized granites is found along a roughly 120-mile area immediately northeast of Prince of Wales Island.

Beyond the REE prospective areas, USGS' geospatial tool identified the Lost River-Kougarok region on the Seward Peninsula and a stretch of the central Brooks Range as other good places to look for the granites that host this group of critical minerals.

Elusive PGMs

The geospatial tool also proved to be effective in turning up new areas of Alaska to explore for the elusive platinum group metals — platinum, palladium, rhodium, iridium and ruthenium.

The largest use for this suite of metals, especially palladium and platinum, is as a catalyst to help scrub harmful emissions from petroleum burning automobiles and petroleum refineries. These metals are also used in modern electronics, such as increasing storage on computer hard disks and as an alloy for restorative dentistry.

Platinum, palladium and rhodium are used as investments and are commonly minted into physical bars and coins.

The United States currently relies on foreign sources for about 90 percent of these critical metals.

Though an economic lode-source of PGMs has yet to be discovered in Alaska, about 650,000 ounces of these obscure metals have historically been mined from Salmon River placer deposits in the Goodnews Bay area. This region of Southwest Alaska continues to be an intriguing place to look for PGMs, according to USGS' geospatial tool.

Other areas of the state, however, show higher potential. The best known of these is the Wrangellia terrane, a distinct belt of rocks along much of the southern slopes of the Alaska Range eastward through southern Yukon and into western British Columbia. While intriguing signs of rich deposits of PGMs are found in the Alaska portion of the Wrangellia, such as the Man property about 165 miles southeast of Fairbanks, an economic deposit has yet to be identified here.

The other regions where USGS identified high PGM potential are:

Angayucham terrane, a belt of rocks found along the northwestern slopes of the Brooks Range and south of the Brooks Range;

Peninsular terrane, which stretches along the Chugiak Mountains in Southcentral Alaska; and most of the Southeast Alaska panhandle.

Investigating north of the Brooks

As part of its critical metals investigation, USGS also looked at carbonate-hosted copper deposits, which often also host the critical minerals cobalt, germanium and gallium.

Cobalt is an important ingredient of super-alloys used to make aircraft turbine engines. This application makes up nearly half of the United States' consumption of this critical mineral.

Germanium and gallium have properties that make them important minerals in a number of modern applications including solar cells, infrared optics, LEDs, semiconductors and smartphones.

The best known carbonate-hosted copper deposit in Alaska is Bornite, also known as Ruby Creek, in the Ambler Mining District along the southern slopes of the Brooks Range. While best known for its high copper grades, Bornite also hosts significant quantities of cobalt.

Interestingly, USGS' geospatial tool found that almost the entire length of the Brooks, especially the underexplored northern slopes stretching the entire width of Alaska, is prospective for the style of copper deposits known to host cobalt, germanium and gallium.

In addition, the USGS study identified two areas of the Seward Peninsula and a long stretch of the Wrangellia terrane as prospective for carbonate-hosted copper deposits that may have associated critical minerals.

Broadened potential

Overall, the geospatial tool seems to have broadened Alaska's critical mineral potential, while narrowing the search to the hottest areas across the 663,000-square-mile minerals-rich state.

"Using this process, we have identified the potential for critical minerals in new areas such as the northern Brooks Range, and have expanded the area with potential for resources around known mineralized areas like the Seward Peninsula and east-central Alaska," the authors of the study wrote in a summary of their findings.

For explorers seeking critical minerals, the new and under-explored areas turned up by the geospatial tool may provide enough data to unearth new deposits in areas where no one has thought to look.

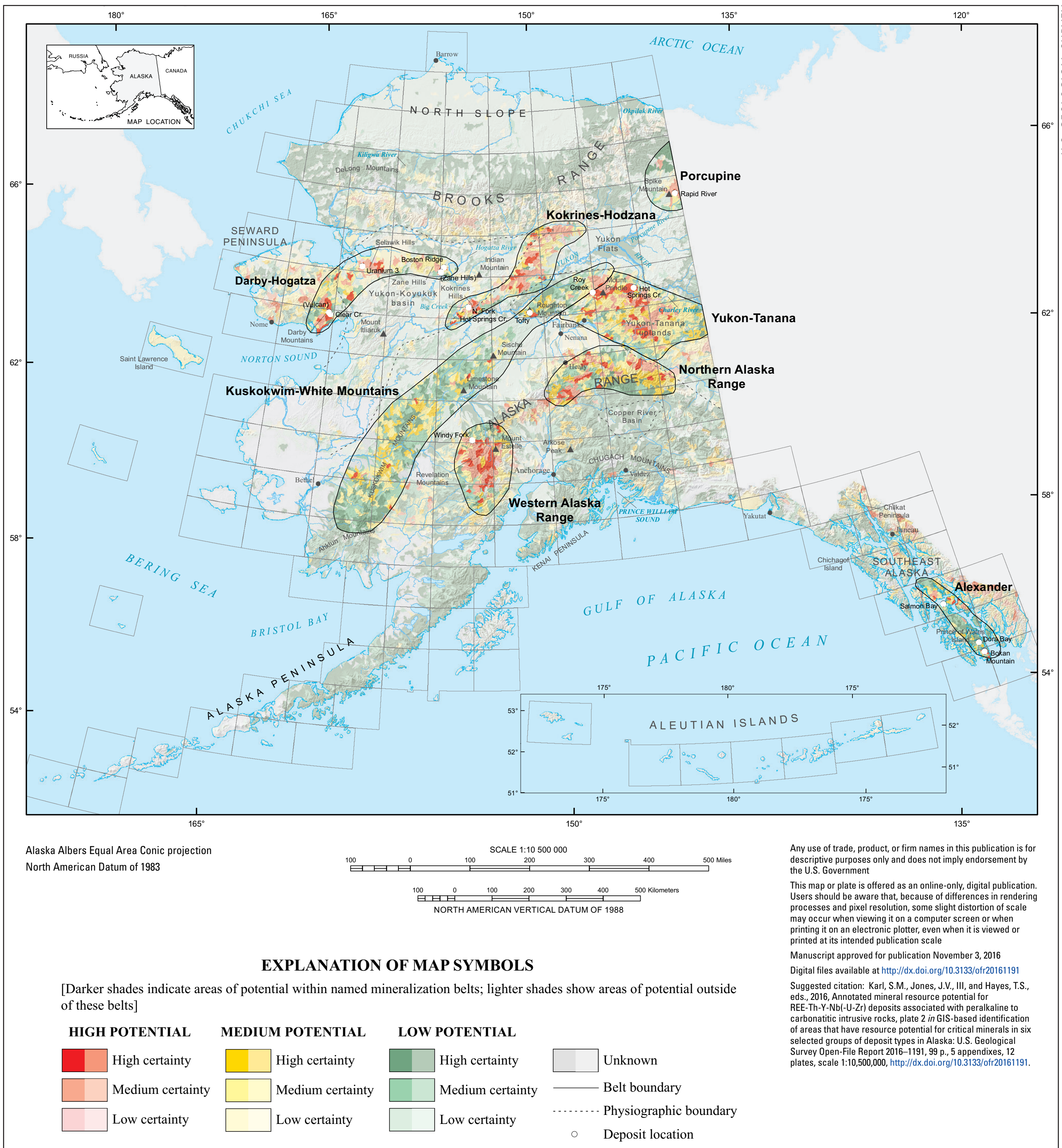
Advice to explorers from USGS

The authors of the report offered a tidbit of advice for such intrepid explorers: "Future geologic investigations should focus on areas that have relatively high potential scores but for which available data are limited."

Given the results of the critical minerals investigation, USGS believes the geospatial tool shows promise for identifying other deposits across the expansive Far North state.

"This study will help guide our minerals-focused geologic investigations for many years to come. We have so much left to learn about the basic geologic framework of Alaska, and now we have a great new geospatial tool to help make our research efforts more efficient and effective," said Jamey Jones, research geologist, USGS, and co-author of the study.

The full report — complete with source information, datasets and maps — can be found under the title "GIS-based identification of areas that have resource potential for critical minerals in six selected groups of deposit types in Alaska" in the publications section of USGS' website. ●



Annotated Mineral Resource Potential for REE-Th-Y-Nb(-U-Zr) Deposits Associated with Peralkaline to Carbonatitic Intrusive Rocks

GOVERNMENT

Trump orders reversal of climate actions

In an executive order signed on March 28, President Donald Trump mandated a review of all government agency actions deemed to place a burden on the safe and efficient development of domestic energy resources. The order takes particular aim at actions from the Obama administration to address climate change, with various reports and memoranda ordered rescinded, including President Obama's Climate Action Plan, Power Sector Carbon Pollution Standards, the Climate Change and National Security memorandum and the Climate Action Plan Strategy to Reduce Methane Emissions.

Also on the firing line is the Obama administration's Clean Power Plan, a series of regulations designed to curb carbon emissions from industrial scale power generation facilities. Trump has ordered the administrator of the Environmental Protection Agency to review these regulations in the light of the new administration's energy policies and, as soon as practicable, change the guidance associated with the regulations or propose rules suspending, revising or rescinding the existing rules.

The Clean Power Plan, which does not actually apply to Alaska, has become the target of multiple lawsuits and is currently subject to a stay imposed by the U.S. Supreme Court. The regulations were a key component of Obama's strategy in support of the Paris international agreement on climate change.

According to Trump's order, his administration's energy policy includes the promotion of the clean and safe development of U.S. energy resources while avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth and prevent job creation. The order also says that government agencies should take appropriate actions to promote clean air and clean water for the American people, while also respecting the proper roles of the Congress and the states concerning these matters.

In other action, on March 27 Trump signed into law a resolution passed by Congress to cancel the Bureau of Land Management's new land planning regulations, commonly known as Planning 2.0. The resolution was passed under the terms of the Congressional Review Act, a statute allowing the cancellation of any federal agency rule that had gone into effect within the previous 60 days.

—ALAN BAILEY

FINANCE & ECONOMY

OPEC, non-cartel nations may extend cut

OPEC members and non-cartel nations are leaving open the possibility of a six-month extension on a deal to reduce oil production, according to a statement March 26 by a committee of ministers from OPEC and other oil-producing nations.

The joint committee, which met in Kuwait, said that as of February, OPEC and participating non-OPEC countries achieved a conformity level of 94 percent on a voluntary six-month cut in output. The statement said the figure "demonstrates the willingness of all participating countries to continue their cooperation."

The committee said it "encouraged all participating countries to press on toward 100 percent conformity."

The Organization of the Petroleum Exporting Countries agreed in late November to cut its production by 1.2 million barrels per day, the first reduction agreed to by the cartel since 2008. Eleven other non-OPEC oil-producing countries pledged in December to cut an additional 558,000 bpd, reaching an overall reduction of 1.8 million bpd.

The statement March 26 from the meeting in Kuwait said that while the deal came into effect at the start of the year, it can be extended for another six months, "depending on the status of supply and demand, including global inventories."

Russia's Energy Minister Alexander Novak was also quoted saying there's "94 percent" compliance on the production cut among OPEC members and non-cartel nations, as well as discussions about continuing the cuts to boost crude prices. In comments made in Kuwait, Russia's TASS news agency quoted Novak as saying discussions on extending the cuts continue.

Crude oil sold for over $100 a barrel in the summer of 2014, before bottoming out below $30 a barrel in January 2016. It now trades at just under $50 a barrel.

—ASSOCIATED PRESS

continued from page 1

LEGAL BATTLE

A proposed order associated with the stipulation asked the U.S. District Court Judge John W. Sedwick to dismiss the claims "without prejudice," which would end the matter.

The stipulation makes no reference to an earlier settlement that the two sides reached last summer in an attempt to resolve the nearly five-year-old case. The settlement needed final approval from the U. S. Department of Justice but was delayed for several months during the end of the Obama Administration and the start of the Trump Administration.

—ERIC LIDJI

Contact Eric Lidji at ericlidji@mac.com

continued from page 1

COSMO WELL

BlueCrest subsequently began the drilling of a second well on March 21, Johnson said.

BlueCrest is developing the Cosmopolitan field, offshore under the Cook Inlet, using directional drilling from an onshore site near Anchor Point in the southern Kenai Peninsula. The idea is to drill directionally to the field's oil reservoir and then horizontally through the reservoir. The horizontal drilling enables considerable distances of net oil pay to be penetrated. The reservoir lies at a vertical depth of 7,000 feet, but BlueCrest anticipates the Cosmopolitan wells attaining measured depths of up to around 24,000 feet. The company has brought in an exceptionally powerful drilling rig to achieve these extreme drilling distances.

BlueCrest started oil production from Cosmopolitan in April 2016 from a converted exploration well. The company's plan of development for the field indicates an intent to drill up to five development wells. However, the Anchor Point pad can accommodate many more wells than that — there is the potential to drill up to 20 wells, Johnson told House Finance. The drilling operations create 200 to 300 jobs, mostly carried out by Alaskans, he said.

—ALAN BAILEY

Contact Alan Bailey at abailey@petroleumnews.com

continued from page 2

AGDC BOARD

said he believes that if ASAP was built as designed it would have to be subsidized. But, he said, the determination of the final pipe size and the project will be based on what the market will bear.

Possible scaling of project

Short is co-founder, chairman and CEO of investment firm Pt Capital; prior to that he was president and CEO of Alaska Growth Capital, an Arctic Slope Regional Corp. subsidiary.

He told legislators the board's strategy is to get the best cost estimate and move the project toward a reasonable build size and is working to identify an experienced engineering, procurement and construction contractor for the project. A 42-inch line looks most feasible, he said, and AGDC is looking at a way to scale the construction build through options such as starting with one train, very little compression and making the gas treatment plant more efficient and less cumbersome to build.

On the financing side, Short said third-party tolling and third-party financing give you more bang for the buck than tax-exempt status. With third-party financing, he said, you avoid the problem of partners having different hurdle rates which you have to blend before everyone will agree to proceed. Most of the bang, he said, is from bringing the hurdle rate down with third-party financing.

The second lever is the tax-exempt status, which requires a private letter ruling from the Internal Revenue Service. That requires the financing plan to be "fully baked," which hasn't occurred yet, Short said.

Project finance, third-party financing based on project economics, is the 80 percent driver in reducing cost, he said. If the private letter ruling doesn't happen, that would increase the tariff.

On the project timeline, Short said AGDC believes it will be prepared to submit an application to the Federal Energy Regulatory Commission in April, and said there is some optimism under the new administration with its infrastructure focus.

Transparency

On the transparency issue, for which AGDC and the board have taken considerable criticism, Short said AGDC has spent eight to nine months negotiating transition agreements, most of which has to be done in executive session. He said it was frustrating for board members because there was so much they could only talk about in executive session.

Short said he and AGDC board Chair Dave Cruz have told each other that they would limit executive sessions to a minimum and told legislators they had his commitment to continue to be more outfacing and to do more outreach with the Legislature.

On the issue of gas sales Short said it was very difficult to negotiate a joint marketing agreement with four partners, although ConocoPhillips has said it would be interested in a joint sales agreement. But, he said, economics will indicate that the price would be fairly similar. ●

Contact Kristen Nelson
at knelson@petroleumnews.com

continued from page 1

REI CLOSURE

As one possible means of achieving a workable gas price, REI had considered taking an equity position in a Cook Inlet gas field, but the investor in the company had opted not to go down that route, Pease said. And the company has been impacted by low global LNG prices, given the current glut in LNG supplies.

"You can bring down the cost of your plant. You can make all these different changes. But if you don't have a reliable, stable feedstock at under $5 (per thousand cubic feet) you don't have project," Pease said.

Recent contract prices negotiated for Cook Inlet gas for local use have been running well in excess of $6 for firm supplies.

Still optimistic

But despite the company closure, Pease remains optimistic about Alaska's ultimate ability to export resources to Japan.

"REI is closing its offices but I believe that is vastly different from the Alaska-Japan opportunity going away, because I believe that (opportunity) still exists and it may take another form, another shape, over the years, and that's what I think is important," Pease said.

The deregulation of the Japanese utility industry has resulted in the operation of many utility companies in Japan and those utilities need natural gas. Ports with LNG receiving terminals are being built out on Japan's west coast in a trend that signals a different LNG market than has been seen in the past, Pease said.

"I believe that this opportunity is still very strong," Pease said.

And Pease does not see LNG from Cook Inlet as competing with the potential of LNG from the North Slope, where the larger proven gas basin can create an attractive project for the Asian market, provided it is possible to pencil out the costs of the required gas treatment plant, the pipeline from the Slope and the LNG plant. Alaska's main competitor is Canada, a country that is still resolving issues relating to its First Nations when it comes to LNG export facilities, Pease said. And Alaska enjoys the benefit of a relatively short sea route to Japan and a cold climate for LNG production.

Larger Cook Inlet market needed

In the Cook Inlet region the gas production is at tidewater, a situation that should place the region in a strong position for LNG exporting. But Pease sees the region as in a Catch-22 situation, in which companies have made new gas discoveries but where there needs to be a functional gas export plant to provide an appetite for gas demand.

"We have new discoveries but we do not have new production at the scale we need to have," Pease said.

REI's concept had been to build a 1 million ton-per-year LNG plant near the existing port at Point MacKenzie, across Knik Arm from Anchorage, to process about 160 million cubic feet per day of Cook Inlet gas. The company had selected the type of liquefaction technology to use and had negotiated the availability of two ice-class LNG carriers for shipping LNG to Japan. And in the fall of last year the company had been on the verge of deciding whether to proceed to the front-end engineering and design phase of the project. The capital cost of the project was estimated at around $1 billion.

But, although the company had identified adequate sources of Cook Inlet natural gas for the LNG plant and had conducted discussions with several gas producers about establishing gas supplies, it ultimately proved impossible to settle on a gas pricing formula that would render the LNG project economically viable.

Existing LNG plant

At this point, Pease sees the continued operation of an existing LNG plant operated by ConocoPhillips at Nikiski on the west coast of the Kenai Peninsula as being critical to the future of the Cook Inlet gas industry. ConocoPhillips is currently trying to sell the plant. The plant has not been in operation recently because of the low global price of LNG. But that plant can provide a market outlet for gas, as a step towards moving the Cook Inlet gas industry to a more viable scale, Pease thinks.

As a believer in starting small and then building volume, Pease thinks that new LNG trains could be added to the plant as necessary. And the plant enjoys the advantages of having an existing permitted location and facility, she said.

The key issue comes back to the price of the gas supply, and making a project more competitive by being nimble in responding to what the market is demanding, Pease said. With the days of 20- to 25-year supply contracts over, gas buyers in Japan are interested in the price of the gas, and in the terms and conditions of the deal.

"It's got to be competitive, and it's got to be competitive globally," Pease said. ●

Contact Alan Bailey
at abailey@petroleumnews.com

GOVERNMENT

Arctic coast guards sign joint agreement

During a meeting of the Arctic Coast Guard Forum on March 24 coast guard leaders from the eight Arctic nations signed a joint statement adopting shared arrangements for emergency marine response and combined operations in the Arctic, the U.S. Coast Guard has announced. The agreement included the doctrine, tactics, procedures and information sharing protocols for Arctic operations. U.S. Coast Guard Commandant Adm. Paul Zukunft signed the agreement of behalf of the United States.

The forum has an objective of leveraging collective international coast guard resources in the Arctic, with an operational focus and with a basis in consensus.

"This forum — one of many ways in which the Coast Guard uses our unique roles to enhance our nation's diplomacy — has quickly established itself as a premier platform for fostering safe, secure and environmentally responsible maritime activity in the Arctic," Zukunft said.

The signing ceremony culminated two years of collaboration between the various coast guards, with working groups establishing strategies, objectives and tactics for achieving common operational goals in the Arctic. National representatives have also participated in table top exercises in Reykjavik, Iceland, and the District of Columbia. The forum is planning a live exercise in the Arctic for later this year, the Coast Guard said.

Zukunft also participated in a formal ceremony marking the transition of the chairmanship of the Arctic Coast Guard Forum from the U.S. Coast Guard to the Finnish Border Guard.

"I am extremely proud of the U.S. Coast Guard and our partners for their dedication to our common mission," Zukunft said. "I have the utmost confidence that our colleagues in the Finnish Border Guard will take us to new heights during their chairmanship of the Arctic Coast Guard Forum."

—ALAN BAILEY

Petroleum news

Oil Patch Bits

Fluor's Stork secures five-year maintenance contract

Fluor Corp. announced that Stork, Fluor's maintenance, modification and asset integrity segment, was awarded a five-year contract by Huntsman International LLC for maintenance and sustaining small capital projects at four of its differentiated chemicals manufacturing sites in Texas. Fluor will book the undisclosed contract value in the first quarter of 2017.

"Fluor has worked with Huntsman on projects around the globe for nearly two decades and we are pleased that Stork will continue that long-term relationship with this new maintenance work," said Taco de Haan, president of Stork.

"Stork is a leader in the maintenance, modification and asset integrity business and this new maintenance contract is an example of our emerging growth in the oil, gas and chemicals market along the U.S. Gulf Coast," said Dale Barnard, regional vice president of Stork.

Stork will begin work in mid-April with about 220 full-time personnel at Huntsman sites in Dayton, Conroe, Freeport and Port Neches, Texas. Stork has service centers located in Houston and Pasadena with additional locations planned for Freeport, Texas City and Beaumont.

Crowley launches industry leading ConRo ship

COURTESY CROWLEY

El Coquí will now proceed through the final topside construction and testing phase before beginning service in the U.S. Jones Act trade during the second half of 2017.

Crowley Maritime Corp. and VT Halter Marine launched Crowley's new commitment class ship El Coquí, one of the world's first combination container/roll on-roll off ships powered by liquefied natural gas in Pascagoula, Mississippi.

El Coquí, named after a beloved frog native to the island, will now proceed through the final topside construction and testing phase before beginning service in the U.S. Jones Act trade during the second half of 2017.

"This was a special day for Crowley, VT Halter Marine and all of the men and women who designed, and who are constructing, this world-class ship," said Tom Crowley, company chairman and CEO. "We are extremely appreciative of all the work that has been accomplished so far and look forward to the successful delivery of El Coquí later this year and her sister ship, Taíno, in the first half of next year."

El Coquí, like her sister ship Taíno, will be able to transport up to 2,400 20-foot-equivalent container units and a mix of nearly 400 cars and larger vehicles in the enclosed, ventilated and weather-tight Ro/Ro decks. A wide range of container sizes and types can be accommodated, ranging from 20-foot standard, to 53-foot by 102-inch-wide, high-capacity units, as well as up to 300 refrigerated containers.

Editor's note: Some of these items will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News' contracted advertisers. The next edition will be released in September.

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

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

continued from page 5

KAWASAKI Q&A

view of the project?

Kawasaki: Well, I'll say this. I wasn't a supporter of SB 138. It was the most recent iteration of the gas line bill. I thought it left us in a position where we would assume a lot of risk. Today we find ourselves in that position where we've spent a lot of money where there is a work product that will soon come out but it still leaves us with a lot of exposure when it comes to moving a product forward. At the same time, I'm willing to see AGDC come to a point where you can have in hand a (FERC) license so there is some value we can retain as a state at that point. Every time the state has pushed a major project, whether it was the Gasline Port Authority, whether it was ANGDA, whether it was Gov. Palin's AGIA or this SB 138 project, it feels like we start to get the ball rolling and we lose momentum. I'd like to get the ball rolling so we have enough momentum, so it actually keeps rolling rather than stopping because every time we stop it takes a lot more energy to start again, to start pushing that ball down the road.

Petroleum News: Don't these changes have a lot to do with the market changing drastically?

Kawasaki: Sure. But just like Exxon, BP and ConocoPhillips look at projects with a 20-year horizon or a 30-year horizon, the state of Alaska should really be looking at that, too. If we only looked at things in terms of a few budgeting years or who was going to be governor next year, a project of that nature would never get done. Bradley Lake would never get done; the railroads wouldn't have got done; we wouldn't inter-ties between Fairbanks and the rest of the state; we wouldn't have Snettisham Dam. All of those major projects took a longer-term view.

Petroleum News: One of the prevailing criticisms toward AGDC has been an identified lack of communication from AGDC toward the Legislature. Even your colleague Rep. Tarr has said in a recent confirmation hearing that communication still needs improvement. How do you feel about that?

Kawasaki: I've been on both sides of the argument when I felt it was not giving us enough information or when I thought they trying to hide things or sequester information. I've been pleased recently with AGDC's ability to get us information we've asked for in a timely manner. There are other multimillion dollar agencies that are out there that we have equal difficulty getting information from at times. AGDC, for the most part, has been a lot more open and given us a lot more clarity.

Petroleum News: So what would you like to hear from AGDC next as far as the project is concerned?

Kawasaki: I want to hear at what point do we get to the decision if it's a go or no-go. I want to know at what point do they pull the plug. At what point do they decide that this project is not feasible in this market climate nor in the foreseeable future and that it makes no sense at this time for the state to pursue a project. There are a lot of agencies out there that can keep accepting state budgeted money, state budgeted dollars.

But if they are not moving forward, we as members of the Finance Committee really have to take a hard look at it and say if this isn't something that's moving forward, whether it's the KABATA or the Susitna-Watana, then we need to pull back on those particular projects and AGDC is one of those potentially.

Petroleum News: There has been a lot of turnover there. Does that concern you at all?

Kawasaki: You know the professionals — the ones who do a lot of the engineering and modeling — are still there. There have been some faces who seem to move in and out of all sorts of different agencies from time to time. I think the underlying employees who are still part of AGDC and still part of the project over all are good people.

Petroleum News: OK, let's circle back to oil taxes in the context of a fiscal plan and how a fiscal plan is connected to the gas line. A lot of people in this building, regardless of what plan gets supported, say that without a plan it's going to be increasingly difficult to advance a gas line. How do you feel about that?

Kawasaki: The number one issue we need to solve is to have a comprehensive fiscal plan moving forward out of this Legislature. I think it underpins everything. It underpins whether we support AGDC to the amount they need or whether they pull the plug. Whether we support the Department of Natural Resources and their permitting process, the 100 percent most important thing we do is make sure we've got a fiscal plan in place.

Petroleum News: So what among them comes first? A fiscal plan? An oil tax rewrite? A gas line plan?

Kawasaki: I think they are all pieces of a grand puzzle. They have to be laid out at the same time and completed like a puzzle. I think many of us can see us getting to that point. If you stand back you can really see the full picture and that it all needs to be done.

Petroleum News: Let's get closer to your home in Fairbanks. When you first came into office, all the rage was turning back Gov. Murkowski's gas line plan in favor of Gov. Palin's plan, also known as AGIA. But Interior lawmakers stressed the high energy costs for heating homes and businesses. How do you see things now? Has there been any progress?

Kawasaki: The big thing was the price of home heating oil. It went from $2 to $4 overnight in 2008. Many people were suddenly spending $5,000 more than they anticipated just to heat their homes. That shock has generally subsided. Oil prices are under $2 once again because of the markets. People aren't talking about the costs of energy when we go door-to-door as much as they did two years ago. At the same time, for folks who want to think about long term, the prospects of natural gas still are there and folks still want to get natural gas into their homes and into their communities but because of the low price of heating oil, it makes that really difficult for most families to make the decision to switch.

Petroleum News: So is the infrastructure getting put in place the way you would like to see it done?

Kawasaki: The infrastructure under the Interior Energy Project is still moving forward. They have done the Phase I out of North Pole and I think they are laying groundwork in phases. I'm pretty sure they are caught up. Fairbanks Natural Gas did a lot of work over the few short years. I think they pretty much hit every part of the neighborhood, but they also capped them because most houses aren't ready to switch and we don't have the supply.

In the early years, we did see some help. We started the phase of getting Healy II up and running. We put wind generation in over at Healy on the hill. We had expanded capacity at Flint Hills at the time. For the long term we passed AGIA, which was a longer term prospect, so a lot of things moved really quickly during those years of high energy prices. Now with lower home heating fuel prices really driving that train, it's tamped down any moves to continue on with natural gas as we used to see just a few years ago. ●

Contact Steve Quinn at squinnwrite@gmail.com

continued from page 1

PIPELINE LEAK

posed the risk of the oil line freezing and thus incurring damage to the line. At that point the gas line was leaking at rate of about 229,000 cubic feet per day.

After discussions with Gov. Bill Walker and the Alaska Department of Environmental Conservation, the parties involved agreed on a reduction of the pressure in the gas line to 65 pounds per square inch, a pressure level that necessitates shutting in oil production from the field, the company said.

According to a press release from Gov. Walker, Hilcorp executives committed to the governor that they will not start production at the platforms again until federal and state regulators are satisfied that the oil and gas lines can be operated safely, in accordance with all applicable laws.

"I appreciate that the company officials are implementing a prudent plan of action," Gov. Walker said. "Alaskans want peace of mind that our waters are protected."

Nelson said that pumps are circulating filtered sea water through the subsea oil pipeline from the field to eliminate the risk of that line freezing up.

Preparing for repair

Hilcorp plans to send divers down to repair the broken gas line but has not yet been able to do so because sea ice conditions in the inlet currently render diving operations unacceptably dangerous. Based on current weather forecasts and ice conditions Hilcorp anticipates mobilizing equipment and deploying divers to begin repair operations within the next 10 days, Nelson said.

Meanwhile the company has been implementing a plan of environmental sampling and monitoring, to gauge any environmental impacts from the leak.

The federal Pipeline and Hazardous Materials Safety Administration has proposed two orders relating to the pipeline leak. The first order would require Hilcorp to repair the leak by May 1. The second order would require the company to conduct an inspection of the subsea oil pipeline, to ensure that the oil line is not also damaged. PHMSA has suggested that the likely cause of damage to the gas line is abrasion against rocks on the seafloor. ●

Contact Alan Bailey
at abailey@petroleumnews.com

continued from page 1

KEYSTONE XL

of jobs," he said.

Girling: Challenges ahead

Girling was a trifle less hyperbolic beyond agreeing that "thousands of people are ready and itching to get to work."

He noted that some tough battles loom before the Nebraska Public Service Commission where landowners are waging a battle to protect their properties, but made no mention of threats by Indian tribes to mount a repeat of the Dakota Access Pipeline protests.

While Trump said he would "call Nebraska" a Washington, D.C.-based regulatory law expert, Fred Jauss, said state and local regulatory processes could be long, noting that the "state permitting agencies are all independent of the federal government."

Environmental activists are also gearing up for a fight, with Bold Nebraska, 305.org, the Sierra Club and the National Resources Defense Council declaring they will file legal challenges.

"The fight will be very real and very intense," said Bill McKibben of 305.org.

TransCanada said only that construction of the 900-mile length in the United States will start once outstanding permits are issued, allowing Keystone XL to start its shipments of 830,000 barrels per day (about 100,000 bpd from the North Dakota Bakken shale, and the rest from Alberta's oil sands) to the Gulf Coast refining hub within another two or three years.

Refiners in the U.S. Gulf Coast and Midwest have spent billions of dollars reconfiguring their operations to handle diluted bitumen from the oil sands and despite the shale-oil boom they will remain prime markets for Canadian heavy crude because of declines in Mexican and Venezuelan heavy-oil production.

Canada's Natural Resources Minister Jim Carr said Trump's approval of XL "is a very good example of how the integration of the energy economy in Canada and the United States is in the interests of both countries, so this is a good day."

Alberta shippers welcomed the announcement from the White House, with Suncor Energy saying XL will "present a more efficient way to deliver Canadian oil to U.S. markets."

Alberta Premier Rachel Notley said that if the pipeline does go ahead, the project will create about 5,000 "immediate term" jobs and generate more than C$1 billion in direct investment, while XL will help diversify Alberta's crude markets.

"This is all going to make oil and gas development in Alberta more compelling to investors," she said.

One of a trio of lines

XL becomes part of a trio of pipelines that could offer about 1.5 million bpd of incremental shipping capacity to the U.S. and Asia, adding to the approvals late last year of Kinder Morgan's Trans Mountain expansion to 890,000 bpd by 2020 and the possibility of increasing Enbridge's Line 3 to Wisconsin to 920,000 bpd in 2019.

Carr estimated that the three projects would create 32,000 jobs in Alberta lone.

While Enbridge's 520,000 bpd Northern Gateway, opening a route to Asia, has been shelved, TransCanada's 1.1 million bpd Energy East remains in play, but faces a tough fight to cross Quebec on its way to the Irving Oil refinery in New Brunswick and possibly a nearby export terminal.

On the upside for the industry and resource-dependent provinces is what some observers believe has been an irreversible setback for environmental and aboriginal activists, who have failed to sway political leaders in the United States and Canada and are no longer able to engage in endless and costly legal challenges. ●

Contact Gary Park through
publisher@petroleumnews.com

Trump wields a big stick

The appearance of peace, harmony and brotherhood at the Keystone XL announcement in the White House might well have covered up a bare-knuckles showdown in preceding days.

President Donald Trump told a fund-raising speech in Washington, D.C., on March 21 that he had ordered one of his top aides to threaten TransCanada that he would "terminate" the pipeline project unless the Calgary-based company dropped US$15 billion lawsuit against the U.S. government for basing its delays in handling the XL application "on an arbitrary political calculation."

Trump also claimed he had "paved the way" for Keystone XL and the Dakota Access pipelines, making it a requirement that the projects he constructed with U.S. steel.

He said the directive was given to top National Economic Council Director Gary Cohn, a former president of Goldman Sachs, who is emerging as one of the president's top advisers.

Trump said the lawsuit was dropped, adding "Isn't that easier? Being president gives you great power."

TransCanada's claim was based on a violation of the North American Free Trade Agreement.

Trump said he recalled telling Cohn: "Wait a minute. I'm approving the pipeline and they're suing us for US$14 billion (US$1 billion short of the actual amount) and I've already approved it, right? I said ... 'Go back and tell them if they don't drop the suit immediately we are going to terminate the deal.'"

Trump also claimed he had "paved the way" for Keystone XL and the Dakota Access pipelines, making it a requirement that the projects he constructed with U.S. steel.

"You want to put pipelines under our land, you're going to make the pipe in this country," he declared.

In fact, TransCanada purchased the pipe it needs years ago when it thought the project would go ahead and only half came from U.S. pipeline makers, with much of the raw steel being imported.

TransCanada Chief Executive Officer Russ Girling never confirmed the threat was delivered and, instead, opted for the high road.

In a written statement, he said: "We greatly appreciate President Trump's Administration for reviewing and approving this important initiative and we look forward to working with them."

But at least one legal expert on ethics and government reform said Trump's message would be seen as a threat of retaliation against other companies if they defy the White House.

Norman Eisen, a special counsel to President Barack Obama, told the Washington Post that "while demanding litigation be dropped can sometimes be part of a legitimate negotiation, Trump's bullying, boastful manner here is odious. It also sends a dangerous message: He is prepared to retaliate against those who exercise their legal rights in court."

—GARY PARK

continued from page 1

WIND PROPOSAL

build a new, larger farm at Delta Junction, with a capacity of 13.5 megawatts.

Golden Valley has evaluated the request under the terms of its tariff that the Regulatory Commission of Alaska approved in 2016 for the connection of renewable energy sources. That evaluation has concluded that the connection does not meet the tariff requirements, and that the wind farm would unacceptably reduce the reliability of Golden Valley's system while also increasing the cost of electricity for the utility's customers, Golden Valley told the commission in a March 15 filing.

The tariff that Golden Valley is using is itself the subject of an administrative appeal in Alaska Superior Court by Alaska Environmental Power.

Questions of cost

The issues surrounding wind farm interconnection relate to the cost of the power and the fact that wind energy is intermittent: The power output from a wind farm fluctuates as the wind strength at the farm rises and falls. These fluctuations must be counterbalanced by equal and opposite fluctuations of other power sources on the electricity grid: How much this power regulation costs and how it is paid for is a contentious subject. Also, in terms of the cost of the wind power, a key parameter is what is referred to as the "avoided cost," the cost of the power that the wind power displaces: The higher the avoided cost in relation to the wind power cost, the more beneficial is the wind power, and vice versa.

Under the terms of the federal Public Utilities Regulatory Policies Act, or PURPA, electric utilities are required to purchase power under reasonable terms from qualifying, independent renewable power producers. The RCA has adopted PURPA regulations in Alaska. The Alaska regulations require a utility to calculate both the cost of integrating a varying renewable power source into its system and the benefit to be gained from the use of the renewable power. The regulations also use an incremental approach to determining the avoided cost associated with the renewable source, an approach that assumes that a utility will preferentially displace its most expensive power sources through the availability of the renewable energy.

Golden Valley has argued that its new renewable energy tariff complies with the RCA regulations and the RCA has approved the tariff. Alaska Environmental Power has claimed that the tariff is illegal because it does not, for example, appropriately account for Golden Valley's capital costs of its power generation, and that the tariff does not correctly allow for integration costs and integration benefits. In the latest twist in the resulting appeal in Superior Court the RCA has elected not to participate in the case.

Impact of power regulation

In rejecting the request to connect a new Delta Wind Farm to its system, Golden Valley says that the need to regulate the fluctuating power from the farm would put stress on the power generation units used to provide the power regulation, thus adding to system maintenance costs and adding risk to the reliability of Golden Valley's power supply system. Moreover, the fluctuating power output from the new wind farm would be highly correlated with fluctuations from the two wind farms that Golden Valley already has connected to its system, Golden Valley says. Thus, the variability of the wind power would increase substantially, but with no offsetting benefit from increased diversity of power sources, the utility says.

Currently, Golden Valley does not need any additional power generation to meet its customers' long-term electricity needs and, although the utility supports renewable energy, the utility is not using all of the existing wind power connected to its system, Golden Valley told the RCA.

Golden Valley commissioned a system modeling consultant to analyze the likely system operating characteristics and financial impacts resulting from the integration of the proposed new wind farm into the utility's power supply system. The analysis found that regulation of the power from the farm would require the increased use of Golden Valley's less efficient fuel-burning power generation plants. The consequence would be an increase in Golden Valley's annual fuel costs of $19.9 million in 2018, rising to $82.7 million by 2037, Golden Valley told the commission.

Because the integration of the wind farm would result in significantly increased costs to Golden Valley's members, Golden Valley is not obliged to connect the wind farm to its system, Golden Valley told the RCA.

AEP's response

Mike Craft, managing partner of Alaska Environmental Power, vehemently disagrees with Golden Valley's position. Craft told Petroleum News March 28 that the analysis commissioned by Golden Valley grossly overstated the fuel cost that Golden Valley would incur by integrating the Delta Wind Farm, especially given the modest size of the wind farm in relation to Golden Valley's total power needs. Golden Valley already has to use its less efficient power plants as spinning reserves, to guard against shortfalls in non-firm power supplies that the utility obtains from Southcentral Alaska through the single power transmission intertie between Southcentral and the Interior, Craft said.

Craft also disputes Golden Valley's assertion that the fluctuations in the power from Delta Junction would correlate with fluctuations in the utility's existing wind power resources. Most of that existing wind power comes from Golden Valley's wind farm at Eva Creek, a location at a significantly higher elevation and in a completely different wind system from Delta Junction, Craft said.

Craft, who has been pushing his wind power concept for the Interior for several years, expressed his extreme frustration at what he sees as utility obstruction to using power from an independent source. He said that he had purchased the Delta Junction wind farm site because of its particularly favorable location relative to the wind system that flows from the Wrangell-Saint Elias Mountains north through the Tanana Valley. The existing wind farm at Delta Junction enjoys a capacity factor of around 71 percent, including 18-day wind events, during the winter, when electricity demand is at its highest, Craft said.

"That's unheard of anywhere in the world," he said.

Croft also commented that a wind power integration study conducted in 2010 concluded that, while the Eva Creek could swing its input to the transmission grid by 24 megawatts in less than 10 minutes, the maximum swing at Delta Junction would likely be 10 megawatts.

—ALAN BAILEY

Contact Alan Bailey at abailey@petroleumnews.com