

page EIA says May Brent average \$77 per barrel, highest since November '14

Vol. 23, No. 24 • www.PetroleumNews.com

A weekly oil & gas newspaper based in Anchorage, Alaska

Week of June 17, 2018 • \$2.50

Southcentral power pool makes progress addressing complexities

The three Southcentral Alaska electric utilities, Chugach Electric Association, Municipal Light & Power and Matanuska Electric Association, are making progress towards implementing the economic dispatch of generation capabilities across their service areas, utility officials told the Regulatory Commission of Alaska on June 13. Because of the complexities involved in dealing with the various issues associated with implementing the tight power pooling arrangements, implementation of the pool is taking longer than originally envisaged. However, the utilities now anticipate having the pooling agreement approved by the RCA and in operation by the end of March 2019, the officials said.

The term economic dispatch refers to procedures whereby

see POWER POOL page 11

Alaska in Repsol's strategic plan

Spanish major, Repsol, in a 2018 to 2020 update to its strategic plan, makes mention of the company's opportunities in Alaska. The plan update references Alaska as one of five areas worldwide earmarked for development projects. The five areas have a combined breakeven oil price, the price at which development projects become viable, of \$42. The strategic plan assumes a Brent oil price of \$50 per barrel.

Repsol is partnering with Oil Search and Armstrong Energy in the development of the huge Pikka/Horseshoe prospect, to the east of the Colville River delta. The prospect involves a major oil find in the Nanushuk formation as well as oil in Alpine sands.

The full version of Repsol's plan, originally published for years 2016 to 2018 but now dated June 2018, characterizes the company's Alaska oil interests as "advantaged oil" and one of the company's high-margin assets. The plan indicates a breakeven oil price of less than \$45 for the company's Alaska venture, with first oil anticipated around 2023-24.

—ALAN BAILEY

Data from 22 Slope wells to be released, including Tinmiag 2, 6

The latest public release of exploration data by Alaska's Division of Oil and Gas will consist of data from 22 North Slope wells, including ConocoPhillips' Tinmiaq 2 and Tinmiaq 6 wells, drilled in 2016 in the Greater Mooses Tooth unit and forming the basis of the company's subsequent announcement of its major Willow oil discovery in the National Petroleum Reserve-Alaska.

On June 1 the division issued notices for the public release of the data after 30 days. The data releases come as part of the state tax credit system — companies making use of tax credits in support of exploration activities have had to file resulting

see **WELL DATA** page 10

Flipping pipeline is not easy; **Canadian govt faces unknowns**

The Canadian government is about to get a harsh lesson in the ownership of Kinder Morgan's existing pipeline from Alberta to the British Columbia coast and the challenges it faces in bringing expansion of that system to completion.

So far the government has put C\$4.5 billion on the table to acquire the 300,000 barrel per day Trans Mountain line and assets in the planned 590,000 bpd expansion, all to fulfill their commitment to ship Alberta oil sands bitumen to Asia.

But it faces a pile of unknowns — how much the actual expansion will cost above current projections of C\$7.4 billion, what consequences it might face in a series of court actions that

see PIPELINE UNKNOWNS page 8

EXPLORATION & PRODUCTION

Starfish success

Glacier finds oil, starts production from new reservoir horizon at Badami

By ALAN BAILEY

Petroleum News

lacier Oil and Gas Corp. has suc-Cessfully found oil with its Starfish exploration well at Badami on the North Slope, Carl Giesler, Glacier CEO, told Petroleum News in a June 7 email. The well, referred to as the B1-07 well, has gone into production through the processing facilities at the Badami field.

Well testing demonstrated production rates above 2,500 barrels of oil per day, Giesler said.

The Swordfish well targeted the Killian sand, a reservoir interval immediately above the oil source



rock and below the Badami sands that form the reservoir for the Badami field. The well has proven the geologic and commercial viability of this new reservoir, Giesler said. The B1-07 is the first well brought into production in the Badami unit since 2010 and the first to produce from the Killian sand, he said. The well is located to the southwest of the Badami development area.

Giesler commented on the achievement of drilling the new well in parallel with production operations at Badami, with more than 100,000 manhours of work involved and a three-

see STARFISH SUCCESS page 12

Purchase is confirmed

IGU board has approved Pentex acquisition thus enabling completion of deal

By ALAN BAILEY

Petroleum News

n June 12 the board of the Interior Gas Utility voted to agree on final terms for the purchase of Pentex Natural Gas Co. from the Alaska Industrial Development and Export Authority, thus enabling completion the Pentex

IGU can now combine with Pentex subsidiary Fairbanks Natural Gas to form a consolidated utility for the Fairbanks area. The purchase will also bring IGU ownership of the Titan liquefied natural gas plant near Point Mackenzie and a trucking operation for shipping LNG to Fairbanks. The move comes as part of the Interior Energy Project, an AIDEA project to greatly expand the supply of

The IGU had previously approved the completion of the Pentex purchase, subject to AIDEA board approval of a letter of agreement altering some of the terms of the purchase and sales agreement.

natural gas in Fairbanks, to address issues relating to the high cost of energy in the city and air pollution from the use of wood burning stoves. The Fairbanks utility consolidation represents a major step in the project.

The IGU board passed the Pentex purchase resolution by a majority of four to one, with board

see PENTEX SALE page 12

PIPELINES & DOWNSTREAM

Tanker ban angers Alberta

Legislation in Canadian Parliament threatens jobs, Eagle Spirit plan for port at Hyder

By GARY PARK

For Petroleum News

ost amid haggling over the Trans Mountain expansion project, the Canadian government has infuriated Alberta by advancing legislation that will impose a moratorium on shipments of condensate, bitumen and upgraded bitumen exceeding about 90,000 barrels through an area from the northern tip of Vancouver Island to the Alaska border.

The Alberta government estimates the sleightof-hand will wipe out imports of Asian condensate, essential to the movement of oil sands bitumen through pipelines, threatening "thousands of jobs and billions of dollars of investment."

Alberta Premier Rachel Notley, challenged

"Prohibiting shipments from the strategic deep-water ports on the north coast of British Columbia, which can deliver products to Asian markets with a full-day advantage over other Pacific ports, will have profound and long-standing economic consequences (for Canada)." —Alberta Energy Minister Marg McCuaig-Boyd

June 5 by United Conservative Party leader Jason Kenney to pressure Prime Minister Justin Trudeau to withdraw the bill, said her government has complained to the Canadian government that "the

see TANKER BAN page 9

ALTERNATIVE ENERGY

US DOE announces marine energy grants

Two Alaska projects to receive funding assistance for systems can use river flows to generate power for remote rural communities

By ALAN BAILEY

Petroleum News

n June 8 the U.S. Department of Energy announced that it is awarding grants to six projects for generating electricity from moving water, including two Alaska projects researching energy production from the water flow in rivers.

The agency is awarding \$2.3 million to the Igiugig Village Council and Ocean Renewable Power Co. of Maine for the test of an in-current power generation system at Igiugig. And a grant of \$1.3 million is going to the Alaska Center for Energy and Power at the University of Alaska Fairbanks and to Renerge Inc. for work on the development of the "water horse," a machine for harvesting hydrokinetic energy

"Marine energy technologies have the potential to pro-

vide millions of Americans with locally sourced, affordable, and reliable energy," said Daniel Simmons, principal deputy assistant secretary for DOE's Office of Energy Efficiency and Renewable Energy. "This is why DOE's research and development is critical to advancing American economic growth and energy security, especially for rural communities that have high energy costs but abundant marine energy resources."

U.S. Sen. Lisa Murkowski, R-Alaska, lauded the DOE decision.

"I am so pleased that these projects have been selected to receive funding from the Department of Energy," Murkowski said. "The innovation happening in Alaska is real, and the people advancing technologies in our state are helping address not only the significant energy challenges facing many of our remote communities, like Igiugig, but also paving the way for microgrid solutions around the world. Once you prove these technologies can work in rural Alaska, you prove they can work just about anywhere."

Since 2014 Ocean Renewable Power Co. has been testing the use of a hydrokinetic device with helical shaped turbine blades submerged in the Kvichak River at Igiugig for power generation for the village. Power cables connect the device to the village power distribution system. The company has been testing design changes that can make the device more durable, and easier to deploy and retrieve. Murkowski said the new DOE grant will enable the permanent installation of an in-river turbine system at Igiugig, in a move toward relegating the village's diesel power gener-

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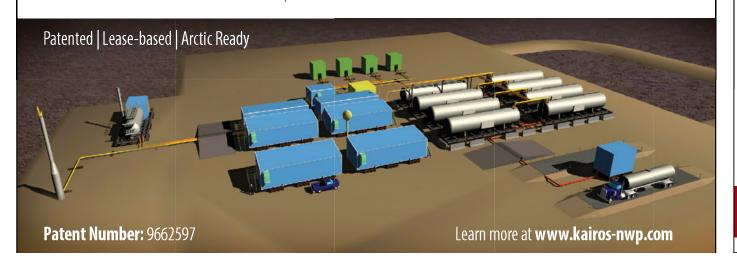
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GOVERNMENT

GAO wants better **BLM** well oversight

Says agency does not have adequate information regarding its liabilities for well plugging, abandonment; recommends improvements

By ALAN BAILEY

Petroleum News

Government Accountability Office A report has recommended that the Bureau of Land Management needs to improve the oversight of its potential liabilities with respect to abandoned oil and gas wells on federal land. The report says that BLM's liabilities are probably increasing and makes recommendations for improved data collection, to enable a better understanding of liability levels and to enable a better evaluation of the adequacy of bonding requirements for well operators.

Essentially, a well operator is responsible for plugging and abandoning a well that has reached the end of its useful life: The operator must plug the well effectively and reclaim the land around the wellhead. BLM requires the operator to post a surety or personal bond for the well, to cover the estimated cost of plugging and abandonment. But if the operator fails to conduct the plugging and abandonment adequately, perhaps because of bankruptcy, BLM becomes liable for any outstanding plugging and abandonment costs above the level of the well bond. And the well becomes designated as "orphaned."

Liabilities unclear

The GAO report says that, because of inconsistencies in the manner in which different branches of BLM collect data, and because of inadequacies in data management, the agency does not have a clear understanding of its outstanding liabilities. And, in particular because of the growing number of wells on BLM land, those liabilities are likely increasing, the GAO report

BLM does not keep comprehensive records of how much money it has spent on reclaiming orphaned wells, nor does the agency keep systematic historical records of the numbers of orphaned or inactive wells, the report says.

And one particular issue is inconsistencies between different field offices in the manner with which officials conduct and record well reviews, given the lack of a documented standard for what a well review means and entails, the GAO report says.

Recommendations

needs to more thoroughly track the actual costs that the agency incurs for the reclamation of orphaned wells. BLM also needs to maintain a time indexed inventory of orphaned and inactive wells, to enable an assessment of the agency's potential liabilities. And the BLM director should develop and communicate specifications for what constitutes a well review, for the purpose of annual reporting.

GAO has also recommended improvements to BLM's data management, including the checking of data quality.

BLM should also ensure that its well bonding policies adequately reflect the overall risks presented by well operators. And the agency should develop a resource management plan to ensure the appropriate availability of resources for conducting bond adequacy reviews and reclaiming orphaned wells — a number of BLM officials had told GAO investigators that, with limited BLM staffing available, priority had to be placed on meeting statutory deadlines for processing well permit applications, rather than on dealing with reviews of bonding adequacy.

Bonding requirements

There are also issues with regard to

The BLM has in general concurred with the GAO findings and has told the GAO that it will take actions to address the areas of concern. However, commenting that it already has an annual work planning process that addresses the allocation of agency resources, BLM requested further information about what GAO envisages as a required resource management plan.

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GAO has recommended that BLM

maintaining adequate minimum requirements for bonding amounts: While bonding amounts have not kept pace with inflation over the years, some BLM officials expressed a view that most well operators would not be able to remain in business, were bonding amounts to reflect the total costs of well reclamation, the GAO report

ENERGY GRANTS

continued from page 2

ation system to becoming an emergency backup facility rather than a prime power

The water horse device being developed by UAF's Alaska Center for Energy and Power uses an oscillating system that can deployed in small rivers, too shallow for the installation of large turbines.

These in-water power generation systems have much potential for use in remote Alaska communities. Challenges include dealing with debris and sediment being carried in fast-flowing river water.

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NATURAL GAS

Support group for LNG project forms

The Alaska Gasline Development Corp. said June 7 that Alaska organizations from around the state have formed the Alaska Gasline Coalition to support AGDC's Alaska LNG project.

Members include: Alaska AFL-CIO, Alaska Laborers, Anchorage Economic Development Corp., Arctic Slope Regional Corp., Calista Corp., Construction Industry Progress Fund, Kenai Peninsula Builders Association, Kenai Peninsula

Economic Development District, National Electrical Contractors Association-Alaska AGDC said it would provide and the Soldotna Chamber of Commerce.

AGDC said it would provide coalition members with regular updates on the progress of the project and highlight opportunities for Alaskans to be involved. Coalition members support its work to develop Alaska LNG, AGDC said, because the project will allow commercialization of the

coalition members with regular updates on the progress of the project and highlight opportunities for Alaskans to be involved.

North Slope's natural gas resources, generate state revenue and provide jobs and reliable affordable energy for state residents.

AGDC said it would "utilize the coalition to demonstrate Alaskans' support for the project and in-state capabilities to potential investors, the global LNG industry, and stakeholders."

"Alaska LNG is a transformative project that will provide opportunities for all Alaskans," said AGDC President Keith Meyer. "Alaskans will benefit from Alaska LNG through direct jobs, access to stable low-cost, clean energy, and revenue to the state. The Alaska Gasline Coalition will help ensure Alaskans are informed about the project's progress so residents are prepared to take advantage of opportunities to be directly involved in the project from pre-construction through operations."

Anchorage Economic Development Corp. President and CEO Bill Popp said AEDC "firmly believes that the Alaska LNG project would be a boon to our economy" and would grow and diversify the state's economy, both goals which AEDC champions.

Alaska AFL-CIO President Vince Beltrami said his organization is fully committed to the Alaska LNG project. "We know Alaskan contractors and workers are the best in the world at building in the Arctic and we look forward to the opportunity to build this project and bring our gas to market."

Information about the Alaska Gasline Coalition is available at www.agdc.us/coalition.

—PETROLEUM NEWS





FINANCE & ECONOMY

May Brent \$77, highest since November 2014

EIA forecasts Brent average of \$71 this year, \$68 in 2019; WTI expected to average almost \$7 below Brent this year, \$6 lower in 2019

By KRISTEN NELSON

Petroleum News

he U.S. Energy Information Administration said June 12 in its Short-Term Energy Outlook that Brent crude oil averaged \$77 per barrel in May, up \$5 per barrel from April, and the highest monthly average since November 2014.

"The forecast for Brent crude oil is for spot prices to remain above \$70 per barrel this year, as global oil demand outpaces supply," EIA Administrator Dr. Linda Capuano said in a statement. "Global oil supplies have been lower than expected, notably because of outages in major oil producer, Venezuela. Our forecast indicates Brent crude oil prices will decline to an average of \$68 per barrel in 2019, as U.S. crude oil production continues to grow at a rapid pace."

EIA's forecast for this year remains \$71 per barrel. The 2019 forecast price, \$68 per barrel, is up \$2 per barrel from the May forecast. The agency said it DR. LINDA CAPUANO expects West Texas



Intermediate to average almost \$7 per barrel lower than Brent in 2018 and \$6 lower

US production

U.S. crude oil production continues to

Capuano said the agency continues to expect "robust growth" in domestic production, with an increase of more than 15 percent from 2017 to 2018, "eclipsing an average of 11 million barrels per day during the fourth quarter of 2018."

EIA estimates U.S. crude oil production averaged 10.7 million barrels per day in May, up 80,000 bpd from April, and is projecting an average of 10.8 million bpd this year, up from 9.4 million bpd in 2017 and rising to an average of 11.8 million bpd in 2019.

Natural gas

U.S. dry natural gas production averaged 73.6 billion cubic feet per day in 2017, and EIA said it is forecasting an average of 81.2 bcf in 2018, which would be a new record.

"EIA's June outlook increased the forecast for U.S. dry natural gas production this year," Capuano said, and the agency now expects an increase of more than 10 percent in 2018, "reaching a record 81 billion cubic feet in 2018."

EIA expects production to continue to grow in 2019 to some 83.8 bcf per day, up about 3 percent from 2018.

"Increased production and added infrastructure have positioned LNG exports for considerable growth in 2018 and 2019," Capuano said. "EIA's June outlook is that U.S. LNG exports will exceed an average of 5 billion cubic feet per day in 2019, compared to last year's average of just under 2 billion cubic feet per day. Assuming the forecast holds, U.S. exports of LNG will more than double over a 24month period," she said.

U.S. LNG exports averaged 1.9 bcf per day last year and are forecast to average 3 bcf this year and 5.1 bcf per day in 2019, EIA said.

The Henry Hub natural gas spot price is expected to average \$2.99 per million British thermal units this year and \$3.08

Crude prices

EIA said Brent traded above \$80 per day briefly in late May before declining in the first week of June, with the May increase attributed to declining production from several members of the Organization of the Petroleum Exporting Countries, including Venezuela and Nigeria, "and as markets accounted for the uncertainty surrounding Iran's future crude oil production levels."

The Iran uncertainty was due to the U.S. announcement that it would withdraw from the Joint Comprehensive Plan of Action and reinstate sanctions on companies doing business with Iran.

OPEC, Russia and other non-OPEC countries are scheduled to meet June 22 "to access current oil market conditions as they relate to their existing crude oil production reductions, which are scheduled to continue through the end of 2018," EIA said, with oil ministers from Saudi Arabia and Russia announcing they will reevaluate the production reduction agreement.

EIA said that in this forecast it assumes some supply increases from major producers next year and said pending outcome of the June 22 meeting the magnitude of any increase is uncertain.

OPEC is forecast to produce an average of 32 million bpd this year and 32.1 million bpd in 2019, levels which are

see EIA FORECAST page 5

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Petroleum News and its supple ment, Petroleum Directory, are owned by Petroleum Newspapers of Alaska LLC. The newspaper is published weekly. Several of the individuals listed above work for independent companies that contract services to Petroleum Newspapers of Alaska LLC or are

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OWNER: Petroleum Newspapers of Alaska LLC (PNA) Petroleum News (ISSN 1544-3612) • Vol. 23, No. 24 • Week of June 17, 2018 Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518 (Please mail ALL correspondence to:

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P.O. Box 231647 Anchorage, AK 99523-1647) Subscription prices in U.S. — \$118.00 1 year, \$216.00 2 years Canada — \$206.00 1 year, \$375.00 2 years Overseas (sent air mail) — \$240.00 1 year, \$436.00 2 years "Periodicals postage paid at Anchorage, AK 99502-9986."

POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

CORRECTION

Hilcorp the operator

In the production story in the June 10 issue, Hilcorp was twice incorrectly identified as "Hilcrest"; Petroleum News apologizes for the error.

Hilcorp is the operator of a majority of fields in Cook Inlet, including the McArthur River and Middle Ground Shoal fields, where the naming error occurred in the story.



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EXPLORATION & PRODUCTION

PETROLEUM NEWS • WEEK OF JUNE 17, 2018

BP presents its 2017 **Statistical Review**

Energy demand up, led by natural gas; strong growth in renewables; OPEC-led cuts exceed goals, offset by US tight oil production

By KRISTEN NELSON

Petroleum News

BP's 2017 Statistical Review was released June 13, with Spencer Dale, BP group chief economist, providing an overview from London.

Growth in overall energy demand was up in 2017 over 2016, he said, along with an increase in coal consumption — the first in four years. And carbon emissions were up after three years of little or no

The growth in energy demand in 2017 was 2.2 percent, up from 1.2 percent in 2016 and above a 10-year average of 1.7 percent. Dale said much of the growth can be attributed to the increase in economic growth, but there was also a slight slowing in improvements in energy intensity, the amount needed for a unit of output.

While there was strong growth in Organization for Economic Cooperation and Development countries, 80 percent of the expansion came from developing countries, with China contributing over a third to the growth, reflecting a rebound in some of that country's most energyintensive sectors.

Some 60 percent of the increase in primary energy came from natural gas and renewables, Dale said, with a 3 percent growth in natural gas and a 14.8 percent growth in renewables.

When the 2016 Statistical Review came out, Dale said, oil production and consumption were broadly in balance, but inventories remained at record highs. The Organization of the Petroleum Exporting Countries together with 10 non-OPEC countries led by Russia, collectively called the Vienna group, had begun to implement production cuts but tight oil production in the U.S. had begun to increase, he said.

In 2017, oil demand grew by 1.7 million barrels per day, similar to 2016 and well above the 10-year average of a little over 1 million bpd, Dale said.

On the production side, growth was some 600,000 bpd, similar to 2016, but output by the Vienna group, which increased by 1.6 million bpd in 2016, fell 900,000 bpd last year, while production outside the group, which had fallen in 2016, grew by 1.5 million bpd led by the U.S. and Libya.

Dale said the target for cuts by the Vienna group was almost 1.8 million bpd, relative to October 2016, but the cuts totaled nearly 2.5 million bpd in April 2018.

Those cuts were instrumental in reducing oil stocks, which fell to normal levels in 2017, he said. The combination of reduced production and increased demand meant consumption exceeded production for much of 2017, reducing OECD inventories to a five-year average.

U.S. tight oil and natural gas liquids production increased by almost 2 million bpd since October 2016, but Dale said bottlenecks in the supply chain in the U.S. and signs investors were becoming wary suggest some limit to tight oil growth.

Dale characterized 2017 as "a bumper year" for natural gas, with a 3 percent increase in consumption and a 4 percent increase in production.

Natural gas

Dale characterized 2017 as "a bumper year" for natural gas, with a 3 percent increase in consumption and a 4 percent increase in production. Consumption growth, he said, was led by Asia, particularly China with a 15.1 percent consumption growth rate. Increasing production came from Russia, up 8.2 percent, Iran, up 10.5 percent, Australia up 18 percent and China up 8.5 percent.

The surge in Chinese gas demand was the most significant factor in the expansion in gas consumption, Dale said, led by switching in the industrial sector. The surge led to severe strains in that country, with sharp price increases for natural gas, some caused by the increase in gas demand, the limit to how quickly liquefied natural gas imports can be increased, an incomplete network of pipelines across China and inadequate gas storage — some 3 percent of consumption compared to 20 percent in the U.S. and Europe.

LNG trade

There was a continued expansion of LNG in 2017, up 10 percent, the strongest growth since 2010, with about half of the global expansion attributable to China's need for LNG.

Dale said the numerous projects sanctioned between 2009 and 2014 had led to predictions of an LNG surplus, but that has not developed. He said this was partly because new supplies have come online less quickly than planned, while surplus LNG which did occur produced periods of

see STATISTICAL REVIEW page 6

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EIA FORECAST

200,000 and 300,000 bpd lower, respectively, than those the agency forecast in May.

The agency said it is currently forecasting an increase in global crude production of 210,000 bpd in 2019, which is expects "will put modest downward pressure on crude oil prices in the second half of 2018 and in 2019."

EIA noted that prices for longerdated futures contracts have increased by larger percentages in the past six months than in the second half of last year. As an example the agency cited Brent crude oil prices for December 2022 delivery, which increased by 6 percent from June 7, 2017, to Dec. 7, 2017, while the same contract increased 12 percent from Dec. 7 to June 7, settling at more than \$60 per barrel.

"Upstream crude oil production projects with long lead times and investment periods often use futures prices several years in advance to aid final investment decisions," EIA said. "Higher prices for longer-dated futures contracts could trigger increased investment interest in upstream projects that would begin producing oil in future years." ●

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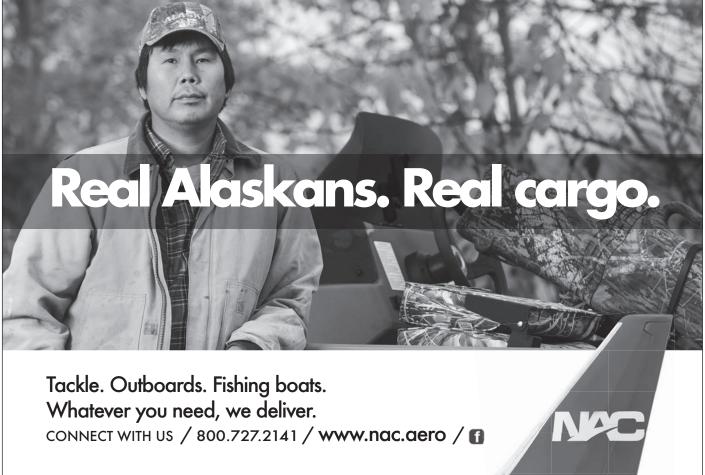
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GOVERNMENT

Interior approves \$4 million for ANWR

On June 7 Interior Secretary Ryan Zinke announced \$50 million in funding for the rebuilding of critical U.S. Fish and Wildlife Service infrastructure, including \$4 million for the Arctic National Wildlife Refuge. The ANWR funding is characterized as targeting improvements to existing facilities and the construction of outbuildings, to support heightened activities in readiness for oil exploration in the 1002 area of the ANWR coastal plain.

The Department of the Interior has not responded to a request for further information about the ANWR funding. However, Associated Press has reported that the funding will pay for six projects for facility improvement or construction. Those projects involve an aviation fuel storage facility in the village of Kaktovik, on the northern edge of the 1002 area, and storage buildings in the village to protect vehicles from bears. Funding will also enable the expansion of a cabin in Galbraith Lake and the construction of a cabin in Arctic Village, the AP report says.

Galbraith Lake is located adjacent the North Slope Haul Road on the north side of the Brooks Range. Arctic Village is on the south side of the Brooks Range, on the southern edge of ANWR, some 150 miles south of the coast plain.

Zinke has indicated that he sees tackling a backlog in deferred maintenance on Interior-administered federal lands as one of his top priorities. In Alaska the Fish and Wildlife Service funding will also be used for the rehabilitation of a number of public use trails, cabins, a boardwalk and a boat ramp in the Kenai and Kodiak National Wildlife Refuges.

—ALAN BAILEY



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FINANCE & ECONOMY

State sued over changes in Slope tax collection

By KRISTEN NELSON

Petroleum News

Exxon Mobil Corp., Hilcorp Alaska LLC and SAExploration Inc. have filed suit against the Alaska Department of Revenue seeking judgment based on DOR's Advisory Bulletin 2017-01 which, plaintiffs said, "re-interprets Alaska's tax code and regulations to increase the tax burden on taxpayers by approximately \$110 million in 2018 and to retroactively impose back taxes of \$50 million (plus an unspecified amount of interest) for tax years 2014-

Plaintiffs said in the June 7 filing that the 2017 bulletin reverses a 2011 advisory bulletin.

"This reversal in position, and retroactive application, was made without public comment, due process, or the requirements" of state statute, they said.

At issue is production tax paid by North Slope producers based on production tax liabilities which can be reduced by tax credits, including a sliding scale credit providing a credit per barrel adjusted based on oil prices and costs, a new oil credit which provides a flat \$5 per barrel credit on oil from qualified leases and other credits.

Plaintiffs said the sliding scale and perbarrel credits were enacted in 2013 as part of Senate Bill 21.

Prior to publication of the 2017 bulletin,

plaintiffs said the Department of Revenue "acknowledged in the 2011 Advisory Bulletin that North Slope Producers could reduce their tax liability below the Minimum Tax by using the New Oil Credit and the Other Credits," and "stated that taxpayers could apply the Sliding Scale Credit first to reduce tax liability down to the Minimum Tax and then apply the New Oil Credit and the Other Credits to the portion below the Minimum Tax."

The 2017 Advisory Bulletin, plaintiffs said, was adopted by the department "without seeking comments from, or providing notice to, affected taxpayers or the public." Plaintiffs also said the department "failed to rescind the 2011 Advisory Bulletin that had opined that taxpayers could apply the New Oil Credit and Other Credits against the Minimum Tax."

In the 2017 Advisory Bulletin the department asserted "that if a taxpayer uses the Sliding Scale Credit, the taxpayer cannot use any credits, including the New Oil Credit and the Other Credits, to reduce its tax liability below the Minimum Tax."

The plaintiffs are seeking a court order voiding the 2017 Advisory Bulletin and an award of costs, including attorneys' fees.

The state had not yet filed a response when this issue of Petroleum News went to press.

> Contact Kristen Nelson at knelson@petroleumnews.com

EXPLORATION & PRODUCTION

National rig count rises by 2 to 1,062

The number of rigs drilling for oil and natural gas in the U.S. increased by two the week ending June 8 to 1,062.

At this time a year ago there were 927 active rigs.

Houston oilfield services company Baker Hughes reported that 862 rigs drilled for oil (up one from the previous week) and 198 for gas (also up one). Two were listed as miscellaneous (unchanged). Among major oil- and gas-producing states, Texas added three rigs, Colorado increased by two and Louisiana gained one.

Oklahoma and Wyoming declined by two rigs each and North Dakota decreased by one.

Alaska, Arkansas, California, New Mexico, Ohio, Pennsylvania, Utah, and West Virginia were unchanged.

—ASSOCIATED PRESS



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STATISTICAL REVIEW

unstainable low prices rather than a buildup of idle capacity. He said Asian spot prices over the last two ears have fluctuated between U.S. LNG exporters' full-cycle costs and their short-term operating costs, with U.S. suppliers willing to supply LNG as long as operating costs were cov-

Coal

Coal had a mini-revival in 2017, Dale said, with both consumption production increasing. Consumption rose by 1 percent, led by India, with increases also in China. World oil production was up by 3.2 percent, with China at 3.6 percent and the U.S. at 6.9 percent, with U.S. consumption falling and producers there exporting to Asia.

> Contact Kristen Nelson at knelson@petroleumnews.com

• EXPLORATION & PRODUCTION

Oooguruk drilling suspension to continue

Caelus planning another year without drilling at flagship North Slope field; workover program continuing; Nuna project delayed

By ERIC LIDJI

For Petroleum News

aelus Natural Resources Alaska LLC is once again planning for a year without any drilling activity at its Oooguruk unit and is also planning a decline in workover activities.

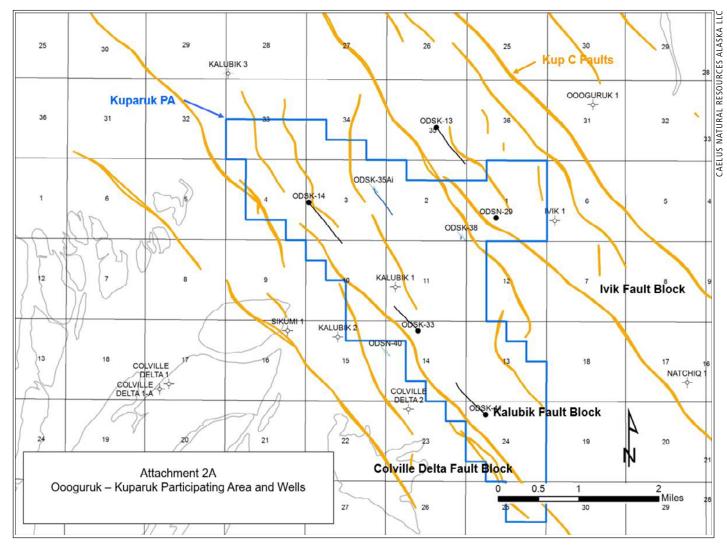
And the company has again pushed back the estimated launch of its Nuna development.

The local subsidiary of the Texasbased independent suspended drilling operations at the nearshore North Slope unit in May 2016 due to low oil prices and investor confidence.

In its 12th plan of development, covering the year ending Aug. 31, 2019, the company proposed no new wells or side-tracks. The company announced plans for three workover operations "pending approval by management," down from eight in the current year. In its 11th plan of development, the company had mentioned six well locations that it hoped to drill when economics improved. Those wells were not mentioned in the current plan.

As described in the plan, the proposed workover program involves replacing failed electric submersible pumps with gas lift at the ODSN-02, ODSN-04 and ODST-39 wells and repairing casing at the ODST-39 well that was damaged during workover activities this past year. The company said the workover program could be expanded or contracted.

Caelus is also planning a complete



shutdown for approximately a week in the summer of 2019 to inspect "the (Oooguruk Tie-In Pad) production separator, turbine generator packages, gas compressors, multiphase meters and other crit-

ical equipment." The work will occur during a six-week window driven by planned maintenance at the Kuparuk River unit Central Processing Facility-3, which is downstream of the Oooguruk unit.

Oooguruk-Kuparuk

The Oooguruk unit includes three pools: the Kuparuk, Nuiqsut and Torok.

see OOOGURUK DRILLING page 8



continued from page 1

PIPELINE UNKNOWNS

could further delay, or even halt construction, and the risks posed by demonstrators who are resolved to block work on the addition by whatever means.

All of which pose complications to the timing of a promised sale of Trans Mountain.

"We're not seeking to make a profit," Finance Minister Bill Morneau told reporters. "We're seeking to ensure the project gets done.

"We've also said that our long-term preference is to (put the pipeline) in private hands, so the challenge would be what timing is most appropriate to meet the goal of getting the project done.

"We'll be listening to potential bidders in the near term to ascertain whether that will provide us with project certainty and a financial deal that's appropriate for Canadians."

Marketing materials

The government has wasted no time in sending out marketing materials to several potential buyers — including several pipeline companies, pension funds, asset managers and aboriginal groups — about the planned sale.

Among those listed as prospective bidders are heavyweight U.S. investors such as Berkshire Hathaway and Blackstone Group.

Greenhill & Co., a New York-based investment bank, was the exclusive financial adviser to the government on its purchase of Trans Mountain and is reportedly working on a sale ahead of an expected Kinder Morgan shareholder vote to close the current transaction in late July.

However, most observers doubt any company will be willing to go near Trans Mountain when the fate of the project remains clouded with doubt.

They say no corporate board wants its corporate brand associated with scenes of pipeline protestors being led away in handcuffs, or to deal with endless court challenges initiated by the British Columbia government.

Some insist there is no hope of Prime Minister Justin Trudeau's government getting full value for Trans Mountain until bitumen is flowing through the expansion to Vancouver's tanker terminal.

Reassuring shippers

As the owner and operator, the government is anxious to reassure Trans Mountain oil shippers, including Suncor Energy, Imperial Oil and Cenovus Energy, that they won't face sharp increases in shipping tolls under the new arrange-

Although long-term shipping commitments made by producers dropped by 22,000 bpd or 3 percent last year, those were quickly seized by other producers.

However, any capital cost increases are normally passed on to shippers. Under that formula, every C\$100 million hike in the budget translates into a 7 percent rise in tolls, which were previously pegged at C\$5-C\$7 a barrel.

Hal Kvisle, former chief executive officer of TransCanada, said that if the capital cost rises 50 percent tolls will climb by a matching amount.

But Natural Resources Minister Jim Carr noted that the government's ability to quicken the pace of construction reduces the prospect of cost escalation from political interference by the B.C. government.

"There is a high level of confidence that (Trans Mountain) will be a revenue-producing asset that will be attractive to prospective investors," he said.

The big unknown is how much the expansion price tag has climbed above the C\$7.4 billion figure previously cited by Kinder Morgan, industry and government sources.

Since then, Kinder Morgan has refused to estimate project costs since it halted non-essential spending in April or comment on federal government sources who have calculated that construction costs will grow from C\$15 million to C\$150 million a month when active construction resumes.

—GARY PARK

Contact Gary Park through publisher@petroleumnews.com

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OOOGURUK DRILLING

Caelus expanded the Oooguruk-Kuparuk participating area this year to include six wells: active producers ODSK-14, ODSN- 29 Kuparuk and ODSK-41, active injectors ODSK-35Ai and ODSK-38i, and the producer ODSK-33, which is inactive due to water cut.

Oil production continued as expected from the horizontal ODSK-14 and ODSK-41 wells.

The company completed a workover on the ODSN-29 Kuparuk well in September 2017 and brought the well online in October 2017. The well has been consistently producing 1,500 barrels per day with cumulative production of 263,000 barrels through April 2018.

Pressures in the ODSN-29 Kuparuk well align with those at ODSK-38i in the main Kalubik fault block but not with those at ODSK-13 in the western Ivik fault block. And production rates at ODSK-13 remained level after ODSN-29 Kuparuk came online, further reinforcing the argument that the recompleted well is targeting a different block.

The company temporarily shut-in Nuiqsut production from ODSN-29 while producing from the Kuparuk but plans to ask the Alaska Oil and Gas Conservation Commission for permission to either co-mingle or alternate production from both pools at the well.

According to the company, oil production and water-tooil rates at the Oooguruk-Kuparuk participating area have remained stable (and have sometimes even exceeded expectations) because the participating area is a "mature dual porosity system."

Oooguruk-Nuiqsut

Caelus also expanded the Oooguruk-Nuiqsut participating area to include all existing development wells. The area now has 28 active wells — 18 producers and 10 injectors.

The central ONPA Kalubik fault block is producing

from the ODSN-01A, ODSN-24, ODSN-25, ODSN-31, ODSN-36, ODSN-37 and ODSN-42B wells with water and gas injection from the ODSN-19i, ODSN-26i, ODSN-32i and ODSN-34i wells. The company cycled ODSN-01A production this year "to manage voidage replacement."

The ONPA Colville Delta fault block is producing from the ODSN-10, ODSN-16, ODSN-17 and ODSN-18 wells with water and gas injection from the ODSN-23i and ODSN-15i wells. The ODSN-10 well from 2016 "successfully defined the potential of the area and also demonstrated very high production potential," according to Caelus.

The northern ONPA Ivik fault block is producing from the ODSN-02, ODSN-04, ODSN-06, ODSN-28 and ODSN-29 wells. The ODSN-29 well is currently offline in the Nuiqsut pool to accommodate initial production from the Kuparuk. The ODSN-07i was converted to injection in January 2017 to provide support for the ODSN-03i well. The company has been restricting Ivik production "when feasible" to minimize increasing gas-to-oil ratios "until injection response is fully established" following ongoing reservoir surveillance.

The company is planning remediation of the "thief interval" in the ODSN-03i well in August 2018. Following water breakthrough at two offset producing wells, the company plugged the lateral at ODSN-03i and eventually identified the thief interval in 2017.

The southwestern ONPA is producing from the ODSN-22 and ODSN-43 wells with water and gas injection from the ODSN-48i well. Production is being alternated between the two production wells "to manage voidage" and producing gas-to-oil ratios.

Oooguruk-Torok

The Oooguruk-Torok participating area produces from the ODST-45A well with support from the ODST-46i injection well. Both wells were returned to operation in 2017 after maintenance activities, but related producers

ODST-39 and ODST-47 remain offline.

The Torok formation is an important component of the proposed Nuna development, and Caelus said it plans to apply for a Nuna-Torok participating area sometime this

In a plan of exploration accompanying the development plan, Caelus announced a range of efforts for the coming year to bring the Nuna project online no sooner than 2019.

The company had already sanctioned the Nuna project by the time it suspended drilling operations at Oooguruk but delayed Nuna plans as well. The current plan involves three basic parts: maintaining existing assets, improving modeling and advancing the project.

The company said it plans to perform preventative maintenance on assets acquired before the suspension and will eventually continue procurement alongside construc-

The modeling work covers two areas. The first involves improving the geologic and geophysical analysis of the project through well data and also through information about the nearby Pikka unit that would be obtained through the CGG Tabasco seismic survey.

The second involves updating the cost and timeline for facility installation "in light of oil price and tax structure environment." The company said it planned to "complete the facility design and integration" of the Nuna development with the Oooguruk Tie-in Pad and the Kuparuk River unit this year "in anticipation of start-up in 2019 or later."

The proposed start-up date in the new plan is a delay from a proposed start-up date of "2018 or later" in the current plan, which was a delay from a previous date of late 2017.

The work described in the proposed plan of exploration is similar to the work undertaken in the current plan, albeit somewhat more robust in planning and modeling activities.

Contact Alan Bailey at abailey@petroleumnews.com

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TANKER BAN

tanker ban in its current iteration is too broad and may well limit opportunities."

Alberta Energy Minister Marg McCuaig-Boyd, in an exchange of emails with federal Transport Minister Marc Garneau, effectively accused the Trudeau government of breaking faith with promises late in 2017 that the moratorium would exclude naphtha or condensate.

She said the "subsequent expansion of the list of products to include condensates is very concerning as it significantly jeopardizes our efforts to diversify our economy" and poses an economic risk to Canada "as a whole."

McCuaig-Boyd warned the legislation, covered under Bill C-48, "will affect several future projects with the potential to reach new, high-value markets in Asia."

"Prohibiting shipments from the strategic deep-water ports on the north coast of British Columbia, which can deliver products to Asian markets with a full-day advantage over other Pacific ports, will have profound and long-standing economic consequences (for Canada)," she wrote.

McCuaig-Boyd noted that Alberta's progress in upgrading oil and gas is an "important development policy and

Martha Hall Findlay, president of the independent Canada West Foundation, said Bill C-48 is "loaded with hypocrisy," and has no parallel on any other stretch of Canadian coastline, least of all the southern portion of British Columbia's coast which handles 95 percent of tanker traffic carrying crude.

because it will support our transition to a low carbon future."

Although British Columbia has not publicly entered the debate, it also stands to lose offshore shipments of by-products from the Montney shale gas formation that covers both sides of the northern border between B.C. and Alberta.

There is little hope of Alberta bringing Bill C-48 to a halt now that it has passed third reading in the House of Commons and is before the Senate for any final recommended changes.

For environmentalists it's a partial victory after they lost their attempt to sink the Trans Mountain expansion.

Bill C-48 is "a significant win for the coast that the oil tanker moratorium ... is a big step forward for keeping north coast ecosystems, communities and livelihoods safe from the risk of oil spills," said Jessica Clogg, executive director of the

West Coast Environmental Law Association.

Suit over Hyder project

But an aboriginal-owned company called Eagle Spirit, which hopes to build a C\$17 billion, 900-mile pipeline that would carry more than 1 million barrels per day of oil sands bitumen to a tanker port at Hyder, Alaska's southernmost community, has launched legal action in a British Columbia court to stall Bill C-48.

Eagle Spirit has signed a memorandum of understanding with Roanan Corp., a private landowner in Hyder for 40 years, to locate the pipeline's endpoint at the head of the Portland Canal.

More than 30 First Nations across northern Alberta and British Columbia support a project along the corridor that would carry upgraded bitumen, synthetic crude, natural gas, power transmission and fiber optic lines.

Eagle Spirit has the support of major Canadian oil producers such as Suncor Energy, Cenovus Energy and MEG Energy.

"We absolutely do not support big American environmental (non-governmental organizations who are financed by opposing natural resource projects) dictating government policy and resource developments within our traditional territories," said a council of chiefs opposing the legislation. They declared their support for the Eagle Spirit energy corridor "because it would provide real-world sustainable benefits and own-source revenue and meaningful participation for the poorest communities in Canada."

Randy Hoback, a Saskatchewan legislator in the Canadian Parliament, said Bill C-48 is "not a tanker ban ... this is to stop development in the resource sector."

But Garneau said the bill accomplishes his government's climate priorities and merely formalizes an existing voluntary tanker exclusion zone.

"We have an opportunity now to accomplish something of historic importance and we should grasp that opportunity," he said.

Martha Hall Findlay, president of the independent Canada West Foundation, said Bill C-48 is "loaded with hypocrisy," and has no parallel on any other stretch of Canadian coastline, least of all the southern portion of British Columbia's coast which handles 95 percent of tanker traffic carrying crude.

"We must not pick and choose where and when we exercise our environmental conscience, particularly when doing so favors jobs in some parts of the country, but kills others," she wrote in the Globe and Mail. •

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Oil Patch Bits



Documentary featuring history of ASRC wins Emmy Award

Arctic Slope Regional Corp. said it is pleased to have won an Emmy Award from the Northwest Chapter of the National Academy of Television Arts & Sciences for its long-format documentary "True North, the Story of ASRC." The 55th annual award ceremony was held June 9 in Seattle, Washington. The corporation was also nominated for an Emmy for a series of television commercials, which aired throughout the state in 2017.

"In the fewer than 50 years since our incorporation, ASRC has grown into the largest locally-owned and operated business in Alaska, and that was no accident," said Rex A. Rock Sr., ASRC president and CEO. "This production really highlights the decision-making process from our early leaders, based on their Iñupiaq values, that led to our success and

I'm honored the documentary is being so well received. I'd also like to thank everyone who had a hand in putting this unique project together."

"True North, the Story of ASRC" shares the story of the corporation's early leaders — the people of Alaska's North Slope — from their fight for land before statehood, to the signing of the Alaska Native Claims Settlement Act, to the present day strategic planning process to create additional opportunities for the corporation's expanding pool of shareholder owners.

The documentary took more than two years to complete, utilizing archival video as well as new hi-resolution footage from every community on Alaska's North Slope. It will be reshown statewide later this summer.

Companies involved in Alaska's oil and gas industry

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PIPELINES & DOWNSTREAM

Corps of Engineers to wrap up Dakota Access pipeline work soon

By BLAKE NICHOLSON

Associated Press

The U.S. Army Corps of Engineers within the next two months expects to wrap up an environmental study of the Dakota Access oil pipeline after recently meeting with four American Indian tribes battling the pipeline in court.

The tribe leading the lawsuit still feels it hasn't had a meaningful role in the study and Standing Rock Sioux attorney Jan Hasselman said June 11 that "the tribe is not giving up this fight" two years after the suit was filed and a year after oil began flowing.

Last year, U.S. District Judge James Boasberg in Washington, D.C., allowed the \$3.8 billion pipeline to begin pumping oil from western North Dakota through South Dakota and Iowa to a shipping point in Illinois. However, he also ordered the Corps to further review the pipeline's impact on tribal interests, including how a spill under the Missouri River in the Dakotas would impact water rights for the Standing Rock, Cheyenne, Yankton and Oglala Sioux tribes.

Texas-based developer Energy Transfer Partners has said the pipeline is safe.

The work has gone beyond the Corps' initial completion estimate of April 2 because of what the agency maintained was difficulties in obtaining needed information from the tribes. Justice Department attorney Matthew Marinelli said in a status report to Boasberg filed June 8 that the Corps between May 22 and June 1 met with representatives of each tribe and "has made substantial progress in its evaluation of the (study) issues."

Marinelli said that by Aug. 10 the Corps will "finish its consideration and analysis of the information submitted by the tribes and consider issues identified at the meetings with the tribes."

The Standing Rock and Cheyenne River tribes have sought more involvement in the study, and Hasselman said Standing Rock still isn't satisfied.

"We were never given access to any of the technical materials such as oil spill risk models that the government is relying on," he said. "We've done an excellent job preparing technical materials of our own explaining why the risk of this pipeline is much higher than the government has ever acknowledged, but we've had to do that with one hand tied behind our back."

Marinelli didn't immediately respond to a request for comment.

side of the NPR-A.

Wells south of Smith Bay

1

continued from page 1

exploration data with the division.

Well data become publicly available after two years. The Division of Geological and Geophysical Surveys' Geologic Materials Center

In addition to the two Tinmiaq

wells, data come from two

ConocoPhillips wells in the Greater

Mooses Tooth unit: the Spark DD 6

well, drilled in 2008, and the

Rendezvous 2 well, drilled in 2001.

These wells found hydrocarbons

with a high gas content in Alpine

sands. There are also data from the

ConocoPhillips drilled 10 miles or

so west of the Bear Tooth unit in

2007. And there is data from the

Intrepid 2 well, drilled in 2007 by

ConocoPhillips to the south of the

Walakpa gas field, on the far western

well,

which

WELL DATA

provides data access.

The data to be released shortly include that from four Aklaq, Aklaqyaaq and Amaqyaaq wells drilled by FEX in 2006 and 2007 in the northwestern NPR-A. The wells run along a line extending southwest from Smith Bay, where Caelus Alaska announced a major oil discovery in 2016. FEX reported finding hydrocarbon bearing sandstones in two of the wells.

Other data are also coming available from the Puviaq 1 well, drilled by ConocoPhillips a few miles south of Smith Bay in 2003.

Located below the waters of Harrison Bay, off the Colville River delta, is the Qugruk 4 well, drilled in 2012 by Repsol as part of an exploration program that ultimately led to the onshore Pikka Nanushuk discovery. Data also come from another Repsol well, the Tuttu 1PB1, drilled in 2014, immediately south of the Kuparuk River and Prudhoe Bay units.

Brooks Range Beechey Point wells

There are also data from five Brooks Range Petroleum Corp. wells: the North Shore 1, 1PB1 and 3 wells, and the Sak River 1 and 1A wells, drilled in the Beechey Point area, on the Beaufort Sea coast, to the north of the Prudhoe Bay unit between 2007 and 2010. The North Shore 1 well flowed oil from the Lyishak

Data are being released from Ultrastar Exploration's Dewline 1 well drilled in 2009, and Pioneer Natural Resources' Hailstorm 1 well drilled in 2006. The Dewline well is near the Beaufort Sea coast, to the north of the Prudhoe Bay unit, and the Hailstorm well is immediately south of the central Prudhoe Bay unit

Data are also being released from two wells drilled by Great Bear Petroleum close to the North Slope Haul Road south of Prudhoe Bay, to test the potential for source rock oil development in the region. These are the Merak 1 well, drilled in 2012, and the Alkaid 1 well, drilled in 2015.

—ALAN BAILEY

Contact Alan Bailey at abailey@petroleumnews.com

Public Notice for Solicitation of Interest

State of Alaska
Department of Natural Resources
Division of Mining, Land and Water
Northern Region Office Lands Section

The Department of Natural Resources (DNR), Division of Mining, Land and Water (DMLW), Northern Region Office (NRO) Lands Section has received an application for a lease area that includes an already constructed, privately-owned 14-acre gravel pad with two access roads located on the north slope within the Prudhoe Bay Unit along the Spine Road. The requested lease, under AS 38.05.070, is to utilize the area for general oil field support operations such as processing natural gas, chemical manufacturing, tankage, and storage. The lease area also includes a corridor that may be utilized to access a natural gas supply pipeline.

The DMLW, NRO is soliciting interest under AS 38.05.070(d) to determine if there is interest from others in developing this site. If there is interest, DMLW, NRO will proceed with a competitive auction. If no interest is expressed, then DMLW, NRO will proceed with a negotiated lease.

To be considered a potential bidder expressing interest in a competitive auction a person must express interest in writing before the expiration of this 30-day public notice period and submit a complete application with a development plan within 30 days after the end of this public notice for solicitation of interest. If the lease proceeds through the competitive auction and the current owner of the private infrastructure is not the successful bidder, the winner of the auction will be required to reimburse the owner for its investment costs to construct the infrastructure on site.

If no additional qualifying application is received, DMLW, NRO will proceed with a negotiated lease. The negotiated lease process will include a 30-day public notice period to allow the public to comment on the project with more details on the proposed action.

DEADLINE TO SUBMIT INTEREST:

Interest must be received in writing by the DMLW, NRO Lands Section on or before 5:00 p.m. on July 11, 2018 to ensure consideration.

IN ADDITION, a lease application and development plan must be submitted within 30 days of the above deadline in order to verify an entity's interest.

To express interest or to seek additional information contact:

Becky Baird
DNR, DMLW, Northern Region Lands Section
3700 Airport Way
Fairbanks, AK 99709-4699
Phone (907) 451-2732
E-mail: becky.baird@alaska.gov

DNR complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services or special modifications should contact the Public Information Center in Anchorage, between 10:00 a.m. and 5:00 p.m. Monday through Friday, at (907) 269-8400, or pic@alaska.gov, or TDD (907) 269-8411; or the Public Information Center in Fairbanks between 10:00 a.m. and 5:00 p.m. Monday through Friday at (907) 451-2705, or fbx pic@alaska.gov.

DNR reserves the right to waive technical defects in this publication.

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POWER POOL

continuous use is made of the cheapest available power generation, thus minimizing the cost of electricity for consumers. In January 2017 the three utilities formed an agreement to jointly implement economic dispatch arrangements. Implementation of the arrangements is taking much longer than originally anticipated and some stakeholders in the electrical system have expressed concern about the length of time being taken.

In 2015 the RCA recommended a more unified approach to the management of the Railbelt electrical system, including the implementation of economic dispatch. The electrical system is owned and operated by six independent utilities and the state of Alaska. The commission has been monitoring voluntary efforts by the utilities to meet its 2015 recommendations the commission scheduled the June 13 meeting to obtain an update on progress towards economic dispatch.

A commercial arrangement

The power pooling arrangement that the Southcentral utilities are developing is essentially a commercial arrangement, to enable all three utilities to make maximum use of the most efficient power generation in the region. This represents a 20-year commitment to lower energy costs through economic dispatch and marks a step change from the day-ahead planning of energy sales by which the utilities currently interchange energy, Mark Fouts, Chugach Electric executive manager for fuel and corporate planning, told the commission.

But the utilities can also buy power from and sell power to other Railbelt utilities that are not part of the Southcentral power pool. Fouts told the commissioners that, having developed procedures for operating the Southcentral pool, the utilities involved in the pool met with Fairbanks-based Golden Valley Electric Association in November of last year to discuss procedures for selling power to a party external to the power pool. That meeting confirmed complexities that had not been catered for within the power pooling procedures. In particular, each external power sale impacts the economic dispatch within the Southcentral pool, and hence impacts the economics of the pool.

By Jan. 26 of this year the utilities in the pool finally arrived at an agreement for external power sales, but the procedures involved were much too complicated, Fouts explained. So, further work was required and that has led to a feasible approach.

The Southcentral utilities now anticipate finalizing the commercial agreement

The power pooling arrangement that the Southcentral utilities are developing is essentially a commercial arrangement, to enable all three utilities to make maximum use of the most efficient power generation in the region.

and the power dispatch procedures for the power pool by the end of September. The selection and implementation of suitable computer software for operating the system, together with the training of utility staff, will likely take until sometime in November, with the RCA approval process for the new arrangements potentially starting in October, ultimately leading to the March 2019 completion date for power pool implementation.

Structure and procedures developed

At this point the Southcentral utilities have determined an operating structure involving the use of a central power scheduling service, to make maximum use of the most efficient power while operating within the constraints of ensuring supply reliability, Fouts said. Supply reliability requires the availability of spare generating capacity, a constraint that means that generators cannot all run continuously at full capacity, he added.

The utilities have also developed a process for distributing between each other the benefits from the pooling arrangements. This settlement process, the most complex component of the power pool, will be overseen by a settlement process committee and will be subject to an auditing mechanism. There is a methodology for electricity pricing. And the utilities have developed a methodology for conducting the economic dispatch itself. A participants committee and an operations committee will oversee the operation of the power pool.

The utilities are now very close to completing the process of developing the power pooling agreements and procedures, Fouts said. However, the documents need to go to the utilities' regulatory and legal staff, and before their boards, before final completion, he added.

Maximum use of efficient units

In essence the power pooling arrangements would make maximum use of two highly efficient, combined cycle, gas fired power plants, both located in Anchorage, for base load power: ML&P's Plant 2A and the Southcentral Power Project, jointly owned by Chugach Electric and ML&P. MEA owns the efficient, modern Eklutna Generating Station, which uses gas-fueled internal reciprocating engines that are especially effective for following variable electricity loads. The utilities also own several older, less efficient plants that can be used to help meet peak power demand or can act as backup systems as contingency against problems with other generation plants.

Ed Jenkin, senior system engineer for MEA, explained that, under current arrangements, MEA tends to buy power from the combined cycle plants during periods of low power demand, while the other utilities tend to purchase power from MEA when demand is high, to minimize the use of old, inefficient plants.

Jeff Warner, strategic administrative coordinator for ML&P, overviewed the results of two test days, one in July 2017 and one in November 2017, in which the utilities had practiced centralized power scheduling, to assess the impact of economic dispatch implementation. Cost savings were achieved in the July test through the avoidance of any need to switch in older, less efficient equipment. During the November test ML&P's Plant 2A was not fully operational because of maintenance activities. However, the power pooling arrangement enabled a relatively efficient use of one of the older plants, with output from that plant shared between the three utilities, Warner said.

Homer Electric's position

Larry Jorgensen, director of power, fuels and dispatch for Homer Electric Association, overviewed Homer Electric's perspective on power pooling in the Railbelt. Homer Electric provides electricity services on much of the Kenai Peninsula and operates its own power generation facilities, including a modern combined cycle, gas fired generation facility at Nikiski. The utility's system is connected to the Southcentral grid via a single transmission intertie that runs along the north side of Turnagain Arm. Although Homer Electric commonly enters into energy sales agreements with other Railbelt utilities, the Kenai Peninsula utility has in the past expressed reluctance to join the Southcentral power pool, primarily because of dependence on the single inter-

As do the other utilities, Homer Electric struggles with the balance between economic dispatch and reliability, Jorgensen told the commissioners. To ensure the continuous availability of sufficient power, Homer Electric typically operates with three power sources: the Nikiski unit, some power from the Bradley Lake hydroelectric facility in the southern Kenai Peninsula and power that is available through the intertie to Southcentral. And loss of the intertie requires the startup of a second-generation unit on the peninsula.

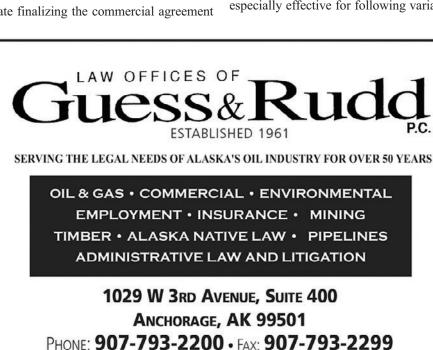
The utility manages its use of power from Bradley Lake to optimize power generation from the Nikiski unit. And given the utility's current constraints and assets, Homer Electric has not been able to identify any additional benefit to be gained from alternative arrangements, Jorgensen said. He commented that the only situation in which Homer Electric sees a likely benefit from participating in the Southcentral power pool would be if the Nikiski generation facility had to be shut down for some reason.

Homer Electric does support a transparent approach to economic dispatch modeling, so that people understand the choices that we make, Jorgensen said. And the utility sees some benefit in the implementation of a transmission company to operate the Railbelt transmission grid, he added.

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PENTEX SALE

member Patrice Lee voting against the resolution.

Letter of agreement

The IGU had previously approved the completion of the Pentex purchase, subject to AIDEA board approval of a letter of agreement altering some of the terms of the purchase and sales agreement. The AIDEA board, during its May 31 meeting, partially concurred with the letter of agreement but rejected terms that would have specifically accommodated changes to plans for expanding the LNG supplies for Fairbanks. AIDEA was concerned

about the possible impacts of the changes on other aspects of the sale agreements and commented that the terms of the sale already accommodated the possibility of changes to the LNG development plan.

AIDEA board Chair Dana Pruhs has assured the IGU board that AIDEA will act in good faith in resolving any future difference of opinion over the appropriate arrangement for expanded LNG production. And IGU has accepted AIDEA's position.

Alternative LNG plans

When AIDEA and IGU originally negotiated the purchase and sale agreement for the IGU acquisition of Pentex, the organizations specified a plan for expanding the LNG supply for Fairbanks through the expansion of the Titan LNG plant. But since then manufacturing company Siemens, in conjunction with Knikatnu Corp., the Native village corporation for the Knik and Wasilla area, has proposed the construction of a new LNG plant near Houston, as an alternative to the Titan plant expansion. The proponents of the Houston proposal argue that this concept would offer the advantages of having a new modular and easily expandable plant, with the possibility of conveniently shipping LNG to Fairbanks by rail rather than by road.

In mid-May the IGU board held a workshop, at which Siemens described its proposal and the board reviewed the pros and cons of the Siemens and Titan alternatives. It appears from the results of this

review, that the Siemens option may present a lower capital risk than the Titan option.

Clearly the IGU board is taking the Siemens option seriously and wants to be able to evaluate this option as an alternative to the Titan expansion. But, with the utility's purchase of Pentex and the LNG expansion being funded through AIDEA loans, as part of the IEP, AIDEA will have a say in how the LNG expansion is done.

Working together

In a June 11 letter to IGU board Chair Pamela Throop on behalf of Pruhs, AIDEA board member Fred Parady said that the AIDEA board is "open to consideration of lower cost alternatives to LNG supply.'

"In short, together we have built the foundation for achieving the Interior Energy Project's goals — 'to bring affordable natural gas to as many residents of Interior Alaska communities as possible as quickly as possible," Parady wrote in relation to the working relationship between AIDEA and IGU.

In a June 11 letter to Pruhs, Gov. Bill Walker stressed the important of the IEP to the state administration and said that he agreed with the need for clarification over a mechanism for resolving any disputes over how to proceed with capital projects.

"One important reason for this administration's support of IGU is our commitment to ensure maximum, local utility control over the capital projects underlying the project," Walker wrote. "My administration firmly believes that Alaskans living in the Interior should have the necessary control to shape the best natural gas solutions for their communities, and we believe IGU will provide this control."

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STARFISH SUCCESS

fold increase in the number of personnel at the field site.

Fulcrum for development

Giesler has previously commented that the Badami field, located to the east of the central North Slope, can act as a fulcrum for future development in the Badami area. The field processing facilities were designed for production rates of up to 38,500 barrels of oil per day, but until the drilling to the Swordfish well, production had only been running at about 1,000 bpd. The Badami pipeline can transport oil from the region to the trans-Alaska oil pipeline.

And Glacier has seen the Swordfish well, if successful, as a route to opening up development in the Badami area.

"If this well works close to what we think it will, it should open five to seven more prospects similar to it," Giesler told the Alaska Support Industry Alliance in September.

Giesler told the Alliance that he likened his company's three key plays in Alaska to the three cards in a hand of Texas Hold 'Em. The continuing oil development at the Redoubt unit in Cook Inlet was "face up." The two "face down" cards were the proposed Sabre exploration well near the West McArthur River unit, also in Cook Inlet, and the Starfish exploration well in the Badami unit. Glacier may drill the Sabre well this summer.

However, the Starfish card now appears to be "face up." ●

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