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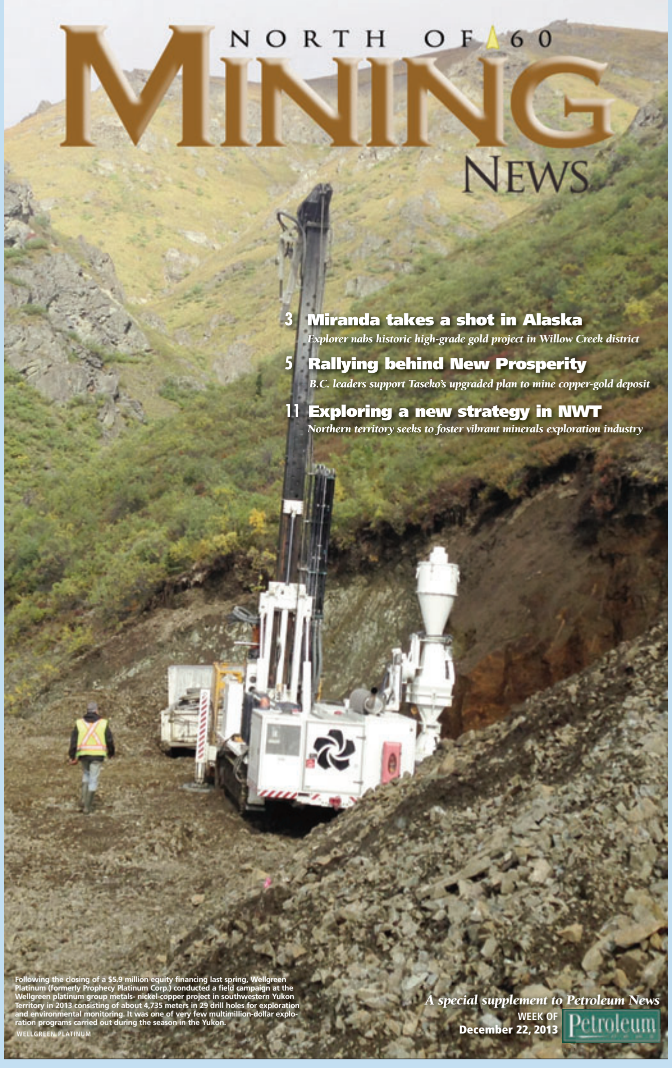

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11 Exploring a new strategy in NWT
Northern territory seeks to foster vibrant minerals exploration industry

Following the closing of a $5.9 million equity financing last spring, Wellgreen Platinum (formerly Prophecy Platinum Corp.) conducted a field campaign at the Wellgreen platinum group metals- nickel-copper project in southwestern Yukon Territory in 2013 consisting of about 4,735 meters in 29 drill holes for exploration and environmental monitoring. It was one of very few multimillion-dollar exploration programs carried out during the season in the Yukon.

WELLGREEN PLATINUM

A special supplement to Petroleum News
WEEK OF December 22, 2013

The December issue of North of 60 Mining News is enclosed.

Canada invokes the Santa clause; Russia going the military route

Canadians have always claimed Santa Claus as one of their own. And they have no doubt that Santa lives at the North Pole (not that Alaska version). Ergo, the North Pole is part of Canadian territory.

There's even speculation that the jolly old elf shares a hearth with Mrs. Claus, a women's hockey player from Saskatchewan. What further proof is needed?

Russian President Vladimir Putin, not known as a barrel of laughs, has a more muscular view of who controls what in the Arctic.

Earlier in December, he even ordered his Defense Minister

see **POLE PLAY** page 15

ConocoPhillips applies to restart Kenai LNG plant for gas exports

ConocoPhillips has applied to the U.S. Department of Energy for a license to restart the export of liquefied natural gas, or LNG, from the company's mothballed LNG plant at Nikiski on Alaska's Kenai Peninsula. The license, if granted, would allow the export of up to 40 billion cubic feet of natural gas as LNG over a period of two years.

The company has not said who would buy the exported LNG or where the LNG would go.

Faced with tightening gas supplies from the Cook Inlet basin, ConocoPhillips shuttered the LNG plant early this year after using the plant to export gas to Japan for many decades, starting in 1969. The most recent Department of Energy license for LNG exports from Kenai expired in March.

see **PLANT RESTART** page 14

EXPLORATION & PRODUCTION

Chukchi oil after 2025

Shell CEO says an Arctic offshore oil find would take years to bring on line

By ALAN BAILEY
Petroleum News

Shell CEO Peter Voser said Dec. 11 that he anticipates oil production from the Alaska Arctic offshore to start during the second half of the next decade, if the company makes a discovery. For several years the company has been engaged in an exploration program on the outer continental shelf of the Alaska Chukchi and Beaufort seas but has yet to drill an exploratory well into a potential hydrocarbon zone.

Voser is leaving Shell in March and his remarks about his company's Alaska plans came as part of an interview, posted on the Shell website, in which he commented on Shell's business strategy and some of the issues facing the company as he prepares to hand over the management reins to his successor at the top.

> *"Shell is making preparations to potentially start exploratory drilling in 2014 or 2015, but this has not yet been decided."*
> **—Shell CEO Peter Voser**

Following a series of difficulties during the summer exploration season in 2012, in which Shell commenced drilling in both Arctic seas but was only able to drill top-hole sections of wells, the company placed its drilling program on hold in 2013. The company has recently announced its

see **ARCTIC OIL** page 15

EXPLORATION & PRODUCTION

New technology for CD-5

ConocoPhillips innovating for installation of Nigliq Channel crossing

By KRISTEN NELSON
Petroleum News

Respecting the environmentally sensitive area where it is working at its Colville River unit on the west side of the North Slope is a priority for ConocoPhillips Alaska, Nick Olds, the company's vice president for North Slope operations and development, told the Alaska Support Industry Alliance Dec. 12.

That includes both how facilities are designed and how they are installed.

Olds said ConocoPhillips is in "both cooperation and collaboration with the Kuukpik Corp. out there as well as the Arctic Slope Regional Corp.," as one of the unique features of the Colville River unit is Native ownership.

> *Olds said the plan is to complete the three smaller bridges this winter, as well as installing pilings and piling caps for the main bridge across the Nigliq Channel.*

All development is through extended reach drilling with horizontal wells, allowing for the very small footprint, a total of some 163 acres for all Alpine facilities, camps, roads and the airstrip, he said.

The single train at Alpine is also different than normal oil field development, where it's typical to

see **CD-5 TECHNOLOGY** page 16

EXPLORATION & PRODUCTION

Buccaneer drops heads

Fires Alaska president, appoints two board members and ends a farm-out deal

By ERIC LIDJI
For Petroleum News

Buccaneer Energy Ltd. has replaced its top two men in Alaska.

The Australian independent recently fired Jim Watt and Allen Huckabay, the president and the vice president of exploration and development of its local subsidiary Buccaneer Alaska LLC, the company announced on Dec. 16. Former Chief Operating Officer Andy Rike has taken over as president and former Chief Geologist Mike FitzGerald has taken over as vice president of exploration and development, according to the company.

Buccaneer declined to say why it made the changes, but Buccaneer Energy Chief Executive Officer Curtis Burton described the moves as "positive steps" amid broader efforts to focus on Cook Inlet. "With our new board members now firmly in place we are taking steps to streamline operations, reduce capital expenditures and accelerate our overall development plan," Burton said in

> *The Alaska Department of Natural Resources is threatening to terminate the Southern Cross and North West Cook Inlet units because Buccaneer failed to meet work commitments.*

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GOVERNMENT

Mike Pawlowski on what SB 21 really does

Revenue department fiscal advisor reviews background of oil tax change, ACES problems identified by consultants over several years

By STEVE QUINN

For Petroleum News

Around the Capitol Halls Mike Pawlowski is known as "Fish," a name his lives up to with his recent trout and salmon hauls out of Alaska's waters. But he's equally known as a numbers guy who can bring financial understanding to complicated measures such as an operating budget or a bill with fiscal consequences.

As a newly minted Department of Revenue advisor, Pawlowski has been a lead voice for Gov. Sean Parnell's efforts to bring reform to the state's tax regime. He's spent much of the interim delivering presentations to groups throughout the state.

Some in the audience don't support Senate Bill 21, and he knows it, but he brings a less confrontational approach to his presentations.

His official title is advisor for petroleum fiscal systems with the Department of Revenue. Pawlowski, who has also been lead staffer for finance and resources committee chairs, sat down with Petroleum News to discuss his interim work on bringing clarity to the new law, which takes effect Jan. 1.

Petroleum News: What's been your approach in your presentations?

Pawlowski: I will not talk about the politics surrounding the question. What I will talk about is what SB 21 is, what the Legislature and the administration was considering when they undertook oil tax reform and why they made the changes they did. Those are the three areas I try to cover in the presentations.

Petroleum News: How do you find that the approach works for you?

Pawlowski It sparks a good dialogue, I think a healthy level of disagreement, and it gives people the opportunity to look at the whole picture. One of the problems in a complex subject is the legislative process focuses on pieces of the problem. The Resources Committee might focus on the detailed resources issues and the Finance Committee approaches it through a finance lens.

It's when you're able to go back and look at the discussions across of all the committees which are very thorough and all of those reports to those committees, you're actually able to tell a story. Unless you were following each step in something this complex, it was actually difficult for a lot of people. So when I give my presentation, people appreciate seeing the progression of the thoughts and the problems the committees went through to arrive at the conclusion that they did.

Petroleum News: How did you come to arrive at those three criteria?

Pawlowski: I looked at what was really important to talk about. There are a lot of statements thrown around about oil tax reform, really on both sides. But oil tax reform itself isn't something that just started in January. It's been something that's been going on for several years with discussion. It's important for people to see the why of it and what SB 21 does to address the problems consultants frankly for years have identified. It's important to give the public the details they need to understand what happened during the legislative session. I leave the arguments around it really to other people. There are other people who are engaged on this issue who can make arguments. As a department it's important for us to stick to the progression of things we presented the Legislature during the debate and the deliberations, describe what the consultants said and describe what the legislation does.

MIKE PAWLOWSKI

Petroleum News: Do you find you have a more receptive audience by taking the politics out of the discussion?

Pawlowski: You always have a receptive audience just because people are interested, at least at the venues I've spoken at. When you take a step back from the rhetoric, people want to listen to a methodical discussion.

Petroleum News: You've used the word reform. Why is this a reform and not rebate or a giveaway?

Pawlowski: Whether SB 21 raises more money than ACES depends on three to four variables: the price of oil, the level of production; the cost of transporting that oil and the direct lease expenditures in producing it. The combination of those four variables dramatically changes how SB 21 relates to ACES. There are many scenarios — we are projecting one for FY 2015 — where SB 21 raises more revenue for the state at $105 a barrel than ACES. To start off saying that it's a rebate or a giveaway, it depends on what point on the price chart of those variables you want to talk about. Consultants for years identified the five key problems with ACES. We were more focused on what was broken about ACES and how do you address the problems.

Petroleum News: Would you recall those five please?

Pawlowski: High levels of government take reduce competitiveness for capital, especially at high prices; high marginal tax rates; complexity makes meaningful economic analysis and comparison difficult; significant state exposure to low-price environments, and for high-cost developments; impact on large-scale gas sales and tax rates. When you think about those five problems, every one of them is based on the combination of the interaction between progressivity and qualified capital expenditures. These are very similar to what Pedro van Meurs said in 2011. The reason this is reform is because we addressed all five of these problems. We provided downside protection while preserving some of the upside reward, and making it a more competitive, predictable place to invest.

Remember the governor gave us four key principles to oil tax reform: it had to be fair to Alaskans; simple, so that it restored balance to the system; that it encouraged new production; that it was competitive and durable for the long term.

Q AND A

Petroleum News: So you've got nine variables. You've got the five problems the consultants identified with ACES and you've got the governor's four guiding principles. Do you think SB 21 addressed all nine?

Pawlowski: Absolutely. The five key problems are technical issues. The four guiding principles are principles to approach each of those five problems.

Petroleum News: Another criticism of SB 21 is the state is rewarding production already slated to occur?

Pawlowski: First of all, rewarding it depends on the cost of production and the price of oil, that's actually happening. So if prices are where they are today or lower, SB 21 isn't much of a reward. I think we've been proved right in the change in investment we've seen announced by companies. ConocoPhillips already announced capital investment in Alaska to $1.7 billion from $600 million in 2012. We've seen new rigs already going up to the North Slope. Whether they would happen anyway, it's a level of confidence we weren't seeing. The new investment the state is seeing is really significant and will lead to new production.

Petroleum News: The state has tried for decades to boost production. What gives you confidence this new law that starts Jan. 1 will stem the decline?

Pawlowski: I think part of it is the incentives built into the system, which have been shifted to production away from capital spending on per barrel credits. The system provides a more targeted incentive for production. The steady tax rate provides a more predictable environment. The investments being talked about do have the potential to offset the decline. Part of the dilemma Alaskans face, is that as we've waited — remember the governor began approaching tax reform several years ago — production decline materially since then. I've looked at the fall forecasts 2010, the ones oil tax reform started around. They predicted 100,000 more barrels a day than we will see. We continue to take conservative forecasting methodology into our projections that we released publically. If you look at the upside potential we see, they say there is a real opportunity for flat to increasing production. Even getting production from the 8.2 percent decline to even zero is a major feat.

Petroleum News: On the regulation defining new oil, there is a concern that ultimately all oil produced would qualify as new oil. Do you see that as true and do you believe the new regulation holds the industry accountable?

Pawlowski: I think the new regulation does that. I think the new regulation

see **PAWLOWSKI Q&A** *page 13*

● GOVERNMENT

BC dreams won't happen 'overnight'

Clark acknowledges LNG-dependent goal of 100,000 jobs may take a 'little longer' to achieve; Asian buyers' 'club' not seen as factor

By GARY PARK
For Petroleum News

British Columbia Premier Christy Clark is not prepared to concede that Asian moves to establish an LNG buyers' club will damage her lofty goals for related job creation and financial returns from the sector.

But she does admit that her election campaign promises last year of a "trillion-dollar" LNG industry and 100,000 spinoff jobs has hit a rough patch, although she pins her belief in a turnaround on hopes that some LNG proponents will make final investment decisions in 2014.

"We haven't seen all the fruits of our labors yet, but we will," she told reporters, while cautioning that her sizzling job forecasts "are not the kind of thing that will happen overnight."

"We've set a goal to create jobs, to grow the economy, to create economic development. You do not get to that long-term goal without sticking to a plan over a good period of time. So it's going to take us a little longer."


SHANE LASLEY
CHRISTY CLARK

Underpinning the employment growth are Clark's goals of eight new mines by 2015, upgrades and expansions to nine currently operating mines and at least one LNG pipeline and export terminal operating in Kitimat by 2015 and three more by 2020.

Asian buyers in discussions

But her upbeat assessment of a recent trade mission to China, South Korea and Japan to promote LNG has since been put in doubt by word that those three countries, along with India and Taiwan, have discussed how they can use their collective purchasing power to negotiate lower LNG prices. A follow-up meeting is scheduled for February.

> *"Buyers want it cheaper and the sellers want it to be a little more expensive. That's where we are at, at the moment."* **—British Columbia Premier Christy Clark**

There have been reports that India and Japan are considering combined LNG tenders, with the objective of delinking the price of LNG from the price of crude oil — a key element that underpins British Columbia's economic case for LNG.

Clark said she is far from certain that there will be a "buyers' club. ... I don't know that all of the competitors in Asia will be able to get together to set prices. Typically, when it comes to energy exports, it has been the seller that sets the prices."

She said the failure so far by British Columbia to land any LNG final investment decisions is part of the nature of high-stakes negotiations as the LNG project proponents vie to secure contracts.

"We have to be competitive. There is no doubt about that," Clark said.

"If we want to attract that quantum of investment ... we have to be selling at a price the market will accept, but this is the way negotiations work."

"Buyers want it cheaper and the sellers want it to be a little more expensive. That's where we are at, at the moment."

Petroleum Brunei joins

The jostling among proponents has just taken another twist with Petroleum Brunei adding its name to the Petronas-controlled Pacific NorthWest LNG partnership, by acquiring a 3 percent stake, reducing the Petronas holding to 87 percent, with Japan Petroleum Exploration retaining the 10 percent it picked up earlier this year.

Petroleum Brunei is also scooping up a 3 percent stake in the northeast British Columbia gas assets of Progress Energy Canada, now wholly owned by Petronas.

Pacific NorthWest President Greg Kist said the joint venture is positioned to attract additional international investors in 2014.

US said to have edge

A report by RBC Dominion Securities has warned that the United States has an edge over Canada in the competition to export LNG from North America, with analyst Greg Pardy pointing out that four U.S. projects currently being retrofitted — Sabine Pass in Louisiana, Freeport in Texas, lake Charles in Louisiana and Dominion Cove Point in Maryland — will have huge LNG export capacity.

Judith Dwarkin, chief energy economist at ITG Investment Research, said that although northeastern British Columbia has an abundance of natural gas to underpin LNG operations "it is certainly taking a long time for some of these B.C. projects to find buyers for the LNG."

Common processing suggested

Meanwhile, a study by consultants Gas Processing Management and Ziff Energy (a division of HSB Solomon Associates) said new opportunities to develop gas in northeastern British Columbia and northwestern Alberta for LNG are changing the dynamics of infrastructure systems in that region.

The North Montney and shale gas resources present a unique opportunity to "integrates and utilize the area infrastructure for the benefit of both current and developing resources," the study said.

"Growing shale and tight gas production, when coupled with the declining existing resource base, will require constructing new infrastructure and utilizing, retooling and expanding existing facilities."

The study estimated the existing infrastructure has processing capacity of 5.1 billion cubic feet per day, with planned expansions to 5.7 bcf per day, but only 2.2 bcf per day is currently processed in the area, while there is upwards of 3 bcf per day of unused capacity.

As a result, it suggested that a "structured approach to develop a common gas gathering and processing strategy in gas growth regions, along with a repositioning analysis in maturing regions, will improve utilization and effectiveness of the infrastructure, extend overall gas field production and ultimately result in the development and recovery of more resources." ●

Contact Gary Park through publisher@petroleumnews.com

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www.PetroleumNews.com

Kay Cashman	PUBLISHER & EXECUTIVE EDITOR
Mary Mack	CEO & GENERAL MANAGER
Kristen Nelson	EDITOR-IN-CHIEF
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Ashley Lindly	RESEARCH ASSOCIATE
Dee Cashman	RESEARCH ASSOCIATE

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

Bonnie Yonker • 425.483.9705
byonker@petroleumnews.com

FAX FOR ALL DEPARTMENTS
907.522.9583

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● FINANCE & ECONOMY

Forecast sees major growth in LNG trade

ExxonMobil assesses world energy supply and demand in annual outlook, notes competition to capture Asia Pacific gas market

By WESLEY LOY
For Petroleum News

International trade of natural gas in 2040 is expected to be 2½ times the 2010 level, and most of the growth will take the form of liquefied natural gas or LNG, a new forecast from ExxonMobil says.

The Asia Pacific region will be the hot market for LNG, the report says.

The percentage of natural gas demand met by imports from outside the region is expected to rise from 15 percent today to 35 percent by 2040.

"By 2040, about 40 percent of Asia Pacific's natural gas demand will be satisfied by LNG," the report says.

The projections are part of ExxonMobil's 2014 Outlook for Energy, a sweeping survey of global energy supply and demand. The annual report looks at sources of energy from oil and gas to coal to nuclear to renewables, and includes analysis on population growth, urbanization, automobile trends and greenhouse gas emissions.

ExxonMobil says the outlook helps guide its own long-term investments.

The 56-page report is posted on ExxonMobil's website.

The LNG race

The LNG picture is of particular interest in Alaska, where ExxonMobil and partners BP and ConocoPhillips are mulling a megaproject to develop the vast stranded gas resource on the remote North Slope.

The project would involve construction of a trans-Alaska pipeline to carry the gas to a liquefaction plant and tanker terminal sited somewhere along the state's southern coast.

This project, an old and previously rejected concept that's come back to life, is seriously challenged due to the need for the multibillion-dollar pipeline. Shipping LNG directly off the North Slope isn't practical due to Arctic Ocean ice.

The ExxonMobil report is encouraging in terms of the projected LNG demand, and the growing environmental preference for gas over coal to generate electricity. But the report also makes clear that Alaska's LNG dream has major competition.

"All around the world — from the highlands of Papua New Guinea, to the deep water off east Africa, to frigid far east Russia, to the U.S. Gulf Coast — LNG projects are in various stages of planning and development to produce gas destined for faraway ports," the study says.

Crude oil outlook

Looking out to 2040, ExxonMobil says oil is expected to remain the top global energy source and the fuel of choice for transportation.

And the world still has a great deal of oil available.

"Ongoing advances in exploration and production technology continue to expand the size of the world's recoverable crude and condensate resources," the study says. "Despite rising liquids production, we estimate that by 2040, about 65 percent of the world's recoverable crude and condensate resource base will have yet to be produced."

Conventional crude oil production likely will decline slightly by 2040, but this decline will be more than offset by emerging sources including tight oil, deepwater oil and oil sands, ExxonMobil says.

North American liquids production is expected to rise by more than 40 percent from 2010 to 2040, boosted by gains in oil sands, tight oil and natural gas liquids or NGLs, the study says.

NGLs include ethane, propane and butane, and are expected to approach 15 percent of global liquids supply in 2040.

The Organization of Petroleum Exporting Countries will gain influence, with about 45 percent of the world's liquids supply coming from OPEC countries by 2040 compared to 40 percent in 2010.

"North America is expected to shift from a significant crude oil importer to a fairly balanced position by 2030," the outlook says.

The report calls the Arctic "the world's largest remaining frontier of undiscovered oil and gas resources."

Technology wonders

The report spotlights some amazing industry feats.

At the Gorgon Jansz development offshore northwest Australia, wells will deliver natural gas at rates in excess of 300 million cubic feet per day.

"Just one of these wells could meet the residential gas demand of more than 40 million households in China every day," the report says.

At the Sakhalin 1 project in eastern Russia, fields far offshore are being developed with the enormous Yastreb

see **LNG GROWTH** *page 14*

GOVERNMENT

Canada bolsters Arctic seabed claims

Canada has launched an evidence-gathering program as it sets the stage for a territorial arm wrestling with Russia over rights to the Arctic seabed and who can lay claim to the geographic North Pole.

Prime Minister Stephen Harper has ordered federal officials to develop a more expansive international claim for ocean-floor resources after the initial submission they presented to him failed to include the Pole.

The result will be overlapping claims by Canada and Russia, with expectations that Denmark will also outline its case for the Pole.

The Arctic region is believed to contain as much as 25 percent of the world's undiscovered energy resources and countries are tabling scientific evidence with the United Nations Convention on the Law of the Sea to win control of those assets.

Russia filed a submission in 2001 and was told its bid required more supporting evidence, while Denmark is expected to enter the contest in 2014.

The Canadian government wants more firsthand scientific evidence, including supporting information from mapping and research.

The United Nations convention allows a country to secure control of the ocean floor beyond the internationally-recognized 200-nautical-mile limit if it can demonstrate the seabed is an extension of its continental shelf.

Processing the claims goes to the U.N. Commission on the Limits of the Continental Shelf, which is overloaded with a backlog of cases.

It turns overlapping claims back to the countries involved which are supposed to negotiate a solution under rules agreed to by all signatories to the U.N. convention.

The key to Canada's claim is whether it can establish that an underwater mountain ridge called the Lomonosov Ridged is linked to Canadian territory.

Rob Huebert, associate director of the Center for Military and Strategic Studies at the University of Calgary, welcomed Harper's decision to "push the submission as far as we are entitled under international law" rather than "prematurely surrendering" the North Pole.

—GARY PARK

● ENVIRONMENT & SAFETY

Arctic continued to warm in 2013

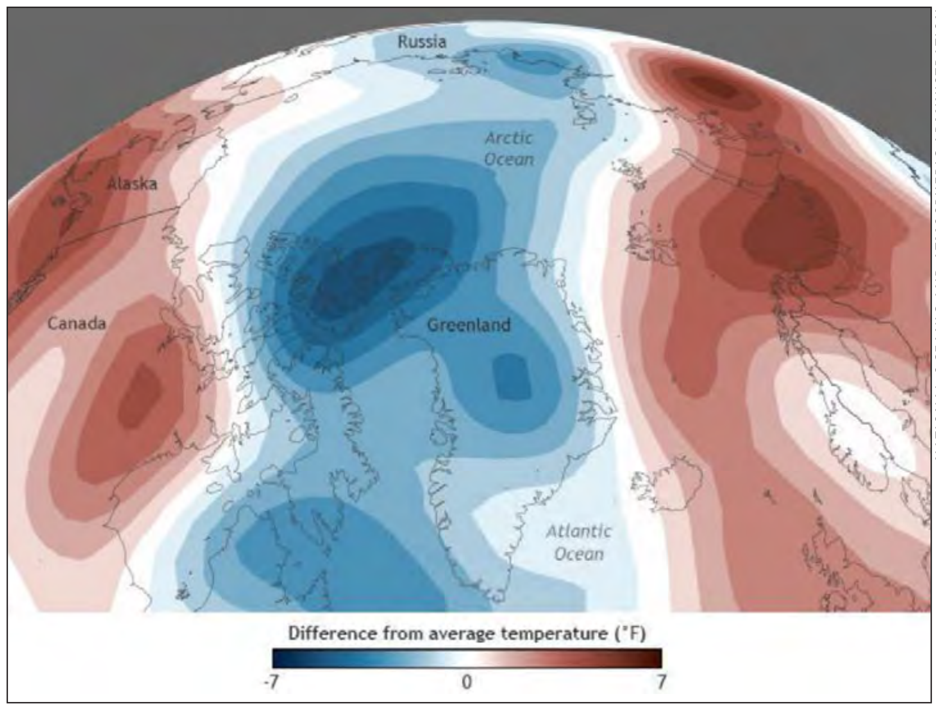
New NOAA report: Conditions less extreme than in 2012 but summer was warmest on record in Alaska; Arctic ecosystems changing

By ALAN BAILEY
Petroleum News

The National Oceanic and Atmospheric Administration has published the 2013 update for its Arctic Report Card, an annual overview of Arctic environmental observations.

The report says that there were fewer extreme ice and snow events than in 2012 but evidence of the continuation of a decades-long warming trend in the region. Along with this warming, the Arctic tundra is greening and there is evidence of changes in the distributions of Arctic marine species, the report says.

"The Arctic caught a bit of a break in 2013 from the recent string of record-breaking warmth and ice melt of the past decade," David Kennedy, NOAA's deputy secretary for operations, said during a Dec. 12 news conference announcing publication of the report. "But the relatively cool year in some parts of the Arctic does little to offset the long-term trend of the last 30 years: the Arctic is warming rapidly."



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

During the summer of 2013, while Alaska basked in abnormally warm conditions, Greenland, northern Canada and the adjacent Arctic Ocean were relatively cool.

Weather anomalies

As Alaska residents may recall, 2013 has seen at least some weather anomalies, with a cold spring followed by an extended spell of warm summer sun.

Curiously, while Alaska saw the coldest spring since 1924, with Fairbanks setting a record late date of May 26 for its annual "green-up" of birch and aspen, spring in much of the Arctic Ocean basin and Eurasia was warmer than normal, with Eurasia seeing a record new low for its May snow extent, the NOAA report says. Then, in the summer, while Eurasia remained warm, Alaska also warmed up to enjoy abnormally hot weather. Fairbanks in the Alaska interior, for example, achieved a record 36 consecutive days with temperatures of at least 80 F.

But northern Canada, Greenland and adjacent areas of the Arctic Ocean experienced much lower summer temperatures than in the previous five years. The cool temperatures over Greenland resulted in the summer melt taking place over just 44 percent of the ice sheet, a melt extent close to the long-term average and much lower than the 97 percent extent observed in 2012, the report says.

Larger ice minimum

The cooler 2013 temperatures around Greenland and northern Canada also led to an end-summer minimum ice extent significantly higher than that seen in 2012. Nevertheless, the 2012 minimum extent had been the lowest since observations began in 1979, and the 2013 minimum remained consistent with an average downward trend of 13.7 percent per decade. And the maximum ice cover in March actually dropped slightly relative to 2012, remaining on a decline rate of about 2.4 percent per decade.

The age of the sea ice is also extremely important in determining ice thickness, and hence the ice's overall quantity and resilience. In March 2013 only 22 percent of the sea ice was more than one year old — that compares with 25 percent in March 2012 and 42 percent in March 1988. The extent of ice more than four years old has declined from 26 percent of total cover in March 1988 to just 7 percent in March 2013, the report says.

With summer sea-surface temperatures being strongly influenced by the extent of the sea-ice cover, as the open ocean tends to absorb solar heat, the early withdrawal of sea ice from the Barents and Kara seas in the summer likely led to anomalously warm sea surface temperatures there, the report says. On the other hand, the Chukchi and east Siberian seas saw unusually cold water temperatures, probably related to a later and less extensive ice retreat than in recent years.

Marine ecology

Changes in the observed distribution and growth patterns of sea-bottom-living creatures such as shellfish and crabs appear to reflect responses to long-term climate change and to human activities such as the introduction of invasive species through vessel ballast water and the deposition of debris into the ocean, the report says,

Knowledge of fish distributions around the Arctic Ocean suffers from a paucity of past research. But reports of new Arctic and sub-Arctic species, especially in the Canadian Beaufort Sea, likely represent the impacts of climate change, the report says. However, some observations of new species may simply reflect that shortage of earlier research. But the steep gradient in the diversity of species between warmer waters to the south and colder waters to the north leads to a strong likelihood of species migrating into the Arctic, as the Arctic waters warm, the report says.

Greening tundra

On land, observations which began in 1982 have shown a continuous increase in the productivity or "greenness" of Arctic tundra vegetation, with that productivity accelerating in North America since the mid-2000s — the length of the growing season has increased by nine days per decade during that period, the report says. In Siberia tall shrubs and trees have expanded their ranges. And on the North Slope of Alaska the last decade has seen a dramatic increase in the number and severity of tundra wildfires, the report says.

Current population estimates of caribou and reindeer herds indicate unusually low numbers of animals and smaller winter ranges than in the past, the report says. However, there are large differences in population size between different herds, and each herd appears to undergo

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● LAND & LEASING

BOEM publishes scope of CI lease sale

Adopts a targeted approach that would offer land tracts in 1.17 million acres of the more northerly part of the lower Cook Inlet

By ALAN BAILEY
Petroleum News

The Bureau of Ocean Energy Management, or BOEM, has published its recommendation for land tracts to be included in lease sale 244, the lease sale scheduled to be held for the federal waters of Cook Inlet in 2016. The proposed lease sale area encompasses the federal outer continental shelf of lower Cook Inlet, north from a line extending west from Seldovia in the southern Kenai Peninsula. The bureau proposes excluding from the sale the more southerly part of lower Cook Inlet and the whole of the Shelikof Strait, to the south, areas that are also within the agency's Cook Inlet planning area. And, to avoid encroachment on sea otter critical habitat, the agency has also excluded a narrow strip of territory adjacent to state coastal waters along the west side of Cook Inlet.

The State of Alaska owns the land and administers oil and gas leasing in upper Cook Inlet, to the north of the federal offshore land tracts. All existing offshore oil and gas fields in the Cook Inlet are in state land in the upper inlet.

Targeted approach

BOEM had originally proposed using an areawide approach to its Cook Inlet lease sale, conducting an environmental analysis and consideration for leasing for the entire Cook Inlet planning area. But, following a decision to use a more targeted approach to land offerings in its 2012-17 five-year lease sale program, the agency changed its Cook Inlet recommendation to this more targeted proposal, reducing the lease sale area to about 1.17 million acres in just the northern portion of the planning area. The entire planning area encompasses about 5.36 million acres.

The area proposed for leasing retains most of the area of interest to the oil industry, as determined from responses to a request for interest that the agency published in March 2012, BOEM says. The area is adjacent to active state oil and gas leases and is relatively close to existing infrastructure needed to support exploration activities, the agency says.

The area proposed for leasing retains most of the area of interest to the oil industry, as determined from responses to a request for interest that the agency published in March 2012, BOEM says.

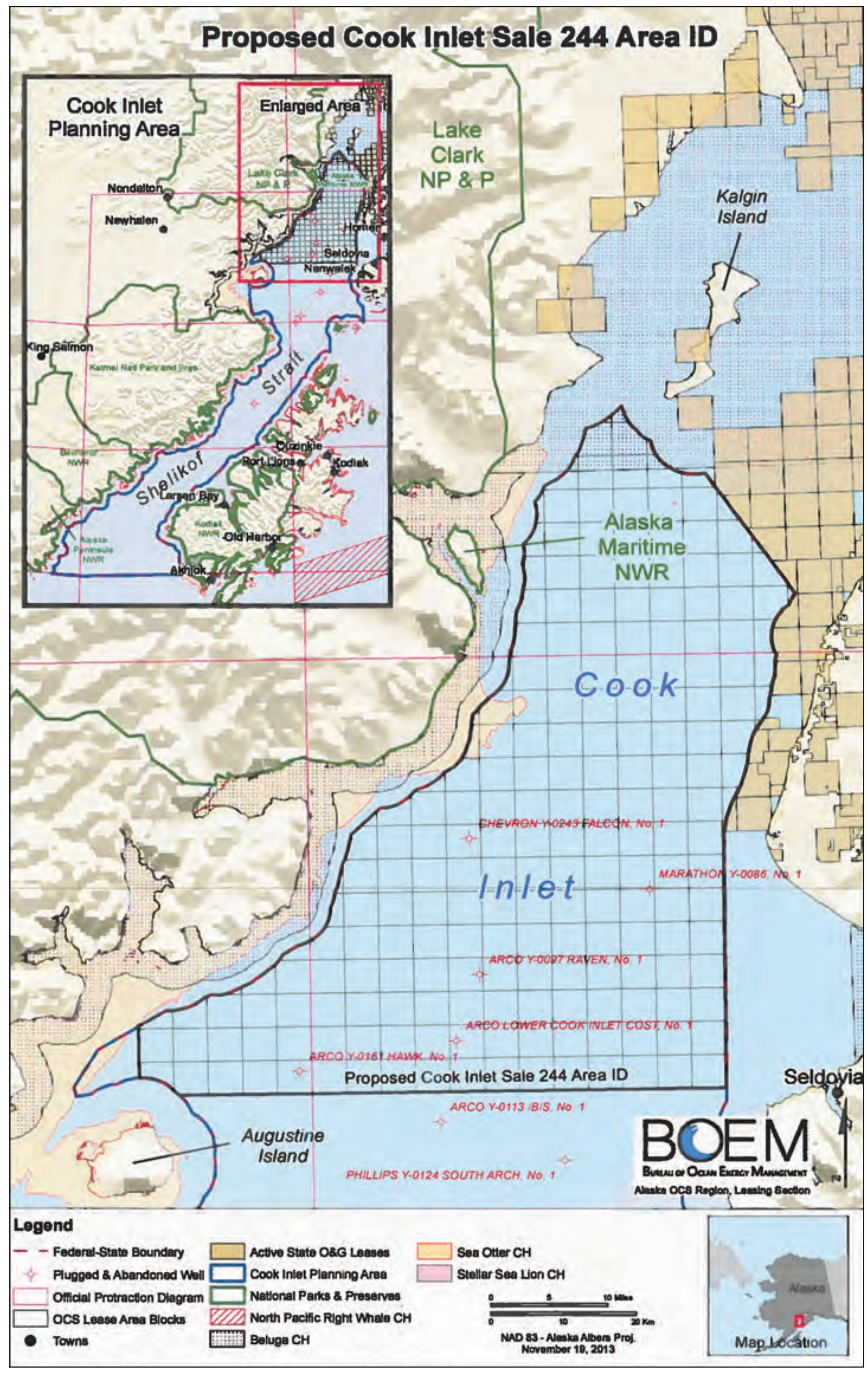
At the same time, the leasing area completely avoids the critical habitat of both the Steller sea lion and the North Pacific right whale; is well spaced from several national parks, preserves and wildlife refuges; and avoids subsistence use areas for Native villages. However, the upcoming environmental analysis for the leasing area will further consider some overlaps with northern sea otter and beluga whale critical habitats, BOEM says.

Previous exploration

In the 1970s and 1980s 11 wells were drilled in the lower Cook Inlet and Shelikof Strait, but none encountered commercial quantities of oil and gas. Since that time industry has shown little interest in exploring the area.

The geology of the area consists of a continuation of the Cook Inlet basin that hosts the oil and gas fields of upper Cook Inlet. But the younger and shallower Tertiary strata that hold the hydrocarbon reservoirs of the fields in the upper inlet become very thin in the southern inlet. On the other hand the Mesozoic strata of the basin, under the Tertiary, attain a thickness of up to 36,000 feet. These older strata include rock equivalent to the Jurassic rock that sourced the oil in upper Cook Inlet and include older Triassic strata with excellent source rock potential. The rock sequence contains potential oil and gas reservoir formations, although the mineral plugging of pores in some of these rocks has raised question marks over reservoir quality in some cases. ●

Contact Alan Bailey at abailey@petroleumnews.com



U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF OCEAN ENERGY MANAGEMENT

● GOVERNMENT

Facing the perils of regulatory risk

Attorney argues for addressing permitting issues up front, using NEPA process for agency coordination and robust permit defense

By ALAN BAILEY
Petroleum News

With many major permitting decisions associated with the oil and gas industry in Alaska being challenged through the courts in recent years, the troublesome and often time consuming legal defense of environmental permits has become something of a rite of passage for would-be developers of the state's hydrocarbon resources. But, in the spirit of turning an issue into an opportunity, Svend Brandt-Erichsen, a managing partner with Marten Law PLLC, suggested to attendees at the Law Seminars International's Energy in Alaska conference on Dec. 6 that the process for compliance with the National Environmental Policy Act, or NEPA, can provide a means of ensuring government agency cooperation and the development of a robust permitting record.

That robust record is the key to the successful defense in court of a permitting decision, Brandt-Erichsen said.

"If you bring me into a case that has a great record, I can look like a hero. If you bring me into a case with a bad record, I get to be the goat," he said.

NEPA process

The NEPA process, invoked whenever a project involves some federal action, typically results in the preparation of an environmental assessment or an environmental impact statement, documents that

He said that he tends to find companies particularly focusing on the commercial risk as a prime driver in project planning, with the regulatory risk viewed as a project cost.

can certainly take months and may take years to complete. And, with completion required before a final decision on that federal action, the NEPA process often becomes the critical path on the route to project execution.

But a developer can use the NEPA process to drive communications between the various federal permitting agencies, and with state and local agencies, ensuring that the requirements and stipulations are lined up and consistent for all of the permits that a project requires, Brandt-Erichsen explained.

"I have actually seen developers have significant success, using the NEPA process for several key processes," Brandt-Erichsen said.

And this can be of particular importance in Alaska, where almost any significant project involves a federal action, and hence a NEPA review. Federal actions can result, for example, from the need to conduct operations on federal land; or the need to obtain a federal permit or authorization under statutes such as the Clean Water Act or the Marine Mammals Protection Act.

Types of risk

Brandt-Erichsen said that he sees three categories of risk that can impact a project: the commercial risk associated with questions of whether the project will ultimately result in a return on investment; the technology risk that relates to any uncertainties over the practicalities of technically carrying out the project; and the regulatory risk associated with the challenges of obtaining government permits and dealing with any litigation associated with permitting decisions.

He said that he tends to find companies particularly focusing on the commercial risk as a prime driver in project planning, with the regulatory risk viewed as a project cost. And technical risks can also play a major role. In, for example, an underground coal gasification development, a project involving new technologies for generating synthetic gas from underground coal, the need for using unproven carbon capture and storage technology to dispose of carbon dioxide generated by the process would represent a significant technical risk, potentially impacting a company's ability to finance the project.

Regulatory risk

But regulatory risk can also figure large. While the regulatory risk associated with a new natural gas-fired power station, for example, may be quite low because of the low environmental impact of the technology, a project such as the proposed hydroelectric power station at Watana in the upper reaches of Alaska's Susitna River has high regulatory risk, with much environmental scrutiny and an extended evaluation period and permitting process, Brandt-Erichsen said.

And, while the hard requirements for a project emanate from the commercial side of the risk equation, dealing with the regulatory risk requires an understanding of how much wiggle room the project contains — an understanding of which aspects of the project might be given up and to what extent the project can be reshaped, if necessary. Understanding the level of opposition to the project is also critical, Brandt-Erichsen said.

Confront the problems

With up-front work to tackle these issues really paying off, the NEPA process, executed through a really good contractor, can bring to light the key problems confronting the project, he said, emphasizing the dangers of trying to ignore any environmental problems and the importance of understanding and confronting the problems from the get go.

And, with cooperation from the lead government agency in the NEPA process, that process can drive the project's permitting scheme and ultimately the project timeline. With multiple agencies and jurisdictions involved, the objective should be to have the various agencies mesh their efforts, so that assessments and recommendations match across multiple permitting schemes, with permits all re-enforcing each other, Brandt-Erichsen said.

Consistent permits

The consequence of a successful NEPA process should, thus, be a series of permit decisions, timed so that environmental mitigation requirements are consistent both between each other and with what is said in the NEPA evaluation. In this situation, a company can end up with really solid documentation, defensible in court. On the other hand, conflicts between permits and between the permits and the NEPA results lead to documentation that is really weak, Brandt-Erichsen said. ●

Contact Alan Bailey
at abailey@petroleumnews.com

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WARMING ARCTIC

decades-long cycles of abundance and scarcity. The western Arctic herd in Alaska, for example, declined to 75,000 animals in the 1970s before climbing to a peak of 490,000 animals in 2003. By 2011 the herd had declined again to 325,000, the report says.

Musk oxen populations in the Arctic have spread geographically and increased in number following declines in the historic past and following their re-introduction in some regions including Alaska. Alaska musk ox numbers appear to have stabilized. ●

Contact Alan Bailey
at abailey@petroleumnews.com

● FINANCE & ECONOMY

Brent to average $104, WTI $95 in 2014

US Energy Information Administration: November discount $14 per barrel; US crude production averages 8 million barrels per day

By KRISTEN NELSON

Petroleum News

The North Sea Brent crude oil spot price averaged $110 per barrel in November for the fifth consecutive month in a row, the U.S. Energy Information Administration said in its December Short-Term Energy Outlook. The agency said it expects Brent to average $108 per barrel in December and decline to $104 per barrel next year, a weakening EIA attributed to non-OPEC supply growth exceeding the growth in world consumption.

EIA expects the West Texas Intermediate crude oil spot price to average $95 per barrel in 2014, down slightly from an expected fourth-quarter average of $96 per barrel.

WTI averaged $106 per barrel in September and fell to $94 in November.

The discount of WTI to Brent, which averaged $18 per barrel in 2012, fell to less than $4 per barrel this July and averaged $14 per barrel in November.

EIA said it expects the WTI discount to Brent "to average $12 per barrel during the fourth quarter of 2013 and $9 per barrel during 2014, as new pipeline capacity is adding from Cushing to the Gulf Coast."

Record discounts

U.S. Gulf Coast crude oil grades reached record discounts to international benchmarks in November, EIA said.

The spot discount of Light Louisiana Sweet, LLS, a key Gulf Coast light sweet crude oil, increased from $3 per barrel in September to almost $11 in November.

EIA said the large LLS discount to Brent "and the increasing convergence of LLS and WTI prices result from pipeline expansions and reversals that have reduced bottlenecks in the Midcontinent, continuing growth in domestic light oil production, and a seasonal decline in crude oil runs at U.S. Gulf Coast refineries."

Brent spot prices "continue to be supported by ongoing supply outages in Libya and tightness in global light crude oil markets," EIA said.

8 million bpd

U.S. crude oil production averaged 8 million barrels per day in November, which EIA said was the highest monthly domestic production level since November 1988. The agency said crude oil production averaged 6.5 million bpd in 2012, is expected to average 7.5 million bpd this year and 8.5 million bpd in 2014.

"The continued focus on drilling in tight oil plays in the onshore Bakken, Eagle Ford, and Permian regions is expected to account for the bulk of the forecast production growth," EIA said.

Henry Hub increasing

The Henry Hub spot price for natural gas, which averaged $2.75 per million British thermal units in 2012, is expected to average $3.69 this year and $3.78 in 2014. The Henry Hub spot price averaged $3.64 per million Btu in November.

EIA projects U.S. natural gas marketed production to increase from 69.2 billion cubic feet per day in 2012 to 70.4 bcf per day this year and 71.4 bcf in 2014, while natural gas pipeline gross imports — which have been falling for 5 years — are projected to fall 0.5 bcf per day in 2013 and remain flat in 2014.

U.S. crude oil production averaged 8 million barrels per day in November, which EIA said was the highest monthly domestic production level since November 1988.

Natural gas production in the northeastern U.S. rose from 2.1 bcf per day in 2008 to 12.3 bcf in 2013, a trend which EIA said has reduced the cost and increased the supply of natural gas in the Northeast.

EIA said the additional supply has encouraged greater use of natural gas in the Northeast, especially for power generation, and has reduced net inflows from other regions such as the Gulf of Mexico, the Midwest and eastern Canada.

Domestic natural gas consumption, which averaged 69.6 bcf per day in 2012, is projected to average 70.7 bcf per day this year and 69.6 bcf per day in 2014, with colder winter temperatures in 2013 and 2014 — compared to 2012 — expected to increase the amount of natural gas used for space heating. ●

Contact Kristen Nelson at knelson@petroleumnews.com

NATURAL GAS

AIDEA pushes IEP choice to January

The Alaska Industrial Development and Export Authority is aiming to choose a private-sector partner for its Interior Energy Project at an upcoming meeting in January 2014.

The staff of the public corporation is "running parallel tracks," according to Executive Director Ted Leonard. One track is examining the term sheets of the three competing project proposals while the other is conducting due diligence on project components.

By conducting a "quick, hard negotiation" with whatever partner the board chooses, AIDEA will be able to maintain its schedule, Leonard said at a Dec. 18 board meeting.

At the December meeting, the board heard presentations from the Alaska Department of Natural Resources, the Alaska Gasline Development Corp. and the Alaska Railroad Corp., as part of due diligence efforts. The latter two entities could potentially be competitors or collaborators on any effort to truck liquefied natural gas to the Interior.

AIDEA is currently weighing turnkey proposals from MWH Americas Inc., Pentex Alaska Natural Gas Co. LLC and Spectrum Alaska LLC. The AIDEA staff had previously suggested it might recommend one of those proposals to the board at its December meeting, but is now looking to make such a recommendation on Jan. 14.

The delay will allow AIDEA to consult with Golden Valley Electric Association, which could participate in the project as both a partner and a consumer. The electric cooperative is a major energy user in the region, but also holds a long-term gas supply contract.

GVEA plans to give AIDEA its comments on the three term sheets by the end of the month, Leonard said. GVEA has previously said that it expects to purchase between 1.5 billion cubic feet and 2.5 bcf annually from any project, but said the exact amount would depend on the plant offering a "commercially reasonable" fixed price.

—ERIC LIDJI

FINANCE & ECONOMY

JL Properties, CIRI, new building owners

JL Properties Inc., in partnership with Washington Capital Management and Cook Inlet Region Inc., is the new owner of the ConocoPhillips office complex in downtown Anchorage.

The Stan Johnson Co., representing the previous owner, a privately held investment and management company, said in a Nov. 20 statement that the complex had been sold to a partnership of institutional investors.

In a Dec. 16 statement, JL Properties Inc., a real estate development and investment firm, said a partnership it led had acquired the complex.

JL Properties is a real estate development and investment firm, with portfolio exceeding $2 billion and more than 2 million square feet of office property and 5,000 residential units in Alaska. Washington Capital Management is an investment advisory firm focused on equities, fixed income, mortgages and real estate with a portfolio of real estate equity investments in excess of $1 billion in the Western U.S. CIRI is an Alaska Native regional corporation with worldwide investment and operating interests, with real estate investments in Alaska including the Tikahtnu Commons Retail and Entertainment Center, the newly announced Fireweed Business Center and 11000 C Street, a commercial office development at C Street and Klatt Road.

The ConocoPhillips office complex, which includes the tallest office building in the state, has more than 677,000 square feet and sits on 1.7 acres of land, JL Properties said. ConocoPhillips is the primary tenant.

—PETROLEUM NEWS

EXPLORATION & PRODUCTION

Linc adds second alternative at Umiat

Linc Energy Inc. is slightly expanding its winter exploration program at the Umiat field.

The Australian independent now plans to drill as many as three wells this winter at the oil field in the National Petroleum Reserve-Alaska, in the foothills of the Brooks Range.

Earlier this year, Linc announced plans to drill the Umiat No. 23H well this coming winter, but said it would also drill the nearby Umiat No. 24H well, if time and weather accommodated additional drilling. While the Umiat No. 23H is still the priority of the upcoming program, the company now plans to drill the Umiat No. 25 well if conditions allow two wells, followed by Umiat No. 24H, if the season allows for three wells.

The logistical challenges of the remote field forced Linc to postponed its entire 2012 program and defer much of its 2013 program, but the company gave itself a head start this year by leaving its rig, equipment and supplies stacked on location. The decision will allow Linc to begin drilling before it finishes building a seasonal snow road, and the extra time might allow the company to get started on an additional well late in the season.

Linc recently staked the Umiat No. 25 well in lease AA-81726, which is where the company drilled the Umiat No. 18 vertical well this past winter. Throughout its multi-year campaign at Umiat, Linc has wanted to conduct side-by-side flow test comparisons of a vertical and a horizontal well drilled into the same Lower Grandstand interval. The Umiat 23-H well was originally described as the horizontal counterpart to Umiat No. 18.

The legacy wells at Umiat — drilled between the 1940s and the 1970s — were notorious for producing dramatically different results despite having been relatively close together.

—ERIC LIDJI

● EXPLORATION & PRODUCTION

Miller Energy ups its Alaska reserves

Company hopes new estimate will lead to cheaper financing; dissident shareholders look to replace directors, senior management

By WESLEY LOY

For Petroleum News

Miller Energy Resources Inc. has greatly increased its oil and gas reserves in Alaska's Cook Inlet, based on a new estimate from an independent petroleum reserves consulting firm.

The report from Ryder Scott Co. shows "proved developed" reserves of about 6.1 million barrels of oil equivalent, up from a previous reserves report of 1.6 million barrels.

Most of the gain is attributed to three recompleted wells on the company's Osprey offshore platform, plus the new Sword No. 1 well drilled from the inlet's west bank.

Miller, based in Tennessee, operates in Alaska via its Anchorage-based subsidiary, Cook Inlet Energy LLC.

"We started our process with Ryder Scott in order to facilitate our financing objectives," Scott Boruff, Miller's chief executive, said in a Dec. 12 press release. "Given lender focus on proved developed reserves, we expect this report will greatly enhance our ability to access cheaper capital. Moreover, the increase in proved developed reserves attributed by Ryder Scott validates our team's ability to execute on our development and acquisition strategy."

Shareholder revolt

News of the reserves increase comes amid a potential storm for Miller, which is listed on the New York Stock Exchange.

A group of shareholders on Dec. 17 said they would try to reconstitute Miller's board of directors and replace senior management. The group, representing just under 5 percent of Miller's outstanding shares, said Boruff and David Voyticky, the company's chief financial officer, were unqualified and overpaid.

The shareholder group said the company stock was "significantly undervalued."

However, the group allowed that Miller "has valuable assets and a strong operational team on the ground in Alaska."

David Hall is Miller's point man in Alaska.

The shareholder group touted a slate of candidates for the company board, including Bill Richardson, the former U.S. energy secretary and New Mexico governor.

The group said it nominated its candidates for election at Miller's next annual stockholders meeting, expected to be held in late March.

Aiming for 6,000 barrels

The shareholder protest appeared to drive down Miller's stock price. Shares closed at $7.65 on Dec. 18, down from $8.60 on Dec. 16.

Miller made its entry into the Alaska oil and gas arena in December 2009, when its subsidiary, Cook Inlet Energy, took over an assortment of shut-in assets acquired out of the bankruptcy of California-based Pacific Energy Resources Ltd.

Since that time, Cook Inlet Energy has worked aggressively to restore production and to drill new wells.

Miller Energy now has production of just over 4,000 boe per day, mostly from Cook Inlet with a dab in Tennessee.

On Dec. 10, Miller reported results for the second quarter of its fiscal year 2014, which ended Oct. 31.

The numbers included about $18.7 million in oil and natural gas sales for the quarter, with an operating loss of $4.3 million. The company showed long-term debt of about $74 million.

Miller said it expects to reach production of at least 6,000 boepd by May 1.

Factoring into that goal is the pending purchase of the North Fork gas field on the Kenai Peninsula. ●

Contact Wesley Loy at wloy@petroleumnews.com

● EXPLORATION & PRODUCTION

Shell gives Nova Scotia a boost

By GARY PARK

For Petroleum News

Royal Dutch Shell is answering a long-held hope of the Nova Scotia government by announcing plans to drill up to seven deepwater wells over four years starting in 2015 — the first exploration wells in the province's offshore since 2002.

The program is part of a six-year agreement Shell signed almost two years ago after making work commitments of C$998 million for a project area covering 7,870 square kilometers, or 40 percent of the company's total license holdings.

Shell said it expects to use either an ultra-deepwater, year-round drillship or a semi-submersible. The water depths range from 1,000 to 3,500 meters in a region known as the Shelburne Basin, about 250 kilometers southeast of Halifax.

The company holds 28 significant discovery licenses offshore Nova Scotia, drilling its last 100 percent well on the old Onondaga B-84 discovery.

Shell acquired its first Nova Scotia leases in 1963 and has participated in 77 of nearly 200 wells drilled in the offshore, including the initial discovery well.

Primary target oil

Randy Hiscock, Shell's manager of business development and new ventures, said oil is the primary target for what the company hopes could be a presence in the area for "another, 70, 80 or 90 years."

He said the "sun is rising hopefully on a new day in the offshore Nova Scotia," which has seen the Cohasset-Panuke oil project wind down, the Sable offshore gas project (in which Shell is a partner) reduce output by about half from a peak of 600 million cubic feet per day and Encana's Deep Panuke, after falling years behind its schedule, come on stream this year and start ramping up to 300 million cubic feet per day. The bulk of gas from the two operations is exported to the northeastern United States.

Hiscock said that although it would be difficult for Shell to profit from a gas find in its new exploration round, that would not necessarily be a deal-breaker.

"We have the technology to monetize gas if the volumes are economic and if it ranks in terms of Shell's global portfolio," he said.

Hiscock has high praise for Nova Scotia, describing the regime as "world-class ... that's one of the reasons we entered here."

BP has also secured exploration rights after making a successful bid last year of C$1 billion for four deepwater blocks.

A detailed analysis of the offshore, funded by the government, estimated the resource potential at 8 billion barrels of oil and 120 trillion cubic feet of gas. ●

Contact Gary Park through publisher@petroleumnews.com

● GOVERNMENT

Alaska to investigate wetlands takeover

DNR solicits consultants to assist with potential effort to assume permitting program now handled by Army Corps of Engineers

By WESLEY LOY

For Petroleum News

The state is looking to hire expert consultants to help with a potential takeover of wetlands permitting from the federal government.

The U.S. Army Corps of Engineers currently handles permitting under Section 404 of the Clean Water Act. Section 404 requires a permit for all dredge and fill activities in surface waters and wetlands.

Such permitting often is a major factor for oil and gas and other construction projects in Alaska, almost half of which is considered wetlands. The wetlands total more than 174 million acres, or 65 percent of all wetlands in the nation.

The 404 process involves evaluating proposed dredge and fill activity to identify the "least environmentally damaging practicable alternative."

The Clean Water Act provides a way for states to take over, or assume primacy for, Section 404 permitting. It's something Alaska officials have long contemplated.

Now the state is pursing it in earnest, under legislation state lawmakers passed this year (Senate Bill 27).

'Expensive and bureaucratic'

Gov. Sean Parnell offered the bill, calling Section 404 primacy an important step for self-determination and the state's economy.

"The current federal process has resulted in a large number of projects in Alaska being subject to an expensive and bureaucratic federal permitting system and litigation, delaying and restricting opportunities for Alaskans," Parnell said in a letter transmitting the bill to legislators.

SB 27 drew support from the Alaska Oil and Gas Association, provided state primacy wouldn't result in a "duplicative or more cumbersome" permitting process.

Associated General Contractors of Alaska also voiced strong support for SB 27.

"In my father's days in Alaska, the

see WETLANDS TAKEOVER *page 14*

NATURAL GAS

Commission rejects Enstar tariff filing

The Regulatory Commission of Alaska has rejected, on procedural grounds, a controversial tariff filing from Enstar Natural Gas Co.

Enstar's Nov. 27 filing sought tariff revisions that could make it harder for direct gas marketers to get customers. Specifically, Enstar asked the commission to approve a requirement that customers provide at least a year's notice when switching to or from alternative suppliers.

Enstar is the main gas utility serving the greater Anchorage area.

In a Dec. 12 letter to Enstar, the commission rejected the tariff filing, saying it lacked certain required information and covered too many subjects. The agency said Enstar would need to make separate tariff filings to comply with state regulations.

A natural gas producer, Cook Inlet Energy LLC, is proposing to market gas directly to customers using Enstar's distribution system.

—WESLEY LOY

Oil Patch Bits

SPE raises $32,500 at 30th annual BBQ Fundraiser

The Society of Petroleum Engineers held its 30th Annual Scholarship Fundraiser Nov. 7 at the Gateway Hall of the Alaska Zoo.

The Alaska Section of the SPE raised $32,500 for its scholarship fund at the event. The organization has awarded more than $370,000 in scholarships over the last 12 years.

The evening's events included a raffle, with the grand prize of two roundtrip system-wide airline tickets won by Paul Chan; the second prize, $500 in cash, was won by Darrell Lantz; the third prize, $400 in cash, was won by Lisa Hodge; the fourth prize, a $300 gift card to REI, was won by Steve Gerlec; and the fifth prize, two roundtrip tickets to Seward, Alaska, 2013 season Alaska Railroad, was won by Ann Pilch.

Sponsors of the event include Polar Supply Co., Era Alaska, Proactive Diagnostic Solutions, Welltec, Schlumberger and the Alaska Railroad.

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J.J. Harrier, Commercial Marketing Manager

COURTESY PHOTO

J.J. HARRIER

J.J.'s experience includes journalist and features editor for the Frontiersman Newspaper and vice president and communications director for the Anchorage Chamber of Commerce for the last 5 years.

In the summer, he enjoys road, hiking and camping excursions, reading or a movie with good company. In the winter months, J.J. prefers to travel to keep sanity, perspective and spiritual growth intact and states that family, volunteering and fun time with friends makes his life meaningful.

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 3

PAWLOWSKI Q&A

attempts to provide the most clarity to industry who is planning on investing and making decisions and to Alaskans about what's being accounted for. That's a careful balance that through the public process, the department looks at and looks to in designing the regulation. I think the notion that all oil becomes new oil is frankly a misunderstanding of the geology on the North Slope and the way the new oil provisions are structured. New oil can easily be drilling in the legacy fields in Prudhoe and Kuparuk, and the existing participating areas. It is not GRE/GVR eligible oil, which is the new oil in the legislation. But it's still additional oil and new oil being brought out of those legacy fields. For all oil to be new oil, the existing participating areas — the core of Alaska's production, Prudhoe and Kuparuk — all of that production has to go away for the eligible new oil to take up all of the production. When they started developing Prudhoe Bay, the original estimate for recovery was 9.6 billion out of the 24-plus (billion) in place. Now with the application of technology, expertise, reservoir work, the operator and the industry have increased that recovery toward 50 percent of the oil in place. As they continue to work to get more and more oil out of that reservoir, that doesn't qualify as "new oil" under the regulation or new statute because it's not a new unit, it's not a new participating area and it's not an expanded part of the unit. This is in the core of the Prudhoe Bay producing area, and that does not qualify. That today is still the largest geologic prize on the North Slope. It's increasing the ultimate recovery in Prudhoe through the prudent and excellent work that the operator and industry does.

Petroleum News: If you sort the back and forth talking points and even rhetoric, what is the simple explanation for defining the differences between SB 21 and ACES?

Pawlowski: Where ACES had a complex tax system, where the tax rates changed every month and provided credits based on spending, SB 21 provides a fixed tax rate and credits based on production. That's the difference between the two.

Petroleum News: With that in mind, why do you believe this is a simpler bill?

Pawlowski: A net tax system will always have its own inherent complexity because costs are deductible and it does provide a degree of alignment with investors to promote development. It's simpler because under ACES you had a tax rate of 25 percent plus the progressivity factor. That progressivity factor depended on four areas: price of oil; transportation costs; the level of production; the direct lease expenditures. Those factors changed and the tax rate under ACES changed on a monthly basis, which made long-term planning extremely difficult. One of the largest incentives under ACES was what a lot of people called the buy-down effect, the ability to invest in Alaska to reduce my tax rate. That's valuable if I have any idea what my tax rate is going to be.

While I can get a pretty good idea what my tax rate is going to be the next few months — because I have a good idea what the price, production, transportation cost, lease expenditures are — making a multibillion three- to five-year investment, those variables are too complicated to predict with any degree of

> *"Where ACES had a complex tax system, where the tax rates changed every month and provided credits based on spending, SB 21 provides a fixed tax rate and credits based on production. That's the difference between the two."* **—Mike Pawlowski, advisor for petroleum fiscal systems with the Department of Revenue**

confidence. So I think one of the largest problems was the complexity and predicting both the negative impact of progressivity and the positive impact of the buy down was impossible for a company to make a long-term investment decision based on it.

SB 21, by going to a flat rate of 35 percent, solves that problem and provides the simplicity and predictability of the tax rate at 35 percent.

Petroleum News: OK, let's go to a few of your points from the presentations that you believe drive the need for change. One is capital expenditures by area. What do you want the takeaway to be?

Pawlowski: What I want people to see are a couple of things. If you look at 2003-2006, as oil prices were rising, the growth of investments in Alaska was tracking relatively consistent with upstream investment in the United States and worldwide. In 2007 and 2008, ACES goes into effect and prices spike. In the United States and worldwide, investment increases dramatically. Prices fall in 2009, but in 2010, 2011 and 2012, as prices climb, investment in the other regions picks up materially while remaining relatively flat in Alaska. Yes, we can see investment pick up in Alaska even under ACES. We frankly just lived through one of the greatest commodity booms in history in one of the greatest basins in the world, and as prices rose, we did not see the commensurate level of investment in Alaska that we saw in other places or that we saw in 2003-2006.

Petroleum News: The other point you stress is production and how other states are overtaking us. Could you discuss that please?

Pawlowski: I get this discussion a lot. When taxes were low the decline was there. But if you look at 1999-2003, and Gov. Knowles started talking about no decline after 1999, but yes there was North Star and yes there was Alpine, but there were a lot of other developments and a lot of other satellite fields that flattened the decline. It's not conjecture. The state of Alaska has done this before. In fact a lot of the production we see today comes from investment made back then. In 2004, Prudhoe Bay satellites were doing 103,300 barrels a day; this next year we are expecting them to be 40,100 a day.

In my speeches, I've been looking at other states because at the time the focus had been too much on North Dakota and Texas, and it isn't recognizing how broad based the renaissance in the United States really is. In 2010, ANS prices diverged from WTI prices, and put a major premium on Alaskan oil. Remember we have that premium while we have ready access to a fairly empty pipeline whereas other places relied on trucks and rail for transportation to get the oil to market. Alaska didn't see the investment in production. It should have come along with that $15-plus premium. That's a huge premium. Part of the reason was the marginal tax rates under

see **PAWLOWSKI** *page 14*

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PLANT RESTART

However, a revival in the Cook Inlet gas industry thanks to companies new to the region, including Hilcorp Alaska, Buccaneer Alaska, Armstrong Cook Inlet, Nordaq Energy and Furie Operating Alaska, the decline in gas production has been stemmed until at least 2018. But, with Hilcorp, in particular, tying up much of the Southcentral Alaska utility market for a few years into the future, some other gas producers have expressed concerned about finding a market outlet for any new gas that they may find and develop.

Industrial anchor

In fact, although it may appear counterintuitive to export gas from a region where local gas supplies have become tight, the Kenai LNG plant has in the past provided an anchor industrial outlet for gas development and production while also acting as a backstop for winter gas delivery, enabling the diversion of gas originally earmarked for export into the supply stream for utilities.

In September the State of Alaska requested ConocoPhillips to re-open the LNG plant, saying that companies operating in the Cook Inlet basin needed market opportunities as incentives for investment in new exploration in the basin. ConocoPhillips has now responded to that request.

And, in a Dec. 12 email, ConocoPhillips spokeswoman Natalie Lowman told Petroleum News that the company will support utility gas supplies as an overriding priority.

The ConocoPhillips LNG plant at Nikiski on Alaska's Kenai Peninsula

"ConocoPhillips Alaska remains committed to meeting its local gas supply contracts and putting local gas needs first," Lowman said. "COPA affirms its commitment to divert its equity and third party gas from the Kenai LNG facility to local buyers during times of peak need."

And Sen. Mark Begich expressed his support for ConocoPhillips' decision.

"With all the Southcentral utilities having gas under contract through March 2018, this is a welcome boost to the Kenai Peninsula economy," Begich said. "Even seasonal shipments of LNG will add jobs and create incentives for exploration and competition, helping to keep prices lower for Alaskans."

—ALAN BAILEY

Contact Alan Bailey at abailey@petroleumnews.com

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LNG GROWTH

land-based rig.

"Since 2007, ExxonMobil has drilled 19 of the world's 30 longest extended-reach wells, including the Z-44 well drilled at the Chayvo field," the report says. "This well extended for a total length of 12,376 meters (40,604 feet) — more than 7 miles."

ExxonMobil also notes incredible advances in well completions, described as "the final step of the drilling process, where the connection to hydrocarbon-bearing rock is established."

These advances are making it possible to recover more oil and gas from the length of each well.

"Companies are pushing completions in excess of 3,000 meters (9,842 feet) in length, compared to a typical completion of 30 meters a couple of decades ago," the report says.

People, power and cars

From 2010 to 2040, the world's population is projected to rise from 7 billion to nearly 9 billion people.

"Over that same period, global energy demand is likely to rise by about 35 percent," ExxonMobil says.

In developed nations including the United States, overall energy demand will stay essentially flat through 2040, due to improved efficiency and slower population growth.

China and India, the world's most populous countries, together account for half the projected growth in global energy demand.

Developing economies crave two energy-intensive luxuries — electricity and automobiles.

Power generation will propel natural gas as the fastest-growing major fuel through 2040. But ExxonMobil sees only limited growth in natural gas as a fuel for cars.

"We expect global demand for gasoline (including ethanol) to be relatively flat from 2010 to 2040, largely because cars and other light-duty vehicles will become much more efficient," the report says. "On the other hand, demand for diesel (including biodiesel) will grow sharply — by about 75 percent — to power the rise in activity in trucks and other commercial transportation."

The average efficiency of the world's vehicle fleet is projected to reach 46 miles per gallon, compared to 24 mpg in 2010.

This reflects an expected surge in hybrid vehicles, which combine an internal combustion engine and an electric motor.

"By 2040, hybrids are expected to account for about 35 percent of the global light-duty vehicle fleet, up from less than 1 percent in 2010," the study says.

Plug-in cars, more expensive due to battery costs, are expected to comprise less than 5 percent. ●

Contact Wesley Loy at wloy@petroleumnews.com

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PAWLOWSKI Q&A

ACES made it look like from the investor perspective, prices didn't really rise because the state took a greater and greater share.

Petroleum News: Were there any other points you needed to stress?

Pawlowski: One more. I call it the declining value of progressivity. You look at it. The fiscal year of 2008, oil prices were $96.51 and we earned $6.8 billion in oil tax production tax revenue. By 2014, oil is $13 higher and we are making $3 billion a year less in production tax revenue. As production declines, the cost of production gets spread over fewer and fewer barrels. The less oil moving through the pipeline increases the tariff on each of those barrels and ultimately what happens is the value of progressivity, which is based on the value after those costs, goes down. So the tax rate under progressivity goes down. What we are seeing in the Revenue Sources Book today where changes in production assumptions, price assumptions, investment assumptions and transportation costs, drive much lower revenue projections. That's where the 35 percent tax rate does a lot to protect the state. Remember ACES is 25 percent plus the variable tax rate; whereas SB 21 is 35 percent. ●

Contact Steve Quinn at squinnwrite@gmail.com

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WETLANDS TAKEOVER

The new law allows DNR and DEC to evaluate the benefits and costs of a state-run wetlands permitting program.

biggest obstacle they faced in trying to do something was getting the money," wrote John MacKinnon, the organization's executive director. "Today, the biggest obstacle is getting permission."

SB 27 also drew opposition. The Fairbanks-based Northern Alaska Environmental Center said the legislation would allow the state to roll back regulations, making it easier for corporations to develop wetlands without a proper public review.

Two states, Michigan and New Jersey, already have assumed primacy for wetlands permitting.

Call for consultants

On Dec. 12, the Alaska Department of Natural Resources issued a request for proposals from consultants able to assist the state with evaluating and potentially pursuing assumption of Section 404 permitting from the Army Corps of Engineers.

DNR is looking to issue the consulting contract by Jan. 24. The contract would run through June 30, 2016.

Another state agency, the Department of Environmental Conservation, also would be heavily involved in any takeover of Section 404 permitting.

The new law allows DNR and DEC to evaluate the benefits and costs of a state-run wetlands permitting program.

If the state decides to pursue primacy, it will have to win approval from the Environmental Protection Agency, which has oversight of the Army Corps 404 program.

Assuming primacy would not give the state authority over all waters and wetlands. The Corps would continue permitting dredge and fill activity in certain areas, such as tidally influenced waters. ●

Contact Wesley Loy at wloy@petroleumnews.com

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ARCTIC OIL

intention to continue its Arctic drilling program, possibly as soon as the summer of 2014. However, the company has continued to place a hold on its efforts in the Beaufort Sea, with, for the time being, drilling to continue just in the Chukchi Sea, where the company sees the biggest undiscovered oil potential.

Pause in 2013

"We took a pause in 2013 and used the time to reflect on what happened in 2012," Voser said. "Shell is making preparations to potentially start exploratory drilling in 2014 or 2015, but this has not yet been decided. If we make a discovery, I would envisage possible production during the second half of the next decade."

Shell has previously said that, if it does make an oil find in the Chukchi Sea, it anticipates shipping the oil to market through a pipeline that it would need to construct under the Chukchi and across the National Petroleum Reserve-Alaska to the northern end of the trans-Alaska oil pipeline. The permitting and construction of the necessary infrastructure to develop a field and bring the oil on line would presumably take several years to accomplish and require the discovery of a major oil resource. ●

Contact Alan Bailey at abailey@petroleumnews.com

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POLE PLAY

Sergei Shoigu to bolster military units and military infrastructure in the Arctic, just one day after Canada confirmed its intention to lay claim to the seabed under the North Pole.

Shoigu responded by assuring Putin that in 2014 "we intend to create military units and forces for ensuring the military security and protecting the national interests of the Russian Federation in the Arctic."

Canada's Foreign Affairs Minister John Baird, faced with the challenge from Russia as the United Nations Commission on the Limits of the Continental Shelf gets to grips with Arctic sovereignty claims, declared that Canada will not relinquish the geographic North Pole, a stand that puts it at odds with Russia and Denmark.

Intention to claim Pole

It was the first time the government of Prime Minister Stephen Harper has publicly declared its intention to claim the Pole by extending its ocean boundaries in the Arctic and Atlantic.

Harper has gone as far as scrapping Canada's claim to 1.7 million square kilometers of Arctic seabed that government scientists and bureaucrats have been working on for 10 years, ordering them to submit a bigger claim, supported by scientific and mapping evidence, that embraces the North Pole.

University of British Columbia Arctic expert Michael Byers took issue with Harper's strategy, arguing that the North Pole is on the Danish side of the underwater Lomonosov Ridge which he said is a natural extension of Greenland and Ellesmere Island.

"The North Pole is probably Danish and is most certainly not Canadian," he said.

But Baird said the ridge runs near Ellesmere Island under the magnetic pole and would be the geological basis for the Canadian territorial claim.

Environment Minister Leona Aglukkaq said her government is taking more time because "we are defining Canada's last frontier. This is a legacy we will leave for generations of Canadians."

Baird also said legal international recognition "will be vital to the future development of Canada's offshore resources," which Natural Resources Minister Joe Oliver said is important for "Canada's long-term economic prosperity."

Symbolic value

The North Pole seabed itself is not believed to hold large oil and natural gas resources, but it has great symbolic value for countries in the region, including the United States and Canada.

> *In order for Canada to be successful in its claim, it must show that its continental shelf extends beneath the North Pole.*

Just gathering supporting evidence for Canada's claim has been a challenge, said Fisheries Minister Gail Shea.

"The Canadian Hydrographic Service and the Geological Survey of Canada have collected a great deal of data in areas that are ice-covered, difficult to access, and that in some instances have not previously been surveyed," she said.

In order for Canada to be successful in its claim, it must show that its continental shelf extends beneath the North Pole. The United Nations is scheduled to consider the various submissions in July-August 2014.

In the best Canadian traditions, one federal lawmaker is quietly opting for compromise.

Megan Leslie, a New Democratic Party Member of Parliament, and a child of Finnish immigrants, said the question of where Santa is from is a "really delicate" matter, suggesting it might be better if Santa and the North Pole belonged to the entire world.

—GARY PARK

Contact Gary Park through publisher@petroleumnews.com

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BUCCANEER MOVES

a statement. "I welcome Andy and Mike to their new roles and believe these will be positive steps for the company. Buccaneer Energy continues with its commitment to its Alaska projects, both on and offshore, and is looking forward to implementing these measures to drive our projects forward."

In early December, Buccaneer resolved months of complications by appointing Patrick O'Connor and Gavin Wilson to fill two vacancies on its five-member board of directors.

In July, shareholders ousted two of the four existing directors and voted three new directors onto the board. A pair of corporate shareholders had called for the vote in an attempt to change the direction of the company. A subsequent appointment split the six-member board evenly among those seeking change and those looking to stay the course.

The three new directors subsequently resigned in August, without offering any public explanation. A series of other changes left the company without enough board members to satisfy Australian corporation law. The Australian Stock Exchanged suspended trading for the company from Dec. 2 until Dec. 4, when Buccaneer appointed its new directors.

Ending farm-out deal

Even with those personnel matters sorted out, Buccaneer still faces challenges.

The company is currently working to keep two offshore Cook Inlet units. The Alaska Department of Natural Resources is threatening to terminate the Southern Cross and North West Cook Inlet units because Buccaneer failed to meet work commitments.

Buccaneer is asking the department for clemency. The company blamed the delays on logistical problems largely outside its control, but claims to have made "good faith, diligent efforts" to drill at both units this year and believes it will succeed next year.

Those efforts might be complicated by Buccaneer's recent decision to end a farm-out agreement with the California-based independent EOS Petro Inc. In a statement, Buccaneer said it ended the deal because "amongst other things, failure by EOS to fund its obligations under the agreement." Buccaneer declined to elaborate on the reason it terminated the deal and officials at EOS Petro could not be reached for comment.

Under a deal announced this past August, EOS Petro agreed to spend between $150 million and $200 million to fund at least six wells at three Buccaneer units in return for a 50 percent working interest in the properties. The deal called for EOS Petrol to fund two wells each at Southern Cross, at a Buccaneer-operated deep oil prospect at the ConocoPhillips-operated North Cook Inlet unit and at the onshore West Eagle unit in the southern Kenai Peninsula, with an option to fund two wells at North West Cook Inlet.

While declining to discuss how the end of the deal might impact its Cook Inlet plans, Buccaneer Chief of Public Relations and Communications Richard Loomis told Petroleum News, "We continue with our commitment to developing our Alaskan assets." ●

Contact Eric Lidji at ericlidji@mac.com

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CD-5 TECHNOLOGY

"have double redundancy — you might have two primary separators and backup equipment, but in this case we have a single train that's processing all our oil … and it's highly automated." To get the economics with a single train, he said, high uptime is required.

Colville River delta

Environmental sensitivity is necessary, Olds said, because the Colville River delta is the second largest delta in the United States, with abundant wildlife and subsistence hunting from Nuiqsut, the village eight miles to the south of the Alpine central facilities.

With no year-round access to Alpine, ice roads are required in winter to resupply the facility with drilling and maintenance materials. Olds said it's a logistics challenge that has to be overcome every year.

Development phasing

ConocoPhillips is working a phased development plan at its western prospects, he said, reviewing the Alpine discovery in 1994, sanctioning in 1996 and production in late 2000 at the CD-1 central facility. Satellite developments at CD-3 and CD-4 started up in 2006, and Alpine production peaked in 2007 at 139,000 barrels per day, Olds said, with current production at some 60,000 bpd.

CD-5 is projected to come online in late 2015 — construction on that pad and access is beginning this winter.

Olds said the company's strategy is "level-loaded sequential development as we go out into NPR-A," the National Petroleum Reserve-Alaska.

Next in the plan is GMT-1 at the Greater Mooses Tooth unit in NPR-A, with production projected to begin in 2017.

The benefits of doing developments sequentially include "efficient use of our limited company resources as well as agency resources with permitting, reduced impact on the environment and local residents, as well as … leveraging of the use of our existing Alpine infrastructure" at the Alpine central facility, Olds said.

CD-5 work

Development of CD-5 includes a 6-mile gravel road, off the main gravel road from CD-1 to CD-4, an 11.7-acre gravel pad, the Nigliq Channel bridge — a 1,405-foot span — and three smaller, 300-400 foot span bridges.

Olds said pipeline, power and communications for CD-5 will be run out of the central facility at Alpine, "so we don't need to have the redundant facilities located at the pad."

Ice roads for the project will be built through January, with bridge construction January through April.

Olds said the plan is to complete the three smaller bridges this winter, as well as installing pilings and piling caps for the main bridge across the Nigliq Channel.

Bridge deployment

The deployment technique for the Nigliq bridge is innovative, Olds said. Instead of the "traditional pick and set" with cranes used to pick up the girders and set them on the piers, "because of the environmentally sensitive area, we're going to be using a launching technique and we're going to be launching the girders across pier group to pier group for that 1,405-foot span," he said.

Instead of using cranes on the river, a track and trolley system will be used. The beams will be assembled and then launched from the abutment to the pier group, with the longest span that will need to be crossed about 220 feet. A hydraulic ram system will be used and the girders will be pushed across in roughly 4-5 foot increments, he said.

Once the whole span has been crossed the rolling system will be removed, the final deck panels and guardrails will be put in place, and the rig will be moved across for drilling to begin in 2015, Olds said.

The work of moving the beams into place will begin in October

Greater Mooses Tooth 1

Greater Mooses Tooth 1, GMT-1, will follow CD-5.

That project includes a gravel road from CD-5 and two bridges, Olds, said, calling GMT-1 a replica of CD-5, with the oil also to be processed back at the Central Alpine Facilities and the development also making use of water injection facilities, power facilities and communication facilities at Alpine.

Olds said GMT-1, like CD-5, is also "a road-assisted development, and that is driven by the fact that we need to respond in case there was ever a safety instance or an emergency instance, that would impact people and the environment," allowing the company to respond in a timely fashion with resources from the Alpine central facilities.

A permitting package for GMT-1 was submitted in July, he said, and a supplemental environmental impact statement is being developed which should be out for public comment in January. Olds said the plan is to have GMT-1 permitted by summertime and then the project would go for sanction.

Peak production from CD-5 is projected at 16,000 bpd and peak production from GMT-1 30,000 bpd.

Work since SB 21

Other developments since passage of Senate Bill 21, the oil tax reform, include the addition of Nabors 7ES rig at Kuparuk in late May; work on Kuparuk River drill site 2S, where gravel will be laid in February; and an additional rig, Nabors 9ES, for grassroots drilling at Kuparuk projected for January.

Two exploration wells are planned for this winter, he said, wells designed to identify other opportunities in NPR-A: The Lookout prospect near GMT-1 — if a commercial discovery is made — could be developed from GMT-1 with current drilling technology. A second exploration well, in the GMT2 area, is designed to aid with "further appraisal for that asset to determine the commerciality."

Olds said that at CD-2 ConocoPhillips has drilled wells out in measured depth to 25,000 feet, with the average of the longest wells around 23,000 feet.

He said the company continues to look at whether longer wells can be drilled — wells that could reach 30,000 feet for example — and is looking at various drilling techniques to achieve that. ●

Contact Kristen Nelson at knelson@petroleumnews.com