



page 3 Murkowski promotes energy agenda, LNG exports to Japan, S. Korea

## June Mining News inside



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

## Plans unfolding fast for building new trans-Cook Inlet oil pipeline

Executives with Cook Inlet Energy LLC are looking to lay a subsea pipeline across the inlet to carry west side crude oil to Tesoro's Kenai Peninsula refinery.

The Anchorage-based independent, a subsidiary of publicly traded Miller Energy Resources of Tennessee, has been pursuing the project for a couple of years and is deeply engaged in design, engineering and permitting efforts.

"We've spent a fair amount of time, energy and money," David Hall, Cook Inlet Energy chief executive, told Petroleum News on June 20.

The small company is among oil producers operating on

see **INLET PIPELINE** page 23

## Greenpeace asks court to stay injunction; BSEE calls for more tests

As Shell moves closer to drilling in the Arctic this summer, Greenpeace is asking a court to stay an injunction against the environmental group while an appeals process plays out.

In March, federal District Court in Alaska banned the environmental group from occupying any of 19 vessels Shell plans to use for exploratory drilling in the Beaufort and Chukchi seas this summer. In May, the court amended the injunction, banning Greenpeace from occupying the vessels not only in U.S. ports and waters, but also in the U.S. exclusive economic zone, or EEZ, and to certain facilities in the town of Barrow.

Greenpeace has already appealed the injunction, but said that allowing the ruling to remain in place while the appeals process plays out would have "an improper chilling effect on the free speech rights of one of the environmental advocacy organiza-

see **SHELL DRILLING** page 27

## FACILITIES

# Adak supports OCS

OSI and Aleuts to use Aleutian port for Arctic offshore oil logistics support

By **KAY CASHMAN**  
Petroleum News

The former naval base at Adak on Adak Island in the Aleutian Chain will be operated as a logistics support terminal for the oil and gas industry offshore Alaska's North Slope, per an agreement signed June 19 by Offshore Systems Inc., Aleut Enterprise and Aleut Real Estate.

Port of Adak is referred to by its staff as "Port Aleutchon," a play on words referencing Louisiana's Port Fourchon, a sea port with significant petroleum industry traffic from offshore Gulf platforms.

The former naval air station also has an airport with aircraft hangars, an instrument landing system and glidescope, 465,000 barrels of fuel stor-



OSI AND ALEUT ENTERPRISE

age, 400,000-plus square feet of warehouse space, a terminal and two asphalt runways. The runways are at 19-foot elevation and 200 feet wide, with one 7,790 feet long and the other 7,605 feet in length.

see **ADAK LOGISTICS** page 26

## NATURAL GAS

# Is propane being wasted?

Harold Heinze and BP engineers make the case for and against propane sales

By **ERIC LIDJI**  
For Petroleum News

A small amount of propane could help numerous rural Alaska communities break their dependence on expensive heating oil. The Prudhoe Bay unit produces thousands of barrels of propane, but reservoir engineers re-inject almost all of it back underground.

So why can't they share some?

That's what Harold Heinze wants to know.

In a hearing before the Alaska Oil and Gas Conservation Commission on June 19, the former head of ARCO Alaska and the Alaska Natural Gas Development Authority argued that current



**HAROLD HEINZE**

"I will accept that, currently, the answer is, 'Hell no.'" —Harold Heinze

propane management practices at Prudhoe Bay could constitute waste.

But operator BP Exploration Alaska Inc. said propane is crucial for enhanced oil recovery — a program responsible for continued oil production from the aging field — and it couldn't justify a sale until

the economics for propane beat out the economics for oil.

While the commissioners described the hearing

see **PROPANE DEBATE** page 25

## NATURAL GAS

# Apache claims huge gas find

Describes Liard basin in northern B.C. as 'best scale gas reservoir in the world'

By **GARY PARK**  
For Petroleum News

Apache has confirmed the presence of a monster shale natural gas play in the Liard basin of northern British Columbia.

It said a well drilled in 2009, but kept under wraps while it assembled more adjoining land, has yielded the "most prolific shale gas resource test in the world."

Apache estimated it controls 48 trillion cubic feet of net marketable gas — equivalent to about eight years of Canada's current annual gas output — and 210 tcf of resources within its 100 percent-owned 430,000 acres in the heart of the basin.

Apache estimated it controls 48 trillion cubic feet of net marketable gas — equivalent to about eight years of Canada's current annual gas output — and 210 tcf of resources within its 100 percent-owned 430,000 acres in the heart of the basin.

But the Houston-based company is agreeing with many analysts who suggest development of Liard is many years away, despite its proximity to pipelines and other infrastructure.

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GOVERNMENT

# Murkowski promotes energy agenda

Senator helps ease 'torturous' offshore permitting process, promotes LNG export project with Japan, pipeline access across NPR-A

By STEFAN MILKOWSKI

For Petroleum News

As ranking member of the Committee on Energy and Natural Resources, Sen. Lisa Murkowski is deeply involved in energy issues. Murkowski has tracked Shell's progress toward drilling in the Chukchi and Beaufort seas and, frustrated at the pace of air quality permitting, successfully pushed to transfer authority from the Environmental Protection Agency to the Department of the Interior.



SEN. LISA MURKOWSKI

She's also fighting to open the Arctic National Wildlife Refuge, promoting an Alaska natural gas export project with Japan, and working on an energy policy she says will truly be "all of the above."

Petroleum News spoke with Murkowski on June 14.

*Petroleum News: Let's start with Shell. You recently toured the Kulluk drilling unit. What was your impression?*

Murkowski: I was impressed. Taking a vessel that has been used in the Arctic in years past, retrofitting it to the highest standards. The fact that there are zero emissions is quite considerable. Looking at the engine system they have installed — it really is impressive.

*Petroleum News: It's taken Shell seven years and billions of dollars to get here. What can we learn about the permitting process from their experience?*

Murkowski: We have learned that the permitting process can be torturous. We knew it was going to be a difficult process, simply because there has been no activity up in the Arctic for decades. You also had the Deepwater Horizon and all that came with that disaster. There was a moratorium throughout the country.

You have a permitting process through the EPA that is unnecessarily slow. I'd been considering (transferring air quality permitting from the EPA to Interior) for about a year before we brought it up and passed it through the appropriations process. DOI has always had authority over oil production in the Gulf of Mexico. But EPA has taken over the issue in Alaska, and Shell was in a situation where the process was excruciatingly slow.

The EPA failed to demonstrate that it was even capable of issuing a valid permit in a reasonable amount of time. The Interior department can certify air quality compliance in a matter of months. I think it can do a better job of protecting the environment without delaying responsible development to the point of deterring investment.

*Petroleum News: How do you respond to concerns from Rep. Henry Waxman and other House Democrats that regulations won't be as stringent now?*

Murkowski: We moved the authority to a department that has been engaged in the issuance of permits for decades. It's been working in the Gulf of Mexico, and there is no reason that it shouldn't work as efficiently in the Chukchi and Beaufort.

There are those who say it won't be as stringent. I would disagree. The difference

is that you have a level of efficiency within the Department of the Interior that has been built up over decades. With EPA, it was a brand new mission; they had not been engaged in a full-on permitting process as we saw with Shell. They didn't have the expertise. They demonstrated that they just weren't capable of handling this in a reasonable time.

*Petroleum News: You criticized the Bureau of Ocean Energy Management for reducing Shell's drilling season to give time for a late-season cleanup in the case of a spill, calling it unnecessary and not based on science. What did you mean?*

Murkowski: They indicated they were taking historical averages as to when the ice came and walking back the number of days it would take to have the drillships out of the area. What happens if this year it's different?

Right now we're seeing one of the coldest springs and early summers in the Arctic in a long, long time. The level of ice in the Chukchi and Beaufort is pretty much unprecedented. Summer is going to come later this year. Fall might also come later.

Instead of saying, We will look to the ice conditions, (BOEM) gave basically a drop-dead date.

*Petroleum News: Are you comfortable with Shell's oil spill response plans?*

Murkowski: It's not so much whether Lisa is comfortable with it, but whether the regulators are comfortable with it, whether they feel it's adequate and sufficient. We have seen permit after permit being issued. That's the real test.

*Petroleum News: How important is this summer to the future of offshore development in the Arctic?*

Murkowski: It's fair to say the eyes of the world will be upon Shell. This has obviously been a long buildup, with scrutiny not only in the regulatory process but also through the courts. This is probably the most studied and reviewed energy development project we have seen, perhaps ever.

We're going to be looking to see whether they're successful, in the sense that there's a good find out there, hopefully multiple good finds.

But Shell will be scrutinized for a lot of reasons. I think Shell is setting the standard for the type of exploration that we will expect in the Arctic — and not just in Alaska, but in Russia, Canada, Norway, Greenland, all around the Arctic.

The environmental community is looking to make sure there are no mistakes, that Shell is working within their permits. Whether it's concern for the whales, or air quality, or water quality, there will be a great deal of attention.

So there's a great deal riding on Shell's performance this summer. I think they understand that. I think they know their success this summer will impact future development in the Arctic. I want them to set the standard high, and I believe they're doing that.

*Petroleum News: What are your plans for trying to open ANWR, and how are the*

*chances relative to years past?*

Murkowski: We continue to push on ANWR. I will not relax on this because I believe it is the right thing for this nation and for our state. We've got the resource, the demand is clearly there, and I know we can do it right and in concert with the environmental concerns that have been expressed.

The plan is to keep working to educate people. I'm going to be bringing a group of colleagues to Alaska at the beginning of August to see ANWR, to see hopefully what we will have started offshore by then. It's important for members to know what ANWR is and what it's capable of.

I've got two bills introduced but haven't had an opportunity for a hearing on them. I don't have the votes in the Energy Committee today. We likely don't have the votes on the floor today. But that doesn't mean that we relax on the initiative. We're going to keep pressing on it.



see MURKOWSKI Q&A page 22

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## ● EXPLORATION &amp; PRODUCTION

# Hilcorp targets old complicated fields

Privately held Houston independent drawn to Cook Inlet by exit of majors; will invest heavily to increase oil and gas production

By KRISTEN NELSON

Petroleum News

**A**ging oil and gas fields in Southcentral Alaska's Cook Inlet basin may no longer be attractive to major companies, but for a mid-sized Houston independent, Hilcorp Energy, finding ways to produce more oil from big old fields is a way of life.

The privately held company closed on the purchase of Chevron's Cook Inlet assets at the end of last year and is in the process of buying Marathon's inlet assets.

That makes Hilcorp the dominant producer in Cook Inlet, the state's original oil and gas province.

It's the age of the fields in Cook Inlet that attracted the company to Alaska, Hilcorp President Greg Lalicker told the Anchorage Chamber of Commerce June 18.

The company's strategy, he said, is to "look for properties to buy, particularly big, old oil fields, typically from the majors," who have discovered and produced most of the oil and gas. At some point those fields "become, frankly, immaterial to the major oil company's portfolio," because "the size of opportunity gets to small, too hard, not worth the effort and they decide, rather than continuing to invest in those fields, they want to just sell them and move on to the next big field to be produced."

"So when they decide they want to sell, we go out and buy them," Lalicker said.

Over the last five years Hilcorp has spent \$1.992 billion acquiring 162 million barrels of oil equivalent in reserves.

"We buy the fields and then we exploit the properties," with a focus on reservoir engineering, geology and geophysics and field operations, he said.

Over that same five years Hilcorp has spent about \$1.742 billion exploiting properties it owns, and in the process added another 162 million barrels of reserves.

Lalicker said it's what Hilcorp does — acquires and exploits "big old complicated fields."

And in the process spends a lot of money. Its Cook Inlet capital budget for 2012 is some \$203 million, compared to about \$40 million a year Chevron spent in recent years on the same properties, he said.

Lalicker said the spend in Cook Inlet over the next couple of years will probably be about \$150 million a year.

## What's going on in Alaska?

How is Hilcorp spending that money in Cook Inlet?

Most of the Cook Inlet platforms at McArthur River "have drilling rigs on them or had drilling rigs on them that were built in the 1960s which were basically junk," Lalicker said.

So those old rigs are being stripped off the platforms and Hilcorp is working on "getting a rig, a platform rig, that we can move up here and move from platform to

platform and start drilling and working on some of these wells."

The rigs are down already on a couple of the platforms, "and we're plowing through that at a pretty good pace," he said.

At the onshore Swanson River field a workover rig is already starting to repair old wells and there is a remedial program in place across all the producing assets.

There are a lot of old shut-in wells that need to be fixed and brought back on.

"And that's what our first priority is, to wind up the people and equipment to just start fixing all the wells and stuff and then we'll start worrying about the new projects, drilling new wells and all that down the road," Lalicker said.

Hilcorp's current focus on spending is "revitalizing and reactivating and modernizing" equipment to allow drilling not just for the next two or three or four years, but for the next 10, 15 and 20 years, he said.

Production was 15,000 boe a day when Hilcorp took over at the end of 2011, and Lalicker said he hopes to be at more than 20,000 boe a day by the end of this year and up to 25,000 boe per day in 2014.

The Marathon purchase is pending regulatory approval, "so there's not much I can say about when that will happen," but he said the reason for the Marathon purchase is the same as the Chevron purchase: "They have big old fields that need major work." Marathon is Hilcorp's partner in two significant assets, the Grayling gas sands offshore that Hilcorp operates and the Ninilchik field onshore that Marathon operates, Lalicker said, so the Marathon acquisition also has the benefit that Hilcorp gain operatorship at Ninilchik.

## The Cook Inlet challenge

Lalicker said Hilcorp's biggest problem in Cook Inlet comes from the fact that over the last five to 10 years investment by producers "dropped markedly."

"And with that the service industry had been decimated," he said.

Hilcorp can't find the rigs, equipment, people and services that it can find in the Lower 48.

"They just don't exist or if they do they're very, very thin on the ground and they're usually committed to some project already up on the North Slope."

He said "a big part of the challenge" for Hilcorp in Cook Inlet is "rebuilding that pipeline of suppliers to the industry" and Hilcorp has been "enticing some of the people that are in the oilfield service in the Lower 48 that we have good relationships with to come up here and work."

Lalicker said Hilcorp has been lining up more equipment, but he said the small size of the service industry "has been the biggest drag."

And the reason for that, he said, is that "no one has been spending a couple hundred million dollars a year in the Cook Inlet for quite a while." Hilcorp is "working like mad to solve this and we will solve it — but that has been the biggest deterrent to getting things done," Lalicker said.

## Alaska second

Hilcorp is the largest oil producer in Louisiana, he said, and Alaska is now the

see **HILCORP** page 6



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● GOVERNMENT

# Climate policy faces storm clouds

Federal panel estimates Canada on track to achieve only half of 2020 target to reduce GHG emissions, endangering export markets

By GARY PARK

For Petroleum News

A federally appointed advisory panel believes Canada is lagging so far behind its promised cuts in greenhouse gases that it could end up paying a heavy price in 2020 — the loss of export markets for its oil sands bitumen and LNG along with fines or penalties.

The research report by the National Round Table on the Environment and the Economy, NRTEE, requested last year by federal Environment Minister Peter Kent, warned that even under the most optimistic projects Canada would have trouble getting even half way to its 2020 goal of reducing emissions by 17 percent from 2005 levels.

It said foreign governments have already started to introduce regulations that set minimum environmental standards on products, such as requiring fuels to have a reduced environmental footprint, restricting the trade and market access of Canadian companies.

The report warned that Canadian companies are not prepared for these regulations, raising the threat of significant economic repercussions and could “suffer damage to brand recognition.”

## Push for pipeline approval

The conclusions coincide with the Canadian government’s rapid push to gain regulatory approval for pipelines from the Alberta oil sands and British Columbia shale gas plays to the Pacific Coast for export to Asia.

David McLaughlin, president of the 24-year-old advisory panel which the federal government is closing this fall as a budget-cutting measure, said the report was based on extensive consultations with officials from government, business and universities who, for the first time, expressed growing concerns.

“It surprised us that there was that much concern,” he said.

The panel said Canada “risks serious harm to its national economic interests by not proactively developing frameworks, nor engaging in initiatives related to life-cycle approaches (for sustainable development) domestically and globally.”

“The risk is real and Canada must act now to maintain its competitiveness,” the report said.

It estimated policies and programs now in place will cut carbon dioxide levels by 104 million metric tons, mt, by 2020, 117 million mt short of Ottawa’s commitment to lower emissions to 607 million mt.

Under its most optimistic outlook, the panel said an accelerated approach could bring Canada to about 300 million mt if additional climate change measures were introduced and the Alberta government raised penalties on excess emissions.

## Fourteen climate plans

Earlier in June the Canadian government agreed with the provinces of Saskatchewan and Nova Scotia to have a single set of regulations for new coal-fired electricity generation units. Ottawa estimates the coal-fired plants represent 11 percent of Canada’s total emissions.

But McLaughlin said Canada has 14 different climate plans — one federal, 10 provincial and three territorial — “so how can we expect anything but the situation we have today?”

The report said the fast expanding oil sands sector is the largest single contributor

to rising greenhouse gases, putting pressure on the Canadian and Alberta governments to adopt some high-cost solutions, such as carbon capture and storage.

Travis Davies, a spokesman for the Canadian Association of Petroleum Producers, told Petroleum News the industry “recognizes the need to continue to take action to reduce greenhouse gas emissions in our operations and to engage responsibly in the conversation about climate policy in Canada.”

“At the same time, it is important to recognize the world needs energy — including crude oil and natural gas — to meet demand projections and Canada is uniquely positioned to provide it, responsibly and reliably, for the foreseeable future.”

He said the transition to a lower carbon energy system in Canada and globally “must be based on lowering GHG emissions from all forms of energy and across the full value chain from production to consumption.”

## Heavy lifting required

McLaughlin said Canada “can still reach the targets if we do some really heavy lifting, but as time goes by the lifting gets heavier.”

Mark Cooper, a spokesman for Alberta Environment Minister Diana McQueen, said his province is more than willing to do its “fair share” and is prepared to “look at our overall (climate change) strategy,” but does not believe it should have to carry an unreasonable burden.

He said Alberta would prefer to see the Canadian government negotiate comprehensive agreements rather than proceeding on a sector-by-sector basis.

Cooper said Alberta is targeting combined emissions cuts of 50 million mt by 2020 from a “business as usual” level.

He noted Alberta’s limited penalties of C\$15 per mt for excess emissions from heavy industries have reduced greenhouse gases by 3.2 million mt and injected C\$312 million into a technology fund since 2007.

The oil sands sector estimates it has accounted for 2.6 million mt of that total.

The industry-funded Oil Sands Developers Group, which represents operators and developers, said oil sands projects have reduced their carbon dioxide emissions by 38 percent per barrel since 1990 and are making progress toward further lowering “emissions intensity” levels.

The developers’ group said the oil sands make up 4.6 percent of Canada’s overall emissions and 0.1 percent of global emissions, while the industry is working on a proposed carbon capture and storage system for Canada despite the decision in May by a TransAlta-led partnership to cancel plans for a CCS project.

The C\$1.4 billion venture was designed to capture 1.4 million mt per year of carbon dioxide, but failed to attract enough buyers of the CO2 for enhanced oil recovery. ●

Contact Gary Park through publisher@petroleumnews.com

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● PIPELINES & DOWNSTREAM

# Flint Hills closing unit in August

By ERIC LIDJI

For Petroleum News

Flint Hills Resources LLC will close one of the two remaining processing units at its North Pole refining center a month earlier than originally planned, the company said.

The company will now idle the No. 1 processing unit on Aug. 1.

Flint Hills spokesman Jeff Cook said the bump up of the date came about as part of the normal process of idling the facility, and was not the result of any specific change.

Flint Hills originally operated three units at its North Pole refinery, but idled unit No. 3 in 2010. Once unit No. 1 is idle in August, Flint Hills will be left with only unit No. 2.

Cook described unit No. 2 as the “most versatile” of the

*The idling of the unit means the loss of 38 of the 175 jobs at the refinery, although Cook said some of those employees would be offered other positions within the company.*

three, capable of making all the products produced at the facility, including gasoline, diesel, asphalt, jet fuel and naphtha, but Cook declined to elaborate on the capacity of the remaining facility. He also declined to comment on how the reduction might impact a proposal by Flint Hills and the electric cooperative Golden Valley Electric Association to truck liquefied natural gas from the North Slope to use at facilities for both entities, as a way to cut down on their fuel costs.

The idling of the unit means the loss of 38 of the 175 jobs at the refinery, although Cook said some of those employ-

ees would be offered other positions within the company.

When Flint Hills announced its decision in April to close one of its two remaining processing units, it cited “challenging economics and rising crude prices” and said “a single crude unit configuration gives us the best platform to work on these problems.”

Flint Hills has said the idling would not keep it from meeting contractual commitments.

The Associated Press reported June 20 that the Alaska Railroad is eliminating 52 positions because less fuel is being shipped from the Flint Hills North Pole refinery to Ted Stevens Anchorage International Airport, a loss of about \$5 million in railroad business.

The railroad blamed the downturn in the economy, with cargo flights using the Anchorage airport, a majority of its business, in decline since 2009. ●

—The Associated Press contributed to this story



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continued from page 4

## HILCORP

company's second-biggest area. Third is Texas, where the company has several big oil fields; it also operates in the shallow waters of the Gulf of Mexico.

Lalicker said about half of the company's reserve base is oil and about half gas.

The split of its reserves is about one-third (32 percent) those in production; about one-third reserves where wells have been drilled and facilities are in place but some additional work is required to put them into production (30 percent); and about one-third proved undeveloped reserves, those which need more wells drilled and more money invested to get them into production (38 percent), he said.

Hilcorp operates 97 percent of its production.

“We like being in control of our own destiny, so ... we tend to be focused on those areas where we can actually come in as a company and operate ourselves as opposed to being a non operator, waiting for someone else to get something done,” Lalicker said.

### Company growth

The company is growing about 15 percent a year, and over the last five years went from production of 30,000 boe a day to 90,000 boe a day, and from 88.9 million boe of reserves to 323.5 million boe, Lalicker said.

He commented on a big jump in reserves when Hilcorp acquired Chevron's Cook Inlet assets. The chart Lalicker used in his chamber presentation showed a jump from 233.2 million boe to 323.5 million boe, indicating that Hilcorp added some 90 million barrels of oil equivalent to its reserves in its Cook Inlet acquisition.

Fiscal discipline is required, he said. If we want money, “we're not a public company so we don't have the option of issuing equity; we have to do it out of our own cash flow or through debt.” Hilcorp tries to keep debt in the neighborhood of \$4 a barrel, he said, although it's now at about \$2 a barrel due to a divestiture last year.

Hilcorp's goal is to continue to grow at about 15 percent a year.

Between 2006 and 2010 the company had a program called “Double Drive” with the goal of doubling the company in rate of reserves and value over a five-year period.

The program was backed by an incentive: Everyone who was in the company the whole five years, “if we doubled the company, got a new car” or money toward the purchase of a new car.

The new program, “Dream 2015,” isn't a car, he said, it's a cash bonus so employees can pursue their own dreams.

This alignment is a big part of Hilcorp's success, Lalicker said.

The company's bonus program is the same percentage for everyone in the company, not a tiered structure.

“We share the rewards ... evenly and equitably,” he said.

“Anyone can go buy an oil field. It's how well you can exploit it and the differentiation there is how good are your people,” he said. “And having good people, you have to have a model that makes them want to stay with you and work harder for you than they would for the next guy.”

“And that's really what Hilcorp is all about,” Lalicker said. ●



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● EXPLORATION & PRODUCTION

# North Slope summer turnaround a busy one

BP, Conoco have major field, facility maintenance planned over the summer, coinciding with Alyeska summer maintenance

By **KRISTEN NELSON**  
Petroleum News

**A**lyeska Pipeline Service Co. began its summer maintenance work with shutdowns in May and June, with more shutdowns tentatively scheduled for late July and early August.

The major North Slope operators, BP Exploration (Alaska) and ConocoPhillips Alaska, also have maintenance scheduled, five major projects for BP and two for ConocoPhillips.

Major planned maintenance began for ConocoPhillips in mid-June at Kuparuk. ConocoPhillips Alaska spokeswoman Natalie Lowman told Petroleum News that the main work at the Kuparuk River field would be at Central Processing Facility 2, where the company “will test safety systems, make upgrades to instrumentation and electrical systems and perform internal pressure vessel inspections and repairs as necessary.” Lowman said the work was scheduled to begin in mid-June and last some 50 days.

The annual turnaround at Alpine will begin in late July, she said, and last approximately 20 days. Work there “will include smart pigging of production lines, inspection of processing vessels and turbines, and repairs and replacement as needed to the facility’s equipment.”

### Most BP work in July

BP Exploration (Alaska) spokes-

woman Dawn Patience said BP has done some planned maintenance around earlier shutdowns, but that most of the work the company has planned will begin in July. For a six to eight week period, she said, the workforce will grow from about 2,500 to about 3,400, an increase of 900 to handle the turnaround.

BP has a concentrated effort planned at the Prudhoe Bay field, she said, with work at the Central Compression Plant, Flow Station 1 and Gathering Center 1. Work is also planned at the Milne Point and Northstar fields.

Work includes scheduled maintenance on gas compressor turbines, regulatory safety inspections, heavy maintenance operations, inspections and repairs to safety systems at facility.

Patience said the turnaround work was focused on facility maintenance, safety systems and other improvements. She said BP typically plans summer maintenance to take advantage of other facility shutdowns and pipeline shutdowns and the milder Arctic summer climate. Facility shutdowns allow workers to work safely around flares, pipes and other equipment, she said.

### Alyeska shutdowns have begun

Work planned at Alyeska’s May and June shutdowns, scheduled for eight to 18 hours each, included installation of a tem-

see **TURNAROUND** page 9

## PIPELINES & DOWNSTREAM



### 35th anniversary of first oil in TAPS

June 20 was the 35th anniversary of first oil in the trans-Alaska oil pipeline. Construction began on the \$8 billion, 800-mile 48-inch pipeline from the North Slope to Valdez on March 27, 1975, and was completed May 31, 1977.

Alyeska Pipeline Service Co., which operates the pipeline, the Valdez Marine Terminal and the Ship Escort/Response Vessel System, SERVS, for owner companies BP Pipelines (Alaska), ConocoPhillips Transportation Alaska, ExxonMobil Pipeline Co., Unocal Pipeline Co. and Koch Alaska Pipeline Co., said in a statement that the first oil left Pump Station 1 June 20, 1977, and arrived in Valdez 38 days later, on July 28.

Tom Barrett, Alyeska president, said the “anniversary theme is 35 years of delivering excellence.” While the pipeline is an “engineering marvel,” it is the company’s “workforce who has kept oil moving for 35 years,” he said.

To date more than 16.5 billion barrels of oil have moved through the pipeline, the company said. Throughput peaked at 2.1 million barrels per day in 1988 and averaged about 590,000 bpd last year.

On Aug. 1, 1977, the ARCO Juneau became the first tanker to carry crude oil from the terminal at Valdez; more than 20,000 tankers have been loaded since. SERVS was established in July 1989 and through early June there have been 12,000 SERVS-escorted tankers.

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● ENVIRONMENT & SAFETY

# BP fined \$10,000 for polar bear death

Security officer inadvertently shot animal with live round in effort to scare it away from Endicott oil field; feds allege negligence

By WESLEY LOY

For Petroleum News

Federal officials have fined BP Exploration (Alaska) Inc. \$10,000 for the death of a polar bear.

The bear died in August 2011 after a security officer inadvertently shot it with an exploding "cracker shell," rather than what he believed was a beanbag shell in his shotgun.

The shooting happened at BP's Endicott oil field on Alaska's North Slope.

The officer was working for BP contractor Purcell Security, part of Anchorage-based NMS Security.

In a "notice of violation" given to BP on June 6, the U.S. Fish and Wildlife Service alleged a violation of the Marine Mammal Protection Act for the death of the bear. The agency proposed a \$10,000 civil penalty, the maximum allowable for a violation under the act.

Polar bears are listed as depleted under

the Marine Mammal Protection Act, and threatened under the Endangered Species Act.

## 'Saddened us all'

"The death of the polar bear at our North Slope operations in August 2011 was the unintended result of actions taken to protect people from harm. It was truly unfortunate and saddened us all," BP said in a written statement provided to Petroleum News.

The company added: "BP supported the U.S. Fish and Wildlife Service investigation into the incident, and conducted its own investigation. This has resulted in strengthened procedures at our operations."

BP Alaska spokeswoman Dawn Patience said the company agreed to pay the \$10,000 penalty.

Ron Otte, NMS Security vice president of operations, said it was really unfair the notice of violation went to BP.

"The incident was totally, 100 percent the result of a mistake by one of our

employees," Otte said.

"I'm still literally sick to my stomach over losing a polar bear up there," he said.

## Ammo mix-up

The notice of violation said that on Aug. 3, 2011, BP "did negligently take, with lethal effect, an adult female polar bear" in violation of the law.

The incident occurred after the bear was reported to be walking along the beach of the causeway connecting the Endicott offshore oil field to the mainland.

The responding Purcell security officer found the bear about 1.5 miles from the Endicott facility, headed toward the Liberty drilling site.

"The security officer commenced an escalating sequence of deterrence actions, such as activating his vehicle's lights and siren, in an attempt to haze the bear and steer it away from the area," the notice said.

Such hazing is allowed under a Fish and Wildlife Service letter of authorization.

Ultimately, the officer decided to shoot the bear with a beanbag round.

"If done properly, this would have been an authorized non-lethal means of hazing the bear," the notice said. "However, in lieu of using a beanbag shell, the officer inadvertently shot the bear with an exploding cracker shell, which caused it to suffer internal injuries and infection, ultimately resulting in the bear's death. A subsequent necropsy showed that the bear had suffered a 'severe penetrating injury to the right caudo-lateral thorax.' Those conducting the necropsy also found a fragment of the cracker shell inside the bear."

A cracker is a fused, exploding round meant to be fired ahead of an animal, not directly at it.

The Fish and Wildlife Service alleged that the incident "demonstrates negligence" in that BP "failed to establish or implement proper protocols for marking, storing, identifying, and handling ammunition used by North Slope personnel during hazing activities. The security officer's improper hazing due to his misidentification of the type of ammunition being used was a natural and foreseeable consequence of this failure."

## Discontinued practice

Polar bears are a constant threat to workers in the North Slope oil fields.

A BP spokesman said in August 2011 that mild hazing usually turns the bears around. But in this case, the bear kept coming.

After it was shot, the bear ran off but was seen hanging around the Endicott causeway for some days thereafter, the spokesman said. Nearly two weeks later, it was determined the bear had died.

Otte said his company now has a new policy: "We simply do not haze bears at all with shotgun cracker or beanbag rounds, period."

The employee who shot the bear was placed on administrative leave with pay during the investigation, and he no longer works as a security officer on the North Slope, Otte said. ●

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• NATURAL GAS

# Japan taking ownership stakes in LNG

Country expanding natural gas use following 2011 Fukushima disaster; many old supply contracts will expire over the next decade

By **LARRY PERSILY**

Federal Coordinator, Alaska Natural Gas Transportation Projects

Japan has been importing liquefied natural gas since 1969, starting with its first shipment from Alaska and expanding its supplier base over the years to 17 nations in 2011. But many of its supply contracts, with extensions, date from the 1970s and 1980s and will expire over the next decade, pushing buyers to negotiate new deals.

“Some industry analysts suggest that this is driving Japanese firms’ interest in acquiring equity stakes in foreign liquefaction projects, in an effort to guarantee future supply,” said a country analysis on Japan the U.S. Energy Information Administration updated June 4.

Japanese firms (utilities, oil and gas producers, and trading companies) own stakes in five LNG export projects in Australia — one that went online this year and four others under or ready to start construction. They also hold equity shares in operating and proposed projects in Russia, Indonesia and Canada, plus ownership in several more gas plays worldwide that could develop into LNG export operations.

## Record LNG imports

Last year Japan set a record for LNG imports, with a further 10 percent gain expected this year to an average 12 billion cubic feet of gas per day, according to the chairman of the Japan Gas Association. The increased demand is due to losing its nuclear power capability, as the nation is struggling to decide if, when and how to bring nuclear plants back online following the March 2011 Fukushima disaster.

“Some industry sources predict Japan will resume operation of a few reactors by the end of summer 2012,” the EIA brief said. The last of Japan’s 50 reactors went offline in May. Before the earthquake and tsunami, nuclear power supplied 27 percent of the nation’s electricity. Japan’s his-

*continued from page 7*

## TURNAROUND

porary bypass around Pump Station 5 during an eight-hour shutdown on May 18, allowing for piping modification inside the station followed by an eight-hour shutdown May 27 which allowed for removal of bypass piping and restoration of normal flow.

An 18-hour shutdown June 2 allowed for mainline valve testing from Pump Station 5 to Pump Station 7 and safety integrity pressure protection system work at Pump Station 11.

Shutdowns for pipe installation at Pump Station 6 are tentatively scheduled for July 28 and Aug. 5.

The May shutdowns do not appear to have had major impacts on pipeline throughput, but there was a noticeable drop around the June 2 shutdown, with North Slope production dropping from an average of 570,770 barrels per day in May to under 480,000 bpd June 1 and to under 381,000 bpd on June 2 before climbing back above 486,000 bpd on June 3. ●

tory with nuclear power goes back further than its start of LNG imports; the first nuclear plant went online in 1966.

The country was expanding its reliance on nuclear power when the Fukushima disaster struck — two nuclear power plants are under construction and scheduled to start service in 2014, adding more electrical generating capacity (2.7 gigawatts) than the Hoover Dam.

## Electricity from oil, coal, gas

Even with the steady build-up over the years of nuclear power, Japan still relied substantially on oil, coal and natural gas to generate electricity. Fossil fuels provided 63 percent of the nation’s electricity in 2010, with the heaviest reliance on gas and coal. Oil was burned primarily to meet peak demand. The reliance on fossil fuels grew to 73 percent in the first quarter of 2012, while some nuclear plants were still in service.

Just as Japan used a diversified portfolio of power generating fuels, so too it used a diversified mix of LNG suppliers. “The country has a fairly balanced portfolio with no one supplier having a market share greater than roughly 20 percent,” according to the EIA brief. LNG deliveries last year came in from Southeast Asia (Malaysia, Indonesia, Brunei) Australia, the Middle East (Qatar, United Arab Emirates, Oman, Yemen), Russia, Africa (Algeria, Egypt, Nigeria, Equatorial Guinea), Norway, Trinidad and Tobago, Peru, and a bit from Alaska.

Oil, however, was the fuel of choice back in the 1970s, before the LNG market developed. Oil’s share of Japan’s total energy consumption was about 80 percent in the 1970s, declining to half that level in 2010, the EIA said. Which helps to explain why the price of LNG imported into Japan under long-term contracts is indexed to oil, the substitute fossil fuel to

burn for electricity.

But the increasing demand on gas-fired power plants is nearing its limit, the EIA brief said. “Capacity utilization in gas-fired power facilities is close to 80 percent, so increasing LNG use in the short term is limited.” Oil-fired plants, however, were running at 50 percent capacity before the quake, the EIA said, giving utilities the immediate ability to burn more crude and fuel oil to replace lost nuclear power.

To help ease the crunch longer term, three new gas-fired power plants are scheduled to come online by 2016. In addition, three coal-fired plants are under construction, too. ●

*Editor’s note: This is a reprint from the Office of the Federal Coordinator, Alaska Natural Gas Transportation Projects, online at [www.arcticgas.gov/japan-taking-ownership-stakes-lng-projects](http://www.arcticgas.gov/japan-taking-ownership-stakes-lng-projects).*

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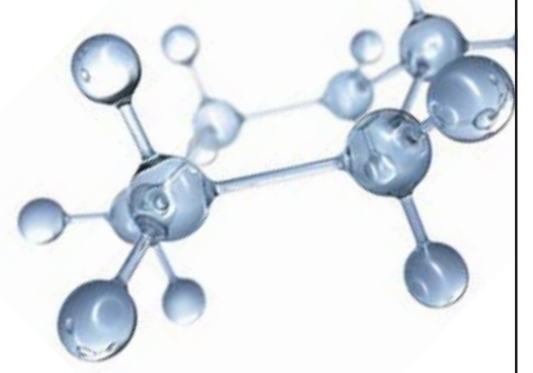
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• NATURAL GAS

# Imaging gives close-up look at corridors

Lidar shot along potential gas pipeline routes funded by state, federal agencies; DGGS in process of making data available online

By **BILL WHITE**

Researcher/writer for the Office of the Federal Coordinator

During late spring 2011, two small airplanes flew dozens of sorties over key transportation corridors bisecting Alaska.

Seated in the back of each plane was a technician, surely with an iron-lined stomach and extraordinary sense of equilibrium, enduring the pitching, rolling and yawing while the pilot maintained a nearly constant altitude above terrain that is anything but constant.

Like bombardiers dropping payloads on air-raid targets, the technicians released millions of laser pulses from the planes' bellies, pelting the ground and capturing the pulses' echoes.



**BILL WHITE**

The entire mission involved a relatively new technology called lidar. It was part of a multiagency effort to understand, map and put into the public realm the precise landscape a North Slope natural gas pipeline would cross.

The data gathered — trillions of bytes of data — is now getting posted on a State of Alaska website. And state geologists and geophysicists who commissioned the lidar research — their first foray into the technology — are now getting an extraordinary look at the Earth's surface in a swath of Alaska never before detailed in such sharp relief.

## Inside Stonehenge

The term lidar stands for "light detection and ranging," and it formerly was known as LIDAR or LiDAR — reflecting its birth as an acronym. But like its cousins radar (radio detection and ranging) and sonar (sound navigation and ranging), lidar over time has segued for many



A Cessna Caravan loaded with lidar gear.

into common use and lost its capitalization.

The concept of lidar dates to the invention of lasers about 50 years ago. Soon the military was equipping tanks with laser range finders, and NASA advanced the technology in the 1970s for all sorts of uses in space (including an exact measurement of the distance between the Earth and moon).

But lidar's use in topographic mapping really didn't take off until the 1990s as three factors converged: Manufacturers developed sensors that could handle 2,000 to 25,000 pulses per second, global positioning systems and onboard inertial navigation systems could be

see **LIDAR MAPPING** page 12

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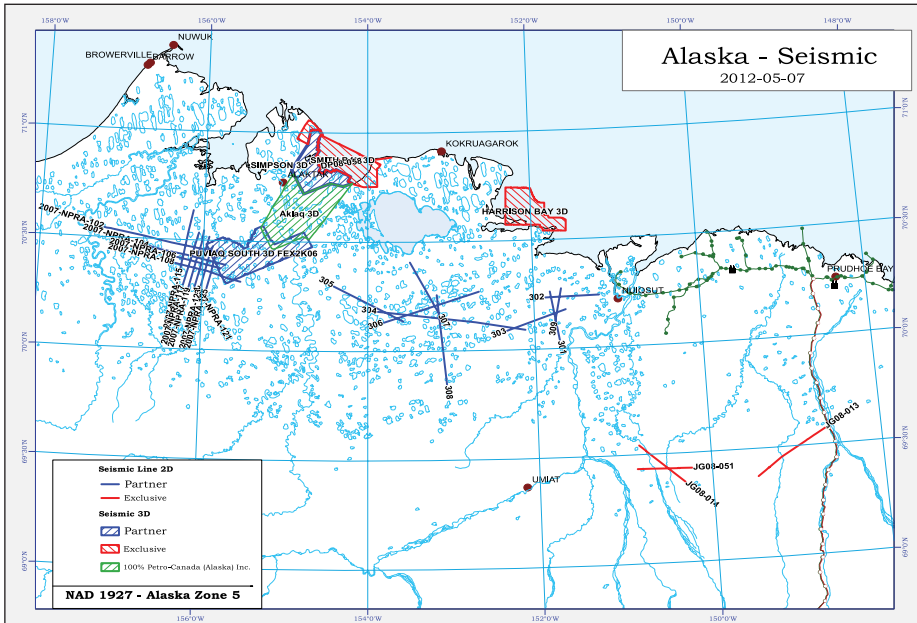
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### Foothills

- 3 2D seismic lines (Vintage 2008) 92 km;

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## LIDAR MAPPING

used to determine the location of each laser-pulse reading, and computers became robust enough to process the data.

Since then, the technology has become more refined.

Rod Combellick with the Alaska Division of Geological & Geophysical Surveys said that a decade ago a typical survey would collect, at best, one lidar pulse per square meter of land. Lidar then wasn't very effective in mapping the ground surface if trees had leaves. Because lidar also cannot penetrate snow, its use in many Alaska forested areas was limited. Today, lidar will shoot eight pulses or more per square meter, and even amid leafy trees some of those pulses will reach the ground.

"The high-resolution lidar of 10 years ago is low-resolution now," said Combellick, whose agency commissioned the new lidar mapping of the gas pipeline corridors.

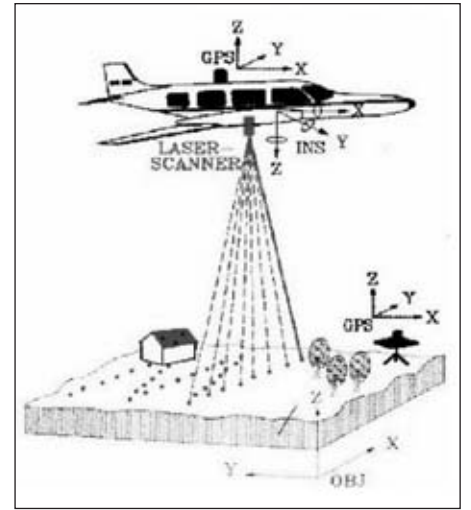
Lidar is put to a myriad of uses these days worldwide. Lidar measures changes in glaciers and shorelines due to climate change. It's used to measure forest canopies, model flood zones and watersheds, detect water and air pollution, and plan cellular-phone networks. Archaeologists use it to identify promising dig sites. Urban planners use it for zoning and placing new roads. Police use it to catch speeders (radar guns are used, too). Even automotive engineers have hopped aboard — lidar is at the root of technology that brakes a car automatically when it gets too near the vehicle in front.

Lidar helped find previously undiscovered topographic banks defining the Stonehenge monument. In Seattle, it penetrated second-growth forests and urban development to unmask a dangerous seismic fault running east-west through town. In New York City, lidar readings of the World Trade Center ruins in 2001 aided rescue workers by finding debris likely to shift or collapse.

You get the idea: Lidar has a broad and growing reach.

In Alaska, lidar mapping is spotty. The U.S. Geological Survey, U.S. Forest Service and National Oceanic & Atmospheric Administration all have used lidar, Combellick said. So have the Kenai and Matanuska-Susitna boroughs; the latter recently partnered with the Alaska Energy Authority for lidar mapping of the borough's more populated areas, the lower Susitna River valley and the site of the proposed Watana hydroelectric dam.

Some lidar mapping around Anchorage, Fairbanks and coastal communities is available as well.



A diagram of how lidar works.

Lidar mapping that is not in the public domain also has occurred. Both the BP-ConocoPhillips and TransCanada-ExxonMobil gas pipeline projects commissioned lidar mapping of the natural gas pipeline routes they proposed in 2010. TransCanada and ExxonMobil said this year that lidar imagery helped discover an active seismic fault in Interior Alaska along the pipeline corridor.

The latest gas pipeline corridor lidar survey was the state Division of Geological & Geophysical Surveys' first venture with lidar, Combellick said.

The pipeline corridor lidar data gathering ran for three weeks in early fall 2010 before weather shut down the work for the season. Lidar imaging resumed on May 17, 2011, and concluded two months later.

Watershed Sciences Inc., an Oregon business specializing in lidar work, won the state contract, priced at about \$2.35 million. Funding came from three agencies, two of them connected to a major gas pipeline project from Alaska's North Slope — the state's Gas Pipeline Project Office and the Office of the Federal Coordinator — and the Alaska Gasline Development Corp., a state agency proposing a smaller, state-sponsored gas pipeline project.

The agencies hope publicly available detailed mapping of pipeline corridors' terrain, based on evaluation of lidar, will help ease agency review and permitting of a pipeline project. Steep slopes vulnerable to landslides that would threaten a pipeline could be avoided. Earthquake faults could be mapped and engineered around or over. Wetlands could be better identified. River crossings planned more astutely.

Watershed flew two planes equipped with Leica sensor systems: A single-engine Cessna Caravan 208B and a twin-engine Partenavia P-68.

The planes covered three pipeline corridors under consideration: From Prudhoe Bay to the Canadian border, from Delta

see **LIDAR MAPPING** page 13



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## LIDAR MAPPING

Junction to Valdez and from Livengood to Big Lake — the last two are possible routes for a pipeline to a tidewater gas liquefaction plant for LNG exports. Flying was good most days. But lidar data couldn't be collected reliably when it was rainy, misty or smoky or when small clouds would drift below the aircraft, said Trent Hubbard, a state geologist overseeing the lidar project. The corridors span over 1,000 miles, so the planes usually could find somewhere to work on any given day.

The pilots flew their aircraft about 4,900 feet above the ground, an altitude kept nearly constant as the terrain rose and fell because the Leica system was calibrated for readings from that height. The planes' speed was as close to 105 knots as possible.

The aircraft position was measured twice per second. The altitude was recorded 200 times per second, according to Watershed.

As for the Leica system, it strafed a swath of ground, at least a mile wide, with 150,000 laser pulses per second along the entire corridor, covering about 3,000 square miles of Alaska from Prudhoe Bay south.

Blended together, all these measurements provide a very accurate picture of the ground.

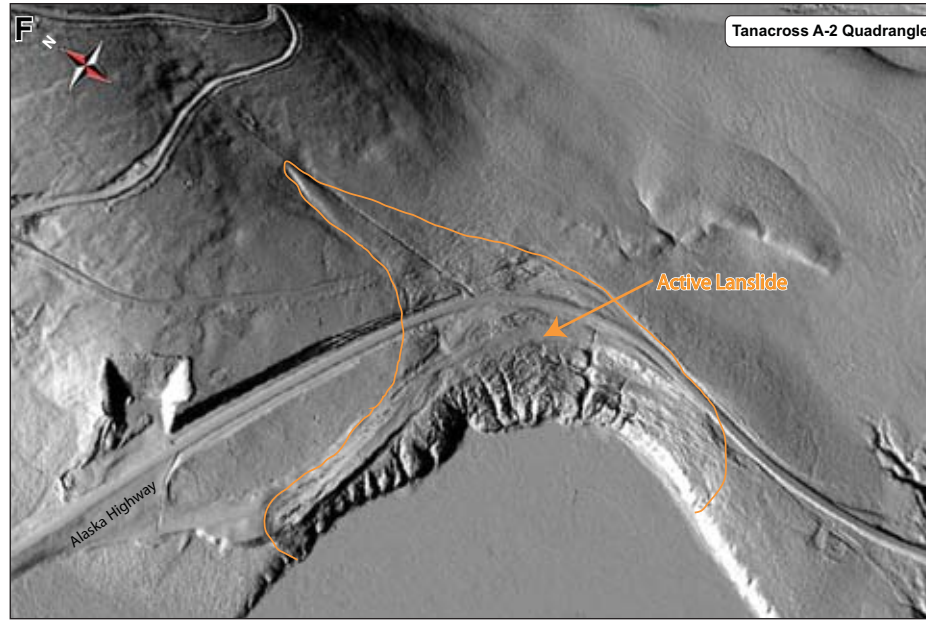
Like its radar cousin, lidar essentially fires a wavelength at an object and times its return. But the lidar pulse is a laser bullet, giving an exact reading of the spot it strikes, providing more precision for mapping the ground than the broad beam of radio waves used in radar.

Over Alaska, each laser pulse provided up to four returns. Each return had its own intensity value that varied with the amount of light absorbed by the object the pulse struck on or near the ground, Hubbard said.

"The returned lidar pulses provide information about the locations and intensity values of the surfaces from which they are reflected," he said.

Raw data then is analyzed. Did the pulse hit bare earth, vegetation, buildings or other man-made structures, water, snow or above-ground pipelines? he said. After the data is classified, a variety of programs can interpret the data and produce topographic contour maps.

A geologist can use the data to identify



Lidar image showing an active landslide crossing the Alaska Highway.

river terraces, abandoned stream channels, dune fields, glacial moraines, alluvial fans, landslides, faults, permafrost and other features. Engineers can use the data to analyze surface drainage or design bridges. And so on, depending on the user's specialty and interest, Hubbard said.

### New insights

Staffers at the Division of Geological & Geophysical Surveys have begun processing lidar data amassed in 2010 and 2011 and releasing it to the public.

In all, Watershed delivered 11 hard drives full of data — totaling about 5.4 terabytes, or 5.4 trillion bytes of data (think of it as roughly 1.3 million iTunes songs).

So far the division has made available a variety of products derived from the lidar — "digital surface models" containing accurate three-dimensional coordinates, including elevation, and "digital elevation models" showing bare-earth topography. It's possible now to "see" the elevation of the bare earth free from vegetation or buildings, a record of everything above the ground, vegetation, canopy cover, water bodies, hills and laser-intensity images.

Still to come will be release of the raw "point-cloud" data — or the three-dimensional coordinates of the data the laser pulses returned and other information, including the aircraft pitch, yaw and heading.

Ultimately, the division staffers hope to refine how the public can access the

imagery, to make it more like how Google Maps works — a detailed, zoomable satellite or map view. The raw data likely will be released through a couple of public-data outlets.

"We don't have a timeline for this yet," Hubbard said.

Separate from the gas pipeline projects, the division is using the lidar data for its ongoing evaluation of active faults and other geologic hazards. In particular, before the lidar project division geologists had been working to improve their mapping along the Alaska Highway from Delta Junction to the Canadian border. That's also a possible pipeline corridor, so

now they're delighted to have lidar data from that swath as well.

Already the lidar confirmed a hunch that geologists had about whether the state successfully skirted an unstable slope when rerouting a section of highway near Northway Junction. Cracks that quickly formed in the new roadbed suggested otherwise. The lidar data showed the instability extends much farther up the slope than previously believed, Combelleck said.

Another discovery could change their whole view of the Castle Mountain Fault. That 125-mile fault crosses the lower Susitna valley from southwest to northeast about 25 miles north of Anchorage. It runs between the towns of Houston and Wasilla. A gas pipeline to the Anchorage area from the north would span the fault.

Geologists thought they understood this fault.

But shaded-relief images of the ground surface derived from the new lidar are providing new insights. The images show features along the fault in great detail — abandoned stream channels that cross the fault, tension cracks and tears.

This fresh look will let geologists re-evaluate their previous interpretations of how this fault behaves. And that will help if a gas pipeline is engineered across it. ●

*Editor's note: This is a reprint from the Office of the Federal Coordinator, Alaska Natural Gas Transportation Projects, online at [www.arcticgas.gov/new-imagining-gives-close-up-look-gas-pipeline-corridors](http://www.arcticgas.gov/new-imagining-gives-close-up-look-gas-pipeline-corridors)*



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• GOVERNMENT

# Old icebreaker gets a six-month reprieve

Seattle-based Polar Sea was headed to the scrap yard, but Alaska and Washington senators persuade U.S. Coast Guard to hold off

U.S. COAST GUARD



The Polar Sea, commissioned in 1977, experienced major engine problems in 2010 and has been inoperative in its homeport of Seattle.

By WESLEY LOY

For Petroleum News

A trio of U.S. senators announced June 15 they had succeeded in persuading the U.S. Coast Guard to slow down its plan for scrapping one of the nation's few icebreakers.

Disposal of the Polar Sea was set to begin right away, but is now postponed through 2012, the senators said.

The action was agreed to in a meeting between Coast Guard Commandant Robert Papp and Sens. Mark Begich and Lisa Murkowski of Alaska and Maria Cantwell of Washington.

The Polar Sea, commissioned in 1977, experienced major engine problems in 2010 and has been inoperative in its homeport of Seattle.

The senators argue that scrapping the

Polar Sea would further hobble the ice-breaking capability of the United States, which has only one operational icebreaker, the Healy.

Unlike the Polar Sea, which is a heavy icebreaker, the Healy is a medium duty ship designed primarily for scientific research.

The Coast Guard has another heavy icebreaker, the Polar Star. But it, too, is old and inoperative. It's expected to return to duty in 2013 following a major overhaul.

Considerable debate has swirled around the question of how the nation can best meet its icebreaker needs as the Arctic Ocean becomes increasingly open to human activity.

New heavy icebreakers are extraordinarily expensive to build. But it's not clear whether overhauling old vessels is the way to go.

The 399-foot Polar Sea is one of the world's most powerful non-nuclear icebreakers, able to break up to 21 feet of ice, the Coast Guard says.

A June 15 press release from Cantwell's office said the Polar Sea was scheduled to be drydocked and taken apart beginning June 18. The process would have ripped out the vessel's "hubs" and sealed off major portions of the ship, a prelude to final destruction.

"We are glad the Coast Guard has agreed to postpone the scrapping of this valuable icebreaker," said Cantwell, a Democrat. "This is good news for Washington shipbuilding jobs and for America's icebreaking capability. The Polar Sea's hull is still in sound condition. Postponing its scrapping allows the Administration and Congress more time to consider all options for fulfilling the nation's critical icebreaking missions."

Said Begich, also a Democrat: "The Coast Guard has listened to our call to postpone the drydocking of the Polar Sea so we can continue to explore the most cost-effective measures to ensure the United States has adequate icebreaking capabilities. Rebuilding this valuable cutter would save taxpayer dollars, create jobs and increase our ability to operate in the Arctic, and I look forward to continuing to discuss next steps in revitalizing the Polar Sea."

"As an Arctic nation, we need to proceed intelligently as opportunities open up in our northern waters," said Murkowski, a Republican. "Dismantling critical components of the Polar Sea without a complete plan for its replacement and a year before Polar Star will be back in the water would not be the best course of action. While this may only be a six-month respite for the Polar Sea, I will use this period to work through my role on the Appropriations Committee to make America's icebreaking capacity a top priority."

Recently the Coast Guard, in its five-year capital investment plan, penciled in \$860 million for a new polar icebreaker.

The Cantwell press release cited one study indicating at least six heavy and four medium icebreakers are needed to meet Coast Guard and Navy mission requirements.

The Coast Guard is planning a large summer deployment of cutters and aircraft to the Arctic in support of Shell's planned offshore drilling. ●



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Contact Wesley Loy  
at [wloy@petroleumnews.com](mailto:wloy@petroleumnews.com)

FINANCE & ECONOMY

# Turning up the heat in the oil sands

Bitumen extraction with electromagnetic heat field tested; plan for electrical current in commercial in-situ project turned down

By GARY PARK

For Petroleum News

The search for the magic solutions that will reduce greenhouse gases, water consumption and high capital costs in the Alberta oil sands have made one gain and one setback in June.

A consortium led by the Florida-based Harris Group has reported successfully field testing the use of electromagnetic heat to extract bitumen, but another plan by E-T Energy for using electrical current in a commercial in-situ project was turned down by the Alberta Energy Resources Conservation Board, ERCB.

The Harris partnership, with oil sands producers Suncor Energy, Nexen and Laricina Energy as partners, said its microwave method could overcome the industry's greatest hurdles based on preliminary results from a C\$33 million trial that could lead to a pilot project in 2013.

However, the group conceded it is likely years away from a commercial operation.

Although Harris claims the technology could lower greenhouse gas emissions by one-third, Laricina Chief Executive Officer Glen Schmidt said there is no solid indication yet how much costs might drop from the use of steam-assisted gravity drainage, the most popular technology for accessing deeply buried bitumen.

The electromagnetic heating method is similar to SAGD, which uses two wellbores — one to inject steam to melt the viscous bitumen and one to force the bitumen to the surface.

The Harris group, which operates in 150 countries, sends an antenna down one well and radiates electromagnetic energy to heat the bitumen. Solvents such as propane or butane are then pumped down to combine with the bitumen.

It believes there is a chance to eliminate the use of water from in-situ operations, thus eliminating one of the most controversial aspects of oil sands development.

Derik Ehresman, senior manager of energy projects at Harris, said using less energy, cutting greenhouse gases and ending the need for water could shrink the environmental footprint.

The test, approved by the ERCB, confirms the ability to successfully generate, propagate and distribute electromagnetic heat in the oil sands formation, the consortium said.

The C\$33 million evaluation program was financed jointly by the consortium partners and the Alberta government's Climate Change and Emissions Management Corp. which issued a challenge in 2009 to expand climate change knowledge, develop new "clean" technologies and explore practical ways to implement them.

However, the ERCB turned down an application by E-T Energy for a commercial in-situ project using an electrical current.

In response to the ruling and in light of weak capital markets, the company said it might consider a smaller project building on an electro-thermal dynamic stripping process to modify its plans for a proposed 10,000 barrels per day commercial operation on 10,560 acres of lease.

"We're really comfortable that with the 10,000 bpd the economies of scale are there," said E-T Chief Financial Officer Peter Johanson.

The company said it is hopeful it can refile an application as more test data becomes available, including the recovery factor and the energy/oil ratio needed to produce bitumen which is expected later this year.

E-T is now testing the commercial viability of a 250 bpd field test, which is designed to allow more definitive heat and material balances to be determined.

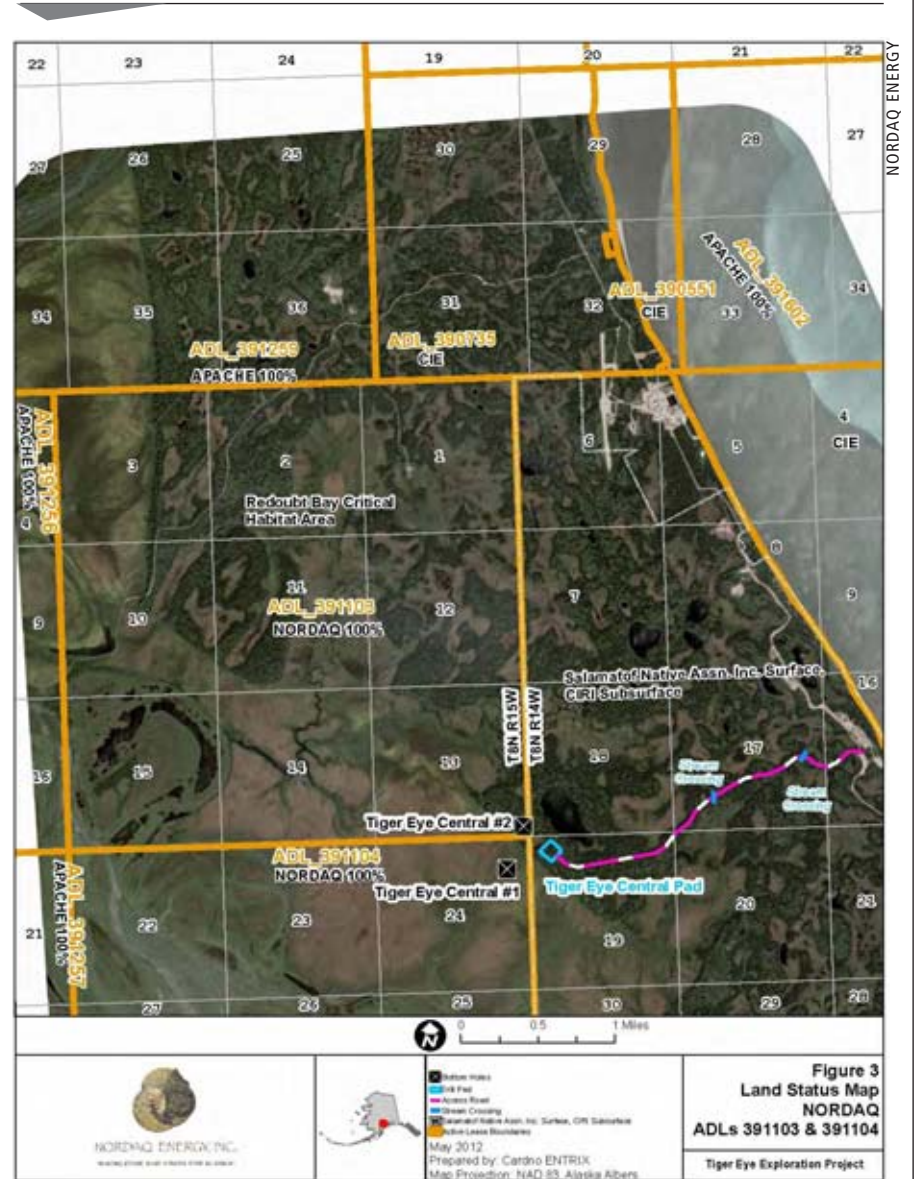
It believes there is great potential for the technology, which can access stranded bitumen resources at depths of 165 feet-500 feet — too deep to mine and too shallow for other in-situ methods, Johanson said.

He said McDaniel & Associates Consultants estimated that the Alberta oil sands have 150 billion barrels of oil in place that would fall within that range.

E-T said France's Total is closely tracking the results and contributed C\$2 million last year for field testing. ●

Contact Gary Park through publisher@petroleumnews.com

## EXPLORATION & PRODUCTION



### NordAq permitting two west side wells

NordAq Energy Inc. plans to drill as many as two exploration wells this year at its Tiger Eye Central prospect on the west side of Cook Inlet, north of West Foreland.

The Alaska-based company is looking for oil and natural gas in the region.

The exploration program also includes a 3-D seismic acquisition.

The directional wells would start on private land and target the Tyonek, Hemlock and West Foreland formations. Tiger Eye Central No. 1 would reach a bottom-hole location at 11,500 feet, beneath ADL 391104 to the southwest. Tiger Eye Central No. 2 would reach a bottom-hole location at 10,175 feet, beneath ADL 391103, to the southwest.

NordAq plans to build a 2.27-mile single-lane gravel road and a gravel drill pad on Salamatof Native Corp. and barge equipment and material across Cook Inlet, to the area.

The road would cross two streams. The pad would be 500 feet by 500 feet. The Hilcorp-owned Trading Bay production facility is about 1.8 miles northeast of the site.

According to its current schedule, NordAq would drill Tiger Eye Central No. 1 in August and September and potentially drill Tiger Eye Central No. 2 in September and October. Each well is expected to take 45 days to drill and between 10 and 30 days to test.

After the completion of drilling activities, NordAq would permit a 3-D seismic program over the southern end of the prospect to be conducted in February and March 2013.

The Alaska Department of Natural Resources is taking comments through July 16.

—ERIC LIDJI

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## • PIPELINES &amp; DOWNSTREAM

# Alaska tug captain sentenced for wreck

Judge says Ronald Monsen was negligent in allowing boat to hit infamous Bligh Reef, causing fuel spill into Prince William Sound

By WESLEY LOY

For Petroleum News

The captain of an oil industry tugboat that ran aground on Alaska's infamous Bligh Reef in late 2009 was sentenced June 15 to six months of home confinement and other penalties.

Ronald Monsen, 63, of Anchorage, was captain of the Pathfinder, one of the Crowley Maritime Corp. tugs stationed at Valdez to assist and escort oil tankers calling there to load North Slope crude oil.

On Dec. 23, 2009, the Pathfinder was out in Prince William Sound scouting for chunks of glacial ice, which can pose a hazard to tankers.

Federal prosecutors, in a press release, said Monsen made navigational errors and was playing games on a bridge computer as the boat headed toward the reef.

The 136-foot tug remained afloat, but the grounding breached fuel tanks and 6,410 gallons of diesel spilled, requiring a massive cleanup response.

Bligh Reef is a charted navigational hazard that gained worldwide notoriety in 1989 when the oil tanker Exxon Valdez ran onto the reef, spilling nearly 11 million gallons of crude oil.

## Industry veteran

Monsen had 33 years in the industry,

Monsen was sentenced to 36 months of probation with the first six months to be spent in home confinement, plus a \$15,000 fine and 50 hours of community service, said the press release from the U.S. Attorney's Office.

had worked on the Pathfinder for more than 10 years, and was planning to retire within eight months, a U.S. Coast Guard report said.

Magistrate Judge Deborah M. Smith imposed sentence on June 15 in federal court in Anchorage.

Monsen was sentenced to 36 months of probation with the first six months to be spent in home confinement, plus a \$15,000 fine and 50 hours of community service, said the press release from the U.S. Attorney's Office.

The sentence was the result of Monsen's guilty plea and conviction for violating the federal Clean Water Act, prosecutors said.

"Judge Smith commented that the defendant's conduct was grossly negligent and that it was important to send a strong message to deter such negligent conduct," the press release said. "In determining an appropriate sentence, Judge Smith also took into account that as a result of his conduct Monsen no longer had a pilot's license and was no longer employed as a captain."

## Disastrous sequence of events

Prosecutors said that after scouting for ice, Monsen anticipated clearance to return to port and set an autopilot course back to Valdez, manually bypassing a couple of preprogrammed GPS way points.

The tug continued to travel slowly southeast, however, soon putting Bligh Reef between the tug and town.

Finally, the tug crew was released from ice duty.

Monsen then placed both engines full ahead, and engaged the autopilot.

"Monsen did not chart his position, or attempt to determine his exact location via GPS or any other method," prosecutors said. "As a result, when Monsen engaged this course, he did not know the location of the Pathfinder, was unaware that the vessel was 1.5 miles due south of Bligh Reef, and did not recognize that he had just set a course that was taking the Pathfinder directly into the reef."

The tug's second mate also was on the bridge.

As the tug headed toward the reef, Monsen checked his email and schedules and played games such as hearts on a computer, his back to the forward bridge window, the Coast Guard and prosecutors said.

"Had Monsen not deleted the two way points earlier in the evening, the Pathfinder would have steered northwest, back to these points, and clear of Bligh Reef," prosecutors said. ●

Contact Wesley Loy  
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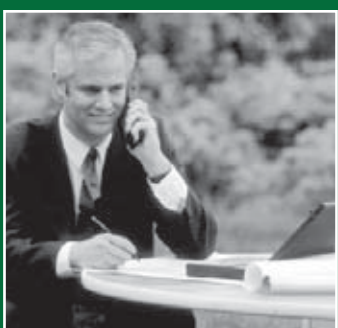


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• NATURAL GAS

# US to add 27 gas storage sites by 2016

By ERIC LIDJI

For Petroleum News

An abundance of natural gas production and consumption in the near future will likely lead to an expansion of storage facilities in the coming years, according to a new report.

The United States will add 27 storage facilities by the end of 2016, according to a GlobalData analysis of the North American underground natural gas storage industry.

With as much as 80 percent of U.S. electricity production coming from gas by 2035, storage capacity should increase to 4.9 trillion cubic feet in 2016 from 4.6 tcf in 2011.

As of 2011, the U.S. led global storage with 405 facilities, according to the report.

Although most storage facilities currently utilize depleted fields, the report predicts a proliferation of salt caverns, saying they can be withdrawn from faster. These caverns could account for as many as 19 of the additional 27 facilities, according to the report.

## Glut of supply

The switch highlights the changes in the natural gas market brought about by the development of shale gas plays across North America. A glut of supply drove down prices this past year, leading many power producers to switch from coal to natural gas.

As of March, the U.S. had 2.4 tcf of working gas in storage, according to the

*As of March, the U.S. had 2.4 tcf of working gas in storage, according to the U.S. Energy Information Administration. That's up almost 60 percent since March 2011, the second largest year-over-year increase since at least 1976. Michigan currently leads the nation in working gas in storage with 394 billion cubic feet, followed by Texas with 359 bcf and Louisiana with 320 bcf.*

U.S. Energy Information Administration. That's up almost 60 percent since March 2011, the second largest year-over-year increase since at least 1976. Michigan currently leads the nation in working gas in storage with 394 billion cubic feet, followed by Texas with 359 bcf and Louisiana with 320 bcf. The EIA does not collect storage data from Alaska.

The U.S. natural gas inventory surplus is currently 645 bcf, according to Bentek Energy LLC, down 30 percent from its five-year high of 927 bcf reached in April 2012.

While the surplus should fall through the summer, Bentek believes coal and nuclear generation will eat into gas market share in the fall, dropping prices below \$2 per thousand cubic feet. ●

Contact Eric Lidji at [ericlidji@mac.com](mailto:ericlidji@mac.com)

## NATURAL GAS

### AGDC seeking members for community council

The Alaska Gasline Development Corp. is looking for three members to join its Community Advisory Council as it pursues an in-state natural gas pipeline.

The council has already held two meetings in an effort to improve communication and coordination efforts along the route of the proposed Alaska Stand Alone Pipeline project.

Co-chairs Tim Navarre of Kenai and Mayor Jason Mayrand of Nenana said they expect to "provide project reports to the communities along the alignment as early as mid-July."

Meanwhile, the council is looking for members to represent Southcentral, the North Slope and the Matanuska-Susitna Borough. The AGDC can be reached at 907-330-6321.

*The council has already held two meetings in an effort to improve communication and coordination efforts along the route of the proposed Alaska Stand Alone Pipeline project.*

—ERIC LIDJI



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## GOVERNMENT

### Juneau man named to Arctic commission

President Obama on June 14 announced his intent to appoint David Benton, of Juneau, to the U.S. Arctic Research Commission.

*Benton, a self-employed marine resource consultant, was deputy commissioner of the Alaska Department of Fish and Game from 1994 to 2000.*

Benton, a self-employed marine resource consultant, was deputy commissioner of the Alaska Department of Fish and Game from 1994 to 2000. He is known for his long involvement in Alaska commercial fishing issues.

U.S. Sen. Mark Begich, D-Alaska, recommended Benton to the White House. Established in 1984, the Arctic Research Commission works to develop and recommend an integrated national Arctic research policy and facilitate cooperation among U.S. and foreign governments.

Benton fills a seat for private industry previously held by Michele Longo Eder of Newport, Ore., Begich's office said. Terms are for four years. Fran Ulmer, formerly lieutenant governor, chairs the seven-member commission, which has Anchorage and Washington, D.C., offices.

—WESLEY LOY



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## EXPLORATION & PRODUCTION



COURTESY APACHE CORP.

### Apache using land, marine seismic nodes

Apache Corp. is using nodal technology to shoot a 3-D survey in the Cook Inlet basin, onshore and offshore, technology which the company calls state of the art and which minimizes impact. (See story on Apache in June 17 issue, "Making strides," at [www.petroleumnews.com/pnads/426944557.shtml](http://www.petroleumnews.com/pnads/426944557.shtml).)

So what do those nodes look like?

Apache provided the accompanying photos, which show the two types of nodes — offshore and onshore — as crews ready them for deployment.

The marine nodes are tethered with rope, and retrieved within 15 days, the company said, to minimize impact to the environment.

Apache said the land nodes are "the first and only truly cable-free seismic land system in the industry." Each unit is self-contained in a 4.8 pound package and the cable-free technology eliminates the need for lay lines. Apache said deployment crews are smaller, reducing environmental impact.

The nodes are autonomous; there is no communication between components. The nodes record continuously and store data on internal flash memory until retrieved. Each unit is also self contained, with all the elements and technologies needed to sense, acquire, digitize, filter and store seismic data.

—PETROLEUM NEWS



COURTESY APACHE CORP.

## ENVIRONMENT & SAFETY

### Kuparuk spill cleanup done; cause updated

Cleanup actions are complete on a produced water spill in the ConocoPhillips-operated Kuparuk River oil field, the state Department of Environmental Conservation says.

On April 21, an estimated 710 gallons of slightly oily produced water released from a line supplying artificial lift fluid to a production well at drill site 1J.

A final situation report from DEC issued June 1 provided an updated statement on the cause of the spill: "A flow meter failed due to erosion as produced water injection came back on-line following pigging operations."

ConocoPhillips estimated a 3,860-square-foot section of gravel pad was affected, with no damage to tundra.

—WESLEY LOY

## EXPLORATION & PRODUCTION

### US oil, gas rig count up by 13 to 1,971

The number of rigs actively exploring for oil and natural gas in the U.S. was down by 13 the week ending June 15 to 1,971.

Houston-based oilfield services company Baker Hughes Inc. reported that 1,405 rigs were exploring for oil and 562 were looking for gas. Four were listed as miscellaneous. A year ago this week, Baker Hughes reported 1,860 rigs.

Of the major oil- and gas-producing states, Colorado, New Mexico, West Virginia and Wyoming were up by two rigs apiece.

Texas declined by eight rigs, and Oklahoma and Colorado were down five each. North Dakota was down by three rigs, and Louisiana dropped by two. Arkansas and Pennsylvania fell by one each.

Alaska was unchanged.

The rig count peaked at 4,530 in 1981 and bottomed out at 488 in 1999.

—ASSOCIATED PRESS

## FINANCE & ECONOMY

### OPEC chief sees \$110 a barrel oil as fair

Oil prices could rise about \$25 from their present levels to \$110 a barrel without threatening the world economy, OPEC Secretary General Abdullah Al-Badry said June 15.

Crude prices have dropped steeply in recent months with the U.S. benchmark selling June 15 at just below \$85 a barrel. That's about 20 percent less than where they were in February, and Al-Badry said it's far below what consumers can afford.

"\$110 is not a threat to the world economic growth," Al-Badry told reporters a day after OPEC oil ministers agreed to keep the cartel's total output ceiling at 30 million barrels a day.

Many of the 12 member nations of the Organization of the Petroleum Exporting Countries consider present prices too low and came to the June 14 meeting seeking a production cutback to reduce supplies and push prices upward.

That, however, was opposed by OPEC kingpin Saudi Arabia — and Saudi oil minister Ali Naimi had even initially suggested he was looking for a production boost. The Saudis have signaled their readiness to make up for any shortfall caused by international embargoes on Iranian crude and already account for about a third of total daily OPEC output of nearly 32 million barrels, including Saudi and other overproduction.

—ASSOCIATED PRESS

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## PIPELINES & DOWNSTREAM

### Pipe failure caused fire at BP refinery

BP says the Feb. 17 fire that shut down its Cherry Point oil refinery in Washington state near Ferndale was caused by a pipe failure in the crude processing unit.

Refinery Manager Stacey McDaniel says the pipe has been replaced and is being monitored while a redesign is considered.

BP added a maintenance "turnaround" to the repairs, which at one time required more than 3,200 additional workers at the site. The refinery returned to operation at the end of May. Its outage had been blamed as a factor in high West Coast gasoline prices.

Cherry Point is the third-largest refinery on the West Coast and produces 20 percent of Washington's gasoline and the majority of jet fuel for Sea-Tac, Portland and Vancouver, British Columbia, airports.

*Refinery Manager Stacey McDaniel says the pipe has been replaced and is being monitored while a redesign is considered.*

—ASSOCIATED PRESS

## PIPELINES & DOWNSTREAM

# RCA asking for APE financial info

*Pipeline operator wants owners' financial records kept confidential for competitive purposes as it connects Nikolaevsk*

By ERIC LIDJI

For Petroleum News

Anchor Point Energy LLC is making another attempt to bring natural gas to a small Kenai Peninsula community after regulators deemed its original application incomplete.

The pipeline operator asked the Regulatory Commission of Alaska in early May to approve an interconnection agreement with Enstar Natural Gas Co. The agreement would allow the entities to use a state grant to deliver gas to the small village of Nikolaevsk.

The RCA denied the application because Anchor Point did not include information about the expected cost of the system and its projected rates, or financials for its owners.

Anchor Point is a subsidiary of Armstrong Oil & Gas Inc. and its partner companies at the nearby North Fork unit. The companies are all small independent explorers.

Working on behalf of those companies, Anchor Point currently operates only the North Fork Pipeline running from the North Fork field to the community of Anchor Point.

In resubmitting its Nikolaevsk application, Anchor Point said the interconnection would not impact the North Fork Pipeline in any meaningful way. Enstar would cover the costs and the interconnection would not impact rates because Anchor Point Energy operates the pipeline through a contract with Enstar and does not charge anyone a rate for service.

However, Anchor Point asked that its owners' financial statements be kept confidential, saying the risk of the owner companies being "competitively or financially disadvantaged" if the records became public would "outweigh the public interest."

When Anchor Point applied for its certificate of public convenience and necessity to operate the North Fork Pipeline, it originally asked to waive certain financial reporting requirements and ultimately got regulators to agree to keep the information confidential.

Anchor Point and Enstar signed the Nikolaevsk agreement on Feb. 27, 2012.

After the community received a \$447,000 state grant last year, Enstar and Nikolaevsk entered into an agreement in July 2011 where the village would pay for a regulator station and a two-inch mainline running 8,930 feet to the Nikolaevsk Community School.

That kicked off an infrastructure build-out in the community. Enstar said it has installed nearly two miles of distribution pipelines through the community through October 2011.

While the school is expected to be the largest customer, Enstar expects the initial build out to also include the community fire station and 12 homes. Enstar could potentially extend the line 1,700 feet to connect a community church and nine additional homes.

Nikolaevsk is home to some 308 people, according to the most recent state estimates.

By approving the agreement "at its earliest convenience," the RCA would give the community enough time to convert its heating systems to natural gas before winter.

The Kenai Peninsula Borough School District and the Anchor Point Fire & EMS Service Area asked the RCA to expedite its review in order to speed up the conversion process.

The RCA added Nikolaevsk to the Enstar service area in 1997.

With the development of North Fork and a series of grants from the Alaska Legislature, the businesses, residents and public buildings of the southern Kenai Peninsula are gradually getting the benefits of natural gas enjoyed by the rest of Southcentral.

In addition to Nikolaevsk, the coastal community of Anchor Point is converting some structures to burn gas. Meanwhile, the regional hub of Homer and nearby Kachemak City are studying and implementing financing plans to build out their distribution grids. ●

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• FINANCE & ECONOMY

# OPEC to keep 30 million barrel target

Oil ministers meeting June 14 agree on steady production; seen as compromise between Iran, Saudi Arabia, message to consumers

By **GEORGE JAHN**  
Associated Press

**O**PEC oil ministers agreed June 14 to keep their production target steady, in a compromise meant to defuse rivalries between Iran and Saudi Arabia and to send a soothing message to economically troubled consuming nations.

Oil prices have fallen more than 20 percent over the past two months, and a statement from the Organization of the Petroleum Exporting Countries cited “downside risks facing the global economy” and ample stocks of crude as being responsible for the trend.

While agreeing to hold the output target steady, however, the statement suggested that OPEC ministers were ready to come together on short notice if prices fell to levels dictating a production cut-back. The ministers, it said, “confirmed their readiness to swiftly respond to developments that might place oil market stability in jeopardy.”

OPEC accounts for about a third of world crude production and its decision June 14 corresponded with its professed goal of taking volatility out of global oil markets. With the economies of Europe and the United States feeble and even China seeing a slowdown, keeping production targets steady at a time of falling prices was meant to reassure consuming nations that they do not need to fear the added burden of more pricey energy.

*OPEC accounts for about a third of world crude production and its decision June 14 corresponded with its professed goal of taking volatility out of global oil markets.*

## Analysts say influence limited

But analysts said OPEC was limited in influencing prices.

“The truth is the decision today is not nearly as important as three other events that will occur over the next few weeks,” said Jason Schenker of Prestige Economics. He listed June 17’s election in Greece, which could decide whether the country stays in the eurozone; a meeting of the U.S. Federal Reserve on June 19; and the July 1 implementation of an EU embargo on Iranian oil as much more significant in determining where crude is headed.

That embargo, combined with a U.S. push for a global ban on imports of Iranian crude figured prominently on the sidelines of the closed meeting.

Iran came to Vienna seeking lowered output to raise prices, while the Saudis were looking to increase production to make crude more affordable. On paper the decision to keep output targets steady was meant to find a compromise between the two positions. But OPEC members normally ignore the official quota — the organization’s daily output is now estimated at nearly 32 million barrels.

OPEC Secretary-General Abdullah Al-Badry told reporters that there was a “collective decision” to honor the 30 million barrel ceiling. But the Saudis, and others with capacity, were expected to keep overproducing to make up for any shortfall caused by the sanctions on Iranian oil.

## Iran faced with cut

Iran, in contrast, is faced with the prospect of having to cut its output of oil, which makes up nearly 80 percent of its foreign exchange earnings. Sanctions levied by the U.S. over Tehran’s refusal to curb its nuclear program have already cut significantly into exports — from about 2.5 million barrels a day last year to between 1.2 million and 1.8 million barrels now, according to estimates by U.S. officials. The European Union embargo will tighten the squeeze.

The oil-related sanctions are only part of the regime of U.N. and other international penalties levied against Iran for its refusal to curb uranium enrichment. Tehran says it is enriching only to create reactor fuel and insists it is not interested in atomic arms, but concern remains strong because enrichment to high levels also can produce the core of nuclear weapons.

Iran has cautioned the Saudis not to use the oil weapon against it, but Iranian oil minister Rostam Ghazemi on June 13 warned the U.S. and Europe that their tactics will backfire.

“The use of instruments such as sanc-

tions or direct military interventions in energy-producing countries will increase the price of oil and market volatility,” he told an OPEC seminar.

On June 14, he denied that Iran was hurting.

“Our exports remain as before,” he declared, adding that the oil embargo will “not have any negative impact on Iran.”

## New head in December

In another manifestation of their rivalries, both Iran and the Saudis are fielding candidates for the post of OPEC secretary general, to be filled in December when Abdullah Al-Badry of Libya retires. But Ecuador also is in the race, along with Iraq, and expectations are high that the ministers will opt for Wilson Pastor of Ecuador.

Al-Badry said ministers deferred a decision on his successor to the next planned OPEC meeting in December.

Saudi-Iranian tensions are an embarrassment to OPEC, and Saudi Oil Minister Ali Naimi refused to answer questions on the issue as he prepared to join the meeting June 14. But he earlier denied tightening the screws on Iran by selectively providing crude to consumers honoring the Iran embargo, telling reporters his country sells to whoever buys.

“We don’t sit and say: ‘We want to sell to this country or that country (or) whatever,’” he said. ●

## ENVIRONMENT & SAFETY

### Group to sue to protect ice seals

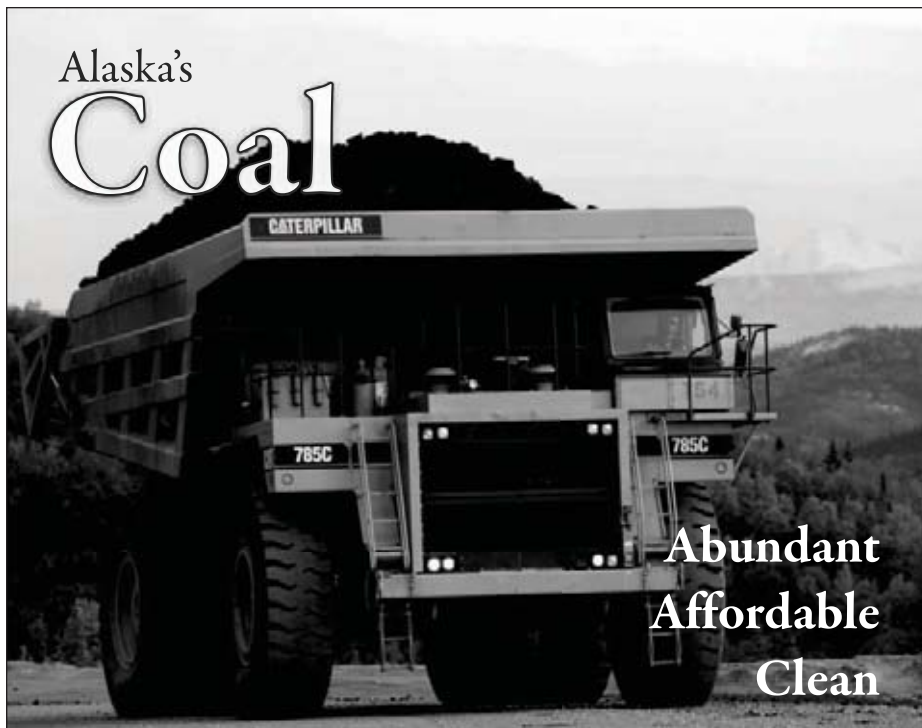
A conservation organization is giving formal notice it will sue the National Marine Fisheries Service for failing to decide whether two ice-dependent northern seals will be listed as threatened because of climate change.

The Center for Biological Diversity on June 18 announced a required 60-day notice of intent to sue over the failure to list ringed and bearded seals. A listing triggers additional protections. Center for Biological Diversity Alaska director Rebecca Noblin says a decision was due in December but the agency extended its deadline for six months. The new deadline was June 17.

The agency proposed listing ringed seals in the Arctic basin and the North Atlantic and two populations of bearded seals in the Pacific Ocean because of projected loss of sea ice.

*The Center for Biological Diversity on June 18 announced a required 60-day notice of intent to sue over the failure to list ringed and bearded seals. A listing triggers additional protections.*

—DAN JOLING, ASSOCIATED PRESS



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## MURKOWSKI Q&A

*Petroleum News: What's your sense of how far President Obama is willing to go in opening new areas?*

Murkowski: We have seen a level of commitment coming out of the administration. Sometimes it's a little slow and, like the process Shell had to go through with its permits, a little torturous. But we have seen somewhat of a willingness to open new areas. I'd like to think we have more opportunities in (the National Petroleum Reserve-Alaska) now because the permit for the bridge with CD-5 was allowed to advance.

But I also recognize that within the NPR-A management plan, there could be efforts that could negatively impact our ability to produce and transport resources throughout the state. We may have been successful in opening new areas in the Chukchi and Beaufort, but we could lose that fight if we're prevented from establishing a pipeline corridor to hook into TAPS. If it's not allowed to cross the reserve, we could face stranded resources, stranded investments.

*Petroleum News: You've been promoting a gas pipeline project that exports gas to Japan. Why is Japan a good market for Alaska gas?*

Murkowski: First and foremost is the

relationship that has been built between Alaska and Japan. We've been sending natural gas from Cook Inlet to Japan for 40 years. We've got a history of cooperation, a history of trade, and that's a real positive.

Japan is in need of energy resources after the tsunami and the shutdown of their nuclear facilities. You've essentially got 30 percent of Japan's electricity shut down. Japan is looking to switch a major portion of its power generation to natural gas, but they need an affordable, reliable source. I think Alaska can be that source.

Another market that is important to recognize is the South Korean market. South Korea is the second-largest importer of LNG, so there's great potential there for us.

*Petroleum News: Is there a time window for capturing a piece of those markets?*

Murkowski: I always say the window is not open indefinitely. Japan needs the resource now. They're talking to many other nations about how they can meet the need. (We need to) establish that we can be that energy provider for 100 years. Between offshore, NPR-A, what we currently have, ANWR, the potential is 100 years plus. I'm told it's 150 years that we could supply 4 (billion cubic feet per day) to Japan. And this doesn't count tapping into Alaska's methane hydrates.

We have the resource. We're as close as most other nations. We've got the relationship. We need to move on it.

*Petroleum News: You've talked up this idea to members of the Japanese parliament and also to Prime Minister Yoshihiko Noda. What kind of response did you get?*

Murkowski: It was quite encouraging. I met first with several members of the Japanese diet. When they came over, they were focused on the availability of Lower 48 shale gas. But they came to understand very quickly that there is debate right now about whether to ban export of natural gas out of the concern that it could increase consumer prices.

I explained that Alaska gas is different. Ours is not shale gas. It's wet gas. Our market is separate from the Lower 48.

I have been talking to anybody who's willing to listen about why what we have in Alaska really does help meet the needs of Japanese. I had a dinner with the Japanese ambassador and the South Korean ambassador, and was delighted that we were able to spend most the evening talking about energy and what Alaska has to contribute.

*Petroleum News: I understand you're working on an energy plan to be released this summer. What can you tell me about that?*

Murkowski: About a year ago, I gath-

ered all the smart folks on my energy committee and said, Look, we have not really moved much in the way of energy policy this Congress, and that's unfortunate, but it gives us time to focus on a real comprehensive energy policy.

I asked them to do a little homework. Go back to every energy policy laid out since the '70s. Let's look at what's been run up the flagpole and down, what's worked and what hasn't. I want to re-imagine what a national energy policy could look like, and I want it to be comprehensive. Instead of just saying, "all of the above," I want it to mean all of the above.

There is focus on increased domestic production, absolutely. But it also has equal emphasis on how we move to the energy sources of the future, how we can realistically build out our renewable energy sources. I want to make sure we have equal emphasis on efficiencies and conservation so we're smart with our energy use, and we've got to focus on transmission.

I'm really excited about what we're going to put out. It will be towards the end of the summer. We're not going to be introducing legislation. We are defining strategic goals. We are laying forth a vision.

*Petroleum News: In the past, you've co-sponsored cap-and-trade legislation. Do you support any kind of climate change legislation now?*

Murkowski: There's nothing out there even up for consideration.

My focus is on making sure we have access to abundant and affordable energy. The kind of climate proposals we've seen in the past couple years have been built around the idea that you push things in a direction by making energy scarcer and more expensive. I don't think that's the right way for us to be going. Look at the state of our economy right now. Alaskans can't afford to have their energy be more expensive.

There are steps we can take to use the energy we've got more efficiently and then transition, whether it's to sources like natural gas, which has a smaller footprint, or renewable energy, whether it's geothermal, wind, or hydro, anything — but where it makes sense to do it economically.

Our big problem is how we pay for the policies. My idea is to take a portion of the revenue the government receives from fossil fuel production and dedicate it to R&D. We're big oil consumers today, but there's nothing wrong with letting oil essentially work itself out of a job. ●

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## INLET PIPELINE

Cook Inlet's remote west side.

At present, its oil production moves on the Cook Inlet Pipe Line Co. system to the Drift River terminal, where tankers pick up oil for a short voyage across the inlet to the Tesoro refinery at Nikiski.

Houston-based Hilcorp took over CIPL and the terminal Jan. 1 as part of its purchase of Chevron's Cook Inlet oil and gas properties.

Hall said he sees two big reasons for building a subsea pipeline across Cook Inlet.

First, nearby Redoubt volcano is a threat to the existing oil transportation infrastructure. A series of eruptions in 2009 idled west Cook Inlet oil production for months.

Second, a new subsea pipeline could alleviate the high pipeline transportation and tanker costs that west Cook Inlet producers now face.

Hall's team has enlisted engineering consultant Michael Baker Corp. to help with the proposed pipeline.

Already, some key numbers have

been hammered out.

### From Kustatan to Nikiski

The trans-Foreland pipeline, as Hall calls it, would be 25 miles long and would run from Cook Inlet Energy's Kustatan production facility to the Nikiski area. The Kustatan facility is near West Foreland point, while the Tesoro refinery is near East Foreland point.

The pipeline wouldn't run straight across the inlet; rather, it would horse-shoe to avoid an area of deep water, thus making the line more accessible to divers.

The pipe would be 8 inches in diameter, and would have a capacity of 90,000 barrels per day.

The estimated cost to build is \$53 million.

A number of financing options are being explored, and "numerous parties" are interested, Hall said.

"Pipelines are generally low risk from an investment standpoint," he said.

The trans-Foreland pipeline would be open access with a regulated tariff, Hall said.

Most likely, a separate entity would

own and operate the line, following the CIPL model, he said.

The pipeline would feature a state-of-the-art leak detection system, and could accommodate "smart pigs," devices that slide through to check for corrosion or other problems.

The hope is that engineering and permitting can be completed by year's end, with procurement beginning in early 2013, Hall said. The pipeline would be installed in the summer of 2014, creating an estimated 130 construction jobs. The line could be operational by fall 2014.

Permitting agencies would include the state Department of Natural Resources, the Department of Environmental Conservation and the Army Corps of Engineers, Hall said. Only waters in state jurisdiction would be affected.

Hall couldn't say whether an open season might be held to secure shippers on the line. He also declined to say whether Tesoro is a potential investor in the project.

"We have made sure the active players in the inlet are aware of our intentions and plans," Hall said. "We're trying to rally support."

The pipeline would not be the first oil industry line laid beneath Cook Inlet's tidally turbulent waters. It likely would eliminate the need for running tankers across the inlet. Environmental organizations such as Cook Inletkeeper favor a subsea pipeline over tankering.

Hall and colleague JR Wilcox on June 15 briefed the Cook Inlet Regional Citizens Advisory Council on the project.

The pipeline's 90,000-barrel capacity is very large relative to current west Cook Inlet production, and certainly far above Cook Inlet Energy's current production, which averaged about 1,600 barrels per day in April.

But the company is aiming to greatly increase production from its Osprey offshore platform, where a new drilling rig is nearly ready to start working.

Likewise, Hilcorp is aiming to grow production, and Apache Corp. is aggressively exploring on the west side of Cook Inlet.

—WESLEY LOY

Contact Wesley Loy at [wloy@petroleumnews.com](mailto:wloy@petroleumnews.com)

continued from page 1

## GAS FIND

Spokesman Bob Dye said the Apache-operated Kitimat LNG project, with Encana and EOG Resources each holding 30 percent, will use gas from the more-developed Horn River basin 60 miles east of Liard.

"As we get further along we will maybe have more clarity on where Liard might end up," he said.

Apache said its initial test well flowed 21,300 million cubic feet per day over 30 days. Two other experimental vertical wells were drilled in 2010.

John Bedingfield, Apache's vice president of exploration and new ventures, said that although the Liard gas is challenged by commodity prices, "what is really critical is recognition of this resource. This is, in my estimation, the best shale gas reservoir in the world, certainly from a performance perspective."

He said Apache's focus now is on "drilling tenure wells to hold the acreage together," and not on development.

### Analyst: LNG outlet required

A report by Global Hunter Securities doubted Liard would be monetized for years without an LNG outlet.

Given the "newness" of the Liard information, the firm said it "wouldn't be surprised to see the announcements of customer agreements, and subsequently (a final investment decision), pushed into early 2013."

Kitimat partners have been pointing to a corporate sanctioning later this year and an onstream date of 2017, but Dye would not be drawn into speculating on a timetable.

To date the project has permission from Canada's National Energy Board to export 10 million metric tons a year of LNG over 20 years, starting at 5 million metric tons a year.

Encana Chief Executive Officer Randy Eresman said in May that because of Kitimat LNG's high initial cost of C\$5.4 billion "we think it might be best to reduce our risk to accelerate the point of commercialization by bringing in another party."

He said that process includes offering up to 20 percent equity positions to one or

**Apache said its initial test well flowed 21,300 million cubic feet per day over 30 days. Two other experimental vertical wells were drilled in 2010.**

two anchor buyers of the LNG.

Dye said most LNG buyers would be looking for an equity position, "but whether it ends up as 20 percent or some other number has yet to be determined."

"We are continuing to negotiate with a number of parties on off-take agreements and that is certainly important to have us go into a final investment decision, but at this time we are not giving any time period," he said.

### Talks in Japan

Leslie Gill, the Canadian government's energy trade commissioner in Tokyo, said Apache is scheduled to be in Japan in July for talks with prospective LNG buyers.

"The likes of Marubeni and Mitsubishi are looking for investment in upstream assets. The Liard find will provide

Apache with a bargaining chip and in a way it will be a win-win for both," he said.

According to an Apache investor day presentation, the D-34-K well was drilled in 2009 to a vertical depth of 12,600 feet and a lateral length of 2,900 feet with six frac stages, each of which averaged 3,600 million cubic feet per day, indicating an ultimate recovery of 17.9 billion cubic feet from the well.

RBC Capital Markets estimated development wells in the Liard would cost C\$35.4 million for 66 bcf of estimated ultimate recovery gas.

A spokesperson for British Columbia Energy Minister Rich Coleman said the Apache disclosure confirms the government's expectations for the Liard and bolsters the view that the province is "an attractive place for natural gas production" and the development of LNG export projects.

### Liard numbers 'enormous'

Gordon Currie, a senior oil and gas analyst with Salman Partners, said the

Liard numbers are "enormous" and indicate the basin alone could support LNG exports for "many years to come."

But he said the gas quantities identified in British Columbia "and elsewhere have seriously depressed the price of the commodity."

Barclays said in a note "go-forward economics (in Liard) are estimated to work at \$2.57 per thousand cubic feet at the well head, implying roughly \$3.25 per thousand cubic feet full-cycle break even."

Financial services firm Stifel Nicolaus said in a report that the while the Liard economics "look good, the timing to properly monetize the asset is a 2017-plus timeframe, given that this is Canadian gas."

Robert Fitzmartyn, managing director of institutional research at FirstEnergy Capital, said the "big issues" posed by Liard's remoteness are matters the stakeholders will have to resolve. ●

Contact Gary Park through [publisher@petroleumnews.com](mailto:publisher@petroleumnews.com)

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## TTT Environmental launches multifunctional website

TTT Environmental said June 12 that it has launched its new website. The new site provides access to product reviews and specifications, downloadable manuals, data sheets and quick guides. Users can request a quote or place an order instantly online, get up-to-date product news and technical notes. Additional site features include the product of the month, inventory search and advice and top manufacturers. The webpage is user friendly, with easy-to-find information, right at your fingertips.



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## Leon joins MSI Communications as creative director

MSI Communications said April 30 that Mike Leon, a veteran creative director who has developed advertising campaigns for some of the best-known brands in the world, has joined its team.

Leon succeeds outgoing creative director Grant Johnston, who will bring his expertise to the agency's client services department, managing strategic accounts and issue campaigns. Johnston continues to serve as the agency's vice president and campaign strategist.

Leon comes to MSI with more than 20 years' experience in advertising at some of the top agencies in the country. His clients have included Volkswagen, IBM, Exxon, Ford Trucks, Proctor & Gamble, Sprint, AutoZone and Bayer Chemical. As the art director of Doyle Dane Bernbach in New York, he was responsible for the American introduction of the Volkswagen Jetta, and as creative director of JWThompson in Detroit, he oversaw television and print campaigns to launch the Ford Explorer and Windstar minivan.



MIKE LEON

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see **OIL PATCH BITS** page 25

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## PROPANE DEBATE

as purely “informational,” it raised questions that could re-emerge should North Slope producers ever be in the situation of sucking the last drops of oil from fields while also selling the gas used for that effort.

### ‘There is a local market’

Although the Prudhoe Bay unit has been using propane for field operations for a while, the question of waste didn’t rear its head until relatively recently, according to Heinze.

“There is a local market for Prudhoe Bay propane. There may not have been five years or 10 years or 30 years ago, but there is today,” he said. The producers could supply the market using an infrequently operated propane recovery facility at the Central Gas Facility or CGF, Heinze believes. “Instead of turning the switch off every month after a day and a half, it should be left on. And that propane can be made available,” he said.

Because Prudhoe Bay won’t produce forever, any propane not sold today would theoretically be trapped underground once the field is taken offline. And even that small hypothetical amount, Heinze argues, constitutes waste according to state statutes.

“Failure to grab it while it’s there sets the stage for lost production,” he said.

While Heinze said BP is a responsible operator, he believes the company isn’t challenging its engineers to find a way to produce more propane to be used in-state.

As one source of potential supply, Heinze pointed to a refrigeration unit recovering 25 barrels of propane per day but only run for a day-and-a-half each month. As another, he suggested tweaking the system, claiming there is no “exact formula” for miscible injectant. “In many ways, it’s a witch’s brew. You work with what you’ve got,” he said.

While the vast majority of propane produced at Prudhoe is used on-site, some 750 barrels per day is sent outside the field, either to the trans-Alaska oil pipeline, the BP-operated North Star unit or the ConocoPhillips-operated Kuparuk River unit. Heinze believes the Department of Natural Resource should look into the propane leaving the unit because “when things leave the unit they are subject to royalty consideration.”

Heinze said he copied the heads of the Department of Natural Resources and the Division of Oil and Gas on all correspondences on the matter, but received no “feedback” from either.

### ‘A direct and negative impact’

It’s not so simple, though, according to BP.

Over several hours of technical testimony, BP engineers attempted to show how every molecule of propane produced at Prudhoe Bay is used to pump more oil out of the field.

Prudhoe Bay’s propane use really maximizes the economic recovery of Alaska’s oil, helping to produce more than 2 billion barrels beyond initial recoverable reserve estimates for the field, according to Janet Weiss, vice president of resources for BP.

“The removal of propane would have a direct and negative impact on the number of EOR barrels we recover through enhanced oil recovery processes,” Weiss said. Additionally, “that propane remaining in the reservoir could be sold with an economic gas sale.”

The propane is used to enhance oil recovery in two ways.

First, as part of the miscible injectant pumped into oil fields and second through a residual stream injected into the gas cap to increase the pressure at the field.

Of the roughly 110,000 barrels per day of propane coming into the Central Gas Facility, BP includes about 70,000 in the residual stream injected back into the reservoir for pressure maintenance. Of the roughly 40,000 barrels per day remaining, more than 85 percent is used to make miscible injectant. (Roughly 11 percent is used for fuel.)

“With the current limitations to the process, if we removed more propane it would remove its ability to be used for miscible injectant process,” Weiss said. While the Prudhoe unit owners could theoretically make money by selling the propane, “you make less oil because you wouldn’t have that propane to be used as miscible injectant.”

Weiss also suggested BP couldn’t change the profile of the miscible injectant. What Heinze described as a “witch’s brew,” Weiss described as “careful chemistry.”

With the right project — EOR or a sale — BP could expand the Central Gas Facility to recover more propane, Weiss acknowledged, but while the owners have investigated opportunities, “we don’t have an expansion option that’s economic enough,” she said.

(During the testimony, a BP engineer said the company has more potential miscible injectant targets than volumes to serve its needs. Additionally, the engineer suggested the current tax code made it difficult to justify a plant expansion, but when Commissioner Cathy Foerster

pressed for details the engineer only said that the code, called Alaska’s Clear and Equitable Share, removed the upside of investments at high oil prices.)

Asked how the unit owners would determine if a propane market justified producing fewer barrels of oil from enhanced recovery, Weiss said the companies would use “standard economics,” but suggested such an arrangement might require approval from the AOGCC because it would change the ultimate recovery profile for the field.

The issue is complicated further because any commercial decision would require the approval of all Prudhoe Bay unit owners, and BP only owns 26 percent of the field.

Although BP has heard from ANGDA and other entities on potential propane projects, “currently we don’t feel it’s commercially viable to do anything else with (the propane) at this moment,” said Sherri Gould, business development lead for BP in Alaska.

Asked what would happen if the state demanded a volume of propane as royalty-in-kind, Gould said, “I would definitely have to scratch my head on that one and seek some additional expertise,” but said she suspected any use for the propane other than enhanced recovery would require the unit owners to amend their operating agreement.

### What about the big line?

Afterward, Heinze summed up the testimony: BP needs every molecule of

propane it is producing for enhanced oil recovery, but enhanced oil recovery doesn’t currently justify expanding the Central Gas Facility to increase propane production. “If the Prudhoe Bay unit, as the owner of a piece of equipment, can’t figure out a way to slightly modify that facility to do something more with it, as a third party I have no chance economically of doing anything. ... I will accept that, currently, the answer is, ‘Hell no,’” he said.

Additionally, Heinze said the testimony didn’t square with long-term pipeline plans.

In particular, Heinze referred to a Northern Economics study recommending 3,000 to 5,000 barrels per day of propane use within the first five years of a large-diameter North Slope pipeline and 20,000 to 30,000 barrels per day within the first 10 to 15 years.

“A lot of people working on longer term implications of North Slope gas to market and other things like that need some clarity,” he said. “If (miscible injectant) is the greatest thing since sliced bread, so be it. Let’s figure it out and put it on the table. If there really is other things we can do with propane, then let’s figure that out and put that on the table and get on with it.” By extension, while the use of the currently recovered propane is “clearly beneficial,” the producers and the state still have an opportunity to “do better.”

see PROPANE DEBATE page 27

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## OIL PATCH BITS

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### ASRC ranked as a top 20 contractor by ENR magazine

ASRC Energy Services Inc. said May 15 that Engineering News-Record has ranked it as one of the top 20 petroleum contractors in the nation and in the upper 20 percent of contractors overall. Based on gross revenues, ASRC Energy Services saw a 40 percent improvement in their position from last year due to an increase in new contracts for 2011. ENR also ranked AES as a top 500 design contractors for 2012.

ASRC Energy Services Inc. is an Alaskan-owned oil and gas services provider with multiple divisions and subsidiaries that provide a full range of services for producers in the petroleum sector.

For more information visit [www.asrcenergy.com](http://www.asrcenergy.com).

*Editor’s note: All of these news items — some in expanded form — will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News’ contracted advertisers. The next edition will be released in September.*

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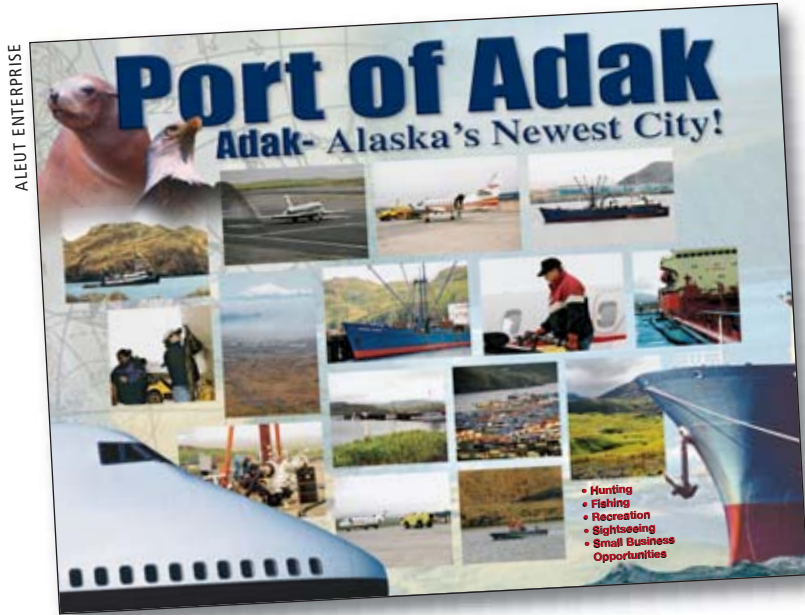
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## ADAK LOGISTICS

Adak Airport is operated by the Alaska Department of Transportation and Public Facilities.

According to OSI, there are more than 100 townhouse and hotel-type personnel housing units available on the island, and hundreds more in good shape that simply need renovating.

“With the development of the OCS (outer continental shelf) in the Arctic by Shell and soon ConocoPhillips and Statoil, it makes sense to have a deepwater facility that is ice free year around with housing, office space, fuel capability, large runways and the infrastructure to support the equipment supplies and personnel for not only exploratory drilling, but the development of the production facilities as well,” said Rick Wilson of OSI. “Adak has 100-plus acres of flat paved access real estate for storing pipe and equipment which will be needed during the construction phase of sub-sea pipelines and associated facilities.”

When asked in a follow-up email whether ship repair was available at Adak, and if there were cranes available to support it, Wilson said, “yes we have a crane and can get more or bigger. Dry Dock is

also something we can offer but it’s not there yet.”

Closed in 1997, the naval base and much of Adak Island was transferred to the Aleut Corp., an Alaska Native regional corporation and parent of Aleut Enterprise and Aleut Real Estate, in hopes that it could develop industry and attract residents because of the facilities left behind by the Navy.

### Strategic strong point

Adak Island was a strategic strong point in the Aleutian Chain during World War II and later in the Cold War. At its peak, 6,000 Navy and Coast Guard personnel and their families made their homes on the island. At that time Adak had a college, McDonald’s restaurant, movie theater, roller skating rink, swimming pool, ski lodge, bowling alleys, skeet range, auto hobby shop, photo lab, and racquetball and tennis courts. A new \$18 million hospital was built in 1990, seven years prior to the closure of the station.

About 30 families with children relocated to Adak in 1998, most of them Aleut Corp. shareholders. Per the U.S. census of 2010, the population is 326.

Adak currently provides a fueling port and crew transfer facility for a combination of the Seattle and Alaska based fishing



Aerial view of city of Adak.

fleets. Adak Fisheries, an employer of a large seasonal staff, processes Pacific cod, pollock, mackerel, halibut, snow and king crabs. A few residents hold commercial fishing permits, primarily for groundfish, but commercial fishing vessels based out of Seattle and other parts of Alaska provide most of the work for the fish plant by regularly offloading their catch in Adak.

Wilson pointed out that flights between

Anchorage and Dutch Harbor/Unalaska with its single 3,900-foot runway are often one stop, flights to Adak are direct on Alaska Airlines’ 737-400 jet service, meaning 43 minutes less time in the air.

OSI operates the largest privately owned marine terminal in Dutch Harbor.

“In 2010, OSI built a berth specifically for Shell Exploration’s drill ship, the Kulluk, and is Shell Exploration’s current Dutch Harbor shore base,” Wilson said in an email.

“Offshore Systems, Kenai (OSK) operates a similar terminal in Cook Inlet catering to the offshore oil and gas industry from their shore base facility in Nikiski, Alaska,” he said.

Adak, formerly Adak Station, is the westernmost municipality in the U.S., the southernmost community in Alaska, and on the same latitude as Vancouver Island, Canada, and Brussels, Belgium. ●

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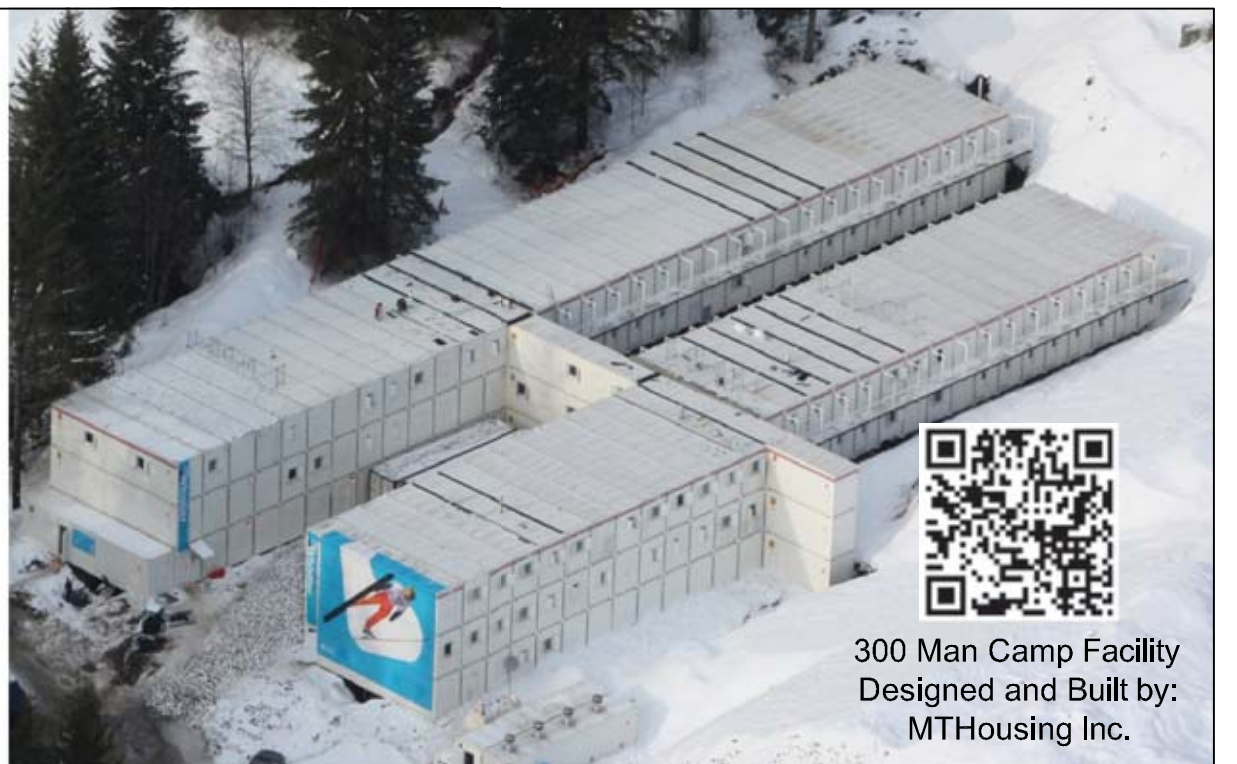
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## PROPANE DEBATE

“I still can’t walk away from that one,” Heinze said.

While he appreciated the information BP added to the record before and during the hearing, Heinze said it was “unfortunate” it took an AOGCC investigation to get “what I consider to be some very basic CGF performance data.” He suggested the facility information should be reported monthly, similar to field level oil and gas production.

“I don’t see any reason that the CGF performance data needs to be confidential or proprietary. It looks to me just like well production reporting data,” he said.

The commission agreed to leave the record open for 30 days.

### ‘A possible energy bridge’

That technical discussion, though, does little to help rural Alaskans.

When discussions for ANGDA began a decade ago, many hoped a pipeline would by now be taking North Slope gas to tide-water and supplying rural communities along the way through a series of off take points, according to Nels Anderson Jr., former energy czar to Gov. Frank Murkowski. “The disparity among Alaskans for their energy is huge and we see propane as a possible energy bridge from diesel to when the state of Alaska finally develops an energy distribution system that can deliver energy equitably to all Alaskans, so that we can all benefit, as Anchorage does, from very low cost energy.”

Calling BP “a good corporate partner” and saying it wasn’t “a target,” he said other operators should be present and the administration should consider the issue a priority.

“This is an instance where Alaskans see a resource that they believe belongs to them, stranded gas on the North Slope, right now, belongs to Alaskans. And when it’s developed we will own 12.5 percent on the royalty,” he said, asking the commission and the governor to make it a priority. “We need to make it possible for propane to be made available to reduce the cost of energy for Alaska, because we are in crisis up there.”

### A pitch for the pipeline

Although Heinze requested the investigation as a citizen, the issue has long been an ANGDA priority. As early as 2005, the voter-mandated public corporation proposed a propane extraction facility at the Yukon River crossing of any North Slope gas pipeline.

“Why wouldn’t we do something at that point and use the river as a transportation system to move energy up and down?” Heinze asked the Alaska Legislature at the time.

While piped gas would be cheaper than propane, the majority of communities in Alaska would not enjoy the direct benefits of a pipeline. With a propane distribution system “you in essence touch 99 percent of the population of Alaska,” Heinze told the ANGDA board in December 2006, when he announced plans to launch a propane demonstration project.

As part of that project, Heinze pitched the idea to BP, he said at the time.

The village of Tanana took the bait in 2007, testing the feasibility of the propane by converting its teacher-housing unit to run on the fuel. Although still expensive by urban standards, propane proved cheaper than heating oil, particularly in bulk purchases.

### ‘Another good idea’

With Tanana as a starting point, ANGDA proposed a wholesale delivery

point at Prudhoe Bay pulling propane from the rich gas stream passing through the Central Gas Facility.

In June 2009, Heinze said one of the three major North Slope producers had agreed to sell propane at a low cost if an independent third party could prove the project was technically feasible and show a market existed. “We believe it’s got every basis in the world to go forward,” Heinze said at a conference in Fairbanks. If the private sector wasn’t interested, ANGDA would “write it off as another good idea that didn’t launch.”

Although ANGDA garnered general endorsements from the Alaska Congressional delegation and then-Gov. Sarah Palin, the project failed to climb to the top of the large pile of competing or complementary projects to bring natural gas products to Alaska.

While those conflicts remained hypothetical in some cases — such as the potential of a large diameter or in-state pipeline to undercut the propane project — Fairbanks Natural Gas President Dan Britton accused ANGDA of “getting in the way of a private entity that is trying to do a similar project,” referring to its proposal to build a liquefaction plant on the North Slope and truck liquefied natural gas to its distribution grid in Fairbanks.

“I think we’re complementary,” Mary Ann Pease, a contractor working on the propane project for ANGDA, said at the time. “And I think anybody — any entrepreneur that wants to come in at that point and have at it — is more than welcome to do so.”

At the time, both considered the Interior electric cooperative Golden Valley Electric Association to be a potential anchor customer. While an FNG affiliate recently received regulatory certification to move ahead on the liquefaction project, Golden Valley is now looking into sponsoring its own operation in partnership with Flint Hill Resources.

By late 2010, Heinze said propane could be profitable for the Prudhoe Bay owners, but suggested it might be too small to attract the attention of multinational companies producing hundreds of thousands of barrels of oil daily. “It’s very hard to get people to focus on secondary and tertiary type levels of contribution to their bottom line,” he said.

### ‘The end of our rope’

Over the course of 2010, according to

letters released as part of the investigation, ConocoPhillips claimed extracting propane from residue gas would decrease the amount of injectant produced at the facility and could impact enhanced recovery, but told ANGDA it would be “willing to continue discussions to determine whether there are technical or operational innovations that are feasible but have not yet been considered.”

In October 2011, Heinze said at least two of the three Prudhoe Bay unit owners appeared to be ready to sell propane. In December, though, he asked the AOGCC to investigate.

“We have reached the end of our

continued from page 1

## SHELL DRILLING

tions most uniquely situated to comment on Shell’s potentially disastrous Arctic drilling campaign.”

### More inspections needed

After touring the ships in Seattle and the capping stack in Portland, Bureau of Safety and Environmental Enforcement Director Jim Watson said Shell would need to pass more tests of its safety equipment before it would be allowed to drill in the Arctic this summer.

BSEE engineers and inspectors and Coast Guard safety inspectors are currently reviewing the rigs. “We have conducted inspections of the two drilling rigs, but we are not making any determinations about their permit applications until all of our safety requirements have been met, including the successful deployment and testing of the capping stack and their proposed containment system,” Watson said in a statement.

The agencies also plan to conduct tests on-water and on-site inspections on the rigs throughout the drilling process and monthly inspections of the capping stack.

rope,” Heinze told the ANGDA board.

In an initial letter to the AOGCC, he wrote, “While the Prudhoe Bay Unit Owners have indicated a willingness to sell propane I have been unable to discern the direction and schedule of the needed actions by the Unit Operator BP. I understand that BP is under no obligation to inform me or the public as to plans, if any, for making propane available.”

Earlier this year, Heinze left ANGDA to open a private consulting firm. ●

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The capping stack is the piece of safety equipment BP ultimately used to control the Macondo well following the Deepwater Horizon explosion. Should Shell get permission to drill, the stack would be deployed halfway between its two proposed drilling locations.

### Solutions will improve

Asked by the Canadian publication MacLeans about the safety of Arctic drilling, Royal Dutch Shell CEO Peter Voser said the shallow waters and low-pressure geology in the Arctic is “a different risk profile” than the deepwater and high pressure Gulf of Mexico.

Asked about cleaning a potential oil spill in ice, Voser said, “I think today we are of the opinion that we can deal with it. That’s not necessary in the exploration phase, because we will only drill in ice-free periods. It’s a challenging environment, a challenging process. But as an industry, and also as a company, we’ve spent significant money developing technical solutions to that. These solutions over the years will improve.”

—ERIC LIDJI

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