Petroleum news

page 7 New rig going up on Cook Inlet
Energy's Osprey platform in inlet

Vol. 17, No. 22 • www.PetroleumNews.com | *A weekly oil & gas newspaper based in Anchorage, Alaska* | Week of May 27, 2012 • $2

May Mining News inside

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

Gas for southern Kenai: Parnell OKs partial gas line funding

Alaska's southern Kenai Peninsula is finally getting natural gas.

Gov. Sean Parnell recently kept an $8.15 million allocation in the fiscal year 2013 capital budget for a transmission line to carry gas to Anchor Point, Homer and Kachemak City.

After vetoing the project for two consecutive budget cycles, the allocation survived this time around because those communities agreed to shoulder around a quarter of the roughly $11 million cost of the project, Parnell said during a May 14 press conference.

"There are about 400,000 people in the Southcentral area

see **KENAI GAS** *page 20*

Buccaneer confirms execution of financing for Cook Inlet projects

On May 23 Buccaneer Energy confirmed that it had executed binding agreements for $20 million in financing from New York-based Richmond Hill Investment Co. Buccaneer says that the financing, which matures in January 2013, will enable the company to "capitalize on the further development of its Cook Inlet assets" prior to establishing a long-dated financing alternative.

Buccaneer has also established a $30 million revolving credit facility with Richmond Hill to fund receivables under the State of Alaska's ACES, Alaska's Clear and Equitable Share, tax exploration and development incentives, Buccaneer says. And the company has financed with another party the acquisition of the Glacier No. 1 drilling rig from Marathon Oil Co.

"Putting together financing facilities totaling US$50 million

see **FINANCING** *page 14*

EXPLORATION & PRODUCTION

Exxon files its plan

Spells out how it wants to bring condensate production on line at Point Thomson

By ALAN BAILEY
Petroleum News

Hard on the heels of an agreement between the State of Alaska and the leaseholders over the much-disputed Point Thomson unit on Alaska's North Slope, unit operator ExxonMobil Corp. has filed a plan of operations for the unit with Alaska's Division of Oil and Gas. The division wants public comments on the proposed plan by June 22.

Although the Point Thomson field is very large — it contains 300 million barrels of liquid oil and natural gas condensate and 8 trillion to 9 trillion cubic feet of natural gas according to the Alaska Department of Natural Resources — the field has yet to produce any oil or gas, despite the fact that Exxon discovered the field as long ago as 1977.

And to accommodate the necessary infrastructure and facilities, Exxon will expand the central pad from its existing area of 13 acres to 56 acres.

While being accused by some of "warehousing" the huge resource that the field contains and being challenged by the state for holding onto but not developing Point Thomson leases, Exxon has over the years put forward several plans for development in the unit, none of which have previously come to fruition.

see **EXXON PLAN** *page 19*

EXPLORATION & PRODUCTION

Finding a good target

Statoil's first well in Chukchi Sea will test the company's Amundsen prospect

By ALAN BAILEY
Petroleum News

Statoil's first Chukchi Sea exploration well, planned for 2014, will likely target the Amundsen prospect, a large geologic structure that appears to contain rock horizons with oil and gas reservoir potential within what geologists refer to as the "rift sequence," April Parsons, lead geologist for Statoil Exploration Alaska, told a meeting of the Alaska Geological Society on May 17.

Parsons said that the Amundsen prospect is located in some promising looking geologic structures that Statoil had found from seismic data prior to the 2008 Chukchi Sea lease sale in which the company had purchased its leases. The company has identified two oil prospects within its lease acreage — the Augustine and Amundsen prospects — with the Amundsen prospect, the larger of the two, becoming the primary exploration target.

The seismic shows the Amundsen prospect to be what is called a three-way closure — an elongated dome sloping off in three directions and bounded by a major geologic fault.

Statoil operates 16 offshore leases about 100 miles northwest of the Chukchi Sea coastal village of Wainwright.

see **STATOIL WELL** *page 18*

NATURAL GAS

Shell launches LNG plans

Lifts curtain on largest of Canada's ventures, warning there is no time to lose

By GARY PARK
For Petroleum News

Royal Dutch Shell is leading three Asian firms in rolling out plans for by far the largest of the projects to export LNG from British Columbia.

The newly titled LNG Canada venture, carrying an estimated cost of C$12.3 billion, is tentatively scheduled for startup late this decade, with initial capacity of 12 million metric tons a year of capacity.

That target easily outstrips the Apache-operated Kitimat LNG project at 5 million metric tons a year and the BC LNG Export Cooperative at 1.8 million metric tons a year — the only two proposals that currently have 20-year export permits from Canada's National Energy Board.

Mitchelmore said Shell does not believe that even China, which owns huge gas resources, will be able to develop those supplies fast enough to meet its demand.

With Korea Gas Corp. (Kogas), Mitsubishi and PetroChina each holding 20 percent stakes, LNG Canada is now in the final stages of engineering work, preparing for environmental assessments and consulting with various stakeholders.

The plans set the stage for the British Columbia government of Premier Christy Clark to have three

see **SHELL LNG** *page 17*

contents

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ON THE COVER

ENVIRONMENT & SAFETY

EXPLORATION & PRODUCTION

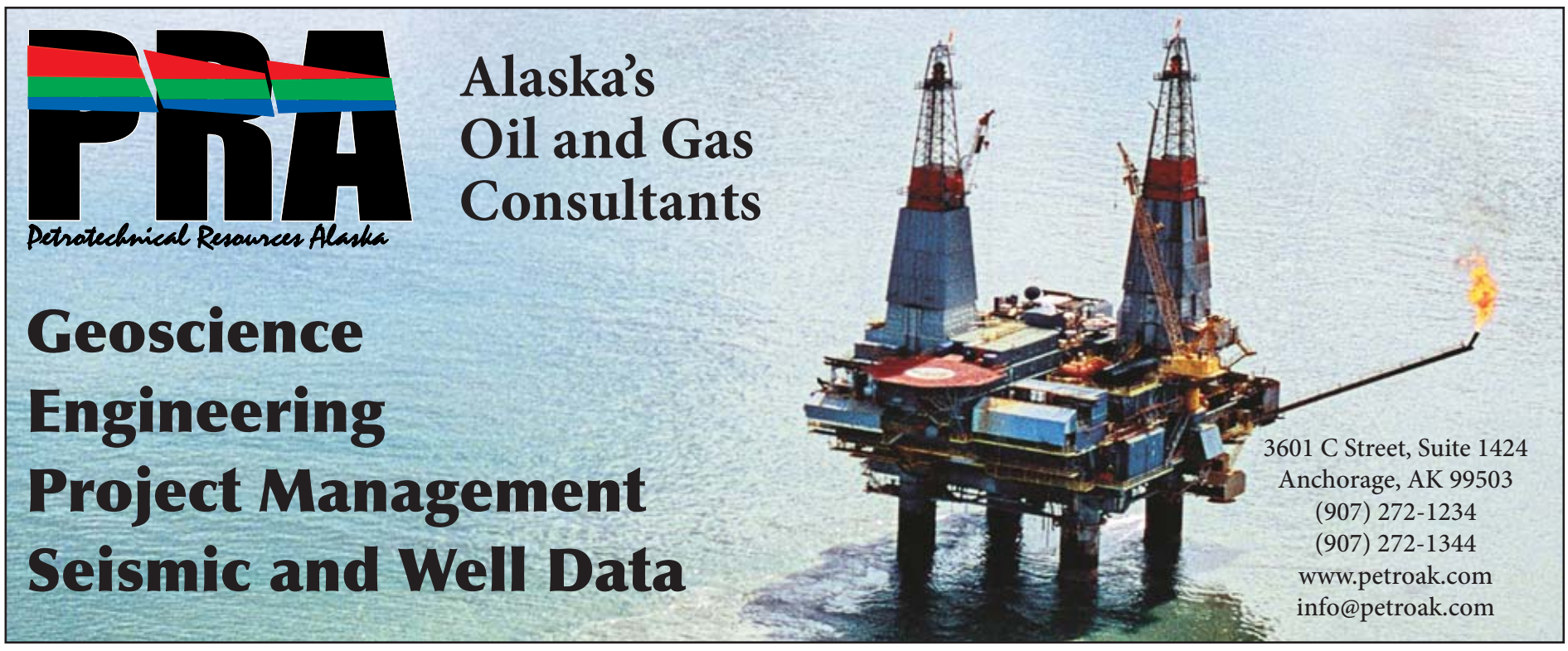
FINANCE & ECONOMY

GOVERNMENT

LAND & LEASING

NATURAL GAS

PIPELINES & DOWNSTREAM



GOVERNMENT

BSEE working on new BOP regulations

Agency holds meeting with government, operator, drilling company, manufacturer participation to gather data on blowout preventers

By KRISTEN NELSON
Petroleum News

The U.S. Department of the Interior's Bureau of Safety and Environmental Enforcement, BSEE, held a technical forum May 22 on next-generation blowout preventer and control systems. The forum's five panels included representatives from government, industry, trade associations, equipment manufacturers, consultants, training companies and blowout preventer, or BOP, monitoring companies.

1 2 3 SERIES

Interior said in a statement that the purpose was to allow industry and other stakeholders an opportunity to provide input and feedback to BSEE on additional steps the agency may take to increase BOP safety. The department said that during the past two years BSEE has already taken steps to improve testing and certification requirements for blowout preventers.

The changes come as a result of the failure of the BOP on the Deepwater Horizon semi-submersible drilling rig to seal a subsea well at the Macondo prospect in the Gulf of Mexico in April of 2010, resulting in 11 deaths in a fire and explosion which destroyed the rig and led to the worst offshore oil spill in U.S. history.

The forum began with overviews by administration officials. A summary of those presentations follows. Information from the forum is available on BSEE's website at www.bsee.gov and will be the subject of stories in Petroleum News in June.

Back in business

Secretary of the Interior Ken Salazar called the forum an attempt to move forward on what should be done with the next generation of blowout preventers. He said today, little more than two years after the beginning of the spill, the Gulf of Mexico is back with production and exploration.

There was a six-month pause, he said, but statistics demonstrate that the Gulf is back, with about a third of all domestic oil coming from the Gulf of Mexico today and rigs at a higher number on average than during 2009.


ALAN BAILEY
KEN SALAZAR

The permitting program is moving forward, he said, with 67 deepwater permits issued in the last 12 months. There was a record Gulf lease sale in December and another sale is scheduled for June, Salazar said.

As a result of discussions with Mexico, they are following the protocols developed in the U.S., which is important because Mexico will move into deepwater drilling, he said.

Salazar said he wants to make sure that the lessons from the Deepwater Horizon and Macondo are not forgotten.

He said "we can never be cautious enough," and noted that before Macondo people thought "we were safe" in the Gulf of Mexico, but that spill did happen and he said Interior wants to make sure it doesn't happen again — and if it does, that "we're ready to move in quickly."

Rulemaking

Deputy Secretary of the Interior David Hayes said the forum was being held because Interior wants help from stakeholders in putting together the best proposal for a new regulation for BOPs. He said Interior had planned to do an advanced notice of rulemaking for new BOP regulations, but it would have taken many months to get to a proposed rule.

Hayes said Interior has a good idea of where it wants to go with BOP regulations based on the National Academy of Engineering report on Macondo, which along with the joint investigative report pointed to some serious issues with the BOP at Macondo.

He said Interior is looking for at least four things in regulations: a BOP needs to be able to cut and seal the drill pipe; better maintenance is needed; better sensors are needed to show what's happening at the wellhead; and everyone working with a BOP needs to be fully and properly trained.

Safety at all levels

BSEE Director Jim Watson, who was the U.S. Coast Guard on scene coordinator for the Macondo response, said he wants safety at all levels and at all times — from the bottom of the well to the top of the derrick. The BSEE mission, he said, is to ensure integrity from the depths to the delivery point of hydrocarbons back on shore, and at all levels of organizations.

Watson said new BOP requirements to date include third-party verification that blind-shear rams and BOP stacks will work in accordance with regulations, American Petroleum Institute standards and best practices; requirements for subsea secondary intervention with ROVs, remote operated vehicles; a bottom hole test of the blind shear rams; crew training requirements; and qualifications for third-parties the companies use.

BSEE has also put into place rules for drilling safety and workplace safety; focused on oil spill response plans and well containment; and will complete the final drilling safety rule and safety management systems rule in the coming year.

For the BOP rulemaking, Watson said BSEE will put out a notice of proposed rulemaking based on input from the forum and input the agency has already received from experts in industry and government.

BSEE will also be looking at risks on the production side and at life-cycle analysis — that's the "all-times" piece of the requirements, he said, with a proposed rule on production safety systems and lifecycle analysis to be out in the next year.

see **BOP REGS** *page 14*

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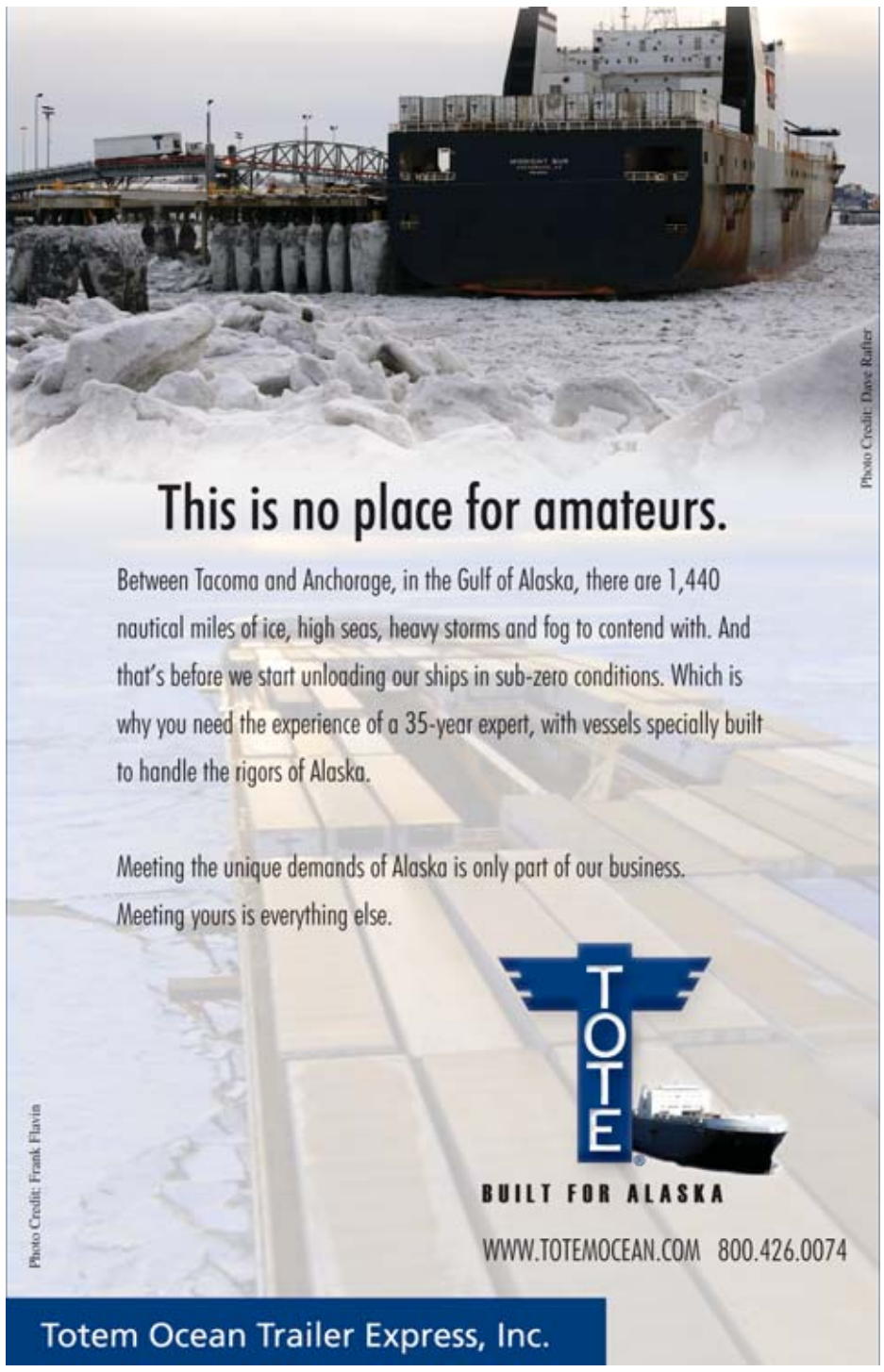

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● GOVERNMENT

Petroleum's political rift

Federal, provincial NDP leaders drive wedge into energy debate; attack oil sands, pipelines; blame industry for manufacturing woes

By GARY PARK
For Petroleum News

The federal and provincial versions of the left-wing New Democratic Party have been seen as Canada's social conscience over many decades, occasionally and often only fleetingly holding power in British Columbia, Saskatchewan, Manitoba and Ontario.

In these erratic political times, voters have abandoned traditional parties in droves, giving the NDP unimagined standings in the national polls, although the next Canadian election is three years away, and setting it up to topple British Columbia Premier Christy Clark's Liberals a year from now.

The result is deep unease within the petroleum industry and the producing provinces to the point where some have renamed the NDP as No Damned Petroleum.

The NDP's newly installed leader Thomas Mulcair, who comes from Quebec, has wasted no time chastising the industry's environmental record, accusing Canada and Alberta of acting like Nigeria in failing to regulate greenhouse gas emissions.

He has also aligned with Ontario Premier Dalton McGuinty, leader of the most populous, industrialized province, in attaching the label of Dutch Disease on Canada's petro-infused currency, which has climbed 55 percent against the U.S. dollar in the past decade.

(The term was coined in 1977 to describe the decline in the Netherlands' manufacturing sector after the discovery of offshore natural gas in 1959 and now refers to any development which results in a large inflow of foreign currency, undermining the competitiveness of a manufacturing sector.)

Mulcair has complained that the muscular Canadian dollar has "hollowed out the manufacturing sector," costing 500,000 jobs.

"The Canadian dollar is being held artificially high, which is fine if you're going to Walt Disney World, but not so good if you want to sell your manufactured goods because the American clients can no longer afford to buy it," he said.

Challenge to pipeline projects

In portraying Western Canada's increasingly powerful resource sector as bad for Canada's economic health, Mulcair and the federal NDP are posing a thinly disguised threat to the oil sands, aided and abetted by the British Columbia NDP under Adrian Dix.

The provincial leader has assembled a legal team to explore ways of blocking Enbridge's Northern Gateway project and Kinder Morgan's proposed expansion of its Trans Mountain system, even though the core approvals are under federal, not provincial jurisdiction.

"Obviously interprovincial pipelines are in federal jurisdiction, but there may be options for the province and we'll have to consider those," he said.

He said the lawyers will examine various legalities surrounding the project to export oil sands crude to Asia, including the plan by Canadian Prime Minister Stephen Harper to shorten the current environmental review of Northern Gateway, or accelerate approval of the Trans Mountain expansion.

Dix said he wants to know whether the Canadian government is fulfilling a commitment in 2010 to ensure that a federal environmental process would be equivalent to one conducted by a British Columbia government.

He said it is not in the interests of either "the environment or economic development, or First Nations issues," if the Harper government interferes with the review process.

Oliver: NDP plans 'unfortunate'

Canadian Natural Resources Minister Joe Oliver, while avoiding a question on whether Dix as premier would have the authority to block Northern Gateway, said both the federal and provincial wings of the NDP are making a mistake in opposing projects that are in Canada's national interest.

"I think it's unfortunate that some oppo-

see **POLITICAL RIFT** *page 6*

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ENVIRONMENT & SAFETY

When oil and fishing industries meet

Anchorage economic consulting firm updates model to assess 'preemption impacts' to fisheries from OCS oil and gas development

By WESLEY LOY
For Petroleum News

The ocean is only so big. So what happens when one industry sets up shop in waters potentially valuable to another industry?

That was the question before Marcus Hartley and his colleagues at Northern Economics.

The Anchorage-based economic consulting firm recently updated a model for determining "preemption impacts" to fisheries from outer continental shelf oil and gas development.

Specifically, what is the displacement cost to the fishing industry when an offshore platform goes in?

Hartley spoke about the model at a May 22 meeting of the Anchorage Association for Energy Economics.

Lots of cells

The model was developed for the Bureau of Ocean Energy Management to assess impacts of five-year OCS leasing plans on fisheries along U.S. coasts.

Alaska has some of the nation's largest and richest seafood harvests, especially in the eastern Bering Sea. Key species include pollock, Pacific cod and king crab.

The modeling involved dividing the Exclusive Economic Zone — waters extending 200 nautical miles offshore — into cells of 100 square nautical miles, and correlating the annual value of fisheries.

Millions of scenarios were run to account for an unknown — the specific cells in which platforms might be installed.

Placement of a platform is assumed to be disruptive to some fishing operations, as the platforms need a buffer zone with a half-mile radius or more.

"The buffer zones must be large enough so that as vessels move around the buffer zone, their gear which trails behind does not get tangled in the platform or its rigging," Hartley's presentation said.

Startling result

The model indicates that the preemption impacts to commercial fisheries in terms of harvesting revenue are very small. In Alaska, the annual impact is from $0 to $260 per platform.

Fishing generally occurs in "hot spots," Hartley said, and the probability of platforms going into these hot spots is low. But if they did, the loss of fishing grounds could be far more costly to the seafood industry.

But this is the average cost impact across vast planning areas, large portions of which never see fishing boats.

Fishing generally occurs in "hot spots," Hartley said, and the probability of platforms going into these hot spots is low. But if they did, the loss of fishing grounds could be far more costly to the seafood industry.

Fishermen do have ways to mitigate impacts from oil and gas operations. They can move into other areas to fish, for instance. And harvesters in some places, such as the Gulf of Mexico, have found that oil and gas installations make for fine fishing, Hartley noted.

Alaska has some oil and gas platforms in Cook Inlet, but none have been installed around the Gulf of Alaska or in the Bering Sea and Aleutian Islands. No commercial fisheries occur in the federal waters of the Arctic Ocean.

Shell has talked of potentially installing platforms to produce natural gas from the North Aleutian basin, which takes in Bristol Bay, the state's most valuable fishing area. But the government has no immediate leasing plans for the basin.

Hartley said he believes the value of the model isn't so much its prediction of low preemption costs to fisheries. Rather, the fishery data that went into the model can be highly informative to the Bureau of Ocean Energy Management.

Precise data can help the agency assess highly productive fishing areas and maybe preclude oil and gas lease sales in those areas, Hartley said. ●

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● GOVERNMENT

New Brunswick sets fracking rules

Objectives: North America's strongest regulations; revenues to ease debt load; royalties raised from 10% to 40%; will be shared

By GARY PARK
For Petroleum News

The Canadian province of New Brunswick has removed uncertainty hanging over the development of its unconventional natural gas resources by unveiling new rules for hydraulic fracturing, while raising its royalties.

Premier David Alward said his government has a two-pronged objective: The strongest shale gas exploration regulations in North America and revenues from its natural resources to ease the debt load on the province of almost 1 million.

The plan, introduced in the provincial legislature by Natural Resources Minister Bruce Northrup and Environment Minister Bruce Fitch, includes a hike in oil and gas royalties to 40 percent from 10 percent.

Those revenues will go into a profit-sharing agreement with local landowners and companies, with landowners receiving 0.5 percent, while municipalities and local service districts within a 25-kilometer radius of producing wells qualifying for 2 percent.

Maximum fines raised

Maximum fines for companies violating laws governing the industry will be raised to C$1 million from C$10,400, with the Department of Natural Resources being authorized to levy the fines directly rather than going through a court process.

Northrup told the legislature the current system is "too slow and not a good use of our time."

New Brunswick has been under mounting pressure over the past year from individuals and organizations who are concerned about the use of fresh water for fracking and the treatment of waste water.

In addition to mandatory pre- and post-seismic testing and drilling regulations announced last year, New Brunswick plans to impose new surface water and groundwater monitoring requirements.

Fitch said "not one hole will be drilled without a thorough review (by his department)."

He said operators will be required to look for ways to use waste rather than fresh water, while the use of open pits for handling drilling fluids will be banned.

Separately, the Department of Health is developing ways to assess the health impact of shale gas development.

Windsor plans to drill in 2013

Calgary-based junior explorer Windsor Energy hopes to obtain government approval to start drilling in 2013, said Chief Executive Officer Khalid Amin.

Northrup announced in April that he had converted Windsor's three-year license, including a commitment to spend C$4.5 million over the term, to a five-year lease that will expire in November 2013.

The company is exploring for oil and natural gas in the Sussex-Hampton-Quispamsis area and is currently analyzing seismic data to assemble a drilling program.

Windsor started seismic testing in 2011 before receiving permission from the local town council, but the Royal Canadian Mounted Police laid no charges and Northrup said a "grey area" that was exposed during the controversy has been removed.

Windsor could have been fined as much as C$5,200, but, under the new regulations, would face a possible penalty of C$500,000. ●

Contact Gary Park through publisher@petroleumnews.com

continued from page 4

POLITICAL RIFT

sition parties and certain other groups want to stand in the way of responsible resource development, hundreds of thousands of jobs, or billions of dollars of economic activity for this country," he said.

Amid comments that Mulcair is attempting to divide Canada, rallying Ontario and Quebec to improve the NDP's chances of winning the next federal election by blaming Western Canada for Central Canada's misfortunes, the western provincial premiers have been quick to condemn Mulcair's stand.

"Here is someone who wants to be the national leader, who, for the sake of politics, would risk the economic advantage of Canada," said Saskatchewan Premier Brad Wall.

Redford: comments 'divisive'

Alberta Premier Alison Redford, who has been advocating a national energy strategy to build greater cross-Canada cooperation, described Mulcair's comments as "divisive, ill-informed and false. The fact of the matter is that the energy industry supports jobs right across the country."

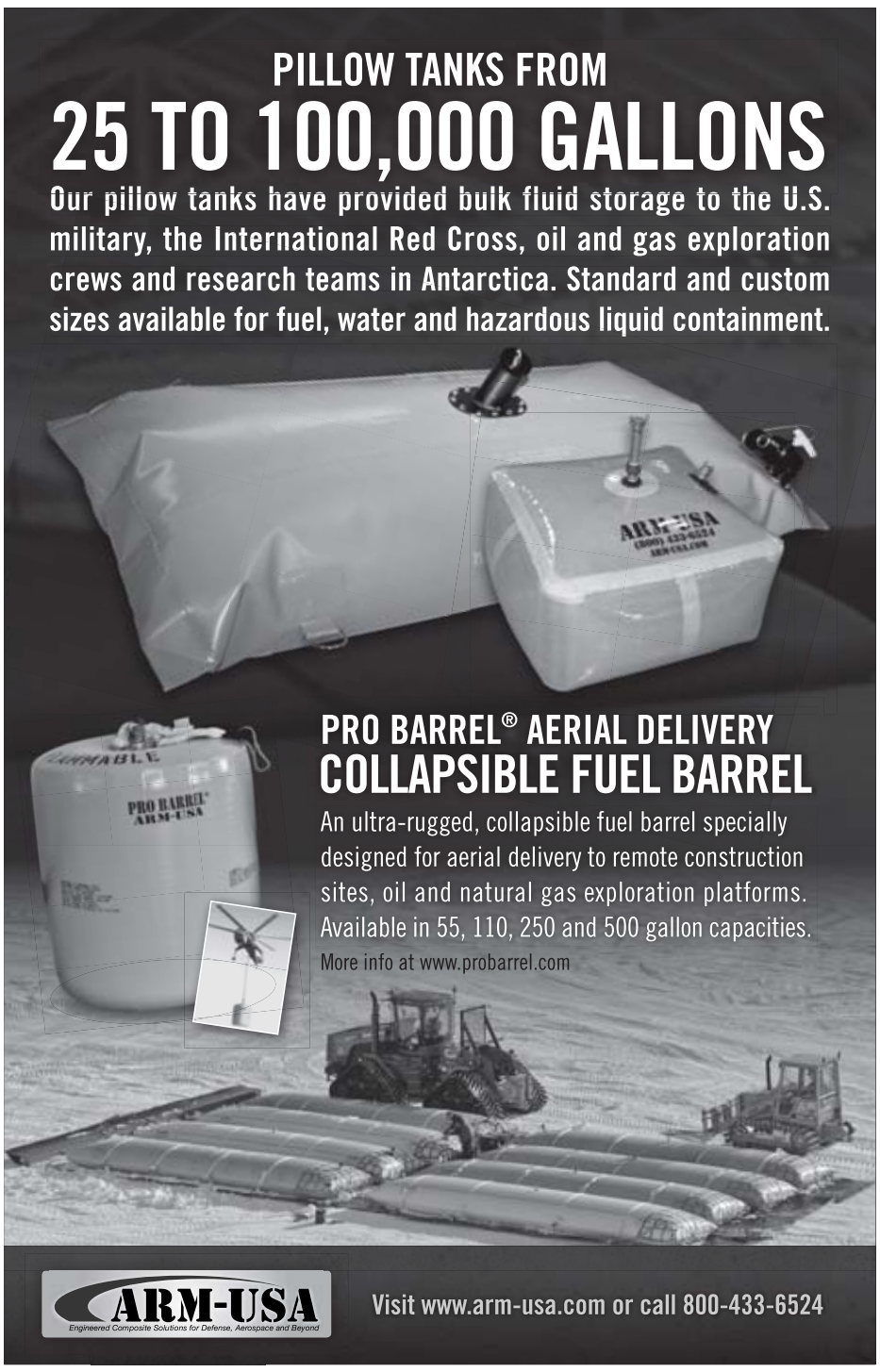
Federal Heritage Minister James Moore, speaking for Harper, said Mulcair "should be ashamed of himself for attacking the West, dividing our country and not even having visited the places he is attacking. It is unconscionable for someone who wants to be prime minister to be so utterly irresponsible."

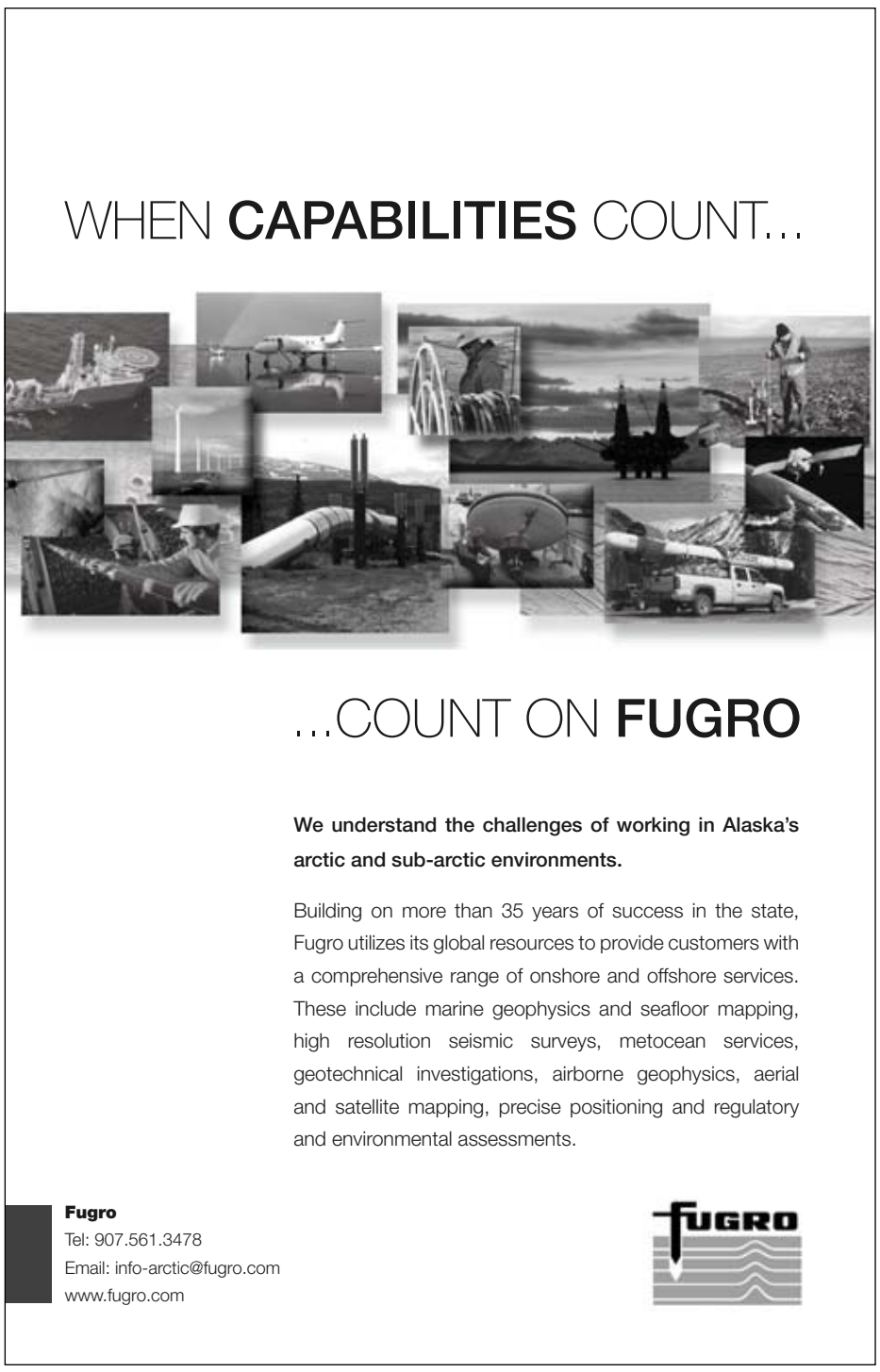
Federal Liberal leader Bob Rae, a former NDP premier of Ontario, said Mulcair has failed to demonstrate a deep appreciation of how sensitive the issued he has raised are in a national debate.

"Westerners are very proud, and rightly so, of the fact that Canada's economy is now developing in their part of the world," he said.

How chilly the mood has become will be put to the test May 30 and 31 when Mulcair is scheduled to visit Alberta, including an expected stop — his first — at the oil sands. ●

Contact Gary Park through publisher@petroleumnews.com





EXPLORATION & PRODUCTION

‘A million and a half pounds of steel’

Cook Inlet Energy continues assembly of its new rig atop Osprey platform; firm secures permit to drill onshore Otter gas prospect

By WESLEY LOY
For Petroleum News

Cook Inlet Energy LLC has a busy summer coming up.

The Anchorage-based company is close to finishing installation of a new drilling rig atop its Osprey offshore platform.

And it’s about to put its newly overhauled land rig to work drilling an exploratory well on its Otter natural gas prospect on the inlet’s west side.

Cook Inlet Energy is a subsidiary of Miller Energy Resources, a publicly traded independent based in Huntsville, Tenn.

COURTESY COOK INLET ENERGY

The new rig being assembled atop the Osprey platform.

Heavy lifting

David Hall, Cook Inlet Energy chief executive, told Petroleum News in a May 21 interview that assembly of the company’s new Rig 35 is “coming together quite nicely.”

Setting up the rig on the Osprey platform has been a major undertaking.

“It’s over a million and a half pounds of steel,” Hall said.

Voorhees Equipment and Consulting Inc. fashioned the $19.5 million rig in Houston. It’s a 2,000-horsepower National 1320 model.

A Voorhees crew is assembling the rig with the help of some local contractors, Hall said.

All the rig components are on the platform, and the derrick is up. Full assembly will take “a few weeks” to complete, he said, and the rig is subject to an Alaska Oil and Gas Conservation Commission inspection.

Cook Inlet Energy is having a third-party safety audit done, which should speed up the AOGCC process, Hall said.

Once the rig passes inspection, he said, “we’ll immediately put it to work.”

Series of workovers planned

Osprey is the newest and southernmost of the 16 platforms in Cook Inlet. It sits in the Redoubt unit.

It was in “lighthouse mode” and in danger of becoming a ward of the state when Cook Inlet Energy acquired the platform in late 2009. Its previous operator, Pacific Energy Resources Ltd., had filed for bankruptcy.

The first order of business for the new rig will be to swap out the electric submersible pump, or ESP, in the RU-1 well, which currently is shut-in.

After that, the rig will tackle a series of sidetracks to bring four more idle wells back onstream. These wells have problems such as collapsed casings, Hall said. A sidetrack is a secondary wellbore drilled to go around an unusable section of the original wellbore.

At present, only one well, the RU-7, is producing on Osprey.

“It’s a little trooper,” Hall said, producing 230 barrels of oil equivalent per day. And that’s with the company operating the well conservatively, running the ESP at minimum speed.

The Otter prospect

The AOGCC on May 11 approved an exploratory drilling permit for the Otter No. 1 well.

The Otter prospect is northwest of the Beluga gas field on the west side of Cook Inlet.

“It’s a nice prospect,” Hall said. “It’s one we’ve been eying for a while.”

Cook Inlet Energy plans to use its Rig 34 on the Otter well. It’s a truck-mounted Atlas Copco RD20 model the company heavily modified to accommodate a blowout preventer underneath. The rig also has eight add-on modules to house the mud system and other equipment.

The rig is designed for rapid mobilization and demobilization, Hall said.

The Otter No. 1 will be a vertical well to a planned total depth of 7,000 feet, he said.

At the state’s May 16 Cook Inlet areawide lease sale, Cook Inlet Energy put down $2.72 million in winning bids on 74,880 acres.

Aside from the Redoubt unit, the company also operates the West McArthur River oil field. It also holds three state exploration licenses covering about 580,147 acres in the Susitna basin north of Cook Inlet.

Cook Inlet Energy has total oil production of a little over 1,000 barrels per day. ●

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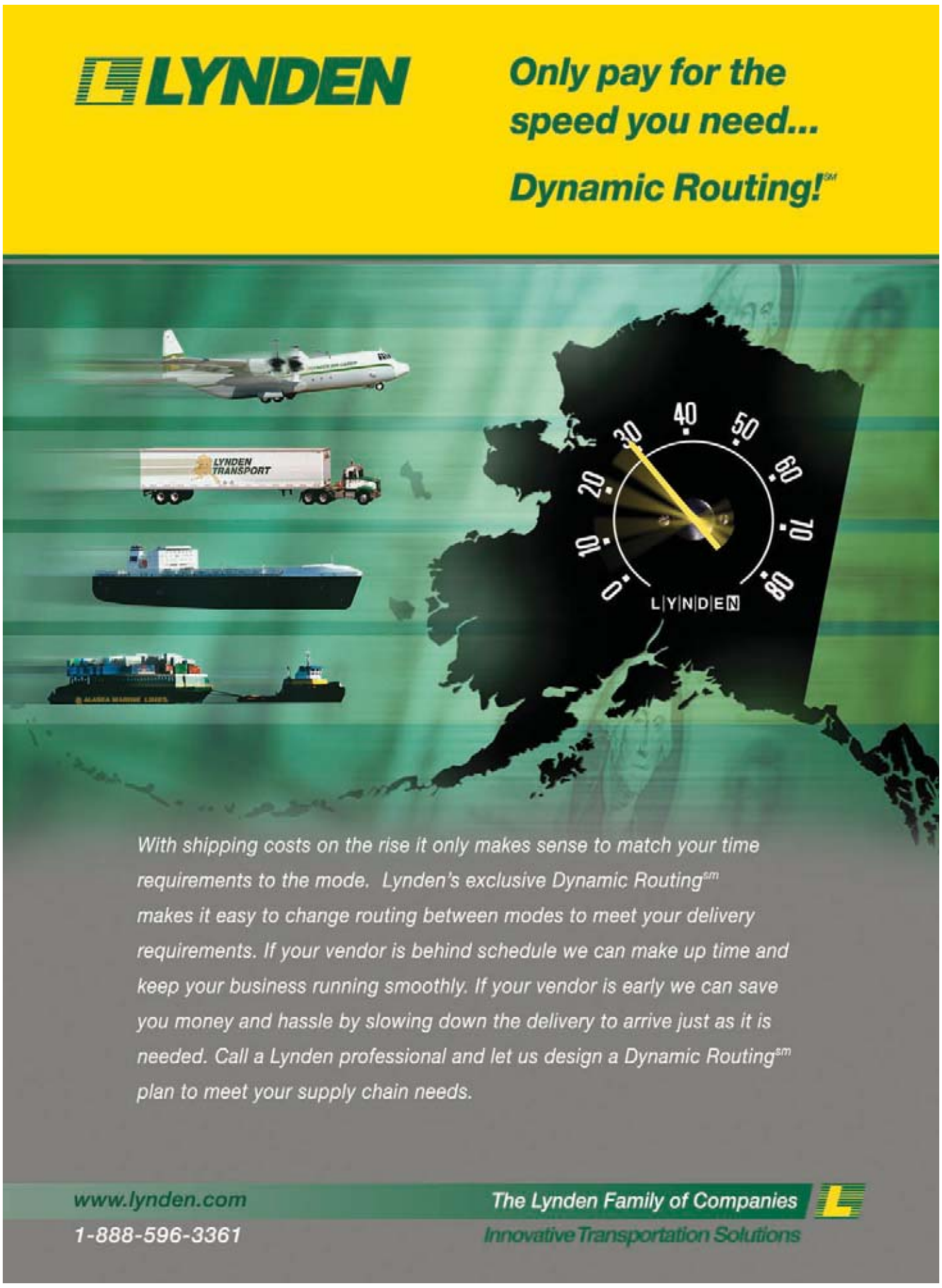

ENVIRONMENT & SAFETY

Researchers document methane seeps

Find and measure methane bubbling into atmosphere in Alaska and Greenland as permafrost and glaciers melt with global warming

By ALAN BAILEY
Petroleum News

A team of university researchers has published evidence of the widespread seepage of methane in areas where the permafrost and glaciers are retreating as a result of global warming.

In a recent paper, published in Nature Geoscience, team members Katey Walter Anthony, Peter Anthony and Guido Grosse from the University of Alaska Fairbanks, and Jeffrey Chanton from Florida State University say that, although people have theorized about methane seepage in northern latitudes, this new research presents for the first time clear evidence that this phenomenon is taking place.

KATEY WALTER ANTHONY, UNIVERSITY OF ALASKA FAIRBANKS

A methane-induced melt-hole on a frozen lake in the Brooks Range in Alaska photographed in April 2011.

Trapped under ice

In northern regions methane from natural gas deposits, coal beds and decomposing organic material can become trapped under impermeable ice-saturated ground or glaciers. In some cases the gas combines with ice to form solid gas hydrate material. People have speculated that the melting of ice and the disassociation of hydrates under warming temperatures would release the trapped methane into the atmosphere.

Methane, the main component of natural gas, is a potent greenhouse gas with a significantly stronger greenhouse impact than carbon dioxide. Scientists worry that the increased release of naturally occurring methane as ice retreats and the land thaws in Arctic and sub-Arctic regions could accelerate overall global warming.

To test theories about methane seepage the research team conducted a series of aerial surveys in Alaska from 2008 to 2010 during winter conditions, when the land and lakes were frozen. The surveys, covering a north-south transect from the Beaufort Sea coast to Cook Inlet, involved observing about 6,700 frozen lakes within a total land area of 11,260 square kilometers. Using direct observations from the aircraft and by examining photographs taken from the air, the team counted the number of open holes in frozen water, with these holes providing evidence of methane bubbling up through the water.

Ground truthing

Ground expeditions visited 50 of 77 sites observed from the air and identified to be probable seeps. This "ground truthing" verified the existence of methane seeps at the observed ice holes and enabled measurements of the rate of methane escape.

The team also visited eight of the observed methane emission sites during the summer, to measure smaller seeps that were invisible during the winter. The team was then able to extrapolate to other seep sites the likely emissions from these smaller seeps by assuming a consistent ratio of small-scale to large-scale seeps across the state.

The team also measured the chemical and isotope composition of the gas bubbling from the seeps to assess whether the methane originated from the relatively recent decomposition of organic material or whether the methane was older, coming from coal seams or subsurface natural gas accumulations. It turned out that the larger seeps tend to consist of the older methane. And the seeps tend to be associated with underlying sedimentary basins.

Overall, the team mapped more than 150,000 seeps in Alaska.

Different regions

In northern Alaska, a region characterized by continuous permafrost, the seeps were found to be particularly associated with low lying areas beneath lakes or near rivers, where thawing is likely to be most rapid. In Interior Alaska, typified by more discontinuous permafrost, seeps were less common and tended to occur along the boundaries between continuous and discontinuous permafrost. In Southcentral Alaska, a region that had once been glaciated but now has relatively little permafrost, the seeps tend to be associated with recent geologic faults — the faults probably formed as a result of the loss of an earlier glaciation-related ice load and presumably now act as conduits for methane to reach the surface.

The team also visited frozen lakes in Greenland, finding that younger methane seeps there are associated with the relatively recent retreat of the ice sheet.

The team used the data that it gathered in Alaska to estimate a total rate of methane emission from seeps in each of the three zones — northern Alaska, the Interior, and Southcentral — along the transect where the observations were made, and then for the whole of Alaska. And, using a recently published U.S. Geological Survey assessment of pan-Arctic oil and gas basins, the team inferred the potential methane emissions from the continuous permafrost zone around the entire Arctic.

Significant seepage

The bottom line?

There may be some 2 million metric tons of methane per year bubbling into the atmosphere from the regions of continuous permafrost around the Arctic, as the permafrost is disrupted by the warming climate. Across the whole of Alaska, including the more southerly portions of the state, there may be 1.5 million to 2 million metric tons per year escaping through seeps of various types, an estimated rate of methane emission 50 to 70 percent higher than previously thought.

If the results from Alaska and Greenland can be extrapolated to glaciated regions such as Siberia, the continuing degradation of the permafrost and glaciation will result in a very strong increase in the cycling of methane through the atmosphere, the research team concluded. ●

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● LAND & LEASING

BLM hears out public on NPR-A's fate

Interest groups push very different visions for how to manage vast Alaska North Slope petroleum reserve; comment deadline June 1

By WESLEY LOY
For Petroleum News

The Bureau of Land Management is scheduled to close out public comment June 1 on an unprecedented plan to guide management of the National Petroleum Reserve-Alaska.

Not surprisingly, visions differ sharply over how to handle the Maine-sized North Slope tract.

An Anchorage-based pro-development group favors making the entire reserve available to the oil and gas industry, while environmental organizations support a much more restrictive approach.

The BLM on March 29 announced the release of the "draft integrated activity plan and environmental impact statement" for the NPR-A, and set a June 1 deadline for submission of public comments.

Range of alternatives

The five-volume document proposes a range of alternative management strategies for the petroleum reserve.

"This plan is the first plan that covers the entire NPR-A, including BLM-managed lands in the southwest area of the NPR-A which were not included in previous plans," the BLM said March 29. "Decisions to be made as part of this plan include oil and gas leasing availability, surface protections, Wild and Scenic River recommendations and Special Area designations."

Two of the four alternatives are drawing the most interest, alternatives B and D.

"Alternative B describes future management that emphasizes the protection of the surface resources of NPR-A with substantial increases in areas designated as Special Areas, designation of extensive areas that would be unavailable for leasing around Teshekpuk Lake, in coastal bays and lagoons, and in the southwestern part of the Reserve with important caribou habitat and important primitive recreation values, and recommendation for designation of twelve Wild and Scenic Rivers, while still offering opportunities for oil and gas leasing on nearly half of the Reserve," the BLM said.

Former President Warren G. Harding set aside the reserve in 1923 for its oil and gas potential. It takes in nearly 23 million acres.

"Alternative D would allow BLM to offer all of the NPR-A for oil and gas leasing, while protecting surface values with a collection of protection measures."

'B is for birds'

The National Audubon Society favors alternative B, saying "B is for birds."

In a recent "action alert," the organization said alternative B "stands apart as the clear choice for conserving birds and habitat."

Audubon is highly interested in Teshekpuk Lake in the northeast portion of NPR-A. The lake is one of the state's largest inland water bodies and a summer mecca for migratory birds such as the Pacific black brant.

"For tens of thousands of geese, Teshekpuk Lake provides a critical safe haven when they are flightless during molt. Bird species that breed here migrate to places across the nation from coast to coast and to six continents. Some of the birds you see in your backyard may have been fledged in the Reserve!" Audubon's action alert said.

The oil and gas industry likewise has shown interest in the Teshekpuk area, which is proximate to the Beaufort Sea coast and a highly productive geologic feature, the Barrow Arch.

The Alaska Wilderness League, based in Washington, D.C., also is pushing alternative B. The organization said alternative B is the most balanced approach, allowing for future oil and gas development in some areas "while also safeguarding the special places that are key habitat areas that are vital to healthy wildlife populations in America's Arctic."

In years past, Audubon and the Alaska Wilderness League have been among groups suing the Interior Department to try to block oil and gas exploration in NPR-A.

The Chukchi corridor

President Barack Obama in May 2011 directed the Interior Department to conduct oil and gas lease sales annually in NPR-A.

Former President Warren G. Harding set aside the reserve in 1923 for its oil and gas potential. It takes in nearly 23 million acres.

To date, NPR-A has been a challenge for oil companies. Most of the exploration and discoveries have been in the northeast corner, closest to the existing infrastructure of the central North Slope oil fields.

The BLM says 29 wells have been drilled since 2000 in the petroleum reserve — 20 by ConocoPhillips, four by FEX, two by BP, two by Anadarko, and one by Total.

The ConocoPhillips-operated Alpine field is just east of the reserve. The company is planning an Alpine satellite field called CD-5, which will be the first development built in NPR-A.

In its own action alert, the Resource Development Council for Alaska urged people to encourage the BLM to adopt alternative D as its preferred alternative.

The council favors opening all of NPR-A's subsurface to oil and gas leasing, with protections for surface values.

These protections, however, must not block development of infrastructure to transport oil and gas from the Chukchi Sea to the trans-Alaska pipeline, the council said.

The BLM is aiming to render a record of decision in December. ●

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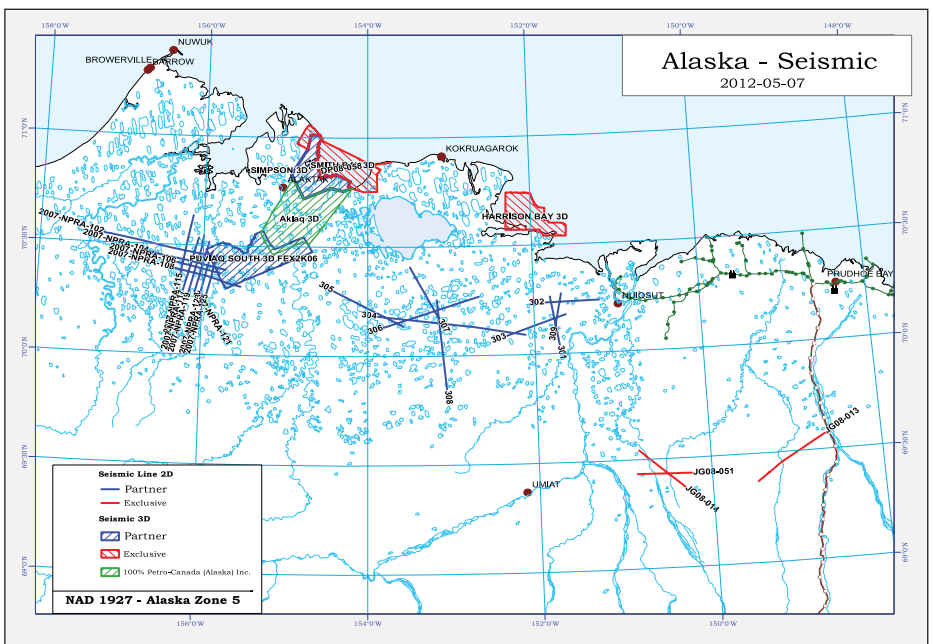

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- AKLAQ 3D (Vintage 2008) 749 sq km - Petro-Canada (Alaska) Inc. 100%

Northeast - NPR-A/Beaufort Sea
- 9 2D long offset seismic lines (2003) 295 km;
- HARRISON BAY 3D (2006) 365 sq km and ice acquisition test;

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

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● NATURAL GAS

LNG industry eyes US gas developments

FERC has granted export rights to Cheniere for up to 2.2 bcf per day of US-sourced liquefied natural gas to anywhere in the world

By BILL WHITE

Researcher/writer for the Office of the Federal Coordinator

The North American gas-price collapse caused by the shale-gas boom is simultaneously battering producers while exciting global buyers that some lower-cost liquefied natural gas might soon be available to them.

BILL WHITE

Those were takeaway messages from the World LNG Americas Summit held April 25-26 in San Antonio.

Delegates from across the United States and around the world tried to make sense of what is occurring in the North American natural gas industry.

They were foreign buyers eager to send a message that they wanted gas — at the right price and other terms.

They were sellers touting the advantages of today's low U.S. prices — while speculating hopefully that the advantages will remain for years.

They were consultants, analysts, executives at support firms, LNG terminal developers and others — eager to build business relationships and simply to learn more.

Casting an almost visible glow over the conference was an historic event that occurred just 10 days earlier: The Federal Energy Regulatory Commission granted permission for Cheniere Energy Inc. to build an LNG export plant at the company's mostly idle LNG import site at Sabine Pass, La. Last year Cheniere received Department of Energy authority to ship anywhere in the world up to 2.2 billion cubic feet a day of LNG made from U.S. production — only a much smaller LNG plant at Nikiski, Alaska, has a similar export right. Cheniere now is working to borrow up to $4 billion to get the $10 billion project going, with the first LNG load intended to sail for market in late 2015 or early 2016.

OFFICE OF THE FEDERAL COORDINATOR

LNG storage tanks at Cheniere Energy's Sabine Pass, La., site.

Other LNG-export applications are pending with the U.S. and Canadian governments, totaling perhaps 17 bcf a day. But most panelists figured only 5 bcf to 6 bcf a day of North American LNG exports actually will begin in the next decade — enough to supply 15 to 20 percent of current world LNG demand.

With U.S. gas production growing faster than demand, prices have collapsed, trading in early May at about $2.30 per thousand cubic feet, the lowest sustained level since the 1990s. With Asian LNG prices of $14 to $16, and European prices of $9 to $12, entrepreneurs see opportunity to make money, even if it costs $5 to $6 to liquefy the U.S. methane and ship it overseas.

Buyers eager for North American exports

"LNG from North America is one of the great possibilities," said Atsushi Saiganji, a U.S.-based executive with Tokyo Gas Co.

Saiganji said Tokyo Gas bought about 530 bcf of natural gas last year and expects to want 775 bcf in 2020, with the extra gas needed mostly for power generation and industrial use.

LNG prices in Japan are linked to — and rise and fall with — oil prices. Japan consumers increasingly are restive for relief from today's near-record high prices, he said. Because North American natural gas prices are unconnected to world oil prices, LNG exports from there could provide that price relief while also diversifying Tokyo Gas' fuel supply.

To secure future supplies, Tokyo Gas has invested in British Columbia shale-gas plays and wants development of LNG exports from Canada's west coast, Saiganji said.

Several speakers priced out North American LNG delivered at $8 to $10 per million Btu (about a thousand cubic feet) in Asia markets, factoring in today's low price for U.S. gas — well below prevailing prices in Asia. Davis Thames, president of Cheniere Marketing, estimated that even if U.S. gas prices jump to $6, his company's Sabine Pass LNG would cost $12.90 in Asia — a price that would be competitive there if oil prices are $86 a barrel or higher.

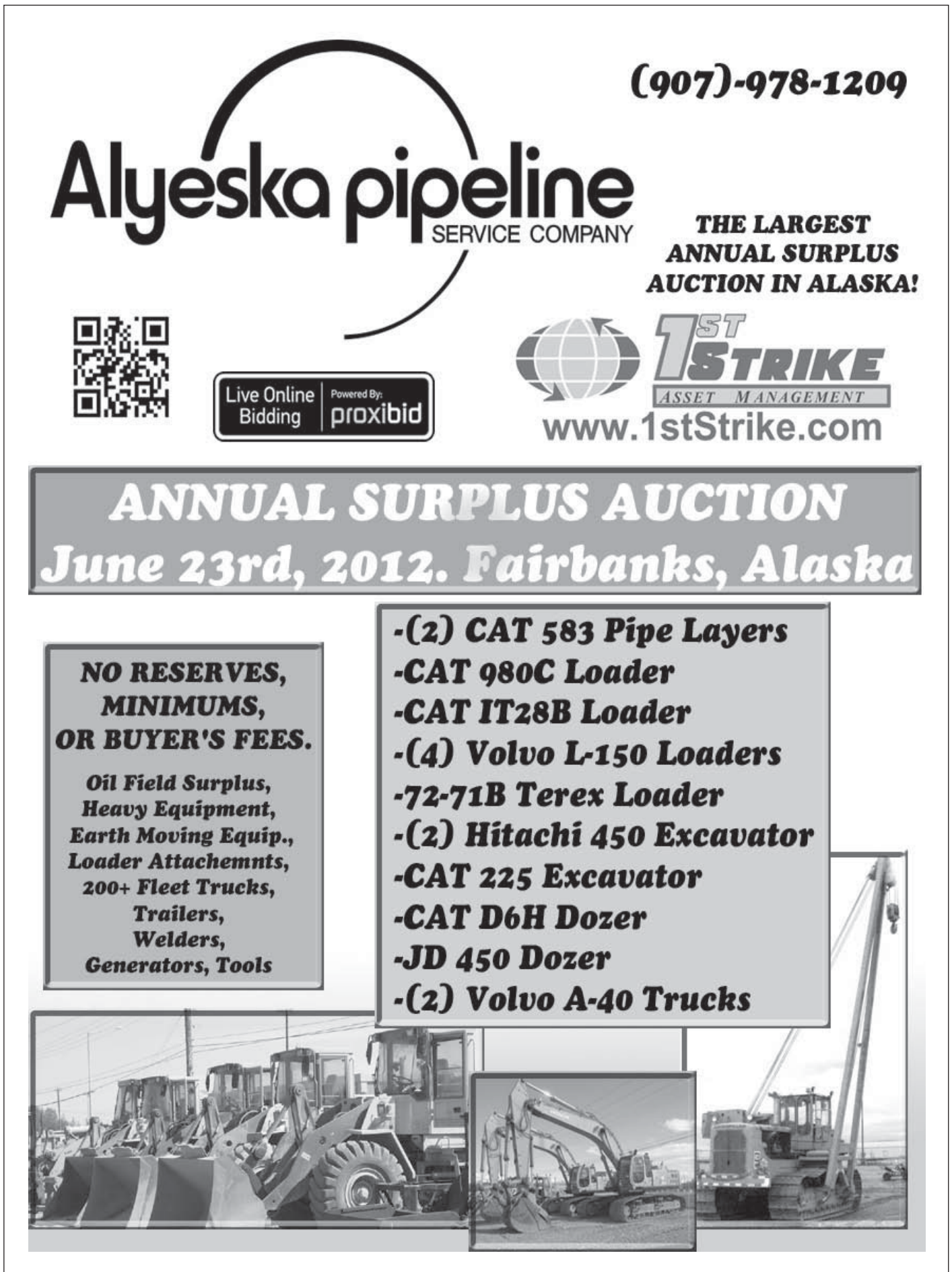
Shigeki Sakamoto, a senior researcher on LNG for Japan Oil, Gas and Metals National Corp., said that with little or no gas production of their own, and a growing demand for fossil fuels, Japan, South Korea and Taiwan crave stable, secure supplies of LNG. That desire supports the emergence of new suppliers, such as North America, East Africa and Australia, he said.

Australia is amid an LNG building binge. Its LNG market share in Japan is projected to grow from 18 percent last year to 43 percent in 2020. Australia's inroads with South Korea should grow from a 2 percent market share last year to 40 percent in 2020, Sakamoto said.

Desire for high-Btu gas

Both Sakamoto and Saiganji noted that most Japanese buyers want high-Btu gas — methane spiked with such gas liquids as propane, ethane and butane — rather than straight liquefied methane, which Cheniere plans to make at Sabine Pass. But if prices and other terms are right, the North American gas will find buyers that will spike the methane them-

see LNG INDUSTRY page 11



continued from page 10

LNG INDUSTRY

selves if necessary.

One of the first companies to contract for Sabine Pass LNG is GAIL (India) Ltd. Prabhat Singh, marketing director for GAIL, also noted the interest of Indian gas buyers to purchase North American LNG to weaken the oil-linked prices that dominate Asia. GAIL committed to buying about 170 bcf annually for 20 years from Sabine Pass.

Singh said India's appetite for natural gas is growing at 13 percent a year, which would cause consumption to triple in 10 years. GAIL bought a stake in the Eagle Ford shale play in southeast Texas last September and looks to spend $1 billion in shale-gas assets over the next year, mostly in the United States and Canada, he said. Other Indian firms have invested in Eagle Ford as well as the Marcellus play in the U.S. northeast.

Several speakers from South America — Argentina, Uruguay and Chile — also said they hope U.S. LNG exports will offer them lower prices as their growing economies expand demand for natural gas.

Christopher Goncalves, vice president of energy consultant Charles River Associates, predicted that current U.S. gas prices will rise, and current Asian LNG prices will fall, possibly in response to availability of U.S. gas on global markets. Even so, he said, he projected that the price spread between U.S. and Asia gas prices will shrink to perhaps $5 to $10 — still enough to support North American LNG exports after adding liquefaction and shipping costs. (Goncalves cautioned his forecast could go awry if he's wrong about the strength of Asian demand growth, how much nuclear power will restart in Japan after that nation's Fukushima tsunami disaster last year, when new Australian LNG plants start up as well as many other variables.)

Will global prices really change?

A couple of speakers doused cold water on the conference's love fest for North American LNG exports.

Yes, North American LNG could put a lower-cost supply on the global market.

Yes, it's interesting that Sabine Pass LNG customers include BG Group, a gas trader, and that other gas traders are tiptoeing into the business. Traders take shiploads of LNG and try to sell the cargo on spot markets or on short-term contracts.

Yes, new LNG tankers on order will help relieve the shortage of ships available. Thirty of the 72 tankers that will be christened by the end of 2015 are being built on spec, not committed long term to a route between an LNG plant and its customers, said Richard Pratt, vice president of Fearnley LNG, a Norway-based broker and consultant.

Because North American natural gas prices are unconnected to world oil prices, LNG exports from there could provide that price relief while also diversifying Tokyo Gas' fuel supply.

All of these developments help unsettle the LNG industry's traditional model of long-term contracts between LNG plants and fixed destinations.

But North American LNG exports will not change the world very much, the naysayers said.

John Fahy, managing director of Britain-based ERAS Consulting Ltd., said North American exports will merely elbow aside the world's highest-cost suppliers, providing little effect on global gas prices.

Keith Barnett, senior vice president of Asset Risk Management, a U.S.-based energy-pricing consultant and strategist, said North American exports won't move global prices because they'll account for maybe 5 percent of global gas trade. Exports might allow a couple of buyers to leverage some price break on their LNG supplies, but the overall market won't really be affected because of the small volumes involved, he said.

Low prices sting U.S. producers

Most speakers also discounted buzz that exports could inflate North American natural gas prices meaningfully by creating a new demand outside the country for the nation's gas production.

They shrugged off as alarmist the headlines from this year that Lower 48 wellhead prices could soar 50 percent in some scenarios if gas leaves U.S. shores.

Tom Choi, a Deloitte MarketPoint executive who has analyzed the U.S. price impact of exports, said shipping LNG from North American could raise prices only about 2 percent overall. That's about 12 cents per thousand cubic feet, an amount the market would barely notice.

Thames, the Cheniere Marketing president, ran through a virtual sales pitch on why exports would be good:

• A new industry that spawns thousands of jobs.

• A lower U.S. foreign-trade deficit.

• Shrunken demand for oil when gas is used to make fertilizer rather than oil-based naphtha.

• Exports would set a floor on low prices because shipments will rise when prices are down, while setting a ceiling on high prices because exports will fade if prices rise too much.

Then Thames took aim at a key critic of North American exports: the petrochemical industry, which wants to continue enjoying low prices for its feedstock. If exports occur, Thames reasoned, more gas wells will get drilled for methane, and in the process the drillers will find more ethane — the petrochemical feedstock.

Price too low to sustain industry

Thames, Choi and other speakers were in agreement that today's natural gas price is too low to sustain the industry.

The United States has suspended some $57 billion in gas production because the market price is too low, said Michelle Michot Foss, an energy economist at the University of Texas.

Gas producers need $6 per thousand cubic feet, she estimated. "It's a high volume, low-margin business."

A consensus emerged that the industry needs a price between $4 and $7 to ensure supply keeps pace with demand.

Goncalves of Charles River Associates sees robust demand for gas. He predicted that U.S. gas consumption could grow by 25 percent — or 15 bcf a day — within a decade. The electrical-power and chemical industries would want two-thirds of that extra gas, and LNG exports would comprise the rest, he estimated.

Lower 48 gas prices must rise if the industry is to supply that growth, and prices have bounced up in recent weeks. But U.S. production growth might be stalling. U.S. gas production fell in February. Drilling rigs are retreating from unprofitable methane plays to focus on oil and gas-liquids wells, Goncalves said. Leading producer Chesapeake Energy Corp. got 90 percent of its revenue from gas in 2009 but will get 60 percent from oil and gas liquids this year, he noted.

He showed the conference delegates a chart on the economic differences between liquids-rich "wet gas" shale plays and dry-gas shale plays (methane). A drilling stampede is occurring in the Eagle Ford wet-gas field of Texas, where net costs are $2 per million Btu of production. The wet-gas portion of the big Marcellus field costs $2.20.

But the dry-gas production from Marcellus costs $4 per million Btu of production. Other hot shale dry-gas fields of recent years similarly are squeezed by today's prices. Fayetteville in Arkansas costs $4.20 per million Btu of production; Barnett in Texas costs $4.50 and Haynesville in Louisiana costs $5.30.

Choi, the analyst from Deloitte MarketPoint, noted that production levels do respond to price. He said much of today's production glut was spurred ahead by the high U.S. prices of 2005-2008, when U.S. spot prices averaged $7.74 per million Btu.

Today's low prices will spark demand that will lift prices eventually, he said.

"The best cure for low prices is low prices, because they will stimulate demand," he said. ●

Editor's note: This is a reprint from the Office of the Federal Coordinator, Alaska Natural Gas Transportation Projects, online at www.arcticgas.gov/lng-industry-eyes-us-gas-developments.

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FINANCE & ECONOMY

Royale posts loss in first quarter

Royale Energy Inc. reported a $1.2 million loss in the first quarter, down from a gain of $76,853 during the first quarter of last year, because of falling production and prices.

The San Diego, Calif.-based independent sold 169 million cubic feet during the first quarter at $2.63 per thousand cubic feet after selling 342 million cubic feet during the first quarter of 2011 at $4.04 per mcf, the company reported in year-end financial filings on May 15.

The San Diego, Calif.-based independent sold 169 million cubic feet during the first quarter at $2.63 per thousand cubic feet after selling 342 million cubic feet during the first quarter of 2011 at $4.04 per mcf, the company reported in year-end financial filings on May 15.

Although the company lost on natural gas during the quarter, it doesn't plan to abandon the fuel as it begins its search for shale oil in Alaska. "We are committed to natural gas' long-term potential," Co-CEO Stephen Hosmer said. "I do not believe present market conditions correctly reflect the future value attributed to developing our natural gas reserves. Yes, we have added oil to our mix by acquiring of the Alaska prospect, but we will not sacrifice the future by deferring the development of this important seismic data."

Royale spent $359,000 during the quarter on a seismic shoot in California.

Royale remains "encouraged" about Alaska, though, saying that the test well planned by fellow Alaska shale prospectors Great Bear Petroleum LLC and Halliburton "is expected to further confirm the prospectivity of Royale's acreage" in the Shublik formation.

—ERIC LIDJI

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• FINANCE & ECONOMY

Oil near $92 on snag in Iran nuclear talks

Crude price down 15% from early May on dropping expectations for economic growth, oil demand; May 23 price lowest since October

By PABLO GORONDI
Associated Press

Oil prices rose to near $92 a barrel May 24 as negotiations between six world powers and Iran about its nuclear program appeared to be stalling.

By early afternoon in Europe, benchmark oil for July delivery was up 89 cents to $90.79 a barrel in electronic trading on the New York Mercantile Exchange. On May 23, the contract fell $1.95 to settle at $89.90, the lowest since Oct. 21.

In London, Brent crude for July delivery was up 52 cents at $106.08 per barrel on the ICE Futures exchange.

Iran has rejected proposals by six world powers to curb its nuclear program, while demanding answers to its own counteroffer meant to alleviate concerns about its ability to build atomic weapons. Still, the negotiations did not appear in danger of collapse as envoys convened again in Baghdad. The talks were expected to wrap up later May 24.

Earlier this year, tensions with Iran, OPEC's second-largest producer, drove up oil prices.

The U.S. and Europe have imposed sanctions against Iran's oil exports, but some analysts say Iran may be allowed to keep exporting oil this year while it negotiates about its nuclear program.

"If the sanctions were to be fully enforced, up to 1 million barrels per day could be affected," said a report from Commerzbank in Frankfurt.

Crude plunged

Crude has plunged about 15 percent from $106 three weeks ago because economic growth and oil demand in Europe, the U.S. and China are likely to be less than expected this year.

On May 24, HSBC Corp. said its Purchasing Managers Index based on a survey of Chinese manufacturers showed activity weakened further in May. A preliminary PMI, based on responses by 85 to 90 percent of companies surveyed for the full index which is released later, fell to 48.7 from April's 49.3 on a 100-point scale. Numbers below 50 indicate a contraction.

China's Cabinet promised May 23 to step up efforts to boost growth after the economy expanded 8.1 percent in the first quarter, the lowest in almost three years.

Political turmoil in Greece in May has also spooked investors, who fear the country may leave the euro common currency,

see **OIL PRICES** *page 13*

EXPLORATION & PRODUCTION

State tundra travel closes for the season

On May 17 the Alaska Department of Natural Resources announced the closure of the Lower Foothills, Western Coastal and Eastern Coastal areas for off-road winter tundra travel. With the Upper Foothills area already closed, the announcement marked the effective end of this winter's off-road exploration and development season north of the Brooks Range.

The department said that temperatures in the areas had been above freezing during the day and that varying degrees of snow deterioration had taken place.

Given that the snow cover might still be adequate for travel at some specific locations, the department said that it would consider travel extensions on a case-by-case basis. Otherwise, off-road travel already in progress had to be completed within 72 hours.

Summer off-road travel using vehicles approved for this purpose this may commence on July 15 but will require a valid permit, the department said.

—ALAN BAILEY

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PIPELINES & DOWNSTREAM

Tesoro working on Kenai refinery

Tesoro Corp. increased its throughput in Alaska in the first quarter, but could see declines in the second quarter as it begins planned maintenance at its Kenai oil refinery.

The refiner handled 155,000 barrels per day from its northwest operations in Alaska and Washington in the first three months of the year, up from 135,000 bpd in the first quarter of 2011. The unit reported a gross refining margin of $183 million ($12.96 per barrel) in the first quarter, up from $163 million ($13.39 per barrel) in the first quarter of last year.

Manufacturing costs fell to $3.83 per barrel from $4.08 per barrel year over year.

Tesoro is planning a turnaround at its Kenai facility in the second quarter. That work began early in May and could last as long as two weeks, according to Bloomberg News.

In addition to refining oil in Alaska, Tesoro uses Alaska North Slope crude oil at its refineries in Martinez, Calif., and Anacortes, Wash. Tesoro also operates 29 fueling stations in Alaska and sells gasoline to 47 third-party fueling stations across the state.

—ERIC LIDJI

EXPLORATION & PRODUCTION

US oil, gas rig count up by 12 to 1,986

The number of rigs actively exploring for oil and natural gas in the U.S. was up 12 the week ending May 18 to 1,986.

Houston-based oilfield services company Baker Hughes Inc. reported that 1,382 rigs were exploring for oil and 600 were looking for gas. Four were listed as miscellaneous. A year ago this week, Baker Hughes reported 1,830 rigs.

Of the major oil- and gas-producing states, New Mexico gained three rigs; California and West Virginia each gained two; and Alaska, Colorado and North Dakota were up one apiece.

Pennsylvania declined by four rigs and Arkansas by one.

Louisiana, Oklahoma, Texas and Wyoming were unchanged.

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

—ASSOCIATED PRESS

ENVIRONMENT & SAFETY

Spills reported at Prudhoe, Kuparuk

The Alaska Department of Environmental Conservation is monitoring cleanup of recent spills in the state's two largest oil fields, Prudhoe Bay and Kuparuk River.

On May 21, crude oil overflowed from a tank at the Flow Station 2 processing facility on Prudhoe's east side.

Field operator BP estimated the spill volume at 4,200 gallons of crude and some produced water, DEC said.

BP spokesman Steve Rinehart told Petroleum News on May 23: "No one was hurt, there was no environmental damage and no impact on production. The overfill fluids were collected and held in a designated containment area, which has an impermeable liner. I expect vacuum trucks to begin cleaning it up soon, if they have not already."

The spill went into a secondary containment area.

A May 22 situation report from DEC listed the cause of the spill as a "failure of process instrumentation and valves used to control the fluid level in tank 1984 during processing."

BP spokesman Steve Rinehart told Petroleum News on May 23: "No one was hurt, there was no environmental damage and no impact on production. The overfill fluids were collected and held in a designated containment area, which has an impermeable liner. I expect vacuum trucks to begin cleaning it up soon, if they have not already."

Kuparuk spill

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 in the ConocoPhillips-operated Kuparuk field, DEC said.

"A flow meter failed as produced water injection came back on-line following pigging operations," an April 23 DEC situation report said.

The spill affected a gravel pad, with no damage to tundra, the agency said.

A ConocoPhillips employee "witnessed the meter failure and was able to shut in the safety valve system and manual block valves to obtain source control within 5 minutes," DEC said.

The spill affected a gravel pad, with no damage to tundra, the agency said.

Response workers vacuumed the fluids and removed saturated snow and ice. ConocoPhillips replaced the meter and brought the well back online.

DEC said it would review plans for cleanup of contaminated soils.

—WESLEY LOY

continued from page 12

OIL PRICES

which could spark financial and economic chaos in Europe.

"The number one issue is the uncertainty and financial instability a chaotic Greek exit from the euro would cause," said Victor Shum, an energy analyst with consultant Purvin & Gertz in Singapore. "However, barring such an exit, crude demand should improve over the summer and prices should strengthen moderately."

Tightening crude supplies in the U.S. have also weighed on oil prices. The Energy Department's Energy Information Administration said May 23 that crude inventories the week of May 14 rose for a ninth consecutive week.

In other energy trading, heating oil was up 1.1 cents at $2.8265 per gallon and gasoline futures added 0.72 cent at $2.8087 per gallon. Natural gas rose 0.4 cent at $2.741 per 1,000 cubic feet. ●

—Alex Kennedy in Singapore and Ali Akbar Dareini and Lara Jakes in Baghdad contributed to this report.

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continued from page 3

BOP REGS

Lessons of Macondo

Tom Hunter, chair of the Ocean Energy Safety Advisory Committee, chartered in February 2011 to advise the secretary of the Interior through the BSEE director on issues related to offshore energy safety, is a former head of Sandia National Laboratories and was the lead on the federal scientific team that worked with BP to develop and analyze solutions to the Macondo oil spill.

Hunter said the BOP at Macondo was not a self-revealing system and that much data needed for response was not available.

Functions of a BOP, he said, include availability at the push of a button during drilling; self-assessing and diagnosing; repeatable responses; upgradable; repairable; understandable; and affordable.

Response from the BOP needs to be instant, Hunter said, whether an event is small or major, but also needs to be controllable because you might want to shut a well in slowly.

If there is a major event, it needs to be clear what's going on; all elements need to be fully diagnosable; all internals need to be observable; and there need to be opportunities for measurement.

If containment becomes necessary, flow needs to be measurable; there needs to be redundant self-capping capability; and there has to be "sheer certainty" including the capability to clear obstructions if necessary.

Hunter said fundamental design principles include: 100 percent availability; totally controllable; completely diagnosable; sheer certainty; sheer closure backup; and it has to be obtainable — you can't just have complicated drawings and, he noted, there is a significant backlog of orders today.

The science aspect

Christopher Smith, deputy assistant secretary for oil and natural gas in the Department of Energy, a member of the Ocean Energy Safety Advisory Committee, spoke to the lives lost in the Deepwater Horizon tragedy, and noted that the BOP was just one piece of the puzzle. The BOP is interlinked with a lot of other complex factors that led to the disaster, he said, including issues such as well design, cementing and organizational and procedural issues.

Smith also addressed the issue of having useful information about what was happening subsea available on the rig. He was one of two designated federal officials for the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling and said that during hearings the commission spent three or four hours looking at one chart.

Smith said it wasn't something that would help the person on the rig interpret what was going on in real time.

On the BOP, he said the commission had a lot of discussion on why the pipe buckled and said the need to understand how a BOP needs to operate under emergency conditions is clear.

Smith said there is a natural tendency in D.C. for agencies to operate individually, but said in this case there was "seamless cooperation" between Interior and Energy.

He said the Department of Energy was working to ensure its research is consistent with the challenges faced by rule makers at the Department of Interior, and also said ongoing collaboration with industry will be necessary to make sure agencies are keeping up with innovation.

See additional stories from the forum in the June 3 and June 10 issues of Petroleum News. ●

Contact Kristen Nelson at knelson@petroleumnews.com

continued from page 1

FINANCING

in the current funding environment is a significant milestone for Buccaneer Energy," said Dean Gallegos, Buccaneer executive director. "We are pleased to be working with Richmond Hill and we appreciate the cooperation of all our stakeholders while we have worked through the process."

Ambitious plans

Buccaneer has ambitious development and exploration plans in Alaska's Cook Inlet basin, having brought its Kenai Loop gas field into production through a single well in the northern Kenai Peninsula. The company has been gathering 3-D seismic data over the field and wants to drill further development wells. With funding assistance from the Alaska Industrial Development and Export Authority, or AIDEA, the company is also in the process of bringing a jack-up rig to Alaska for offshore drilling in Cook Inlet — the rig has been undergoing refurbishment and modification in Singapore and is expected to leave Singapore for Alaska around June 20, AIDEA has told Petroleum News.

Buccaneer also wants to conduct onshore exploration drilling on the west side of Cook Inlet and in the southern Kenai Peninsula. And the company has purchased leases over the Cosmopolitan prospect, an oil pool offshore Anchor Point in the southern Kenai Peninsula.

> *"Putting together financing facilities totaling US$50 million in the current funding environment is a significant milestone for Buccaneer Energy."* **—Dean Gallegos, Buccaneer Energy executive director**

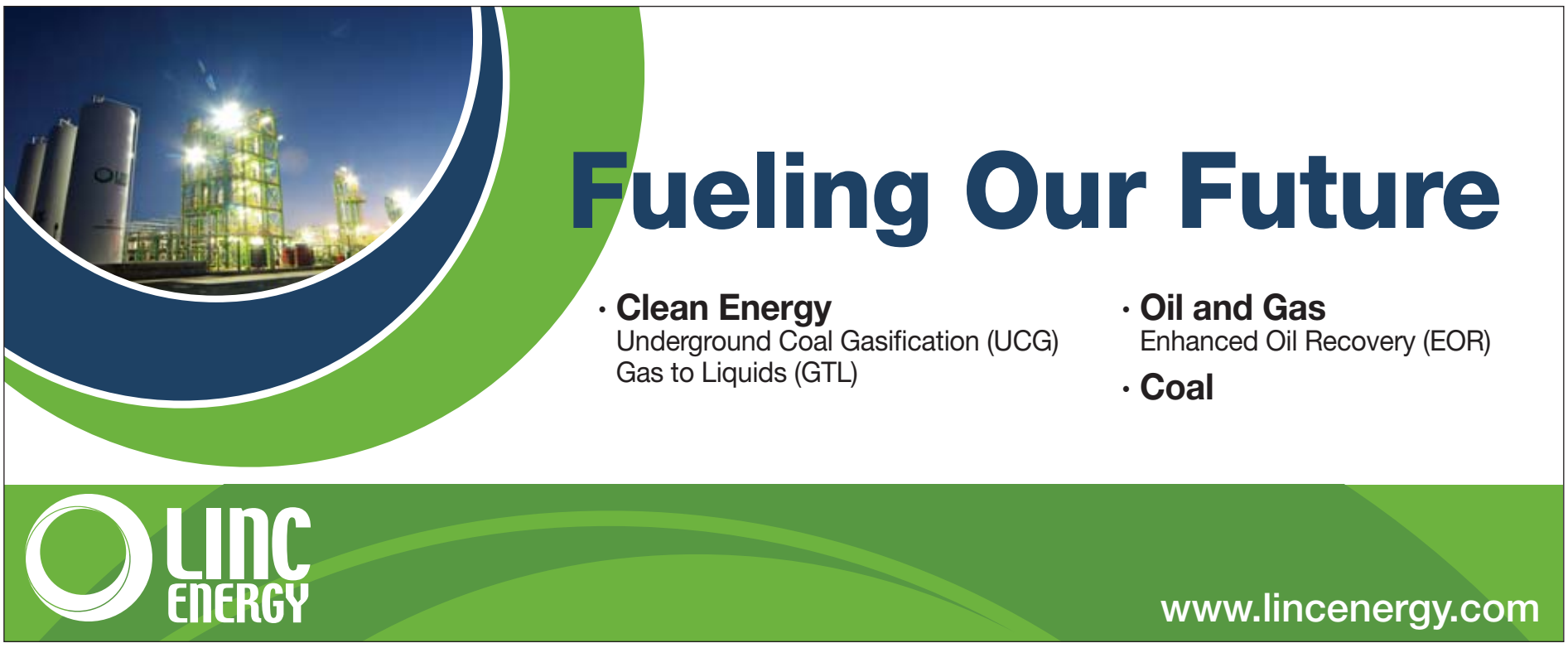
Contractor payments

However, Buccaneer has run into difficulties over payments that it owes to the various contractors that have worked on its Kenai Loop project. The company now says that it is using its new funding from Richmond Hill to pay its outstanding contractor bills. The financing will also cover the cost of drilling another well at Kenai Loop in the second quarter of this year, as well as covering some other business expenses, Buccaneer says.

The company says that its strategy for handling its future cash flow has three components: continuing the development of the Kenai Loop gas field; operating the jack-up rig for third-party use in Cook Inlet; and using the jack-up rig to develop Buccaneer's offshore prospects. The offshore prospects have been independently assessed to hold about 73 million barrels of oil equivalent in hydrocarbon resources, the company says.

—ALAN BAILEY

Contact Alan Bailey at abailey@petroleumnews.com



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Petroleum news

Oil Patch Bits

TOTE announces new hires Lerum, Monson and Moser


JORDYN LERUM


DEREK MONSON


JAMES MOSER

Totem Ocean Trailer Express Inc. said May 14 it was announcing new members of its team, Jordyn Lerum, Derek Monson, and James Moser.

Jordyn Lerum joined Totem Ocean Trailer Express as sales administrative analyst. She comes to TOTE from Pacific Propeller International where she held the position of executive assistant. Lerum is working toward her bachelor's degree in Law and Justice and is currently enrolled in the Administrative Professional Certification Program.

Derek Monson has joined TOTE in the role of senior market research analyst. Monson comes to TOTE from DHL and Airborne Express where during his tenure he held the positions of project manager, pricing manager, senior product analyst, market information analyst, pricing specialist and contracts specialist.

James Moser has joined TOTE as inside sales representative. Moser comes to TOTE from CH Robinson Worldwide where he held the position of sales executive and account manager. Moser moved to Seattle in 2005 from Philadelphia and holds a bachelor of science in business administration from Clarion University of Pennsylvania.

Usibelli Coal Mine announces promotion of Glen Weaver


GLEN WEAVER

Usibelli Coal Mine said May 18 that its president, Joe Usibelli Jr., recently announced the promotion of Glen Weaver as vice president finance and CEO. Weaver replaces Rick Hundrup, who retired after 35 years with UCM. Weaver will have responsibility for finance and administration of UCM and several affiliated companies.

Weaver was born and raised in Fairbanks. He attended the University of Alaska Fairbanks, where he graduated Magna Cum Laude with a BBA-Accounting degree in 1991. He worked at Cook & Haugeberg, CPAs and Northern Schools Federal Credit Union prior to joining UCM in 1999. Weaver is a member of the American Institute of Certified Public Accountants, the Alaska Society of

see **OIL PATCH BITS** *page 17*

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

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

continued from page 1

SHELL LNG

LNG export operations up and running by 2020.

What isn't clear is whether growing opposition from environmentalists and First Nations to proposals by Enbridge and Kinder Morgan to ship Alberta oil sands crude from the British Columbia coast to Asia will start spilling over to the LNG sector.

But the Canadian government has promised to streamline its environmental reviews to end what it regards as unnecessary opposition to its efforts to diversify oil and gas markets beyond the United States.

Shell: LNG complex

Lorraine Mitchelmore, president of Shell's Canadian operations, said LNG is a very complex undertaking requiring a multitude of permits and faces considerable uncertainty.

"It's going to take a lot to bring that to the final investment decision," she said.

Mitchelmore warned that delays in proceeding with LNG Canada could put at risk the British Columbia government's chances of collecting C$600 billion in royalties over the next 25 years if it can arrange buyers for its vast shale gas resources.

She said the 12 million metric tons a year of LNG currently planned for LNG Canada represents about 15 percent of Japan's market, "which is the largest market in the world."

"We sit in a magnificent position. … We are now on the doorstep of the fastest-growing market in Asia," she said, noting that the Asian region could add another 80 million metric tons a year of LNG demand by 2020.

Mitchelmore said Shell does not believe that even China, which owns huge gas resources, will be able to develop those supplies fast enough to meet its demand.

But she conceded that although Canada currently has a "unique opportunity," the longer-term picture is fuzzy.

"We understand our competition now and we understand that we have a very competitive supply," Mitchelmore said. "But we need to make it happen."

Manley: Agreements needed

Joining the chorus of industry and political leaders raising concerns about the barriers standing in the way of Canadian LNG development, former deputy Prime Minister John Manley, now head of the Canadian Council of Chief Executives, said there is a danger that Canadians feel too smug about their ability to open up new export markets.

"We just feel way too good about ourselves," he told a Calgary audience. "I don't think we have a sense of urgency about seizing the opportunities that global dynamics are presenting to us and I think our greatest enemy now is not the European financial crisis of the U.S. deficit. It's hubris, complacency."

Manley said Canada should start to view itself as a Pacific nation and start negotiating trade and economic agreement that will help crack Asian markets.

The eagerness among the Asian partners to move ahead with LNG Canada was underscored by Kogas which said it has secured 2.4 million metric tons a year of the project's capacity.

Kwon Yong-Shik, in charge of LNG supplies at Kogas, said LNG Canada is designed to "ensure stable supplies and diversify import sources for South Korea which has heavily depended on the Middle East."

"We hope the joint project will pave the way for Kogas to have an independent LNG project in Canada," he said.

Report urges diversification

A May 10 report by the accounting and consulting firm of Ernst & Young said Canada, faced with low gas prices and a shrinking U.S. export market, urgently needs to diversify its sales outlets.

"We really don't think that Canada has a choice," said Lance Mortlock, senior manager of the firm's oil and gas advisory practice. "The opportunity window will be open for a finite period of time."

Ernst & Young forecast that Canada could have about 12 million metric tons a year of LNG export capacity in place by 2015, depending on whether U.S. Gulf Coast proponents and other worldwide competitors gain an edge.

It also estimated that Canada will need to overcome environmental and First Nations' concerns and invest C$50 billion in LNG infrastructure over the next decade to answer the "powerful threats" posed by rival supply sources.

Spectra Energy said in a statement earlier in May that it is poised to invest an additional C$4 billion-C$6 billion in British Columbia beyond 2015 in pipelines for anticipated LNG export facilities and to unlock development of the Montney, Horn River and other resource areas.

Currently working on a C$1.5 billion expansion program in British Columbia over the 2009-13 period, Spectra is eager to expand its horizon beyond domestic needs to ensure diverse and stable supplies for Asia, said Doug Bloom, president of the company's Western Canadian operations. ●

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continued from page 16

OIL PATCH BITS

Certified Public Accountants and the Alaska Miners Association.

"I enjoy my job and working with the great people at UCM and the Usibelli family," said Weaver. "The future is exciting while we enhance current operations and look to expand UCM's business opportunities."

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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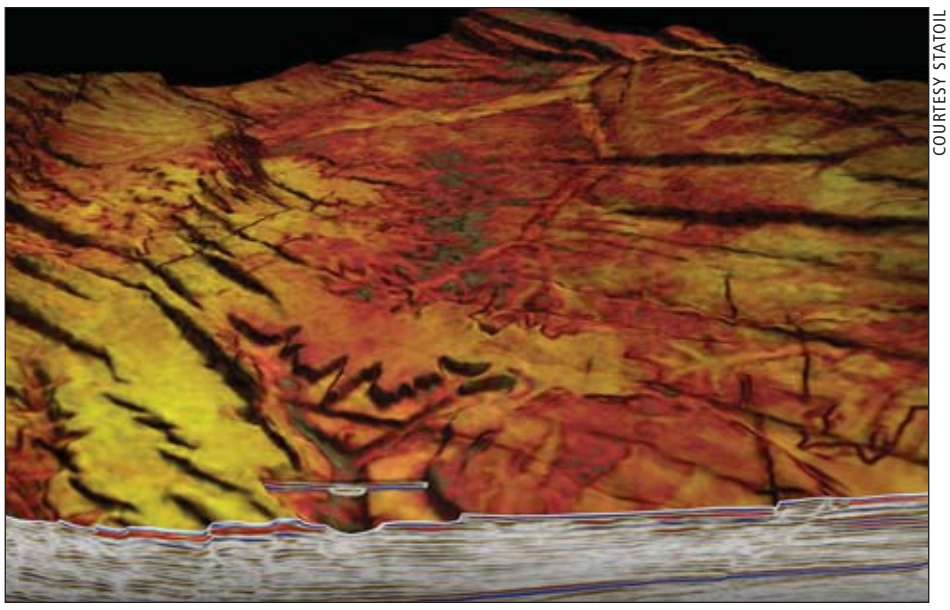
continued from page 1

STATOIL WELL

3-D seismic

During the 2010 Arctic open water season the company conducted a 3-D seismic survey across an area that encompasses its leases, to obtain a more detailed understanding of the subsurface geology and identify drilling targets. Statoil contracted with Fugro GeoServices to use a modern geophysical vessel, the Fugro Geo Celtic, to carry out the survey by towing 12 streamers of seismic recorders, Parsons said. With the 4,000-meter streamers spaced at 100-meter intervals behind the vessel but fanning out to a separation of 125 meters, it was possible to cover the planned survey area very efficiently, she said.

But with only five very widely spaced wells ever having been drilled in the entire Chukchi Sea, there is a severe shortage of geologic data that can be tied into images of the subsurface constructed from seismic data. So, with the closest of the Chukchi Sea wells, the Burger well, lying about 35 miles south of the Statoil leases, in addition to shooting the 3-D survey Statoil elected to shoot a single 2-D seismic line from the Burger well up to the 3-D area. The 2-D line enabled Statoil geoscientists to extrapolate the rock stratigraphy, as determined by well logs and rock samples from the Burger well, to the Statoil prospects.



COURTESY STATOIL

A 3-D seismic image of the unconformity between the Tertiary and the Cretaceous in the area of Statoil's Chukchi Sea leases shows ancient river features including incised valleys from a land surface that would have existed about 65 million years ago.

Kuparuk sandstone

Of particular interest is the fact that a 110-foot sandstone interval in the Burger well demonstrated good reservoir characteristics and is known to contain a major pool of natural gas. The sandstone, equivalent in age to the oil-bearing Kuparuk sandstone in the Kuparuk River field in the central North Slope, lies underneath a regional geologic discontinuity called the Lower Cretaceous unconformity (an unconformity is a geologic feature created during a break in sediment deposition, when strata below the unconformity become eroded and then subsequently covered by younger rock formations).

The Statoil geoscientists were able to identify the Lower Cretaceous unconformity in a seismic cross section constructed from the 2-D seismic line. They then used the unconformity as a marker to trace the reservoir sand from Burger across into the Statoil prospects, Parsons said.

In fact, the detailed 3-D seismic over the Statoil prospects depicts a series of unconformities, thus confirming the fact the region has experienced numerous geologic upheavals during its long history. Particularly prominent, in addition to the Lower Cretaceous unconformity, are a regional unconformity in what is called the Brookian, the youngest and shallowest of the major rock sequences of northern Alaska; an unconformity that marks the boundary between the Tertiary and Cretaceous periods; and another regional unconformity of Jurassic age.

A subsurface image constructed from Statoil's 3-D seismic data shows some especially spectacular geologic features on the unconformity between the Tertiary and the Cretaceous, with river features such as incised valleys clearly visible on what would have been a land surface about 65 million years ago.

Three-way closure

The seismic shows the Amundsen prospect to be what is called a three-way closure — an elongated dome sloping off in three directions and bounded by a major geologic fault. The detailed 3-D seismic has revealed extensive faulting in the structure.

Within the prospect Statoil wants to drill the complete rift sequence, a package of rocks between the lower Cretaceous unconformity and the older and deeper Jurassic unconformity. The rift sequence package across the Amundsen structure is quite thick and, although the Kuparuk-equivalent sand traced from the Burger well is Statoil's main target, there is potential for finding oil and gas reservoir rocks at various levels within the sequence, Parsons said. Statoil is primarily seeking what are called structural traps, locations where the folding and faulting of the strata have created situations where oil could have accumulated.

The planned first well would penetrate a flank of the Amundsen structure rather than the structure's crest, to enable Statoil to evaluate oil volumes using a single well, should the well encounter hydrocarbon resources, Parsons said. The well would need to reach a maximum depth of a little less than 10,000 feet to reach the Jurassic unconformity, she said.

Shublik source

Statoil anticipates the Shublik formation, of Triassic age and a prominent source rock in northern Alaska, to be the likely source of any oil and gas in its Chukchi Sea prospects — assessments of regional thermal maturity indicate that the Shublik would likely generate oil at an appropriate location to feed Statoil's prospects. Statoil wants to find oil rather than natural gas in its Chukchi Sea exploration, Parsons said.

The Shublik lies in an older and deeper rock sequence known as the Ellesmerian, below the Jurassic unconformity. Strata within the Ellesmerian contain several of the major oil fields in the central North Slope, including the giant Prudhoe Bay field. However, although the geologic structures at the Amundsen

see **STATOIL WELL** *page 20*

continued from page 1

EXXON PLAN

Gas condensate

The Point Thompson field presents some particular development challenges.

Although there are known oil pools within the Point Thomson unit, the field consists mainly of a high-pressure gas condensate reservoir. The field could be operated as a conventional gas field, but the production of condensate from the field requires a procedure known as gas cycling. In gas cycling, the reservoir pressure is maintained by injecting produced gas back into the reservoir, thus flushing condensate in vapor form to the surface.

Because of the temperature and pressure conditions in the reservoir, much of the condensate would liquefy underground and remain trapped unless the reservoir pressure is maintained through the cycling process.

The production of condensate is desirable because it has a higher economic value than natural gas and, in liquid form, it could be mixed with crude oil for export through the trans-Alaska oil pipeline. Blowing down the reservoir as a gas field, although much less costly than building and operating a cycling system, would likely result in less gas recovery than would otherwise be possible. In addition there is as yet no means of marketing gas from the North Slope.

Plan proposed

In 2008 in the course of the recently ended dispute with the state over the state's termination of the Point Thomson unit, Exxon proposed a modest-scale gas-cycling development that would enable some condensate production while also providing a means of verifying the feasibility of gas-cycling in the Point Thomson reservoir. In justifying the relatively small scale of its proposal, the company cited significant unknowns and associated risks in a Point Thomson development, including the possibility of poor pressure communication between gas injection and oil production wells; the possibility of discontinuities in the reservoir; the difficulty of injecting gas into an exceptionally high pressure reservoir; and the difficulty of drilling long reach directional wells into that high subsurface pressure (much of the reservoir is offshore and will need to be directionally drilled from onshore).

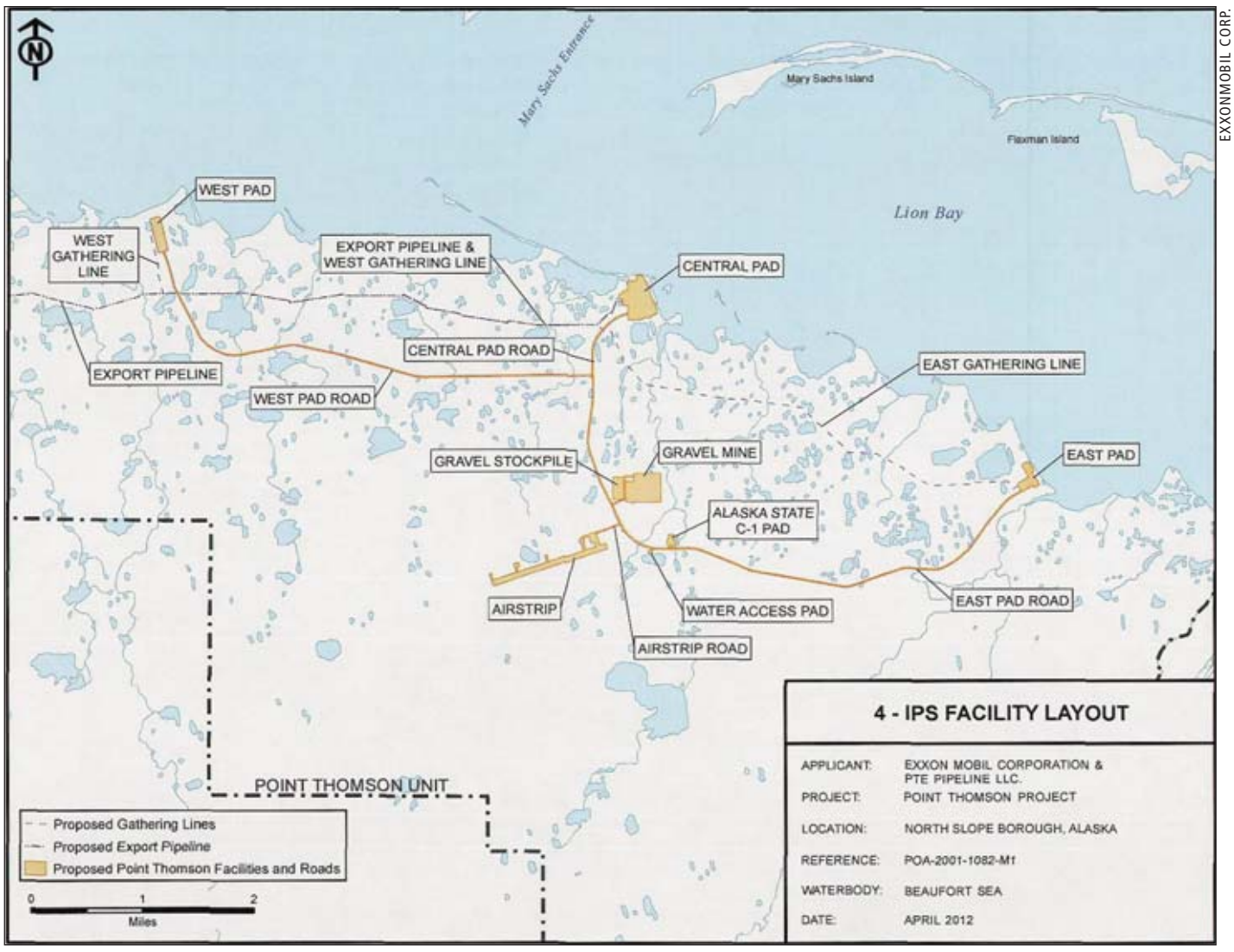
In 2009, with the dispute between Exxon and the state still raging, Exxon moved ahead with the drilling of two initial wells, an injection well and a production well, at an existing gravel pad at Point Thomson. In October 2010 the company announced that the drilling had been successful but did not elaborate on what it had found from the drilling.

Up to five wells

The plan of operations that Exxon has now submitted looks essentially to be a rerun of the plan that it proposed in 2008. The plan entails the drilling of a disposal well and up to five wells, including the two wells already drilled, from three gravel pads: a west pad, a central pad and an east pad. Using long reach drilling, the three pads would enable well access to the west, central and eastern sections of the field reservoir.

"Wells drilled from the proposed pad locations will be at or very near the technical limits of drilling reach," the operations plan says.

The two existing wells were drilled from the central pad. Exxon plans one new well on the west pad and one on the east pad, with the location of the fifth well depending on the results of the drilling, the operations plan says. Produced hydrocarbons will be delivered to a central processing facility on the central pad.



EXXONMOBIL CORP.

Exxon plans to develop the Point Thomson field using three well pads: the west pad, the east pad and the main central pad that will also house the production facilities.

Oil possibility

If one of the wells penetrates an oil pool, either in what is referred to as the "Brookian," above the main reservoir, or in an oil rim around the perimeter of the reservoir, Exxon will evaluate the oil-bearing zone as appropriate, the plan says.

Wellheads on a single pad will be positioned unusually far apart, at a spacing of 40 feet, in recognition of the high pressures and flow rates likely to be involved in field operation, and the need to be able to bring in heavy tools and equipment.

"The production well flowing wellhead pressure is estimated to be over 3,000 psig (pounds per square inch)," the operations plan says.

Five-mile-long gathering lines will connect the east and west pads to the processing facility on the central pad.

Processing facility

At the processing facility, hydrocarbon liquids will be recovered and stabilized for delivery by pipeline to the trans-Alaska oil pipeline. Produced water will be injected into a disposal well, while produced gas will be compressed to 10,000 pounds per square inch for re-injection into the reservoir as part of the gas cycling process. The processing facility will be able to handle 200 million cubic feet of gas per day for the recovery of 10,000 barrels per day of condensate, the operations plan says.

The complete system will "provide essential information about the degree of reservoir connectivity and the producibility from key locations in the field," the operations plan says.

Other facilities

Other components of what Exxon refers to as the "initial production system" include a gravel airstrip; a service pier, a boat launch; an in-field gravel road network; and

see **EXXON PLAN** *page 20*

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continued from page 19

EXXON PLAN

a staging pad. Barges will transport facility modules, equipment, material and supplies to the central pad using an offloading structure adjacent the pad, which is on the coast.

And to accommodate the necessary infrastructure and facilities, Exxon will expand the central pad from its existing area of 13 acres to 56 acres.

Although Exxon plans an operations camp able to house 200 people during field construction, the operations plan says that the camp will be reconfigured to accommodate fewer people once construction has been completed.

Four gas-fired generators will supply electrical power for the field.

To transport Point Thomson production to the trans-Alaska oil pipeline Exxon plans to construct a 22-mile pipeline that will connect with the existing oil export pipeline from the Badami field. The Point Thomson export pipeline will have an outside diameter of 18.75 inches and will be held at least seven feet above the tundra on approximately 2,200 vertical support members. A pig launcher at the central process facility will enable the use of maintenance and inspection pigs, the torpedo-shaped devices that are sent down the insides of pipelines.

Pipeline construction will take place in the winter from ice roads, the operations plan says.

The Point Thomson field will not be connected by permanent road to the central North Slope. Instead, access to the field will be accomplished by sea during the summer open water season and by ice road during the winter. Access will also be possible by tundra travel using vehicles such as Rolligons. And the field's airstrip will be available for year-round access by aircraft.

A project schedule included in the operations plan indicates that detailed engineering design for the project is already in progress and that permitting and an environmental impact statement for the project will be completed this year

Schedule

A project schedule included in the operations plan indicates that detailed engineering design for the project is already in progress and that permitting and an environmental impact statement for the project will be completed this year. Infrastructure construction will start in 2013, with both the infrastructure and gathering lines being completed in mid-2015. Drilling will take place between early 2015 and early 2017, with the main sealift and module installation happening in 2015 and early 2016.

The operations plan also includes information about Exxon's oil spill prevention and response plan; environmental protection measures; workforce development; and the company's involvement with North Slope communities. ●

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continued from page 18

STATOIL WELL

prospect extend downwards into the Ellesmerian, Statoil does not plan to penetrate and test the Ellesmerian with its first Chukchi Sea well, Parsons said. After drilling that first well and after having gained a better understanding of factors such as the subsurface pressures, Statoil may drill some subsequent wells into deeper structures, she said.

Although at Burger a thick sequence of Cretaceous rock extends all the way from above the lower Cretaceous unconformity to the seafloor, in the Statoil leases there is a thick sequence of younger, Tertiary strata above the Cretaceous. The Brookian sequence above the lower Cretaceous unconformity in the leased area does not appear to contain any significant geologic structures and does not appear to be particularly prospective for oil and gas, Parsons said.

Site surveys

During the open water season of 2011 Statoil checked out some potential drilling sites in its leases by conducting shallow hazards surveys, primarily by gathering shallow, high resolution seismic data. The company also gathered shallow rock cores, to determine the nature of the seafloor at those sites. The seafloor in the area is really hard and quite level, with an almost constant sea depth of about 120 feet, Parsons said.

The most interesting feature on the seafloor is a series of criss-crossing ice scours. But, especially given the general absence of recent sediment on the seafloor, there is no good way of assigning ages to the scours, Parsons said.

However, the 2011 surveying did not find any potential hazards at any of the planned drill sites, she said. ●

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continued from page 1

KENAI GAS

who, on their monthly billings for natural gas, in years past or today, are paying surcharges to pay back a portion of the cost of the capital investment needed to get gas to their homes," Parnell told reporters.

Through a recent deal, Enstar Natural Gas Co. agreed to front $2.5 million for the project and recover it through a $1 per thousand cubic foot tariff on monthly bills over the next 10 years. The surcharge is a relic of a failed attempt to bring gas to the region in 2003.

"I thought that was a very positive change," Parnell said.

With the tariff, the average Homer resident will now pay around $12 more per month than if the state had funded the entire project, but natural gas is still expected save consumers 65 percent over heating oil, according to estimates from the City of Homer.

Local distribution plans

Although the project could extend the regional transmission grid into the southern Kenai Peninsula this year or next year, the three local communities will be responsible for funding the distribution grids needed to serve public institutions, homes and businesses.

That process is already under way.

The community of Anchor Point previously approved a Local Improvement District to fund its build out and Kachemak City has passed a mil rate to pay for distribution lines.

Within hours of Parnell approving the capital budget, the Homer City Council passed a resolution to begin the process of bringing gas to the largest city in the region. The city is currently scheduled to hold a workshop on June 4 to discuss potential financing options.

It won't be cheap.

Homer officials estimate full build out across 110 miles of local roads will cost around $20 million, a figure that doesn't include the additional cost to build service lines to individual homes and businesses, but Homer also estimates taxpayers will save more than $1 million each year once all public facilities in the area make the switch to natural gas.

A long time coming

With the discovery of the Kenai Gas Field in 1959, cities and communities across the Southcentral region began converting their furnaces from heating oil to local natural gas, but the southern Kenai Peninsula was long considered too remote to share in the bounty.

Although local officials frequently pressed the issue, their efforts received new life when Armstrong Cook Inlet reported a successful well at the nearby North Fork unit in 2008.

That unit began delivering natural gas into the regional transmission grid in April 2011.

The Alaska Legislature approved a $4.8 million allocation in early 2010 to build a gas pipeline to Homer, but Parnell vetoed all but $525,000, saying the rest could come in a future funding cycle. Parnell didn't include the project in his budget the following year, though, and vetoed a $10 million appropriation approved by the lawmakers that year.

The initial $525,000 paid for a pressure reduction station outside Anchor Point and 3,600 feet of 8-inch plastic pipe down the Sterling Highway, allowing Chapman Elementary School to convert to gas and setting the stage to quickly continue the line to the south.

An additional $447,000 grant will fund a pressure reduction station and 8,930 feet of 2-inch pipe into the tiny village of Nikolaevsk. The Armstrong subsidiary Anchor Point Energy LLC and Enstar are currently seeking regulatory approval for that project.

—ERIC LIDJI

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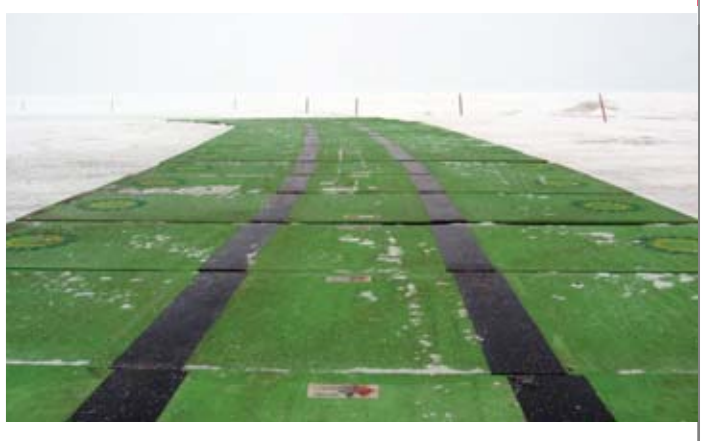
FROM THE JUNGLES OF BRAZIL
TO THE NORTH SLOPE OF ALASKA



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