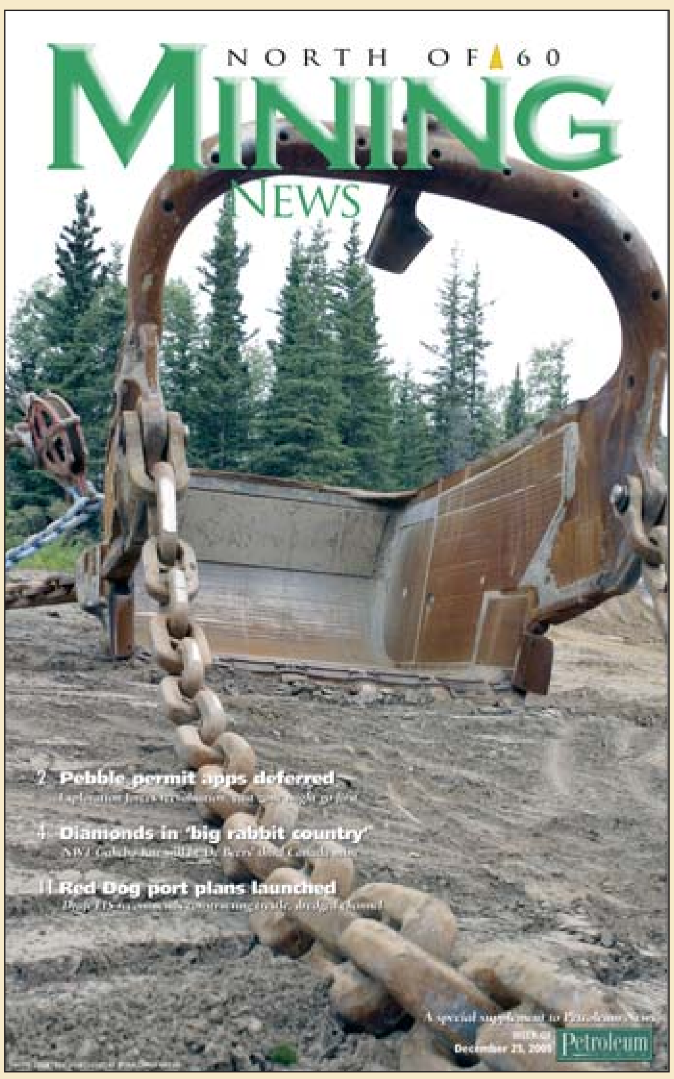
Petroleum news

Vol. 10, No. 52 • www.PetroleumNews.com | *A weekly oil & gas newspaper based in Anchorage, Alaska* | Week of December 25, 2005 • $1.50

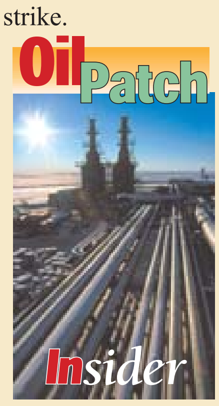
page A3 Alaska gas line negotiators take break; producers asked to engage

December Mining News inside



Hibernia owners, Newfoundland government on collision course

THE NEWFOUNDLAND GOVERNMENT and owners of its offshore Hibernia project are creating a lot of noise over what may or may not be a significant oil strike.



Without confirming that a find of up to 300 million barrels has been made, Hibernia partner Petro-Canada has squared off against any attempt by the province to extract maximum royalties from the play.

Chief Executive Officer Ron Brenneman says reports estimating the size of the rumored South Hibernia discovery are "pure speculation" and will remain that way until the Hibernia B-16 54 well reaches its targeted depth of 26,800 feet early in 2006.

But that didn't stop Brenneman from declaring it is "absolutely clear in my mind" that if new oil is confirmed it will be an extension of the Hibernia field, not a new discov-

see **INSIDER** *page A10*

BREAKING NEWS

A5 Next step for Mackenzie gas: Regulators schedule gas project hearings which involve 63 days of hearings starting Jan. 25

A6 Pioneer's Arctic Fox has arrived: Independent permits three more Cronus wells; major pieces here for Doyon/Akita JV rig

B1 Avalanche of land buying: Coffers bulging, Alberta poised to smash records; focus shifts to oil sands, tight gas, coalbed methane

NORTH SLOPE

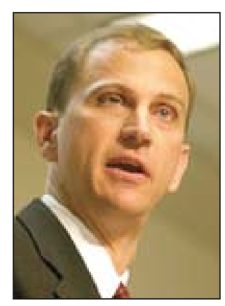
Oooguruk almost a go

Pioneer gets royalty relief from State of Alaska on North Slope oil project

By KAY CASHMAN

Petroleum News Executive Editor

On Dec. 17 Mike Menge, commissioner of the Alaska Department of Natural Resources, announced DNR had decided that royalty relief for the proposed North Slope Oooguruk oil development was in the best interest of the state.



JUDY PATRICK

KEN SHEFFIELD

As part of an approval process that dropped royalties from 12. 5 and 16.6667 percent to 5 percent on nine of the 18 Oooguruk leases, Menge signed a

see **OOOGURUK** *page A10*

Pioneer likely moving forward on gravel island

In addition to getting preliminary approval for royalty reduction on its Oooguruk project from the State of Alaska, Pioneer Natural Resources says its proposed North Slope oil development is moving forward on other fronts as well, which could potentially allow the company to lay gravel for the production island in first quarter 2006.

Just prior to the state's royalty finding the North Slope Borough conditionally accepted Pioneer's application for rezoning the

see **PIONEER** *page A10*

WASHINGTON, D.C.

Senate ANWR showdown

Opponents block drilling provision in early voting on defense spending bill

By ROSE RAGSDALE

Petroleum News Contributing Writer

The fate of a bill that would allow oil and gas drilling on the coastal plain of the Arctic National Wildlife Refuge appeared uncertain early Dec. 21 when ANWR proponents lost a key procedural vote in the U.S. Senate.

SEN. TED STEVENS

Sen. Ted Stevens, R-Alaska, who chairs the Senate Subcommittee on Defense Appropriations, had inserted the Arctic drilling measure into the $446.7 billion defense spending package the week of Dec. 12 after the ANWR provision hit an impasse in budget reconciliation conference negotiations.

The FY'06 Defense Appropriations Conference Report is a measure that requires passage before the Senate can recess for the holidays. It includes funding for critical defense programs and activities as well as $50 billion to sustain contingency operations in Iraq and Afghanistan, $142.8 million for body armor and personal protection equipment, and $180 million for equipment for the National Guard and Reserve. The bill also provided a 3.1 percent across-the-board pay raise for military personnel.

Other provisions of the legislation included $29 billion in federal aid for victims of Katrina and other storms and $3.8 billion to prepare for a possible bird flu pandemic, provisions hard to ignore by Senate moderates and Democrats from the Gulf States, solely because ANWR drilling was part of the package.

ANWR drilling opponents in the Senate, however, succeeded in blocking the drilling measure in an

see **ANWR** *page A12*

INTERNATIONAL

LNG no early gas savior

Analyst warns European and Asian buyers could outbid North America

By GARY PARK

Petroleum News Canadian Contributing Writer

Those reeling from the latest spike in natural gas prices should discard any hopes that imported liquefied natural gas will make the commodity any cheaper over the next five years.

A report by Tristone Capital analyst Chris Theal said LNG will be in scarce supply until at least 2010, and even then it's unlikely North American terminals will be able to pay enough to entice LNG shipments away from European and Asian markets.

"The bottom line is ... LNG is going to move

see **LNG** *page A11*

Quebec LNG projects beginning to wobble

Slowly turning wheels are now in danger of falling off some of the Canadian plans to establish LNG terminals west of the Atlantic region.

Chris Theal, head of institutional research at Tristone Capital, has raised serious doubts that two terminals planned for Quebec can overcome the challenges posed by the ambitions of global gas-producing giants to gain

see **QUEBEC** *page A11*

contents

Petroleum News
A weekly oil & gas newspaper based in Anchorage, Alaska

● ANCHORAGE

Holiday hiatus for pipeline talks

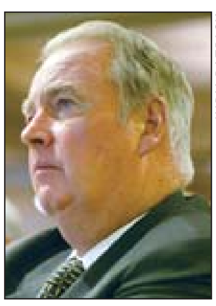
Governor: Negotiations will resume in January, but producers also need to engage on issues state wants

By KRISTEN NELSON
Petroleum News Editor-in-Chief

The State of Alaska has suspended gas line negotiations with the North Slope producers for the holidays, but also until the producers are responsive to some policy issues the state wants addressed in an agreement.

"I obviously had hoped that we could conclude our negotiations prior to the legislative session. That clearly is not possible at this time," Alaska Gov. Frank Murkowski told a press briefing Dec. 16.

The governor said the state has communicated to the principals "some items that are non-negotiable in a sense ... and we have indicated that as soon as those are addressed or as soon as they're ready to engage in addressing them, why we stand ready to meet with them and pursue the finalization of contractual commitments."


JUDY PATRICK
GOV. FRANK MURKOWSKI

He indicated that there are areas where "after extended negotiation decisions" things are turned over to "the wordsmiths and the lawyers on both sides give you another shot at it." That's happened on a few issues, he said, "so that's why recognition of the holiday season's on, people are traveling, we've just decided to re-energize ourselves on some of these issues that we have been unable to close on."

A lot of 'sideways movement'

Murkowski said "we had high hopes that we might conclude something by the end of this week and that's — we were unable to do that — and that's why I felt it necessary to give a little update to Alaskans on what was going on." He compared the negotiations to a crab moving down a beach: "There's a lot of energy, sideways movement ... but a little slow getting down the beach because they don't go down in a straight line ..."

The holidays are part of the reason for the suspension, but the governor also said the producers need to be ready to engage on some issues where agreement hasn't been reached, areas he characterized as policy issues important to the state.

While the negotiations have been productive, he said, they are not complete.

The governor called this "a defining moment in our negotiations, because we have reached consensus on many of the important issues," including a basic agreement with ConocoPhillips in October.

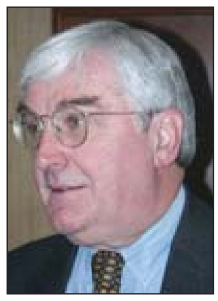
"All of the parties have reached agreement on fiscal terms that are very positive for the state," the governor said in a statement issued after the briefing. "But there are other critical issues on the table that, for the state, are non-negotiable. I am confident that BP and ExxonMobil will come back to the state after the holidays with satisfactory resolution to the items we have presented to them."

Some items non-negotiable for state

What has been accomplished?

"We have come to terms on the numbers. That basically means the cash," Murkowski said.

As to when negotiations will resume, the governor said one issue is that some


JIM CLARK


JUDY PATRICK
JOE MARUSHACK

of those involved are traveling over the holidays and will not be available. Pedro van Meurs, for example, one of the state's consultants, won't be available again until Jan. 6.

The governor said there are some items which are non-negotiable for the state, and as soon as the producers are ready to engage on those issues, the state is ready to meet and work on finalizing the contract.

Those issues include access to the gas line by explorers — those who do not have gas reserves ready to go. Other issues, he said, are "equal treatment for all North Slope participants, investors and explorers," "fair access to revenue for the local communities" and expandability of the pipeline. The governor also said there are "some technical things about procedure on auditing and in the sense of the structure of the LLC there's a few items left."

And there is an issue related to the money the state would borrow to finance the majority of its contribution to the pipeline. The governor said the state's financial advisors say the producers would have to subordinate their debt to the debt that the state would take on.

"It's a mechanical function that most financiers want to assure that their debt is paid off first," the governor said, and the state's financial advisors have advised "of the necessity of the producers subordinating to our participation in the sense of the equity contribution."

These are points, the governor said, where the state cannot respond to the point of view of the producers, and has asked them to respond to the state's view.

Tough issues remain

It's not an impasse, the governor said. "We have, on a few points ... reached a state in the negotiations where we feel that we cannot respond to their particular point of view and are asking them to respond favorably to ours, and that's just a part of the whole complicated process when you're looking at the largest resource development in the history of North America, so it's not a surprise..."

Jim Clark, the governor's chief of staff and the state's chief negotiator, said "we have provided information to ExxonMobil and BP in terms of what we need and when they've got all of that ready to come back, rather than piece meal, then we'll re-engage. And that will be when we have that back from them."

"We do have some important issues yet to resolve in a manner satisfactory to the state," Murkowski said.

The governor said principals of all three companies have been emphatic about their desire to complete negotiations, and the working-level group will continue to work through the holidays.

Murkowski said he has talked to Tony Hayward, BP's chief executive for exploration and production, and ExxonMobil President Rex Tillerson.

The governor said that he has invited the CEOs from the three companies — BP, ConocoPhillips and ExxonMobil — to meet in Juneau the third week of January. "And at that time I hope that we can perhaps either celebrate with some of our participants or substantially conclude our negotiations.

"I can't tell you how emphatic the principals were of their commitment to conclude this project and develop Alaska's gas." The governor said there he had no doubt about "their collective intent" to complete the negotiations.

ConocoPhillips, BP on remaining issues

Joe Marushack of ConocoPhillips was present at the press briefing and Murkowski said BP and ExxonMobil had

see TALKS page A8

NORTH AMERICA

Oil sands minnow feeds on takeovers

Oil sands start-up Connacher Oil and Gas is wasting no time covering its bases as it moves ahead with plans for a 10,000 barrel per day project in northeastern Alberta.

In back-to-back deals, it launched a bid for a Montana refinery and locked up natural gas production that is key to its oil sands production.

For an undisclosed amount, it has offered to buy Holly Corp's 8,000 bpd Great Falls refinery to process output from its Great Divide oil sands venture that is scheduled for start-up by late 2006.

Too small to build its own Alberta upgrader and with no facilities due on line in the short term, Connacher identified Holly as an opportunity to "mitigate risk ... and some of the volatility that has emerged in recent times for heavy oil price differentials."

The Great Falls refinery, which Connacher believes is a candidate for expansion, currently handles sour, medium-gravity crude shipped from Alberta by a Koch pipeline.

The Great Divide project, which covers 68,840 acres and holds an estimated 90 million barrels of recoverable bitumen to support a 25-year operating life, is expected to get final regulatory approval in early 2006.

The Great Falls refinery, which Connacher believes is a candidate for expansion, currently handles sour, medium-gravity crude shipped from Alberta by a Koch pipeline.

Putting a second key piece of its puzzle in place, Connacher agreed to buy Luke Energy for C$196.6 million in cash and shares to secure natural gas costs for Great Divide.

The company said conclusion of the Luke transaction will give it combined production of 15.7 million cubic feet per day of gas and 90 bpd of oil, locking in the gas it will need for the oil sands project and leaving some surplus.

The two companies said the Luke properties in central northern Alberta consist of "significant lower-risk shallow natural gas ... with recognized growth potential."

—GARY PARK

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● WASHINGTON, D.C.

EIA: oil supplies stay tight, prices high

Energy Information Administration releases 2006 reference case, says crude prices will remain volatile, supplies tighter

PETROLEUM NEWS

The U.S. Department of Energy's Energy Information Administration has released its reference case for 2006 and the agency says "world oil supplies are assumed to be tighter" than in its recent annual projections. As a result, world crude oil prices, while projected to fall to about $47 per barrel (average price of imported light, low-sulfur crude oil to U.S. refiners) in 2014 (2004 dollars), will rise to $54 per barrel in 2025 and $57 per barrel in 2030. The price projected for 2025 is about $21 per barrel higher, the agency said, than in its 2005 reference case.

The agency said it expects construction planning for the Alaska gas pipeline to begin "soon, and the new pipeline is expected to be completed by 2015."

Higher world oil prices will lead to greater domestic crude oil production and demand for unconventional sources of transportation fuel such as ethanol and biodiesel and also stimulate domestic coal-to-liquids production, "and, in some of the alternative scenarios with even higher oil prices, domestic gas-to-liquids and shale oil production," the agency said.

There will be both supply and demand changes, resulting in less growth in petroleum imports than previously projected. "Net petroleum imports, which met 58 percent of oil demand in 2004, are projected to meet 60 percent of demand in 2025, considerably less than the projected 68 percent" in the agency's 2005 reference case.

Lower natural gas demand

Natural gas wellhead prices are projected to fall from today's high levels to $4.46 per thousand cubic feet (2004 dollars) by 2016 due to increased drilling and new export prices, and are expected to increase gradually after 2016 to more than $5.90 per mcf in 2030 (equivalent to about $10 per mcf in nominal dollars), as increased drilling brings on new supplies and new import sources become available.

The agency has also reduced its projected natural gas consumption figures. It now believes natural gas consumption will grow from 22.4 trillion cubic feet in 2004 to 27 tcf in 2024, and then decline modestly to 26.9 tcf in 2030. The agency is now projecting natural gas usage nearly 4 tcf lower in 2025 than it projected last year, "as natural gas loses market share to coal for electricity generation." Growth in U.S. natural gas supplies will come from unconventional gas production, the Alaska pipeline and LNG imports, with unconventional natural gas expected to account for 45 percent of domestic U.S. natural gas production in 2030.

The agency said it expects construction planning for the Alaska gas pipeline to begin "soon, and the new pipeline is expected to be completed by 2015."

Higher world oil prices in the new reference case "raise worldwide natural gas demand and prices," the agency said, and as a result LNG will be less economic in U.S. markets than the agency projected last year. It now projects LNG imports to grow from 600 billion cubic feet to 4.1 tcf between 2004 and 2025, compared to a 6.4 tcf level for 2025 in last year's reference case.

Volatility of oil prices

The agency said it believes its 2005 reference case did not fully reflect causes of oil price volatility "and the implications for long-term average oil prices." In the 2006 reference case, combined production capability of members of the Organization of Petroleum Exporting Countries "does not increase as much as previously projected, and consequently world oil supplies are assumed to remain tight." Demand from the United States and China is expected to keep pressure on prices through 2030.

In the 2006 reference case world petroleum demand is expected to increase from 82 million barrels per day in 2004 to 111 million bpd in 2025, with additional demand to be met by increase production from both OPEC and non-OPEC suppliers. ●

● CANADA

Mackenzie hearings ready to hit the road

By GARY PARK

Petroleum News Canadian Contributing Writer

Regulators have set the schedule for the next important phase of the Mackenzie Gas Project which will command attention through all of 2006.

Canada's National Energy Board will begin the first of a scheduled 63 days of public hearings on Jan. 25 in Inuvik, Northwest Territories, and end the process on Dec. 15.

Meanwhile, the Joint Review Panel assigned to deal with environmental issues will also start in Inuvik on Feb. 14 and visit 27 communities in the NWT and Yukon as well as Edmonton and Calgary.

The hearings will be conducted in English, French and at least four aboriginal languages.

NEB chairman Ken Vollman, one of three board members selected for the Mackenzie hearings, said it was decided to coordinate the federal regulator's schedule with the environmental panel.

The board panel will consider engineering, safety and economic matters.

The environmental panel has already laid some of the groundwork by conducting a series of information sessions over the last year, stopping in every community where hearings will be conducted.

The process will be unprecedented in its scope, dealing with a multitude of aboriginal, community and local government concerns over the impact of the C$7.5 billion project on land, the environment, society and the economy.

There are those who regard developing northern gas resources as a chance to give the NWT a self-supporting economy; others are demanding answers on the long-term environmental impact of exploiting resources.

The Mackenzie proponents — Imperial Oil, Shell Canada, ConocoPhillips Canada, ExxonMobil Canada and the Aboriginal Pipeline Group — will also come under intense scrutiny over the fiscal terms they are able to negotiate with the Canadian government.

Imperial, the lead sponsor, has indicated that gas is unlikely to flow from the Mackenzie Delta before 2011, allowing time to complete the hearings, obtain regulatory approval along with hundreds of permits, put the project before the commercial partners for a final green light and construct a 720-mile pipeline down the Mackenzie Valley to northern Alberta to initially carry 80 million to 1.2 billion cubic feet of gas per day. ●

CANADA

Christmas find Knotty and nice

quartet of partners led by Canadian independent Nexen has opened up what is described as a "new frontier" by drilling to the greatest depth yet in the Gulf of Mexico.

They confirmed growing speculation Dec. 20 by announcing they have found a large oil pool under a thick salt layer after reaching a targeted depth of about 34,200 feet.

The $140 million Knotty Head well, 170 miles southeast of New Orleans, encountered 600 feet of net oil pay in multiple zones after earlier reporting 300 feet of net pay at about 29,500 feet.

Nexen's U.S. subsidiary is 25 percent operator, with Anadarko Petroleum, Chevron and Australia's BHP Billiton each holding 25 percent stakes.

Although Nexen says more wells are needed to determine the size of the reservoir, analysts are counting on a 500 million barrel discovery

Appraisal well to be spudded immediately

A $35 million appraisal well will be spudded immediately and a third well is planned for 2006.

Production from the well could average 75,000 barrels per day, starting in 2008.

Dan Pickering, president of Houston-based Pickering Energy Partners, said the discovery ranks among the top 15 made in the Gulf and could generate $25 billion in revenues at average oil prices of $50 per barrel.

Weatherford International, which participating in the drilling, said Knotty Head "opens up new opportunities across the globe" by applying new technology it acquired in June from Calgary-based Precision Drilling, including what is described as "hostile-environment-logging," which applies improved imaging to gather key information during drilling and open up sub-salt plays.

A Nexen spokesman said the partnership now has the added advantage of drilling to new depths in the Gulf.

Nexen has earmarked C$225 million for exploration spending in the Gulf in 2006, scheduling three deepwater shelf and five deepwater wells.

The Gulf breakthrough could also raise Nexen's profile as a takeover target, given its global interests in Yemen, West Africa, the North Sea and its steady advances in Alberta oil sands and coalbed methane plays.

It is aiming for a 50 percent increase in production over the next two years to 350,000 barrels per day, including a net 85,000 bpd from the North Sea Buzzard field acquired from EnCana.

—GARY PARK

● ALASKA

Higher oil prices create tight labor market

THE ASSOCIATED PRESS

High oil prices have caused a rise in oil field activity, which in turn has created job opportunities as well as a tight labor market for oil services companies in Alaska.

In 2004, oil services giant Schlumberger's payroll in Alaska averaged 387 workers, ranking it the 63rd largest employer in the state. When general manager Eric Larson transferred in January back to his home state to run the local office, the company employed about 420 people, from petroleum engineers to mechanics. As of the week of Dec. 12, Schlumberger had 472 people on its Alaska payroll. Larson expects that to bump up to about 500 within six months before leveling off.

"The labor market is tight and getting tighter," he said Dec. 16.

"There's a tremendous skilled labor shortage right now," said Paul Laird, head of the Alaska Support Industry Alliance, an oil-services trade group. BP Exploration, the second largest oil producer on the North Slope, said in November it plans to add 200 engineers and other workers in the next year to staff expansion projects.

Neal Fried, a state labor economist, said hiring for the Alaska oil industry is definitely up, but it comes after years of cutbacks. He also said the industry's hiring is stronger outside Alaska.

The construction industry also is being squeezed for labor, said Rebecca Logan, head of Associated Builders and Contractors, a statewide trade group. During a construction summit early this year, it was estimated contractors would need 1,000 new workers a year to enter the industry over the next five years to keep up with the current shortage and fill in for an expected retirement wave that's coming.

"Everybody is so busy right now with both public and private sector work," she said. Federal and state construction spending is likely to remain high next year, she said. ●

JAPAN

Japan's 3 top oil companies to cooperate

Japan's three major oil companies — Nippon Oil, Teikoku Oil and Inpex — agreed Dec. 19 to seek cooperation in oil and gas exploration and production business abroad.

Nippon Oil Corp., Japan's largest oil refiner in revenue and refining capacity, said it will support a planned merger between Teikoku Oil Co. and Inpex Corp.

Under the agreement, Nippon Oil and the Teikoku Oil-Inpex will consider a capital tie-up as well as a business alliance in new oil development projects, the three companies said at a joint news briefing.

Relationship would create major

A business relationship between Nippon Oil, and the Teikoku Oil-Inpex, if realized, would create a major comprehensive oil company handling activities from oil field development to refining and sales, analysts say.

"Combined with Nippon Oil's refining know-how, and gas-to-liquid oil production technology, we are expecting to strengthen our (the new holding company's) competitiveness in the global competition for natural resources," Inpex President Naoki Kuroda told reporters.

As part of its long-term business plans, the cooperation agreement could help Nippon Oil boost oil and gas exploration and production businesses abroad.

"Joining them (the new holding company) should help form Japan's major oil and gas exploration group, and contribute to Japan's long-term energy supply security," Nippon Oil Shinji Nishio said.

Teikoku-Inpex merger announced in November

In November Teikoku Oil and Inpex announced merger plans for April next year under a joint holding company, and a complete merge by June 2008, in an effort to improve their competitiveness in the race for global oil and gas assets.

Inpex, in which the Japanese government holds a 36 percent equity stake, is a company that promotes the development of international oil resources to gain a stable supply for the Japanese market. Teikoku Oil is an oil and gas exploration company. The three companies involved all are based in Tokyo.

Under the plans, by June 2008, Nippon Oil will consider holding a stake of about 5 percent stake in the Teikoku Oil-Inpex, which will consider holding a stake of about 1.5 percent in Nippon Oil. The agreement has set the cap of Nippon Oil's stake in the merger entity at 7.5 percent.

—THE ASSOCIATED PRESS

● NORTH SLOPE

Pioneer's Arctic Fox Rig No. 1 has arrived

Independent permits three more Cronus exploration wells; major components for Doyon/Akita JV drilling rig arrive on North Slope

By KAY CASHMAN

Petroleum News Executive Editor

In anticipation of hitting pay at its North Slope Cronus exploration well this winter Pioneer Natural Resources filed applications in mid-December to drill three more wells in the newly formed Cronus unit which is on State of Alaska leases east of the Colville River and about 30 miles south of the Beaufort Sea.

The three permits are for Cronus 2, 3 and 4 on Alaska oil and gas leases 390037 and 390038.

Pioneer already has a permit for Cronus 1. (See permit locations on the Antigua map in the Dec. 4 issue of Petroleum News in the story titled "Five's the likely number," which is about the number of exploration wells planned by industry for this winter's North Slope drilling season.)

The Dallas-based independent filed a plan of operations with the Division of Oil and Gas in November to drill the Cronus 1 well this winter.

Ken Sheffield, the president of Pioneer's Alaska subsidiary, said the company has not yet decided which of the four Cronus wells it will drill first.

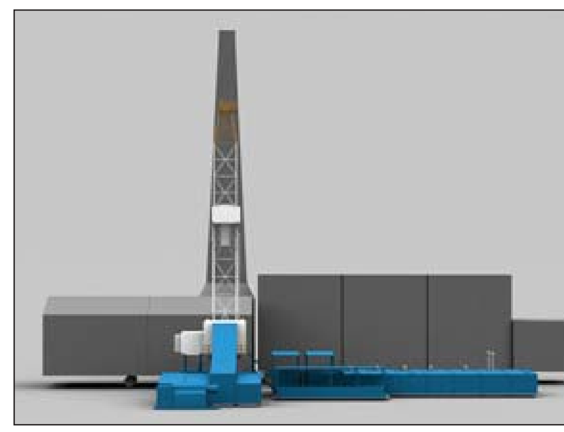
"If we … (are) fortunate to have success then the permits give us the … flexibility to do some follow up drilling," he said.

Spudding Hailstorm first

The primary components of the Arctic Fox No. 1, a new, innovative Arctic rig owned by JV partners Doyon Drilling and Akita Drilling, "have arrived on the North Slope," Sheffield said. Pioneer plans to use the Arctic Fox for all its North Slope exploratory drilling this winter.

"We anticipate spudding Hailstorm before the end of the year, depending on weather, of course," Sheffield said. Hailstorm is in the newly formed NE Storms exploration unit south of Prudhoe Bay where Pioneer and ConocoPhillips each have a 50 percent working interest in the leases.

The Cronus unit application was initially filed by ConocoPhillips in August but the company subsequently entered into a farm-in deal with Pioneer, assigned operatorship to Pioneer and also assigned 30 percent of its working interest to AVCG. The leases were originally part of the larger Southeast Delta exploration unit, dissolved in 2003 when ConocoPhillips elected not to drill a Cronus well for reasons unrelated to the prospectivity of the area.



COURTESY PIONEER NATURAL RESOURCES

The primary components of the Arctic Fox No. 1, a new, innovative Arctic rig owned by JV partners Doyon Drilling and Akita Drilling, "have arrived on the North Slope," Sheffield said.

> *"If we … (are) fortunate to have success then the permits give us the … flexibility to do some follow up drilling."* —Ken Sheffield

The Cronus target is Albian-aged submarine fan turbidite sands in the Torok formation, correlative to the section in the Nanuk 1 well 16 miles to the northwest.

Access to the Cronus ice pad(s) will be via an ice road (8-10 miles to Cronus 1) that runs west from existing facilities at Kuparuk, Drill Site 2P (Meltwater).

Cronus 2, 3 and 4 well locations are at: section 31, township 9 north, range 6 east, Umiat Meridian; 32-9N-6E, UM; and 33-9N-6E, UM, respectively.

Public comments on the three permits are due no later than Jan. 17; a final determination will be issued by Feb. 6, the division said. ●

GULF COAST

LNG terminal gets FERC go-ahead

Cheniere milestones come as Trinidad adds big new production train in tight world market for low-polluting fuel

By ALLEN BAKER

Petroleum News Contributing Writer

Another LNG terminal on the Gulf Coast has received all its permits for construction just as the huge liquefied natural gas complex in Trinidad added production capacity.

Cheniere Energy Inc. announced Dec. 16 it has received authorization from the Federal Energy Regulatory Commission to build a terminal at Corpus Christi, Texas, with a capacity of 2.6 billion cubic feet daily.

The company said the same day that FERC has issued a draft Environmental Impact Statement for the Creole Trail LNG terminal (3.3 bcf per day) in Cameron Parish, La. And three days later, the company building the Freeport LNG terminal (1.75 bcf per day initial capacity) in Texas announced it has closed a $383 million private financing deal for that terminal, where Cheniere has a 30 percent interest and ConocoPhillips is a partner.

Aside from Freeport, in Texas, Cheniere has also begun construction at its Sabine Pass terminal in Louisiana, with a capacity of 2.6 billion cubic feet.

Plainly speaking, the LNG terminals being built around the country could be sitting on loads of excess capacity as other nations speak for the world's LNG supply. The five existing U.S. terminals are running at about 50 percent of their capacity, and new supplies around the world are being locked up by gas-hungry utilities signing contracts stretching out a quarter of a century.

For example, Chevron Corp. has long-term contracts for its 50 percent share of the planned Gorgon project off Australia. Three Japanese utilities recently agreed to 25-year contracts for Chevron's 5 million tonnes of LNG annually, the equivalent of about 660 million cubic feet daily.

The Japanese companies were clearly willing to pay a premium for the gas, which had been destined for China. That country's CNOOC backed out due to price issues.

Atlantic LNG at Trinidad and Tobago is the closest and biggest LNG supplier for the North American market. The startup of Train 4 on Dec. 16 boosted capacity there by more than 50 percent to 15 million tonnes per year.

That amounts to just under 2 bcf per day, so even if it all went to the four Gulf Coast receiving terminals where Cheniere is involved, it would amount to just a fifth of their capacity. That's before planned Phase 2 expansions, competing terminals, and so on. Filling those capital-intensive projects, which cost around $600 million each, could be a challenge.

New LNG supplies are being developed around the world, from Nigeria to gas-rich Qatar to Indonesia and Sakhalin Island. Billions of dollars are going into gigantic chillers and insulated tankers to carry the supercooled liquid.

Australia's Woodside Energy Ltd. just announced plans to spend more than $1 billion on developing the Angel field, with projected output of 800 million cubic feet of gas and up to 50,000 barrels of condensate daily. That will feed the North West Shelf venture, which made a $1.5 billion financing commitment last summer for a fifth liquefaction train there, raising capacity to 16.3 million tonnes annually, or 2.1 bcf a day.

The six equal partners in that project were so bullish on the market they didn't wait for customer commitments. Besides Woodside, the partners are subsidiaries of BHP Billiton, BP, Chevron and Shell, plus Japan Australia LNG (Mitsui and Mitsubishi).

Woodside is also pushing ahead with its fully owned Pluto project, where Tokyo Gas Co. recently made a 20-year commitment.

Most U.S. LNG terminals are being financed with long-term commitments for capacity from major multinationals. At the Freeport project, for example ConocoPhillips has bought a billion cubic feet of daily capacity, which could come from Qatar, Venezuela, or other sources. Dow Chemical Co. has spoken for half a billion cubic feet at Freeport. For a planned Phase 2, a consortium of ConocoPhillips and Mitsubishi has long-term contracts for half a billion cubic feet.

For now, supply is tight and spot market cargoes are rare. With growing demand from Europe and Asia, it may take a long time for a competitive spot market for LNG to develop. In North America, finding adequate supply could be a major issue in the next few decades. The Energy Information Administration figures U.S. consumption will rise by 20 percent by 2025, while supplies from domestic wells are expected to rise by only 10 percent. ●

ALASKA

Conservation groups sue federal government to protect polar bears

Three environmental groups sued the federal government Dec. 15, seeking to protect polar bears from extinction because of disappearing Arctic sea ice.

The lawsuit, filed in federal court in San Francisco, demands that the government take action on a petition environmentalists filed earlier to have polar bears listed as "threatened" under the Endangered Species Act.

Once a species is listed as threatened, the government is barred from doing anything to jeopardize the animal's existence or its habitat. In the case of the polar bear, the environmentalists hope to force the government to curb U.S. emissions of greenhouse gases such as carbon dioxide.


COURTESY DOYON DRILLING

The Center for Biological Diversity, the Natural Resources Defense Council and Greenpeace said extensive scientific evidence shows sea ice is melting because of global warming.

"Global warming and rising temperatures in the Arctic jeopardize the polar bear's very existence," said Melanie Duchin of Greenpeace. "Polar bears cannot survive without sea ice. Polar bears could disappear in our lifetime if we don't take action."

Valerie Fellows, a Fish and Wildlife Service spokeswoman in Washington, said she did not have the lawsuit in front of her and could not comment on its specifics.

America's polar bears are found in Alaska. The Beaufort Sea stock off Alaska's northern coast is estimated at 2,000 animals. The Bering-Chukchi stock off Alaska's northwest coast, a population shared with Russia, is estimated at 2,000 to 5,000.

There is no firm count of polar bears, and the lawsuit did not indicate how many may have been lost because of retreating ice.

In September, the University of Colorado's National Snow and Ice Data Center, NASA and the University of Washington announced a "stunning reduction in Arctic sea ice at the end of the northern summer."

—THE ASSOCIATED PRESS

ALASKA

Veteran auditor to head Tax Division

Robynn J. Wilson of Anchorage, 48, a certified public accountant and 10-year division veteran, has been appointed director of the Tax Division by Alaska Department of Revenue Commissioner Bill Corbus.

Wilson's appointment is effective immediately. She replaces Dan Dickinson, who resigned earlier in 2005 to join Gov. Frank Murkowski's natural gas pipeline negotiating team. Wilson will be paid $93,576 a year as director, Revenue said in a statement.

"We advertised the position nationally and interviewed quality candidates from across the nation," Corbus said. "Robynn's dedication, professionalism and leadership put her at the top of the list." Wilson has been the revenue department's corporate income tax auditor since 1995 and the lead auditor responsible for auditing several of Alaska's largest corporate taxpayers. She assisted appeals staff and state assistant attorneys general on tax issues and the state's legal position in litigation.

Prior to her state service Wilson was a financial administrator with McNall & Associates in Anchorage and a staff accountant at the Anchorage offices of Price Waterhouse. She is a certified management accountant and also was employed previously by the Internal Revenue Service.

Wilson received her graduate certificate in state and local tax from the University of Wisconsin in Milwaukee. She graduated magna cum laude from the University of Alaska Anchorage with a bachelor of business administration degree and an emphasis in accounting.

Lower Foothills opens for tundra travel

The Alaska Department of Natural Resources opened state lands in the lower foothills of the North Slope to oil and gas exploration Dec. 14. The department said in a Dec. 15 statement that the decision allows the use of vehicles that are not approved for year-round tundra travel. This is, the department said, the earliest opening for the foothills area this decade and is based on measurement standards developed by the Division of Mining, Land and Water through a scientific study completed in 2004. The new snow depth and soil temperature standards developed through the study allow the department to length the oil and gas winter exploration season without increasing impact on the tundra, Commissioner Mike Menge said in a statement.

The department said that monitoring of some of the early exploration activity allowed last winter season, followed by additional study this summer, showed that last year's early opening did not result in any increased impact on the tundra. The department said it will continue to monitor the effect of exploration based on the new standards developed.

"The division has responded to the need to lengthen winter oil exploration seasons while still maintaining the existing level of production," Menge said. "While the new measurement standards have resulted in a longer season, the seasonal weather conditions play a vital role as the standards are reflective of the changing conditions."

The department said it will continue to collect data in the upper foothills areas to determine when opening standards have been met.

The east and west coastal areas of state-owned lands on the North Slope were opened to oil and gas exploration activity Dec. 6, the earliest opening since 1995.

—PETROLEUM NEWS

ALASKA

Chevron-Unocal 2006 capex spending to reach $65-75 million in Alaska

The Chevron-Union Oil Company of California net capex spend for Alaska for 2006 will be a range of $65 million to $75 million, Alaska spokeswoman Roxanne Sinz, told Petroleum News Dec. 19.

Chevron announced a $14.8 billion capital and exploratory spending program for 2006 earlier in December, a 35 percent increase compared with estimated expenditures of approximately $11 billion in 2005. The budget includes $4.9 billion investment in the United States, a $1.1 billion increase over 2005 estimated spending.

Chevron announced a $14.8 billion capital and exploratory spending program for 2006 earlier in December, a 35 percent increase compared with estimated expenditures of approximately $11 billion in 2005.

"Our overall investment program continues to advance our strategies to build legacy positions in key producing regions and commercialize our significant natural gas resource base," said the company's chairman and CEO, Dave O'Reilly.

Chevron said some 75 percent of its total capital and exploratory spending, $11.3 billion, is for upstream investment in exploration, production and natural gas-related projects, including $3.3 billion in the United States. Chevron began construction in 2005 on two Gulf of Mexico projects, Tahiti and Blind Faith.

The Chevron takeover of Union Oil Company of California was approved by Chevron shareholders in August.

The company's Alaska interests range from leases in the Arctic National Wildlife Refuge and Point Thomson on the eastern North Slope to production from the Prudhoe Bay, Kuparuk River and Duck Island units on the central North Slope.

In Cook Inlet the company operates the Swanson River, Trading Bay and South Granite Point oil fields as well as being a major natural gas supplier for Southcentral Alaska from a one-third interest in the Beluga River field, the company's oil fields and smaller gas fields on both the west side of Cook Inlet and on the Kenai Peninsula.

—KRISTEN NELSON

continued from page A3

TALKS

been invited to comment, but "they have corporate philosophy relative to being committed to finally finishing the deal before they would care to comment in detail," he said.

Marushack, ConocoPhillips Alaska's vice president for gas commercialization, said federal legislation was secured in October 2004 and this October ConocoPhillips "agreed to the base fiscal terms with the state."

"There are enormous gas resources already known on the North Slope and we want to develop a new industry, a gas development and exploration industry," he said.

With the magnitude of the project, "we need to get the right agreement," Marushack said, adding that ConocoPhillips is encouraged by progress made, "and we're anxious to finalize our contract with the state."

On the policy issues outstanding, Marushack said: "Some issues take a fresh set of eyes — you have to think about it a little bit and come back with something that hadn't been considered before and I think that's what you're talking about, is just considering if there's different ideas, different ways of getting to an end that meets everybody's requirements."

Ken Konrad, BP's senior vice president-Alaska gas, said in a statement: "We have agreed to suspend the negotiations over the holiday period. Our teams have been working very hard and need a well-deserved break to be with their families. Some difficult issues remain on both sides and we expect to resolve them in the New Year."

ExxonMobil did not respond to a request for a comment.

When the negotiations resume in January they will move from Anchorage to Juneau.●

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

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Petroleum news

Business Spotlight

By PAULA EASLEY

FORREST CRANE

Jang Ra, Professor and Chair

UAA Engineering, Science & Project Management Graduate Department

The UAA Engineering, Science & Project Management Graduate Department is a single source of technology and project management training, education and consulting. Its goal is to make Alaska known for its expertise in the field of project management, especially in rural environments with primitive infrastructure, aggressive weather and low-density populations.

Jang Ra was born and practiced textile engineering and quality control in Korea. He came to the United States to learn management and obtained two masters degrees and a Ph.D. He joined the UAA faculty in 1988 and expanded the 40-plus year-old engineering and science management program by adding project management in 2004. He and his wife Jane have two sons. Eric graduated from Texas A&M this summer and Andrew is a UAA sophomore.

continued from page A1

OOOGURUK

preliminary findings and determination document, initiating a 30-day public comment period on the proposed reduction.

Located in the shallow waters of Harrison Bay north of the Kuparuk River unit, Oooguruk's recoverable reserves are in the Kuparuk C sandstone and the Jurassic Nuiqsut sandstone, which are expected to yield 18,000 to 20,000 barrels of oil per day at peak production.

Oooguruk operator Pioneer Natural Resources formally applied to DNR's Division of Oil and Gas for modification of royalty rates under Alaska Statute 38.05.180 in late May, initially asking that the 12.5 percent royalty rate be dropped to 5 percent on four Net Profit Share leases within the Oooguruk unit (ADL's 355036, 355037, 355038 and 355039).

In early November, Pioneer amended its application to include five more leases (ADL's 389950, 389952, 389954, 389958 and 389959), asking that the royalty rate of 16.6667 percent on those leases also be reduced to 5 percent. (The five leases are not in the Oooguruk unit, but Pioneer is working on a unit expansion application involving those leases and one other, bringing total unit leases to 18.

Both sides pleased

Pioneer did not get everything it asked for from the commissioner. He gave them a 5 percent royalty on all nine leases, the minimum rate allowed, but converted the five leases that were not Net Profit Share leases to NPS leases, which means Pioneer will share 30 percent of its profits from Oooguruk after operating costs have been deducted — and after $80 million in exploration costs have been recovered, which Pioneer told the state was what it had spent to date.

The company also requested that Oooguruk be "treated as separate and distinct" from nearby Kuparuk where Oooguruk liquids would be processed "for ELF factor calculation, resulting in a severance tax that is effectively zero."

But Menge said no, tax issues being the jurisdiction of the Department of Revenue.

Still, both sides seemed pleased with the outcome of their negotiations.

"I believe we've crafted a decision that strikes a good overall balance between the risks and rewards for both the state and the leaseholders," the commissioner said.

Ken Sheffield, president of Pioneer's Alaska subsidiary was equally satisfied with the outcome: "We were pleased that the state was willing to work with us. In any negotiation you never get exactly what you want and I think what the state and Pioneer agreed to is fair for both parties."

Facilities capex estimated at $246 million

DNR's approval of the royalty reduction was conditional on several things, including Oooguruk development being sanctioned by its owners by Dec. 31, 2007.

Also, DNR's finding said "if facilities capex — to include island, surface equipment, flowline bundle, etc. — costs less than 75 percent of the amount presented with application," which was $246 million, royalty relief would be rescinded.

The state said Pioneer demonstrated Oooguruk was "extremely marginal, and has considerable risk of low investor returns" without royalty relief.

As part of its justification for the royalty reduction DNR pointed to "inadequacy" of 3D seismic data related to the Nuiqsut accumulation, increasing the risk for Pioneer.

Located in the shallow waters of Harrison Bay north of the Kuparuk River unit, Oooguruk's recoverable reserves are in the Kuparuk C sandstone and the Jurassic Nuiqsut sandstone, which are expected to yield 18,000 to 20,000 barrels of oil per day at peak production.

Primary seismic data used for Oooguruk evaluation was a 3D survey acquired by Western Geophysical for ARCO in 1997. Although the 3D dataset was adequate for determining the distribution and potential thickness of the Kuparuk formation, "the Jurassic Nuiqsut sands are, so far, poorly expressed on any available seismic dataset," the state said.

The state also said "the characteristic low porosity, permeability, and relatively low gravity 20-25 degree API combine to make it difficult to predict Nuiqsut oil productivity from the wells drilled to date."

Pioneer initially looked at a waterflood project to improve production rates at Oooguruk, eventually switching to the more expensive enhanced oil recovery technology, the state said. The company found that the production gains by EOR would still not result in an economic project without royalty relief.

Royalty rates bump up after payout

After ADL 355036 initially reaches payout the royalty rate on the leases will increase over a four-year period, ramping-up to the original lease royalty rates and net profit sharing will no longer apply to the five leases with the higher royalty.

Seventy percent of the working interest in the nine leases is held by Pioneer, 30 percent by Eni Petroleum.

Kevin Banks of the division said this would be the first time the state has used its authority to provide royalty relief to a field before production began. ●

continued from page A1

PIONEER

Oooguruk area to allow for development, a process that Pioneer's Alaska subsidiary president says he hopes will be final in January,

In an interview with Petroleum News on Dec. 20, Ken Sheffield said Pioneer is also waiting for permits from the U.S. Corps of Engineers, which the company hopes to get in January.

"The goal is with the receipt of all the permits and a final binding decision on royalty relief we're hoping to move forward with the gravel laying operation in first quarter 2006," which would allow Pioneer to go into the winter season of 2006-07 with the island complete, Sheffield said.

In early 2007 Pioneer would then "install the subsea flowline and get the drill site hardware on the gravel island," he said.

Pioneer does not yet have a "definitive" facility sharing agreement with Kuparuk River unit operator ConocoPhillips, where Oooguruk oil will be processed, but Sheffield said it does have a "Memorandum of Agreement with Kuparuk unit owners that lays the foundation for that future facility access agreement. … The KRU ballot 255 and 255A (backout portion) will be the foundation of the future agreement."

Sheffield would not comment on when the project might be sanctioned by Pioneer.

—KAY CASHMAN

continued from page A1

INSIDER

ery.

Despite the broad hints from Brenneman of possible pay dirt, Hibernia operator ExxonMobil is sticking to its line that any talk of new oil is premature.

If the oil is deemed to be a new field, and Newfoundland Premier Danny Williams says he has been told it is a separate play, it will face the higher royalties.

At the same time, Williams is emphatic that his government should have an equity stake in Hibernia to obtain a "fairer return" from its offshore.

In speeches and interviews over the last two weeks, he has said it is time Newfoundland received a "share of the wealth" from the "very profitable" Hibernia, now pumping more than 200,000 barrels per day from the Terra Nova and White Rose projects.

Williams has set his sights on establishing a "signature piece" by taking over the Canadian government's 8.5 percent holding in Hibernia, although Prime Minister Paul Martin flatly rejected that notion. ●

continued from page A1

QUEBEC

access to the major North American markets.

He said it appears that Russia's Gazprom has given the brush off to Petro-Canada's hopes of obtaining LNG supplies and is now negotiating directly with BP.

Petro-Canada is in a joint venture with TransCanada to spend C$500 million building and operating a regasification terminal at Gros-Cacouna in Quebec, with plans to sell the gas in Eastern Canada and the United States.

He said the Gros-Cacouna partners, who were optimistic they could participate in building a loading terminal in the Russia port of St. Petersburg, are now "down several notches in terms of their (chances) to access gas out of the Russian system."

Petro-Canada hasn't yet given up, saying discussions with Gazprom continue, but "it's a slow process."

Rabasca terminal faces tough opposition

However, Gros-Cacouna's troubles don't necessarily improve the odds for the second Quebec venture by Gaz Metro, Gaz de France and Enbridge to build the C$700 million Rabasca terminal.

Although the project recently won support in a community referendum, it is expected to face tough opposition at an upcoming environmental review.

Theal said that from what he knows of the community mood, Rabasca "will not get off the ground."

That view isn't shared by Pierre Despars, executive vice president of Gaz Metro, Quebec's leading gas distributor, who told analysts earlier in December that is not impossible for both terminals to proceed.

However, he would prefer that didn't happen, because two terminals would put downward pressure on prices, making the terminals less attractive to investors.

Rabasca has targeted a 2010 start-up — two years later than the original timetable — for LNG imports of 500 million cubic feet per day.

Pipeline extension required

If both terminals proceed, Despars said Gaz Metro would have to invest close to C$1 billion to extend the Trans Quebec & Maritimes pipeline, which currently ships Western Canadian gas in an easterly direction, but would have to be reversed if both Gros-Cacouna and Rabasca proceed.

Modifying Gaz Metro's pipeline network would cost only about C$70 million, but if Gros-Cacouna is built the investment would be about C$260 million, he said.

Plans for one LNG project in British Columbia got a lift earlier in December when Kitimat LNG, owned by privately held Galveston LNG, reached agreement with the Haisla First Nation covering economic benefits for the aboriginal community.

That came just two weeks after the company asked for a temporary suspension to a 180-day timeline review of its environmental application in order to "ensure the application's success."

Kitimat President Rosemary Boulton said that the Haisla deal is a breakthrough for the plans to build a C$500 million terminal.

She said Kitimat now has a "real probability" of being the first of several LNG facilities proposed for the North American West Coast to be completed.

With a C$50 million equity and credit facility in place, the Kitimat plans call for a C$500 million terminal to process 610 million cubic feet per day of send-out capacity to markets in British Columbia, Alberta, the U.S. Pacific Northwest and California.

Kitimat faces competition from WestPac Terminals, which has negotiated a 30 year lease on a possible terminal site near Prince Rupert, with the goal of selling 300 million cubic feet per day of gas to major North American markets by 2009.

—GARY PARK

continued from page A1

LNG

where the highest bid is," he said.

"LNG isn't a solution to lower prices. It's a solution to having balance in the market over the long term."

For gas producers in Western Canada, gas prices will be determined by supply from the Lower 48 and Canada "for years to come," while LNG exporters shop for their best deal, he said.

Theal predicts that gas prices for the rest of this decade will likely be US$7-$8 per thousand cubic feet, while foreign LNG could be delivered at US$4 per mcf plus profit.

But global liquefaction capacity is unlikely to keep pace with demand over that period, while beyond 2010 new LNG terminals will depend for supplies in Russia, Iran, Saudi Arabia, West Africa and Venezuela, all areas with high geopolitical risk profiles, he said.

> *"LNG isn't a solution to lower prices. It's a solution to having balance in the market over the long term."*
>
> **—Tristone Capital analyst Chris Theal**

Theal: Russia, Qatar will be major suppliers

Theal is counting on Russia and Qatar to become the world's major suppliers of LNG — unseating the current leaders from Indonesia, Malaysia and Algeria — as they exploit vast gas reserves.

Giant state-owned Gazprom, already producing 20 percent of the world's gas, is poised to gain a large foothold in North American markets, where it expects to meet one-third of LNG imports that could reach 15 billion to 20 billion cubic feet per day by 2020 from today's 1.7 bcf

Theal, who based some of his findings on information gleaned at the sixth World LNG Summit in Rome earlier in December, said Gazprom is intent on deriving maximum value from its resources by taking a role in production, processing and marketing, although it faces challenge from rising costs in exploiting its Shtokman field in the Arctic. Partners to develop that field are expected to be announced in early 2006.

However, Theal had bad news for Petro-Canada, which is involved in discussions with Gazprom to become a partner in a St. Petersburg liquefaction facility to ship LNG to the planned Gros-Cacouna terminal in Quebec, which is being designed for send-out capacity of 500 million cubic feet per day.

He said the Russians doubt the Quebec terminal, a joint venture with TransCanada, will have the market access they want despite easy access to the United States.

LNG consumption forecast to grow more slowly

Theal forecasts that LNG consumption will grow worldwide by 6-8 percent over the next decade, down from earlier forecasts of 10 percent, reflecting a slowdown in demand in India and China because of higher commodity prices.

By 2010, Tristone believes worldwide regasification capacity will have reached 54 bcf per day, far ahead of the anticipated export capacity of 36 bcf per day. Today, LNG export capacity exceeds regasification capacity by 17 bcf to 20 bcf.

Theal said LNG supplies after 2010 face a number of challenges, including greater security of supply uncertainty, while financing hurdles and a shortage of skilled labor and engineers are hiking the cost of facilities by 15 percent facilities.

The report also said North American regasification facilities are located too far from consumers, further adding to the costs of LNG imports.

The world fleet of LNG tankers, currently 183, could double in the next decade, but the strain on shipyards may stand in the way of that objective, he said.

Even if the tankers could hit the water, the 12 years needed to train qualified tanker captains is a further obstacle.

Tristone noted that global gas reserves are an impressive 6,000 trillion cubic feet, but only 10 percent is in countries of the Organization for Economic Co-operation and Development, while 75 percent belong to seven state-owned companies.

The report said that "with questions of transparent policy and markets in Russia, nuclear development in Iran and geopolitics in Venezuela, the increased geo-political risk is likely to restrict/limit/delay investment by the majors where country, counterparty and financial risk increases."●

continued from page A1

ANWR

11th-hour procedural motion based on Rule 28 early Dec. 21. The motion for cloture, which required 60 votes to limit debate on the bill, failed 56 to 44 in midday balloting.

Four Democrats, Sens. Daniel Akaka and Daniel Inouye of Hawaii, Mary Landrieu of Louisiana and Benjamin Nelson of Nebraska, voted for the motion, while three Republicans, Sens. Lincoln Chafee of Rhode Island, Thomas Dewine of Ohio and Senate Majority Leader Bill Frist, M.D., of Tennessee, opposed it.

Passage of the motion would have prevented a Democratic filibuster of the bill, making ANWR drilling immune to defeat without tanking the entire defense spending package. However, defeat of the cloture motion means Senate negotiators will have to make changes in the bill, likely including removal of ANWR drilling, or send the entire defense appropriations package back to the drawing board, according to Stevens. Additionally, removal of ANWR drilling from the defense spending bill would eliminate a source of funding critical for emergency measures added to the bill in the past week such as hurricane disaster relief and $2 billion for federal assistance to low-income families for home heating bills this winter.

Earlier, the Senate passed a $40.6 billion budget reconciliation bill that included several changes that now sends it back to the House of Representative for approval. The House approved a slightly different version of the deficit-cutting legislation on Dec. 19.

Reconsideration of cloture possible

At the last minute, Frist switched his vote to “no,” which allows the cloture motion to be reconsidered later in the debate.

Earlier, the Senate passed a $40.6 billion budget reconciliation bill that included several changes that now sends it back to the House of Representative for approval. The House approved a slightly different version of the deficit-cutting legislation on Dec. 19.

Throughout the week, Stevens and Sen. Lisa Murkowski, R-Alaska, argued that ANWR drilling is critical to national security and reducing the nation’s dependence on foreign sources of oil, but also crucial in providing federal revenue.

“We have to realize that ANWR is germane to the bill. Nothing is more germane and essential to national defense than energy,” Stevens said in a statement Dec. 20. “ANWR supports national security because it would unquestionably increase the national supply.”

The Department of Defense is the largest consumer of energy in the federal government, he explained.

“The Arctic Coastal Plain can produce between 876,000 and 1.6 million barrels of oil per day,” Stevens asserted. “Developing domestic resources in the Coastal Plain would help reduce the United States’ dependence on foreign countries and unfriendly regimes.

Murkowski also cited the importance of the legislation. “When you look at all that this bill encompasses, it is vital that it be taken up and passed before we adjourn for the year,” Murkowski said Dec. 20.

Opponents argued that Stevens broke Senate rules by inserting ANWR drilling in the defense-spending bill and accused him of abusing his power in the Senate.

Stevens fired back that he was following Senate rules, which allowed for ANWR drilling to be inserted into the measure provided Senate procedures were followed.

If the cloture vote is sustained, the House and Senate will have to reconstitute a conference and reappoint conferees, Stevens predicted. The House had indicated it would not reconstitute a conference and would instead rely on a continuing resolution to fund the Department of Defense, preventing the hurricane relief and avian flu preparation funding from taking effect along with ANWR drilling, he added.

Stevens also said many of the provisions likely would be dropped if Congress had to start all over in drafting a defense spending bill.

During debate early Dec. 21, Stevens said he canceled his Christmas holiday plans and was prepared to stay in Washington until the issue is resolved. “If the people of New Orleans can’t go home for Christmas, I won’t go home either,” he said. “I am not a fair-weather friend,” he added, recalling that he spent a New Year’s Eve in the Senate President’s chair one year.

The Congress cannot leave town for the holidays until it has dealt with spending bills, including the defense measure, with or without ANWR drilling, and the deficit-cutting package.

The decision to remove ANWR drilling from the defense spending package had not been made by press time (1p.m. Alaska time, Dec. 21) but some observers say proponents of ANWR drilling and emergency funding measures might be able to attach them to a reconciliation bill in the future. Reconciliation bills are not subject to cloture in the Senate and can be passed with a simple majority of 51 votes.

House votes for ANWR drilling in defense spending bill

The U.S. House of Representatives was expected to reconvene Dec. 22 to take up consideration of a new version of the budget reconciliation package approved by the Senate early Dec. 21.

House lawmakers overwhelmingly passed the defense spending measure 308-106 early Dec. 19 with Arctic drilling. The ANWR drilling provision had a much closer call in an earlier procedural vote on which 16 House Democrats rallied to the aid of the Republican majority to approve the legislation 214-201. Twenty-one Republicans voted against the rules motion, he added.

The House also set aside its differences briefly to greet Rep. Joe Barton, who returned to Congress after suffering a heart attack Dec. 15. ●

Petroleum news

B SECTION

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JUDY PATRICK

The pipeline, which was constructed in 2000 (see above), transports Northstar oil from Seal Island in the Beaufort Sea to Pump Station No. 1 of the trans-Alaska pipeline, a distance of 17 miles

Settlement proposed for Northstar pipeline rates

BP Transportation (Alaska) Inc. and the State of Alaska have petitioned the Regulatory Commission of Alaska to accept a settlement agreement for intrastate tariffs on the Northstar oil pipeline. The pipeline transports Northstar production from Seal Island in the Beaufort Sea to Pump Station No. 1 of the trans-Alaska pipeline, a distance of 17 miles. RCA has been investigating intrastate tariffs on the Northstar pipeline since 2001 — the intrastate tariffs apply to Northstar oil earmarked for sale within Alaska.

FERC has agreed to methodology

In essence, BP and the state have agreed to calculate maximum intrastate tariffs using the Northstar Settlement

see NORTHSTAR page B3

Report: NWT under-charging on royalties in run-up to Mac hearings

NWT Premier Joe Handley

A resource raid by multi-nationals has resulted in petroleum and mining firms plundering the Northwest Territories for "hyper-profits," said a report by the Canadian Arctic Resources Committee that sets the stage for public hearings on the Mackenzie Gas Project that are expected to stretch over the next 18 months.

The findings come in the midst of delicate negotiations between Imperial

see REPORT page B3

Port authority sues BP, Exxon to get North Slope gas for project

An antitrust lawsuit filed Dec. 19 against Exxon Mobil Corp. and BP PLC claims the two oil giants are restricting the nation's supply of natural gas and keeping prices at record highs.

The lawsuit, filed in U.S. District Court in Fairbanks, says the two companies acted together to eliminate competition for the exploration, development and marketing of natural gas from Alaska's North Slope to U.S. markets.

"The only reason for them to collusively not to sell is to try to continue the scarcity that has driven natural gas prices to historic highs," said David Boies, the attorney for the Alaska Gasline Port Authority, which filed the lawsuit.

BP and ExxonMobil are two of Alaska's biggest oil and gas leaseholders, and are the operators for the North Slope's largest oil and gas fields, Prudhoe Bay and Point Thomson.

see LAWSUIT page B7

ALBERTA

Avalanche of land buying

Coffers bulging, Alberta poised by sustained activity to smash single-auction and 12-month records; focus shifts to oil sands, tight gas, coalbed methane

By GARY PARK
Petroleum News Canadian Contributing Writer

Unfortunately for the Alberta government, Will Rogers, that man for all seasons and reasons, got it right when he said: "Land ... they ain't making it any more."

But what there is has caused the province's already bulging coffers to overflow in the final days of 2005.

Energy Minister Greg Melchin

The year's last auction of oil and gas exploration rights raked in C$544 million, easily shattering the previous single sale record of C$121 million set in July 2001.

For the year, the government pocketed C$2.25 billion from the twice-monthly auctions, a jaw-dropping C$1.1 billion better than the previous benchmark in 1997 that was almost matched in 2004.

In what amounts to the understatement of a year when Alberta is on track for a budget surplus of C$5.9 billion — a figure most observers think will be several billion dollars short of the final tally because of unwavering oil and gas prices — Energy Minister Greg Melchin said the record-breaking deals "confirm the confidence in Alberta's energy industry."

see LAND page B6

CANADA

EnCana on full spin cycle

CEO Gwynn Morgan, CFO John Watson set to leave; deal pending to sell AECO Hub gas storage; hopes of completing Valero deal fallen through

By GARY PARK
Petroleum News Canadian Contributing Writer

Without a doubt, EnCanans live in interesting times.

The employees of Canada's powerhouse gas producer must feel their heads are about to swivel off their shoulders as they try to keep pace with unfolding events.

CEO Gwyn Morgan

Here's the latest batch of highlights:

- Chief Executive Officer Gwyn Morgan and Chief Financial Officer John Watson will take their leave over the next two months from posts that have seen them shape a company created four years ago from the merger of Alberta Energy Co. and PanCanadian Energy.
- EnCana is starting to roll out plans for a new head office that could tower over rivals in downtown Calgary.
- Hopes of completing a US$2 billion deal with Valero Energy to convert an Ohio refinery to process oil sands production have fallen through.
- A deal is pending to sell North America's largest independent natural gas storage network.
- If ConocoPhillips pulls off its blockbuster takeover of Burlington Resources, EnCana could lose its coveted role as North America's largest gas

see SPIN page B7

NORTH SLOPE

Conoco offers Fiord pool rules

Asks AOGCC to agree to single Fiord oil pool, applies for area injection order

By ALAN BAILEY
Petroleum News Staff Writer

On Nov. 22 ConocoPhillips Alaska Inc. proposed pool rules to the Alaska Oil and Gas Commission for the Fiord satellite field at the company's CD3 development in the Colville River Unit.

"ConocoPhillips Alaska Inc. (CPAI) as operator of the Colville River Unit, requests a conservation order by the commission regarding the classification of the Fiord reservoirs as an oil pool and prescription of rules to govern the proposed development and operation of the pool," said Chris Alonzo, development supervisor, western North Slope, for ConocoPhillips Alaska, in a letter that accompanied the proposal. "CPAI also requests an area injection order authorizing enhanced recovery operations for the proposed Fiord Oil Pool."

The company anticipates annualized production rates of between 10,000 and 25,000 barrels per day for the Nechelik zone and between 4,400 and 15,700 bpd for the Kuparuk zone

ConocoPhillips' Alaska predecessor ARCO Alaska began drilling at Fiord in 1992 and in December of that year announced a discovery at the Fiord No. 1 well. ARCO and partner Anadarko Petroleum Corp. said in July 1999 that they estimated Fiord to contain more than 50 million barrels of proven and potential reserves.

Fiord is a roadless development in the Colville

see FIORD page B5

● ALASKA

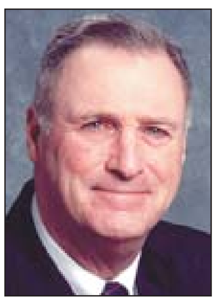
Revenue forecast: prices up, volume down

Change in production forecast due to maintenance, slower moving heavy oil, delay in projects like Point Thomson, Liberty

By KRISTEN NELSON
Petroleum News Editor-in-Chief

Prices being paid for Alaska North Slope crude oil are up, Alaska Revenue Commissioner Bill Corbus said Dec. 15, but ANS production continues a decline that began in 1988.

The department's fall revenue forecast, released Dec. 15, forecasts ANS crude oil production averaging 865,000 barrels per day for the fiscal year ending June 30, 2006, a 5.6 percent decrease from FY '05 when production averaged 917,000 bpd. Over the next decade volumes are projected to continue to decline, averaging 800,000 bpd in 2016, which represents an annual average decline of 0.75 percent per year from FY '06 to FY '16.


Alaska Revenue Commissioner Bill Corbus

Crude oil prices on the West Coast are projected at $57.30 per barrel for FY '06, a 32 percent increase over $43.43 per barrel for FY '05. ANS crude oil prices are forecast to decline to $40.95 per barrel in FY '07. Beyond 2008, prices are forecast at $25.50 per barrel.

Corbus noted in the Fall 2005 Revenue Sources Book that while the fiscal year-to-date average price for ANS on the West Coast is more than $58 per barrel, "price instability continues." He told the press, "three times during the last two decades the price of oil has dropped more than $15 per barrel over a seven-week period."

Factors behind volatility of oil prices include increased global demand for oil, particularly in China, supply interruptions due to the U.S. Gulf of Mexico hurricanes, Iraqi production interruptions and changing Russian and Venezuelan oil policies. Corbus said there is also "a perception factor," a combination of those previously noted "plus the threat of terrorism."

The price differential between ANS crude oil delivered to the West Coast and West Texas Intermediate "has stabilized at about $2 a barrel. Last spring that price differential showed a great deal of volatility, but it has returned to historic norms," he said.

The department has added a section on natural gas, Corbus said, and is "estimating for fiscal year 2006, $9.19 per million Btu; and for the years 2009 through 2016, we are estimating a price of $6.25 per million Btu."

Production timing

The forecast updates production volume details including decreases due to unplanned disruptions, maintenance or repair work that may reduce crude oil flow.

Petroleum engineer Dudley Platt, who has worked on the production numbers for the state for 16 years, said the biggest change in production numbers from the spring forecast is in the timing of when the state gets the barrels.

Ultimately recoverable reserves (from 2005 through 2040) were forecast at about 7.25 billion barrels in the spring, Platt said. "That equivalent number for the fall is 7.15 billion barrels."

The timing of when those barrels will be produced has changed, dropping roughly 50,000 barrels per day for the next nine or 10 fiscal years compared to volumes projected in the spring.

When a gas pipeline starts up, "2014-15-16," then those additional barrels will begin to be recovered, Platt said.

More maintenance

The first reason for the change in production levels is that the state has "reevaluated the downtime associated with some of our more mature fields on the North Slope," Platt said. Prudhoe Bay shut down 70 wells earlier in the year for maintenance work, "that's 20,000 barrels a day through this year and well into next year," he said.

Equipment and facilities on the North Slope are starting to show their age, "not unexpected," and when things break they have to be fixed and that reduces production levels. There were events at the Prudhoe Bay Central Gas Facilities, Platt said, and downtime at Flow Station 2 that was associated with tying in some of the heavy oil developments that will feed into that facility.

Also affecting the production forecast is a "slightly slowed ... pace of development for the heavy oil." The North Slope producers have done a "phenomenal job over the last five or six years on West Sak for instance," getting 6,000 bpd out of a single five-leg well, where 20 years ago they would have been happy to get 300 bpd out of a West Sak well, he said.

Production is beginning from the J-pad heavy oil development, with some oil starting to come on there, but "they've just slowed it down" to reevaluate reservoir performance. "Same thing's happening at the Schrader Bluff field at Milne Point; same thing's happened at the fairly sizeable Orion satellite field in western Prudhoe Bay."

Platt characterized this as the companies digesting some of the new information they're getting from those fields.

Also delays in project startups

The production forecast has also dropped because of delays in estimates of when some projects will come online.

Point Thomson has been delayed two and a half years because the project changed from gas cycling to gas sales and "70,000 barrels a day of condensate just moved from 2011 to sometime beyond that," which also defers 30,000 bpd of "oil that's associated with satellite fields in the vicinity of the Point Thomson field." There will also be an overall production impact: "Relative to the gas cycling project you're not going to get as much gas condensates" produced from Point Thomson, he said.

Platt said he also was more conservative with Liberty, moving startup from that field out three-quarters of a year.

The department is also forecasting a change in Cook Inlet production, a 16 percent drop in FY '05 from 23,000 bpd in the spring forecast, to 19,000 bpd. The North Slope drop for FY '05 is only 0.3 percent, 920,000 bpd to 917,000 bpd, but is steeper in succeeding fiscal years, 5 percent for FY '06, 7.5 percent for FY '07 and 9.8 percent for FY '08. ●

$400 million proposed for gas pipeline investment

High oil prices are projected to give the State of Alaska a surplus of $1.2 billion for the current fiscal year, Gov. Frank Murkowski told Commonwealth North Dec. 15. In addition to earmarking about half of that surplus, $565 million, for education and $130 million for other state needs, the governor proposed saving $400 million for investment in the gas line.

Cheryl Frasca, director of the Office of Management and Budget, told the press that details weren't available, but would be included in legislation introduced during the session for a "corporate structure that would be responsible for advancing the state's role as owner in the pipeline." The $400 million would probably be a capital appropriation, she said, "and by statute capital appropriations last for five years."

Those monies would be part of what the state would put into a gas pipeline project, probably around a billion dollars, in equity before project financing is available from bonding, said Steve Porter, deputy commissioner of the Department of Revenue. For a $20 billion project, with the state taking 20 percent, and 80 percent project funded and 20 percent equity funded, the state needs to come up with "about a billion dollars" in equity, he said. "Equity generally funds the front end of a project, before you can bond the project finances, so most of the equity funding would be in the first four or five years of the project."

Frasca said the $400 million isn't based on specific items, but is based on "carving out some of the surplus from this year" to fund the gas pipeline.

"Actually," quipped Porter, "I wanted a billion and they wouldn't give it to me."

The $1.2 billion surplus is mostly current 2006 fiscal year monies.

For the 2007 fiscal year (the budget presented Dec. 15) the governor proposed additional investment in infrastructure, including industrial roads, and investing in University of Alaska research to make that an industry, with a focus on biomedical, behavioral health and Arctic-related research.

In the job training area the governor proposed funding to help prepare the work force needed for the gas pipeline.

He also proposed a feasibility study involving the state and the Yukon and U.S. federal government to extend rail service from Alaska into Canada. He said there are 1,000 miles of line to build, but it would be possible to complete the project before gas line construction begins, reducing the cost of the gas pipeline and thus reducing the tariff and increasing the value of the state's gas.

—KRISTEN NELSON

continued from page B1

REPORT

Oil, the Mackenzie project's lead partner, and the Canadian government over a range of fiscal options to support the C$7.5 billion Arctic gas development.

Imperial is pressing for lower royalties over the initial years of the project's operating life until the partners have recovered their capital investment, drawing a parallel with the Alberta oil sands, where companies pay a 1 percent royalty on gross revenues until their investment costs have been covered, then 25 percent.

Report: government forfeiting C$540 million

In one of its most controversial findings, the committee report accuses the Canadian government — which collects the royalties from Northwest Territories' resource development — of potentially forfeiting more than C$540 million in oil and gas royalties between 1998 and 2004.

The study report calculated the average royalty rate for the NWT is 5.4 percent, because Canada charges royalties on what companies earn after expenses, compared with the current Alberta rate of 30 percent, which is based on production volumes.

The committee, a citizens' organization formed 30 years ago in response to the first attempt to build a gas pipeline from the Mackenzie Delta, said that given the "dramatic increases in energy prices the value of these resources continues to multiply."

"Northerners can choose to remain a dependent resource colony where multinational corporate capital continues to reap hyper-profits at the expense of social infrastructure and the environment ... or northerners can choose to secure their self-determination by capturing a fair return from the bounty of the earth," the study concluded.

Handley asks for platform positions

Release of the study coincides with a demand by NWT Premier Joe Handley for the leaders of three major political

"Northerners can choose to remain a dependent resource colony where multi-national corporate capital continues to reap hyper-profits at the expense of social infrastructure and the environment ... or northerners can choose to secure their self-determination by capturing a fair return from the bounty of the earth." **—Canadian Arctic Resources Committee report**

parties to disclose their platform positions on issues affecting the region during the current federal election campaign.

In a letter to Prime Minister Paul Martin (Liberal), Stephen Harper (Conservative) and Jack Layton (New Democratic Party), Handley tried where he failed in the June 2004 campaign to get response on four questions — their stance on the Mackenzie pipeline, resource revenue sharing, building a highway to the Arctic Ocean and the challenge of funding the NWT according to its population.

He set a Jan. 9 deadline for answers, two weeks before the vote takes place.

In 2004 he got a detailed reply from Layton, a brief reply from Harper and nothing from Martin, but, based on discussions with the candidates, he is optimistic "they're going to take this (request) seriously."

The NWT has been trying for years to negotiate a transfer of control over resources from the Canadian government, allowing royalties to be channeled directly to the NWT rather than through the federal government.

NWT challenges conclusions

The resources committee's conclusions were quickly challenged by NWT Industry, Tourism and Investment Minister Brendan Bell, who said Alberta's royalty rate was interpreted inaccurately.

He said the 30 percent rate applies to only 15 percent of wells and argued the NWT regime is reasonable, given the costs of accessing frontier resources compared with using existing infrastructure in Alberta.

Given the difficulties of getting equipment into remote areas, he said the NWT royalties are "very competitive and comparable with other jurisdictions."

Committee Chairman Chuck Birchall told CanWest News Services the study is designed to stimulate debate before the Mackenzie proponents "get what they need before we get what we need."

He said it is "unconscionable" that the Mackenzie proponents are negotiating C$1.2 billion in fiscal concessions from the Canadian government, communities along the pipeline right of way have been promised only C$500 million over 10 years, the Aboriginal Pipeline Group has been promised loan guarantees to support its bid for a one-third equity stake in the pipeline and the NWT government "has got nothing."

"What we deserve is a fair royalty resource sharing deal," Birchall said.

In addition, Handley has stirred anger within northern organizations by delivering a "letter of comfort" assuring Imperial it was not the NWT government's intention to "introduce or support any new, targeted tax or royalty changes ... that would negatively impact project economics."

Report prepared by Petr Cizek

The committee report, prepared by Petr Cizek of Cizek Environmental Services based in Yellowknife, the NWT capital, was based on public data covering the value and volume of petroleum and mineral extraction over the 1998-2004 period.

It said public disclosure and discussion is "urgent," given reports that the Mackenzie proponents are trying to obtain guarantees from the Canadian and NWT governments to retain or reduce existing royalty rates.

The study said Ottawa collected C$120 million in oil and gas royalties at an average royalty rate of 5.4 percent from 1998 to 2004, whereas the Alberta rate of 30 percent would have generated C$660 million.

The total value of non-renewable resource extraction in the NWT rose almost 10-fold from C$282.3 million in 1998 to C$2.7 billion in 2004, with combined royalties reaching C$159 million in 2004 at an effective rate of 5.9 percent of total production.

Although profits from most mines and petroleum operations in the NWT remain confidential, the study estimated that in 2004 the Norman Wells oilfield in the Central Mackenzie Valley made a net profit of 87 percent and Rio Tinto reported an EBITDA (earnings before interest, tax, depreciation, impairments and amortization) rate of return of 75.2 percent and an after-tax rate of return of 34.5 percent on the Diavik diamond mine, the report said.

If royalties continue to be collected at the effective 2004 royalty rate of 4.9 percent, the Mackenzie pipeline capacity would have to be increased from the hoped-for start-up of 1.2 billion cubic feet per day to 2.5 bcf to 3.9 bcf per day for royalty revenues to reach the NWT government forecast of C$550 million in 2011, the report said, claiming that the NWT "continues to over-estimate potential revenues from royalties in its fiscal reviews," despite independent studies.

It said that if royalties were collected at the Alberta "ad valorem" rate of 30 percent royalties alone could cover the entire C$1 billion NWT government budget if the pipeline carried only the 800 million cubic feet per day expected to come from the three anchor fields on the Mackenzie Delta.

—GARY PARK

continued from page B1

NORTHSTAR

Methodology (known as NSM) that had previously been agreed with the Federal Energy Regulatory Commission for interstate tariffs on the pipeline. If RCA accepts the settlement BP will refund intrastate shippers for any tariff amounts paid in the past in excess of the settlement tariffs.

NSM will involve prorating pipeline revenue requirements in proportion to the projected pipeline throughput for a particular type of intrastate transportation. The maximum tariff for that type of transportation will then be the prorated revenue divided by the projected throughput.

As agreed with FERC, the pipeline depreciation component of the revenue requirement will use a unit of throughput method that takes into account the projected petroleum remaining to be recovered from the field.

Superior Crude Trading Co. and Murphy Exploration (Alaska) Inc. are also parties to the intrastate tariff dispute and need to agree to the settlement. Superior, a subsidiary of Murphy Oil USA Inc., ships oil on the pipeline and Murphy Exploration is a co-owner with BP of the pipeline. Murphy Oil owns a small percentage working interest in the Northstar field.

—ALAN BAILEY

COOK INLET

Aurora plans Endeavour well this winter

Aurora Gas LLC is still negotiating with a potential partner to drill for oil at the Endeavour prospect near Anchor Point in the southern Kenai Peninsula, Ed Jones, Aurora's executive vice president of engineering operations, told Petroleum News Dec. 16. The company now hopes to drill at Endeavour in the late winter, Jones said.

"We have just filed a (drilling) permit application with the AOGCC," he said.

The Endeavour prospect in the Hemlock and Tyonek formations at depths between 8,000 and 9,000 feet closely resembles the nearby, offshore Cosmopolitan prospect — Cosmopolitan is known to contain oil. Drilling at Endeavour will mark a departure from Aurora's traditional strategy of developing low-risk, shallow gas deposits around the Cook Inlet. The company has also been considering deep drilling for oil in the Tertiary in the Aspen project on the west side of the Cook Inlet. But Jones sees that project as somewhere further down the road for Aurora.

Meantime the company is in the process of planning a busy program of drilling for gas next year.

"We're working on some other prospects," Jones said.

—ALAN BAILEY

ALASKA

Tentatively scheduled Alaska lease sales

Agency	Sale and Area	Proposed Date
DNR	North Slope Areawide	2006
DNR	Beaufort Sea Areawide	2006
BLM	NE NPR-A	2006
BLM	NW NPR-A	2006
MMS	Sale 202 Beaufort Sea	March 2007
MMS	Sale 199 Cook Inlet	May 2007
MMS	Chukchi Sea/Hope Basin	May 2007
BLM	NE NPR-A	2007
BLM	NW NPR-A	2007

Agency key: BLM, U.S. Department of the Interior's Bureau of Land Management, manages leasing in the National Petroleum Reserve-Alaska; DNR, Alaska Department of Natural Resources, Division of Oil and Gas, manages state oil and gas lease sales onshore and in state waters; MHT, Alaska Mental Health Trust Land Office, manages sales on trust lands; MMS, U.S. Department of the Interior's Minerals Management Service, Alaska region outer continental shelf office, manages sales in federal waters offshore Alaska.

● NORTH AMERICA

California beckons for Enbridge

Non-binding open season for planned Gateway pipeline generates unexpected response from U.S. West Coast; larger line contemplated

By GARY PARK

Petroleum News Canadian Contributing Writer

The hunt by U.S. West Coast refiners for crude oil to replace dwindling shipments from Alaska has resulted in a course correction for Enbridge's planned Gateway pipeline.

The response to a non-binding open season that ended Dec. 16 could see the West Coast take more than 25 percent of Gateway's volumes — originally targeted at 400,000 barrels per day — and has prompted Enbridge to look at sharply increasing Gateway's capacity.

That announcement came just a week after Enbridge signaled its growing interest in the Pacific Northwest and California by forking over US$101.9 million for a 65 percent stake in a 290,000 bpd refined products pipeline.

Richard Bird, Enbridge's liquids pipeline vice president, said the stake in Olympic Pipe Line, controlled by BP's wholly owned Arco MidCon, gives the Calgary-based company entry to a growing market in the U.S. refined products pipeline sector and an "important window" to the West Coast.

It also throws a gauntlet in the direction of Kinder Morgan Canada (formerly Terasen), which is seen as strongly positioned from its Vancouver base and through its Trans Mountain pipeline to expand in the Washington-Oregon-California region.

The Olympic network includes 385 miles of 6-inch to 20-inch diameter pipe, with the pipeline extending from Blaine, Wash., to Portland, Ore., linking four Puget Sound refineries to terminals in the two states as well as a 500,000 barrel products terminal.

That deal came on the heels of BP acquiring sole ownership of the Olympic system by taking over the 40 percent holding of Royal Dutch Shell.

Although contractual commitments have yet to be negotiated, the bidding by prospective Gateway customers exceeded the 400,000 bpd economic threshold set by Enbridge.

Company spokesman Jim Rennie told Petroleum News that Enbridge is now weighing the possibility of increasing the pipeline's diameter to 36 inches from 30 inches.

The project involves a 720-mile link from Edmonton to a deepwater tanker terminal at Kitimat, on the British Columbia coast, with a possible in-service date of 2010.

With the addition of pumping stations that could give Gateway eventual capacity of 800,000 to 1 million bpd, he said, while emphasizing that the open season interest did not reach those heights.

But Rennie said it could make "more sense" to build a 36-inch line which would allow a significant reduction in tolls as volumes build.

An earlier non-binding open season for a twin pipeline to import condensate, used to dilute bitumen and allow it to move more easily through pipelines, attracted similarly strong interest.

That test of the market showed a desire to deliver 265,000 bpd, substantially higher than Enbridge's projected 150,000 bpd.

To meet its tentative target of filing with Canada's National Energy Board in the second quarter of 2006, Enbridge, in addition to negotiating shipping contracts, must complete environmental and engineering work and consultations with First Nations, communities and governments along the Gateway route.

Rennie said those discussions have focused on issues of compensation for land owners, jobs and environmental impact.

Bird said in a statement following the open season that by building the condensate and oil sands pipelines in tandem "the increased scale for both pipelines would provide a very economical system."

Enbridge has estimated that building both lines at the same time instead of as standalone projects could save C$600 million in construction costs.

But a final cost estimate will not be available until a regulatory application has been prepared.

Given its talk of a much larger project, Enbridge is seen as having edged ahead of Kinder Morgan, which is exploring the prospects of a 625,000 bpd pipeline from Alberta to Prince Rupert or Kitimat, targeting the same California and Asian markets as Gateway. ●

continued from page B1

FIORD

River delta — last winter ConocoPhillips mined gravel for pads and an aircraft landing strip. At that time the company also completed one well and started two other wells. Production, slated for startup in 2006, will go through the Alpine facilities.

Two zones

Fiord consists of two zones, one zone in the Nechelik sand of the Jurassic Kingak formation and the other zone in the Kuparuk C sand of the Cretaceous Kuparuk River formation. ConocoPhillips is requesting that the two zones be classified as a single Fiord oil pool, within what AOGCC terms the Colville River Field. The Colville River Field already contains two defined oil pools, Alpine and Nanuq.

Oil gravity from the two Fiord zones ranges from 29.4 to 31.3 degrees API.

A northwest trending fault known as the Fiord fault forms a trap on the eastern side of the Kuparuk zone, "with stratigraphic pinchouts elsewhere," according to ConocoPhillips' pool rules proposal — the structure generally dips to the north and the sand thins westward from the fault. The underlying Nechelik zone is truncated by the lower Cretaceous unconformity to the north of the development area and the sand quality degrades to the south and west, the proposal says.

Although a wedge of non-reservoir Kingak sandstone and shale separates the zones in the area of two of the Fiord wells that have been drilled, "Kuparuk sand and Nechelik sand are contiguous in the oil column" at the toe of horizontal well CD3-108, according to the proposal. And oil analysis indicates that the oil in both zones "are likely the same oil" and originated from the same source rock.

The fact that there is a connected oil column with sand-on-sand contact between the two reservoir zones provides the basis for ConocoPhillips' request to establish a single oil pool.

However, the working interest owners also plan to apply to the state of Alaska and Arctic Slope Regional Corp. in early 2006, to form a separate participating area for each zone.

17 horizontal wells

ConocoPhillips plans 17 horizontal wells at the Fiord CD3 development. Six producers and six injectors will form an array of parallel well trajectories within the Nechelik zone, with each well directionally drilled from the CD3 drill site. Three producers and two injectors will work the Kuparuk zone. In both zones injectors will alternate with producers.

Slotted liners are planned for wells in the Kuparuk zone but wells in the Nechelik zone will have open-hole completions.

The proposal to AOGCC requests that well spacing requirements under the commission's regulations "should be waived because the horizontal well development will yield greater recovery than a conventional well development with a minimum spacing rule." Planned inter-well spacing is 2,100 feet for the Nechelik and 4,500 feet for the Kuparuk, with the possibility of different well spacings after analysis of reservoir performance.

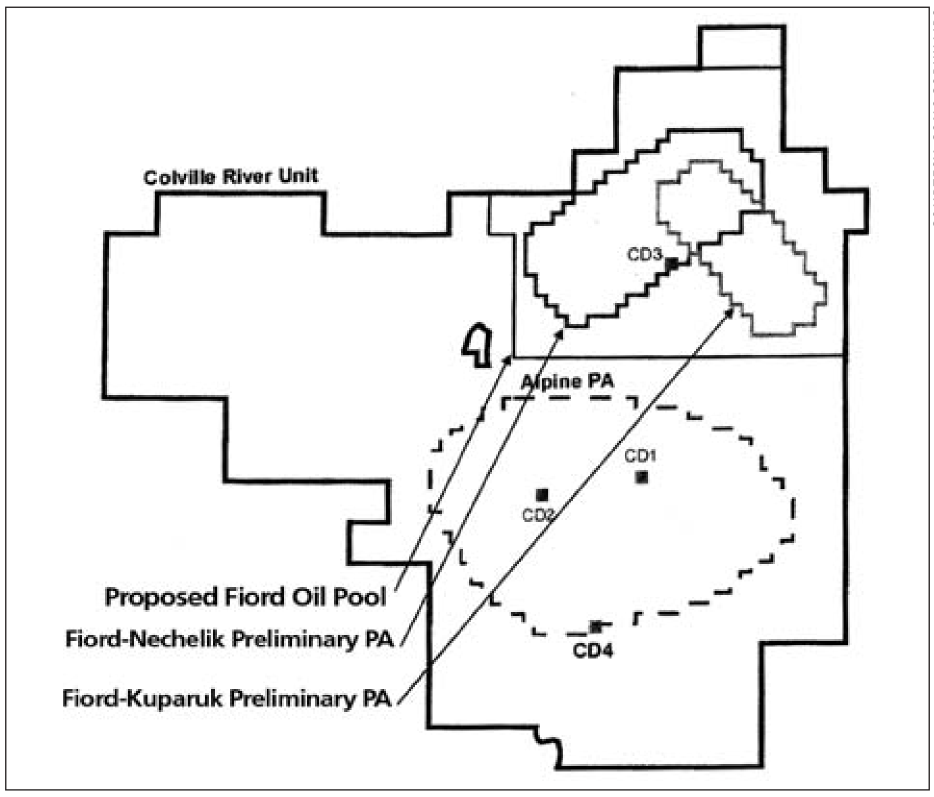
Each well will only enter a single zone — allocation of production and injection back to working interest owners by participating area will be achieved by multiplying total production from the satellite field by a calculated well allocation factor, based on well test data.

Enhanced recovery

ConocoPhillips proposes using a miscible water alternating gas technique for enhanced recovery from the Fiord oil pool. This technique involves sweeping the reservoir with miscible injectant after applying waterflood — the miscible injectant mobilizes oil not swept by the water. Alternating slugs of water and miscible injectant from the injection wells then progressively move oil towards the production wells.

The company anticipates annualized production rates of between 10,000 and 25,000 barrels per day for the Nechelik zone and between 4,400 and 15,700 bpd for the Kuparuk zone. Those production rates will require annualized injection rates in the Nechelik zone peaking at 18,000 barrels per day of water and 12 to 29 million standard cubic feet of miscible injectant gas. The corresponding injection figures for the Kuparuk zone are 5,300 to 18,900 barrels of water per day and 3.7 to 13 million standard cubic feet per day of gas.

Initial water injection will use seawater, but later in field life produced water will become available for injection. Miscible injectant will come from the central Alpine facility. ●



COURTESY CONOCOPHILLIPS

Proposed area of the Fiord oil pool and the participating areas

continued from page B1

LAND

Half a million acres on block

Even before there is a chance to absorb and analyze the astonishing volume of activity, another record is guaranteed to enter the books in 2006.

The Jan. 25 sale will see 209,152 hectares (516,815 acres) of oil sands leases go on the block, shouldering aside the previous single-sale high of 194,176 hectares in 1997.

Those 32 parcels will exceed the annual totals of 2002 and 2003 and put the 2005 total of 355,307 hectares under threat.

Beyond the raw statistics, 2005's auctions underscored the industry's shift from dwindling conventional oil and gas prospects to the unconventional plays in the oil sands, coalbed methane and tight gas prospects along the eastern slopes of the Canadian Rockies.

EnCana the barometer

EnCana, as the barometer of what it describes as "resource plays," was the top spender at the Dec. 14 auction, paying C$160 million for 89,000 hectares in the Edmonton-Calgary corridor that encompasses the rising hopes for coalbed methane production from the Upper Mannville formation.

A spokesman for EnCana, although conceding the Mannville coals present a new opportunity, said the purchase covers several zones (sands, shales and coals) and reflect confidence in the long-term market outlook for gas.

The purchase was also a chance for EnCana to consolidate a "checkerboard" of rights inherited from its founding companies, Alberta Energy Company and PanCanadian Energy.

By far the largest landholder in Canada, EnCana has the added advantage of owning lands given to Canadian Pacific Railway (the parent of PanCanadian) in the 19th Century as partial payment for building a railway across Canada.

Instead of paying royalties on that land, EnCana pays a 7 percent mineral tax.

Manville play 'next craze'

The Mannville play, described by Canadian Society for Unconventional Gas President Mike Dawson as the "next craze," has been estimated by some to have 300 trillion cubic feet of gas in place.

However, tapping into the formation has also been rated a "science" project because of the complex geology.

The focus is on a partnership of Nexen and Trident Exploration which invested C$100 million drilling 80 wells over four years and is now entering commercial development by spending C$400 million over the next 18 months in a program Nexen believes will give it a net 150 million cubic feet per day by 2010.

Others are now apparently ready to take a risk rather than miss a chance.

Wilf Gobert, vice-chairman of investment dealer Peters & Co., said that in addition to EnCana's successful bids, other rights were acquired by Apache Canada, an established coalbed methane producer in Alberta, while little-known junior Ember Resources adding to its Manville holdings by spending C$12 million for rights.

Oil sands also a target

In the oil sands, companies spent almost C$70 million, with Scott Land & Leasing paying C$60 million on behalf of unidentified clients for two parcels covering 7,680 hectares, sitting just north of a parcel acquired by Shell Canada in August.

The Mannville play, described by Canadian Society for Unconventional Gas President Mike Dawson as the "next craze," has been estimated by some to have 300 trillion cubic feet of gas in place. However, tapping into the formation has also been rated a "science" project because of the complex geology.

That triggered speculation among analysts that Shell was again the buyer, adding to its existing holdings as operator of the Athabasca project, which is aiming to grow from 155,000 barrels per day to 500,000 bpd.

For 2005, oil sands leases fetched C$433 million, topping the 12-month record of C$170 million set in 1997.

Postings for the Dec. 14 auction totaled 474,031 hectares, easily the largest offering for the year based on nominations by companies. Transactions averaged C$1.147 per hectare, the second highest average for the year.

For the 12 months, 3.24 million hectares changed hands at a per-hectare average of C$697, eclipsing last year's 3.11 million hectares and C$354.98 average. The final quarter set a blistering pace, with 1.06 million hectares sold for C$950 million at an average C$893.

On the conventional side, 413,422 hectares were acquired for C$475 million at an average C$1.148 per hectare, with BP Canada Energy making a surprise appearance after scaling back its conventional interests in Western Canada by spending C$11.6 million to pick up 15,980 hectares of gas prospects in the Marten Hills area north of Edmonton.

The Deep Basin area of western Alberta was also an area of strong interest, with Cinder Resources leading the way by investing close to C$30 million for a 6,144 hectare license west of Edmonton. Petroland Services joined the activity with a successful C$24.6 million bid for an adjacent parcel.

Debate over sealed-bid prices

The overall auction results have set off a debate among analysts over the prices being paid in sealed bidding — a practice FirstEnergy Capital characterizes as "betting big and betting blind."

With land prospects shrinking, competition heated and companies awash in spare cash, concerns have been expressed that smaller bidders might be inclined to pay too much.

But FirstEnergy's Cody Kwong, while rating the final auction as "huge," saw no evidence of any going "going overboard."

However, Gregg Scott, president of Scott Land & Lease, said there is no reason to expect the buyers have any intention of sitting on land.

That view was endorsed by Roger Soucy, president of the Petroleum Services Association of Canada, and Don Herring, president of the Canadian Association of Oilwell Drilling Contractors.

They said the pieces are in place for prolonged high levels of upstream activity covering at least the next two or three years, limited partly by the availability of rig crews.

Almost overshadowed by Alberta, British Columbia also wrapped up a successful year.

Dominated by the hunt for gas in its northeastern corner, the province pocketed C$534 million from sales in 2005, second only to the C$647 million in 2003, when EnCana paid C$350 million to lock up land in its Cutbank Ridge play. ●

continued from page B1

SPIN

producer.

And, in the thick of all this, rumors persist that it remains in the crosshairs of such global giants as Chevron and Royal Dutch Shell.

Both Morgan and Watson joined Alberta Energy Co. when it was created by the Alberta government in 1975 to develop energy resources on military bases and, now that both have turned 60, they feel the time has come to take a different path in their lives.

Incoming EnCana CEO Randy Eresman

Morgan, who first started calling his employees EnCanans — a label that causes many to cringe — stunned the industry when he decided to let go of the reins.

Watson's announced departure only heightened takeover talk, despite Morgan's insistence that no discussions have taken place with suitors and he is not aware of any looming offers.

The coincidence of the timing was nothing more than that and should be seen only as part of the "natural executive succession" at the company, said EnCana spokesman Alan Boras.

New headquarters building planned

But Morgan is not going without leaving a landmark legacy.

To consolidate EnCanans, who are scattered through five Calgary office buildings, the company has decided to reach for the sky.

Final plans have yet to be unveiled, but the "signature" project is expected to cost up to C$700 million, contain 2 million square feet and rise above the nearby 62-story Petro-Canada tower which dominates the city skyline.

In keeping with EnCana's sense of grandeur, the company has hired the English firm of Foster and Partners as its lead architect.

The firm has been hired to work on the new World Trade Center, having already left its mark with the Reichstag building housing Germany's government in Berlin, London's Millennium Bridge and a London high-rise known, because of its shape, as the Gherkin or pickle.

Foster said in a new release it is thrilled to have the chance to "capture the collective consciousness of Calgary." Whether that means "Stampede-them" no one is saying.

Search for refinery

On the more serious business front, ending a tentative partnership with Valero was a blow to EnCana's oil sands strategy after the largest U.S. refiner balked at converting its 170,000 barrel-per-day Lima refinery in Ohio to process bitumen and heavy crudes from EnCana's oil sands properties.

EnCana had viewed the refinery refit as a better economic proposition than gambling on building its own upgrader in northern Alberta.

But Valero Chief Operating Officer Bill Klesse said the US$2 billion cost of conversion "just did not allow for returns that were sufficient to compete with our other strategic investment opportunities."

The initial deal was made with Premcor Refining Group, which was swallowed up earlier this year in a US$6.9 billion takeover by Valero.

Wilf Gobert, vice chairman of Peters & Co., suggested Valero decided to give priority to major capital commitments to produce low-sulfur fuels in the United States.

Incoming EnCana Chief Executive Officer Randy Eresman said efforts will now turn to finding a North American refinery that might be interested in teaming up with EnCana in exchange for some of the bitumen production.

The company said more than 20 companies have expressed interest in EnCana's oil sands initiatives, including a 10-fold increase in production to 500,000 bpd over the next 10 years, and a short list will be developed early in 2006.

Company also unloading gas storage assets

Also on the agenda is the conclusion of a deal to unload non-core gas storage assets including the AECO Hub in Alberta that holds 135 billion cubic feet of gas, the bulk of the network's total capacity of 174 billion cubic feet.

Analysts already believe EnCana will fetch well above US$1 billion, pushing its total divestitures above US$10 billion, including a recent US$697 million disposal of its natural gas liquids business to Provident Energy Trust.

If the ConocoPhillips-Burlington transaction is completed, EnCana will have a tough job hanging on to the top spot among North America's gas producers.

The combined output of the two U.S. companies is about 3.6 billion cubic feet per day, almost 400 million cubic feet per day ahead of EnCana's third-quarter sales volumes this year.

But EnCana is in full flight, developing its resource plays down the slopes of the Rocky Mountains in the United States and Canada, in a field where Burlington has considerable expertise.

Over the longer-term ConocoPhillips is strongly placed for major growth if the North Slope and Mackenzie Delta projects come on stream.●

continued from page B1

LAWSUIT

Alaska's North Slope is estimated to have at least 35 trillion cubic feet of natural gas reserves, which could supply 7 percent to 10 percent of the nation's natural gas, Boies said.

The January future contract for natural gas rose 41 cents Dec. 19 to settle at $14.04 per 1,000 cubic feet on the New York Mercantile Exchange. The gas contracts have reached record levels near $16 per mcf in recent months.

"I don't think anybody can tell you exactly how much the prices would decline, but it's clear it would decline substantially," Boies said.

The federal lawsuit arose from the producers' refusal to sell supplies of natural gas to the port authority, which wants to build a pipeline from the North Slope to Valdez. From there, the gas would be liquefied and shipped by tanker to the West Coast.

BP and ExxonMobil, along with ConocoPhillips, have their own gas pipeline proposal that they are in negotiations with the state to build. They say the port authority's 800-mile pipeline project is not competitive with other LNG projects around the world.

"Our North Slope gas has always been available to commercially viable projects. It's not at all clear to us that the port authority project is viable," BP spokesman Daren Beaudo said.

Officials at Irving, Texas-based Exxon Mobil did not return a call for comment.

The port authority is seeking unspecified dollar amount in damages and to restore competitive conditions to the North Slope. The only thing keeping the port authority from moving forward with its pipeline plans, its officials say, is BP's and Exxon Mobil's refusal to sell the gas.

"This is an effort to acquire a supply (of gas)," said Jim Whitaker, chairman of the port authority and mayor of the Fairbanks North Star Borough. "They have refused to deal, therefore we are here."

Gov. Frank Murkowski has halted negotiations with the port authority and is focused solely on closing a deal with the three oil companies for their $20 billion pipeline proposal. Murkowski spokeswoman Becky Hultberg said the governor's office has not seen the lawsuit and could not comment.

She said the governor hoped to finalize a long-term fiscal contract with BP, ExxonMobil and ConocoPhillips to build a gas pipeline after negotiators return from a holiday break.

—**MATT VOLZ,** Associated Press Writer


The End of the Rainbow
Reaching Alaska's elusive oil & gas pot of gold
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• Governor Frank Murkowski (invited)
• William Berry, Executive Vice President, Production & Exploration, ConocoPhillips
• Kirk Pickerel, National President, Associated Builders & Contractors
• Rob Ryan, Vice President, Corporate Support, the Americas, Shell Exploration & Production
• Scott Sheffield, CEO, Pioneer Natural Resources
• Dr. Pedro Van Meurs, international energy consultant
LOCAL INDUSTRY UPDATES:
• James Bowles, President, ConocoPhillips Alaska, Inc.
• Steve Marshall, President, BP Exploration Alaska Inc.
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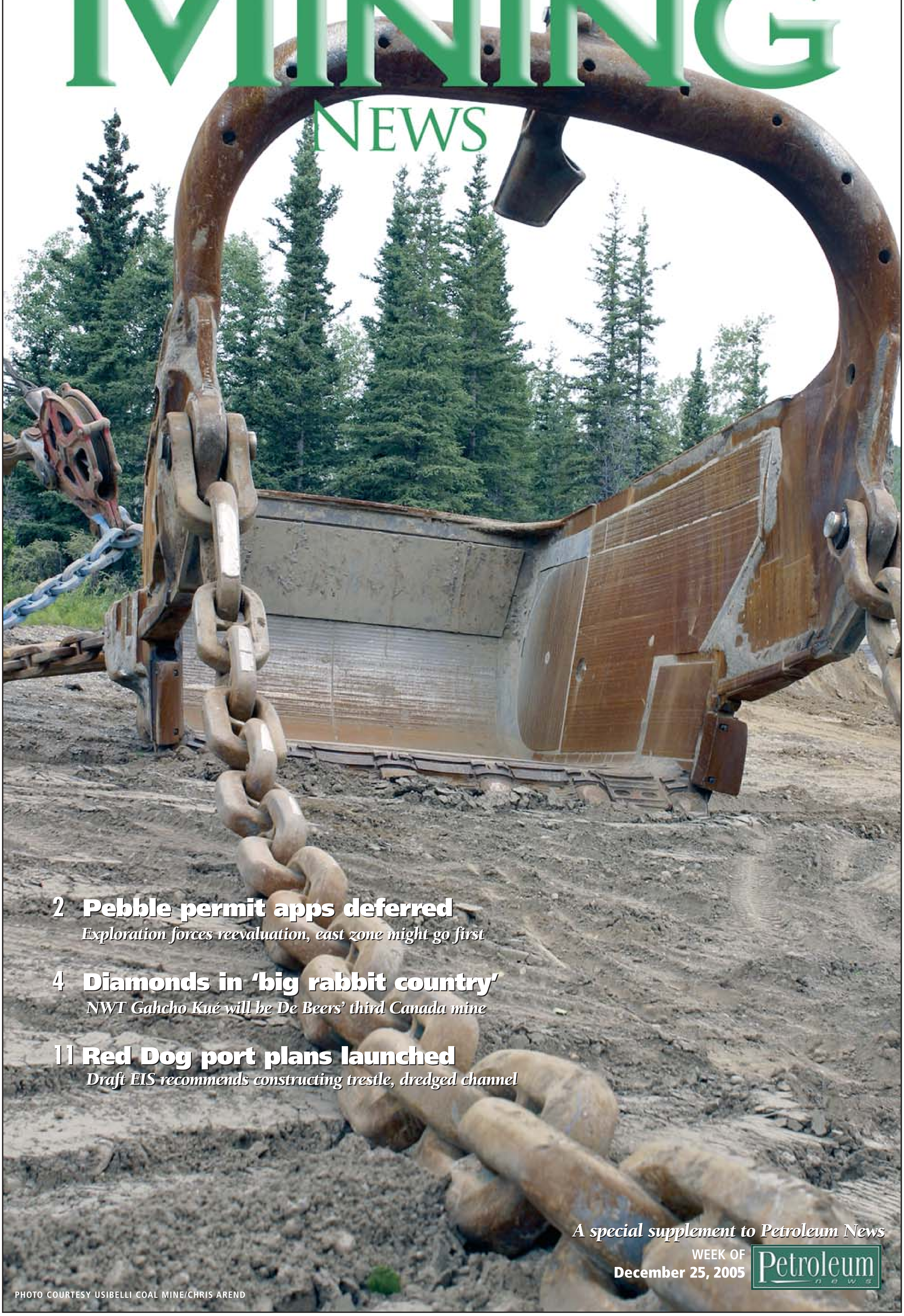
NORTH OF 60

MINING NEWS



2 **Pebble permit apps deferred**
Exploration forces reevaluation, east zone might go first

4 **Diamonds in 'big rabbit country'**
NWT Gahcho Kué will be De Beers' third Canada mine

11 **Red Dog port plans launched**
Draft EIS recommends constructing trestle, dredged channel

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● SOUTHWEST ALASKA

Pebble permit applications deferred

Good exploration news forces reevaluation of mining approach, company says; new feasibility study includes east zone area

By STEVE SUTHERLIN
Mining News Associate Editor

Vancouver, British Columbia-based Northern Dynasty Minerals Ltd. will defer permit applications for its Pebble project near Iliamna on the Alaska Peninsula for at least one year while it evaluates the ramifications of its adjacent new east zone discovery, according to Bruce Jenkins, chief operating officer of Northern Dynasty Mines Inc. (Alaska).

The company will pursue a new feasibility study that includes the new porphyry copper-gold system discovery it announced in September, Jenkins told Mining News Dec. 8.

"Why permit a plan that is going to be obsolete?" Jenkins said.

Based on exploratory drilling, the east zone deposits are deeper and richer than the company's originally proposed open pit mine, Jenkins said.

Northern Dynasty's original plan was to complete a feasibility study for the mine in late 2005, and to apply for state and federal permits in late 2006. Now the company will take additional time and expand the feasibility study to include the study of producing the deeper ore to the east, Jenkins said.

Jenkins said the company extended its 2005 drilling program with six additional holes into the east zone in December, wrapping up drilling for the season Dec. 18.


STEVE SUTHERLIN

Bruce Jenkins, COO of Northern Dynasty Mines Inc. (Alaska) with fresh core samples from the company's new porphyry copper-gold system discovery on the eastern edge of its Pebble project near Iliamna on the Alaska Peninsula

Northern Dynasty is planning a very aggressive and extensive drilling program in the east zone in 2006, Jenkins said, adding that the company will spend $20 million or more on exploration drilling at Pebble in 2006, an amount roughly double what it spent in 2005.

Jenkins said the deeper nature of the east deposit will require upgrades of equipment in 2006 to reach much deeper levels than the company has tested in its exploratory drilling program to date.

The east zone looks to be much more than a tidbit on the edge of the original open pit, and in fact will drive a rethinking of the entire project, Jenkins said. The project and all of its components are subject to redesign and resizing, with possible changes in mining techniques and improved economies of scale. The change in scale will likely alter many aspects of the current plan such as mining pit size and mine power requirements.

Grades in the east zone are so high, it might be cost effective for Northern Dynasty to consider an underground mine there, Jenkins said

"Block caving is a concept that is being looked at," Jenkins said. "Entry from the pit to an underground operation is a possibility at this point."

Jenkins said nothing is cast in stone at this point, and that underground mining is just one of many options the company is considering.

Jenkins said Northern Dynasty is now targeting 2007 for permit applications but the permitting schedule is contingent on 2006 drilling results. The company is prepared to bump the permitting date into the future if more time is needed to delineate its new east zone discovery. ●

● ALASKA

Pogo purchases hi-tech mining equipment

Construction Machinery International provides machinery, parts, from major manufacturers such as Volvo, Hitachi, Atlas Copco

By SARAH HURST
Mining News Editor

Alaska's newest large mines, such as Pogo, will benefit from some of the most advanced equipment on the market, including drill rigs with computer consoles and rock bolts that expand to the right strength whether they are in an ore body or waste rock. Much of this equipment is being provided by a distributor with branches across the state, Construction Machinery International. Ken and Chad Gerondale of CMI gave details at a presentation to the Alaska Miners Association in Anchorage Dec. 14.

CMI represents major manufacturers from all over the world, and particularly Volvo in Sweden. The manufacturers often don't realize how big Alaska is and how the challenging logistics of the state can add to costs. CMI demonstrates this graphically to them by overlaying a map of Sweden onto a map of Alaska. The Scandinavian nation fits comfortably into a narrow swathe in the middle of the state.

Knowledge of how machinery works in Arctic conditions gives CMI an edge in competitive tenders. When Fairbanks Gold Mining ordered a Hitachi EX3600 shovel for Fort Knox mine in 2003, it had to be transported from Georgia to Fairbanks on 11 cars. The convoy broke down in Kentucky and was stuck there for three weeks, which meant that in order for CMI to complete the delivery on time, the shovel had to be reassembled in Fairbanks at a temperature of around minus 35 degrees Fahrenheit in five days. CMI did this successfully and Fort Knox took delivery of a second EX3600 the following year.


SARAH HURST

CHAD GERONDALE

Product support and service is another key aspect of CMI's work. "You don't send a mechanic out with today's equipment — you send a tech out," Ken Gerondale said. "When that tech goes out, he has a toolbox in one hand and a laptop in the other. Every piece of equipment manufactured today, whether it's a small Hitachi excavator or a small Volvo loader or a Caterpillar, they're managed by a computer on board, just like a new car."

Computer program installed in drill

A mining engineer can write a computer program indicating where he wants a portal to go and install it in a jumbo drill, so that when the miner turns the machine on it gives him his daily work. The miner monitors feed pressure and rotation pressure, but doesn't have to manually drill anything.

Teck Cominco's Pogo gold mine currently under construction is a two-and-a-half hour drive from Fairbanks on a good day, and can be up to a four-hour drive, depending on weather conditions, Chad Gerondale said. CMI has already supplied the mine with two scoops, a 50-ton truck and two drill rigs, as well as parts worth around $500,000 and personnel to maintain the equipment and train Teck-Pogo employees. The drill rigs are Atlas Copco's Rocket Boomer M2C, a two-boom jumbo, and the 104, a single-boom jumbo that can be used for smaller, narrower veins.

Atlas Copco, which acquired Ingersoll-Rand Drilling Solutions in 2004, also manufactures the Swellex expanding rock bolts that Pogo has purchased from CMI, used to reinforce the ceiling of the mine shaft. "It expands and creates a friction bond between the rock and the bolt itself, creating a much stronger adherence than some of the other resin rebars or the other bolts that are used," Chad Gerondale said. "Resin or concrete bolts can dry in different lengths of time, providing a different consistency, so you won't get the same strength," he added. The Swellex bolts are more expensive than less hi-tech products, but ultimately they save man-hours and money, according to CMI. The bolts don't have to be continually retested or removed as problems are much less likely. ●

● YUKON

Yukon miners win reclamation awards

Energy, Mines and Resources Minister Archie Lang presented annual awards at the Yukon Geoscience Forum banquet in Whitehorse

By SARAH HURST

Mining News Editor

The government of Yukon announced the annual Robert E. Leckie award winners for outstanding quartz and placer reclamation practices Nov. 24. The awards are for companies and individuals who go above and beyond the call of duty in responsible mining and reclamation. This includes adding features to the land that notably enhance the area; returning mined land to a condition that is both structurally sound and aesthetically pleasing; or cleaning up properties mined prior to mining land use regulations coming into effect.

Gimlex Enterprises won the placer mining reclamation award. Dr. Jim Christie and his family operated on Dominion Creek in the Dawson district from 1996 until 2004, mining a large portion of the wide valley bottom, a short distance upstream from the confluence with Sulphur Creek. Old mine cuts have been sloped to shallow grades, creating natural-looking ponds with vegetation growing right up to the edge. These ponds are already providing seasonal waterfowl habitat according to Yukon's Department of Energy, Mines and Resources.

Tailing piles and other waste piles were contoured to a gentle slope and stockpiled overburden was spread throughout the area, which has resulted in rapid natural revegetation over wide areas. In addition, a considerable amount of work was done to create a system of stable ditches, which provide ongoing control of surface drainage and prevent erosion of reclaimed areas.

COURTESY YUKON GOVERNMENT

Contractor Aurora Geosciences removed old fuel tanks from the Rusty Springs property by air, helping Eagle Plains Resources win a reclamation award.

A-1 Cats honorable mention

Operator Ross Edenost of A-1 Cats received an honorable mention in the placer mining category. Edenost has mined on Dominion Creek since 2002. Since the start of operations, A-1 Cats has done ongoing reclamation. Stripping and tailings piles are kept in low relief. Organic overburden is stockpiled for spreading on contoured areas to facilitate rapid re-vegetation.

Eagle Plains Resources won the quartz mining reclamation award for their work at the Rusty Springs property, which they acquired in 1994. Through good management practices, the company has steadily cleaned up the legacy of the exploration that took place between 1975 and 1986, the Yukon government said.

In 2005 contractor Aurora Geosciences removed rusted fuel drums and up to 2,000 pounds of steel rods and various metal pieces, an old jeep, numerous plastic buckets and other debris from around drill sites. The crew cleaned up the old camp, burned the wood and tidied up the road and strip. They then cleaned up their drill sites and camp site. Every backhaul flight removed waste.

COURTESY YUKON GOVERNMENT

Yukon Chamber of Mines' Past President Scott Casselman (far left) and Energy, Mines and Resources Minister Archie Lang (far right) present the president of Eagle Plains Resources, Tim Termuende, with the award for best quartz reclamation practices.

Strategic Metals received an honorable mention in the quartz mining category for their work at Logtung, near Rancheria. The site has seen activity since the 1970s and the company has been cleaning it up for several years. In 2004 they removed 300 45-gallon drums, part of a bulk sample left on site. The drums, drum lids and metal bandings were crushed and removed to the Whitehorse landfill or recycled. The plastic liners were removed from site and the pallets were burned. ●

COURTESY YUKON GOVERNMENT

The Rusty Springs property after fuel tanks, an old jeep and other debris were removed.

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● NORTHWEST TERRITORIES

Diamond find in 'big rabbit country'

Gahcho Kué in the Northwest Territories will be De Beers' third Canadian mine, producing 3 million carats annually

By SARAH HURST
Mining News Editor

De Beers, the world's largest diamond company, is rapidly making itself at home in snow-bound Canada, thousands of miles from its base in South Africa. On the heels of its Snap Lake mine in Northwest Territories and the Victor mine in northern Ontario, De Beers filed permit applications in late November for the Gahcho Kué mine, also in Northwest Territories. The latest large-scale project will be a partnership with Mountain Province Diamonds (44.1 percent) and Camphor Ventures (4.9 percent).

Construction at the Snap Lake site began this year and is due to be completed in fall 2007. Construction of the Victor project is scheduled to begin in 2006. Gahcho Kué boasts the highest average grade and the highest estimated production rate of the three mines: 1.64 carats per metric ton and 3 million carats to be produced annually over 15 years of operations. Snap Lake has a grade of 1.46 carats per ton with a production rate of 1.5 million carats per year, while Victor has a grade of 0.23 carats per ton and 0.6 million carats per year are expected to be mined there.

Gahcho Kué applications filed

The permit applications for Gahcho Kué have been filed with the Mackenzie Valley Land and Water Board, which brings federal, territory, community and aboriginal governments into the process of assessing the mine's potential impacts. De Beers Canada has already been working closely with several aboriginal groups that are impacted by the Snap Lake project — the Yellowknives Dene First Nation, the Lutsel K'e Dene First Nation, the Tlicho Nation and the North Slave Metis Alliance — and is negotiating impact benefit agreements with them. The agreements include employment, training and development and business opportunities as well as scholarships and financial compensation for loss of subsistence land-use while mining operations are in progress, according to De Beers.

The first major discovery at Gahcho Kué, which is located 187 miles northeast of Yellowknife and just 56 miles east of Snap Lake, came in 1995 when Mountain Province Mining found what is known as the 5034 kimberlite. Mountain Province and De Beers formed a joint venture partnership in 1997, and De Beers subsequently discovered seven more kimberlites on the property. Gahcho Kué was formerly known as Kennady Lake. The new name of the property is the traditional Chipewyan name for the area, meaning a place where there are big rabbits or hares.

Three kimberlite deposits

The three kimberlite deposits that make the mine economic are 5034, Hearne and Tuzo. These three and an additional pipe are located under Kennady Lake, and are covered in sand, gravel and lake bottom sediments. To reach and mine the pipes, the water level of Kennady Lake will need to be lowered temporarily. Natural hills on the lake bottom and constructed dyke impoundments will be used to

see **DIAMONDS** page 5

● NORTHWEST ALASKA

Red Dog Mine gets new general manager

Veteran mining engineer sees improvements in environmental management, safety and production costs ahead for zinc/lead mine

By ROSE RAGSDALE
Mining News Contributing Writer

It is business as usual at Red Dog, the world's largest producer of zinc concentrates.

But a new general manager is in charge of guiding operations at the huge production facility 90 miles north of Kotzebue.

John Knapp, 49, took on the top job at Red Dog earlier in December, when his boss, Robert G. Scott, was appointed vice president of base metal mining at Teck Cominco Ltd., the mine's owner.

Knapp came to work as mill manager at Red Dog in January after 25 years at other Teck Cominco lead/zinc operations, most recently nine years at the now-closed Polaris mine on Little Cornwallis Island, Nunavut, in the Canadian Arctic.


JOHN KNAPP

An underground lead-zinc mine discovered in 1960, Polaris produced lead-zinc concentrates for 21 years from defined reserves exceeding 25 million tonnes, grading about 14 percent zinc and 4 percent lead. Polaris hosted a visit from NANA officials in the early 1980s that helped convince the Alaska Native regional corporation to partner with Cominco Ltd. to develop Red Dog. Cominco later merged with Teck Corp.

Knapp, a mineral processing and mining engineer trained at the University of British Columbia in Vancouver, stayed on at Polaris after the mine closed in 2002 to help execute a two-year, $53 million reclamation plan at the older mine.

Production, profits up

Knapp, who says he is still learning the ins and outs of Red Dog, sees good things on the horizon for the mine, which has proven and probable reserves of roughly 75 million tonnes, grading 18 percent zinc and 4.7 percent lead. This is his second stint at Red Dog. He worked at Red Dog on loan from the Sullivan Mine in Kimberley, British Columbia, for one year in the early 1990s.

"We have enough reserves at Red Dog to last 25-30 years, and we conduct ongoing exploration. We remain optimistic about the future," Knapp told Mining News Dec. 15.

Higher zinc prices in recent months have boosted profitability, and the mine is already running at capacity of 600,000 tonnes of zinc metal per year and will continue to do so in the foreseeable future, he said.

In August, Red Dog set a monthly production record along with several daily highs for zinc concentrates, Knapp said. The mine posted total zinc metal production of 155,600 tonnes and lead metal production of 28,800 tonnes in the third quarter, which ended Sept. 30, Thanks to higher zinc prices and higher sales volumes, operating profits during the quarter nearly doubled, jumping to $106 million from $59 million a year earlier.

Environmental, safety progress

In 2005, the mine made progress in most areas of operation, including ongoing implementation of requirements for the ISO 14001 certification it attained in 2004. The 25,000 man-hour project that took more than two years to complete involved every aspect of Red Dog's operations, from mining and milling ore to freight and fuel hauling and storage.

Achieving the internationally recognized standard for environmental management systems enhanced Teck Cominco's position as an industry leader in the world and demonstrates the company's stewardship of the environment, Knapp said.

A tangible benefit of ISO 14001 certification is an improvement in Red Dog's relationship with various federal, state and local agencies.

"It gives management and agencies confidence that we have the tools to operate within regulatory compliance," Knapp said.

One sign of progress was settlement in February with the Environmental Protection Agency of a 2002 dispute over dust discharges at Red Dog's DeLong Mountain Transportation System port facility on the Chukchi Sea. Teck Cominco paid a fine of $33,000, and spent nearly $16 million on dust controls and other initiatives that were completed this fall with Alaska Department of Environmental Conservation oversight and local community involvement.

Red Dog managers and employees also worked hard this year to improve safety at the mine. The lost-time accident rate at the mine decreased in both frequency and severity in 2005, Knapp said. The improvement followed a sharp spike

see **RED DOG** page 7

● INTERIOR ALASKA

Chuck Hawley never gives up on Golden Zone

For almost 40 years Alaska geologist has looked for results that will let historic property near Denali Park live up to its name

By SARAH HURST

Mining News Editor

No one knows Alaska's Golden Zone better than Chuck Hawley. Since 1967, when he first saw the property near Denali Park while working for the U.S. Geological Survey, Hawley has devoted years of his life and a couple of million dollars to exploration at Golden Zone. He has worked with a string of companies, but now, at age 76, Hawley believes Vancouver, British Columbia-based Piper Capital might be the one to prove up the gold reserves that he is convinced are there.

Hawley himself, a director emeritus of the Alaska Miners Association, keeps his maps and data in a modest basement office at Alaska Earth Sciences in Anchorage. But he prefers to be out in the field. He spent most of last summer supervising his colleagues at Golden Zone: four drillers supplied by Layne Christensen and the Piper crew of geologists, camp hands and a cook. There was a small mining operation at Golden Zone before World War II and the crew uses the original bunkhouse, built in 1936, as an office and cookhouse.

The ore at Golden Zone is in a breccia pipe, a cylindrical body several hundred feet across. Breccias are composed of angular broken rock fragments held together by a mineral cement or in a fine-grained matrix. Golden Zone is in the approximate south-center of the Tintina Gold Belt, which contains many significant deposits, including Dublin Gulch, Pogo, Fort Knox, Donlin Creek and Pebble. The breccia pipe contains a 43-101 compliant, preliminary measured and indicated resource (using a 1 gram per ton gold cut-off) of 2.8 million metric tons grading 2.81 g/t gold, containing approximately 253,000 ounces of gold, 1.2 million ounces of silver and 6.1 million pounds of copper.

Piper Capital took off in 2004

Hawley got together with Canadian promoter Barry Domvile in 1999 with a view to setting up a public company, but Piper Capital didn't take off until 2004, when the much larger British company Hidefield Gold decided to invest in Golden Zone, as geologist John Prochnau had heard of the property. Prochnau came on board with Piper, as did barrister Ken Judge as president and CEO. Hawley is chairman of the company and Domvile is vice president for corporate development. Geologist Pam Strand, Piper's COO, is also CEO of Shear Minerals, a company that is focused on exploring for diamonds in Canada and Alaska.

Piper completed the first two phases of drilling last summer and after looking at the data, Hidefield exercised its option to acquire up to 50 percent of the company's interest in Golden Zone. Piper is currently in the process of buying out most of Mines Trust's interest in the project. Mines Trust is another company that Hawley put together in the early 1990s. He had drilled and mapped the property in the 1970s as a consultant, and around 1980 he organized some investors to buy out the old-timers who owned it.

COURTESY PIPER CAPITAL

Chuck Hawley has worn out plenty of boot leather mapping and drilling at Golden Zone.

Texas-based Ensearch, a gas distributing company, leased Golden Zone and drilled over 10,000 feet in the Zone in the early 1980s, but gave up when the price of gold began falling in 1985. Hawley formed a company in 1987 called Golden Zone Developments that went public on the Vancouver exchange, and the following year optioned the property to another Canadian junior, United Pacific Gold, that did a large amount of work before going broke.

Mines Trust optioned Golden Zone to Colorado-based Addwest Minerals from 1994 to 1999, but once again the price of gold plummeted and work stopped. By 1996 there had been 66,000 feet of drilling on the property and there were several thousand feet of underground workings. "I've spent a couple of million easily, mostly money I should have taken in salary," Hawley told Mining News. "I figured it was good insurance, it would pay off some day, and who knows, it still might."

Hawley is confident of success despite the fact that decades of drilling haven't produced the spectacular results he has been hoping for. "I believe there's lots there," he said. "Some things have been over-drilled. It's a complicated ore body. It plunges almost vertically down. It's kind of a leaching pipe where hydrothermal solutions came up and created a void, and the rocks collapsed into the void." Piper has started drilling away from the known ore body to expand the reserves.

Road built in 1937-38

Golden Zone is quite easily accessible, as a road to the property was built by the territorial administration in 1937-38. Hawley has been reluctant to draw much attention to it up until now, however, because its proximity to Denali Park could draw protesters. "We have to be really careful about water quality and air quality," he said. Piper has enough air quality data, but it needs to start measuring water quality again and do a wetlands survey. The project could reach the pre-feasibility stage within two years, Hawley thinks.

As a history enthusiast whose biography of Alaska's "flying miner" Wesley Earl Dunkle was published in 2003, Hawley is keen to preserve the mill that operated at Golden Zone between 1941 and 1942, and possibly open it to visitors. The building qualifies as a historic landmark which could receive state funds for refurbishment. Hawley would like to set up a non-profit to lease the surface rights to the area around the mill. All the land at Golden Zone is state-owned.

Piper further expanded its activities in late summer of this year, staking 108 state mining claims totaling about 16,000 acres south of Mount Estelle in the south-central Alaska Range. This is a more remote property than Golden Zone, located 109 miles northwest of Anchorage. "There is a huge land play going on out there that nobody knows anything about," Hawley said. "Kennecott has hundreds of claims there." AngloGold Ashanti's Terra prospect is also just 19 miles away.

Piper's initial interest in the South Estelle project area was triggered by the presence of clusters of anomalous gold values in stream sediment samples. Reconnaissance sampling in August 2005 confirmed mineralization in two previously reported prospects, Ultramafic and the Revelation Vein, and identified two new prospects designated Train and Saddle. "We wanted to learn enough over the winter to plan what we're going to do next summer," Hawley said. ●

continued from page 4

DIAMONDS

separate Kennady Lake into two basins. The eastern part of the lake will remain the same, while the western two-thirds will be lowered as required to allow for mine development.

A water treatment plant will be capable of treating up to 60,000 cubic meters of water daily. As Kennady Lake is lowered, it will treat the water before it is released into streams and other water systems. It will also be used to treat some water that accumulates in the pits. Runoff collection ditches and ponds will be constructed both on land and within the drawn down lakebed areas to control runoff from developed areas. A system of pipelines and pumps will be installed to direct water collected in these ditches and ponds.

Capital costs C$825 million

Capital costs to construct the open pit mine at Gahcho Kué are estimated at C$825 million, with annual operating costs of C$135 million. It will employ up to 600 people during the peak of its three-year construction period and 400 people during the operations phase of the mine. Like other diamond mines in the region, the site is remote and can only be accessed by air, except in February and March, when a 74-mile winter spur road off the main winter road between Yellowknife and Lac de Gras can be used.

Diamonds at Gahcho Kué will be liberated by crushing the kimberlite, and fine material will be removed by washing and screening. The crushed, washed and screened product will then be processed through a dense media separation circuit, in which cyclones will be used to produce a concentrate of diamonds and other heavy materials. The dense media separation concentrate will then be passed through X-ray and laser sorters to recover the diamonds.

The close proximity of the kimberlite deposits on the site enables De Beers to sequentially mine the pits, using waste rock from the mining process to back fill pits mined earlier. This should reduce the amount of time it will take for the land to return as closely as possible to its original state and for the lake to reestablish itself. The Gahcho Kué project is governed by an ISO 14001 Environmental Management System.●

● ALBERTA

Firestone leads in Alberta uranium hunt

Prospect shines brightly in southern region where geologist believes rare mineral may occur in commercial quantities

By ROSE RAGSDALE

Mining News Contributing Writer

A young prospector stopped by the Vancouver, British Columbia, offices of Firestone Ventures Inc. last winter, enthusiastically promoting a diamond property he had explored in Alberta.

But Lori Walton, Firestone's president and chief executive, looked past recent hoopla over evidence of kimberlites in Alberta. With rare insight, she snatched up something else in the young man's portfolio.

"I took a look at his uranium property in southern Alberta and liked what I saw," said Walton in a recent interview.

LORI WALTON

The longtime geologist had been watching a steady climb in uranium prices in recent years, a trend that continues today. Uranium's spot price soared past $33.50 per pound in late November, up from $20.20 a year ago and $7.10 five years ago.

Analysts say a global supply gap that's expected to widen as nuclear energy regains prominence is the culprit. The world's 435 nuclear reactors currently need about 160 million to 180 million pounds of uranium per year, but world uranium production totals only 100 million pounds. Demand is expected to further increase as at least 50 new reactors come on stream in China, Taiwan, Russia, India, Brazil and Eastern Europe. Even with the sharp increase in price, world uranium production is only expected to reach 115 million pounds annually by 2010, they add.

Canada world leader in uranium

While Canada is a world leader in uranium production, Alberta may come up with its own need for "yellowcake." The possibility of using nuclear power to extract oil from the province's extensive tar sands was studied two years ago, but the feasibility of such a project would depend on the price of oil and gas as well as the price of uranium.

"A small reactor might be the way to go, but like everything else, these ideas and perceptions evolve over time," Walton said.

In May, Firestone bought 100 percent interest in the prospector's 22,316-acre Alberta Sun property for $10,000 and a 2 percent net smelter royalty. Alberta Sun is located 30 kilometers south of Fort Macleod.

COURTESY FIRESTONE VENTURES

From left, Calgary-based investment newsletter writer and geological consultant Jim Letourneau, respected uranium expert Douglas Underhill and Firestone Ventures Inc. geologist Carl Schulze walk a uranium property.

The company also expanded its position, obtaining additional mining permits that bring to 110,000 acres its total uranium claims in southern Alberta.

"We've gone out and done a little prospecting and found features that tell us we're on the right track," Walton said.

Walton's interest in uranium dates back to the 1970s.

"The last time uranium prices were high was in the 1970s. In 1981, the price dropped and all exploration ceased. The Alberta government put out an excellent report (Alberta Geological Survey Open File Report 1994-8) in 1994, but people were distracted by gold and diamonds," she said.

Many promising areas in southern Alberta, like the Alberta Sun project area, were never advanced by follow-up work or drilling, Walton said. "Most of the attention has been on the Athabasca Basin in northeastern Alberta."

Alberta relatively unexplored

Still, most of Alberta, including the Athabasca Basin which stretches east across the border into Saskatchewan, is relatively unexplored for uranium, said Reg Olson, mineral deposits section leader for the Alberta Geological Survey.

"There is at least a small uranium discovery (perhaps a few million in-place pounds) at a location near Maybelle River within the Athabasca Basin," he said. "As well, there recently has been potentially important uranium deposits discovered in westernmost Saskatchewan at a locale named Shea Creek, which is just a little south of the now-closed Cluff Lake uranium mine. The Maybelle deposit is currently being explored by Cogema Resources, which is the operator on behalf of a joint venture.

"Having said there has been relatively little exploration of the Athabasca Basin within Alberta, the entire western portion of the basin was staked during 2005," he added.

The government's report on southern Alberta outlined promising results of early exploration of that area. "At one occurrence, anomalous radioactivity is up to 2,000 cps (SRAT SPP2N), and a rock sample assays greater than 2,000 parts per million uranium, 13 ppm molybdenum, 78 ppm vanadium and 4 ppm selenium (anomaly 82H-23)," the report said. "Upriver about 5 km there is a second occurrence with anomalous radioactivity up to 900 cps and a rock sample that assays 85 ppm uranium (anomaly 82H-21; Ibid). Follow-up work was recommended for this area, but was never done."

In a roundabout way, the report is actually responsible for the surge of interest in Alberta's uranium prospects, Olson said.

"Lester VanHill, a young Alberta-based geological technologist-prospector came into our offices last year just before Christmas to ask me if there was any publicly available information about uranium that he might read and follow-up on. I referred him to OFR 1994-08, and specifically mentioned a reported uranium occurrence along the Waterton River in southern Alberta that had been discovered during the early 1980s (the tail end of the last uranium 'rush' in Canada, but never followed up on," he recalled. "Lester subsequently staked this locale, and shopped it around to several junior exploration companies. Firestone was the company that optioned the property from him. As a result of this staking, and Lester speaking to various other companies, a staking rush started during early 2005."

A half dozen juniors staked

A half dozen juniors, including Marum Resources Inc., Sandswamp Exploration Ltd. and North American Gem Inc., grabbed some 4,000 square kilometers in claims running south of Calgary to the Montana border and east toward Cypress Hills.

When the Alberta Sun prospect came across her desk, Walton recognized an opportunity.

"Nowadays, a lot of people don't have experience in looking for uranium," she said. "I looked for uranium when I was a student at the University of Alberta around the Baker Lake area."

Drawing on those early skills, Walton led Firestone to confirm the government's findings in initial field work this summer. "Composite grab samples of isolated organic debris material returned up to 7,640 ppm uranium, or 0.901 percent U3O8," Firestone reported. "Grab rock samples from a second area 40 kilometers southeast returned 57 to 150 ppm uranium. Elevated vanadium, molybdenum, arsenic, and lead values in addition to hematite, carbonaceous material and green shale units were noted at both localities and are important indicators of sandstone-hosted uranium."

Firestone spent $125,000 on an aggressive exploration program, with sampling, prospecting and mapping, followed by airborne geophysics and drilling.

Low-grade uranium at Alberta Sun

The geological target for the Alberta Sun uranium project was sandstone-hosted or "roll-front" uranium. In these deposits, uranium is spectacled throughout the rock and tends to occur in small quantities at low-grades. However, they account for 13 percent of global uranium production.

"Much of the uranium in the world comes from high-grade deposits so concentrated they may need robots to actually

see URANIUM page 7

● ALASKA

Rubber hits the roads at Alaska's mines

State of Alaska is building roads for Rock Creek and Kensington projects, but Placer Dome will foot the bill at Donlin Creek

By SARAH HURST
Mining News Editor

Some of Alaska's mines are taking full advantage of Gov. Frank Murkowski's Roads to Resources program. But for others, building a private road may be more economical than letting the state take care of the infrastructure. With public roads, mines not only have to deal with the issue of public access, they must also pay additional taxes and comply with numerous regulations that restrict the size and weight of vehicles.

Northern Dynasty is weighing up the options for its Pebble project in southwest Alaska. The Vancouver-based company is working a road feasibility study, while Alaska's Department of Transportation and Public Facilities is spending around $500,000 on its own separate study, due to be completed next spring. DOT's version would be "an industrial-type road similar to the one at Red Dog," Ethan Birkholz, the DOT official in charge of the study, told Mining News. The 95-mile road from the proposed mine site to the port would be 30 feet wide if DOT built it. Northern Dynasty is looking at a somewhat narrower, one-lane road.

The exact route of the road has not yet been determined, although DOT does have a preferred route based on cost, environmental impacts and right-of-way impacts. The community of Pedro Bay has expressed concern that the road might come too close to it, and DOT is considering an alternative that would take the road further away from the village, but that isn't a particularly attractive option, Birkholz said. Another question will be how to incorporate or skirt around an existing public stretch of road between Pile Bay and Williamsport.

DOT estimates that its road would cost the state $150-$200 million. It would include numerous bridges, the largest of which would span the Newhalen River, with others crossing the anadromous streams in the region. "We realize that it's a very sensitive area to try and build a road through," Birkholz said. Northern Dynasty hasn't yet submitted permit applications for the Pebble gold-copper project, so construction of the mine and related infrastructure is still a long way off.

Donlin Creek, another open pit mine in the pre-feasibility stage, will have a private road rather than a state-funded road. Vancouver-based Placer Dome decided this year that it would build the 25-mile road from the mine in southwest Alaska to the port, turning down the state's offer of assistance. "It was astounding how quickly they made that decision," Jeff Ottesen, director of program development at DOT, told Mining News. Around $20 million of state and federal money had been earmarked for the Donlin Creek road, according to Ottesen. He thinks it is likely that Northern Dynasty will make a similar decision about the Pebble road on economic grounds.

COURTESY ALASKA DEPARTMENT OF TRANSPORTATION

This summer's construction work on the Glacier Creek bypass road for NovaGold's Rock Creek mine near Nome.

Rock Creek, Kensington use state roads

The Rock Creek and Kensington mine projects are making use of the state's roads, however. The state has almost finished building the three-mile, two-lane Glacier Creek bypass road for NovaGold's Rock Creek project near Nome, at a cost of $7.5 million. Construction has now shut down for the winter with the road base in place and a couple more layers of embankment to build to top the road off, DOT Project Engineer Tony Cox told Mining News. This work and some minor items like signs and a bridge rail will be completed next summer.

The road crosses tundra and permafrost, and includes a 100-foot bridge over Glacier Creek. "There were a lot of environmental issues to deal with," Cox said. "The whole project is basically through wetlands. There were quite a number of permits." The prime contractor for the road construction project is Vancouver-based Kiewit Pacific.

The state is also about to complete the 2.5-mile Cascade Point road for the Kensington gold project, extending the Glacier Highway north to a terminal site which will be used to ferry employees from Juneau to the mine site. This cost the state $1.1 million, with the prime contractor Channel Construction of Juneau. The state will spend another $1 million this year and next upgrade the existing 5.6-mile access road for the mine from Slate Creek Cove to the mill site on the west side of Berners Bay. Idaho-based Coeur d'Alene will contribute another $300,000 to the cost of the road, which will be shared with hikers, hunters and trappers.●

continued from page 4

RED DOG

in most safety measures at Red Dog in 2004. "Yes, we have work to do on the production side with cost management, environmental stewardship, and safety is one of the pillars we focus on as well," Knapp said.

"My goals are no different from my predecessor's: safety, cost control in production and enhancement of NANA's position at the mine."
—Red Dog General Manager John Knapp

Other achievements during 2005 include installing a water treatment plant that increased the mine's capacity for treatment and discharge of water, adding a small lift that increased the capacity of the tailings lake, reducing worker turnover at Red Dog and boosting the percentage of NANA shareholders in the work force about 5 percentage points to 55-60 percent from a year ago, Knapp said. Mine managers also improved and redoubled training and recruitment efforts on the job and off site at 11 nearby communities, he said.

"Ultimately, our goal is to have 100 percent shareholder hire among workers and management at this site," Knapp said, noting that efforts involve including local youth in activities such as job shadowing, career fairs, scholarships and support for Iditarod musher John Baker's annual inspirational tour of village schools in Bush Alaska.

"My goals are no different from my predecessor's: safety, cost control, enhancement of NANA's position at the mine, and production," he added. ●

continued from page 6

URANIUM

mine it," Walton said. "That's the case in northern Saskatchewan."

Because deposits seen in southern Alberta occur in low concentrations, Walton believes Firestone's Alberta Sun may be amenable to low-cost and environment-friendly injection-solution or ISL mining methods, which involve drilling holes in the ground and injecting water, oxygen and a little baking soda into the formation.

"It dissolves the uranium out of the rocks and then we can pump it out of the ground," she said. Examples of successful ISL uranium mines include Cameco's Crow Butte mine in Nebraska and the Smith Ranch-Highland mine in Wyoming.

Firestone, which owns five other mine projects including a zinc property in Guatemala, is currently preparing a drill program for Alberta Sun in 2006 with the help of Apex Geoscience Ltd., an Edmonton-based consulting firm. Michael Dufresne, a principal of Apex, co-authored OFR 1994-08. ●

SKAGWAY

Cash upbeat on use of Skagway terminal

Skagway Ore Terminal, located at one of the most popular destinations in Alaska for cruise ships, could be modified to receive shipments of coal, according to a review commissioned by Vancouver-based Cash Minerals. The company hopes to develop a mine at its Division Mountain property in Canada's Yukon and ship the 1.2 million metric tons of coal per year through Skagway to Pacific Rim markets.

The company hopes to develop a mine at its Division Mountain property in Canada's Yukon and ship the 1.2 million metric tons of coal per year through Skagway to Pacific Rim markets.

Cash Minerals engaged Canadian consulting company Sandwell Engineering to conduct the review of the ore terminal. The review suggests that the existing terminal at Skagway can be modified to receive, store, reclaim and load coal into ocean-going bulk carriers. Modifications would include additional coal storage space and upgrading of the reclaiming and ship loading capabilities. Sandwell estimates that for a capital cost to the owner of C$9.4 million, the terminal can be upgraded to load Panamax vessels at a rate of 1,500 metric tons per hour.

Alaska Industrial Development and Export Authority, the contractual owner of the terminal, is negotiating with Cash Minerals over the possible use of the Skagway Ore Terminal for the shipping of Division Mountain coal. AIDEA has use of the docking facility at Skagway in conjunction with White Pass & Yukon Rail.

—SARAH HURST

JUNEAU

Coeur Alaska lowers turbidity levels at Kensington mine near Juneau

Coeur Alaska has provided detailed information to the Alaska Department of Environmental Conservation on measures taken to control erosion at the Kensington mine near Juneau. The company was cited by DEC Nov. 10 for violating the turbidity standard due to sediment discharges into Johnson Creek from construction activities at the mill site, upper bridge and topsoil stockpile areas. The problems were caused by heavy rainfall.

Construction of the mine is also under scrutiny from the Corps of Engineers, which suspended its permit for the discharge of fill material into U.S. waters Nov. 22. Environmental groups have challenged the original issuance of this permit in a lawsuit that objects to Coeur's plan to dump tailings into Lower Slate Lake. If the permit is still suspended next summer, it will hinder construction of the tailings dam. At present the suspension only affects the upgrading of a small portion of the mine's access road, according to Luke Russell, Coeur d'Alene's vice president for environmental services.

DEC re-inspected the construction site Dec. 2, collecting turbidity samples at three locations. State water quality standards require that turbidity increase no more than 5 NTU (Nephelometric Turbidity Units) above natural conditions. Readings taken downstream of all construction activity measured between 1.5 and 3.5 NTU above natural conditions.

Inspectors noted that a number of improvements had been made to the storm water systems, including diversion ditches and pipes for clean water, the construction of small ponds adjacent to the road to collect and treat muddy water, and the addition of more and larger ponds at the topsoil stockpile area. "We continue to implement our storm water management plan," Russell told Mining News. "The rain in the last couple of months has been significantly above average. We had a plan in place, but we didn't anticipate as heavy rain as we got."

Since receiving the citation, Coeur Alaska has hired Washington-based GeoEngineers to provide technical guidance and design information to resolve the sediment discharge problem, and also Oregon-based Zeroday Enterprises to address the use of flocculants on site.

—SARAH HURST

● COLUMN

Mining news update: A mad scramble behind the scenes

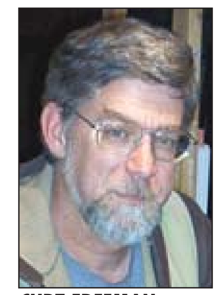
With footage numbers in excess of 400,000 planned for next year, quest on for personnel, rigs, helicopters, supplies and camps

Although results from 2005 activities have finally slowed to a trickle, don't equate this lack of news with lack of activity. Behind the holiday season façade there is a mad scramble going on with companies already jockeying for personnel, drill rigs, helicopters, geochemical services, field camps and all manner of field supplies. While wishing each other season's greetings over a cup of grog, competitors are quietly trying to steal the jump on each other to get the best resources for their projects.

Drilling demand is one way of measuring this competition: a rough tally of companies who already have indicated what level of drilling they are planning to undertake in 2006 brings us to something in excess of 400,000 feet (that's about 122,000 meters for those of you who are English-system challenged and 66,666 fathoms for those of you with a nautical bent). Now mind you, some of these numbers may change (read "decrease") but they represent only a small fraction of the properties where drilling is planned but where total footage numbers have not been announced.

Long story short, the drilling already released is nearly as much as the 451,000 feet of hard rock drilling reported for all of 2004. So down your cup of cheer, ring in the New Year and then strap on your fire-resistant Carharts, 2006 is going to be a hot one!

The author



CURT FREEMAN

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Western Alaska

ST. ANDREW GOLDFIELDS submitted its Plan of Operations, Environmental Assessment and draft Solid Waste Disposal Permits in late October to restart the Nixon Fork copper-gold mine near McGrath. The public comment period closed in late November and subject to the receipt of these permits, it is anticipated that Nixon Fork will commence operations in the mid-2006.

An underground diamond drilling program is planned for early 2006 at the Mystery Creek deposit. This program is intended to delineate and confirm additional mineralization that will provide new reserves for the operation. In addition the company indicated that summer 2005 exploration programs revealed new targets that will require follow-up work in the future.

Eastern Interior

FREEGOLD VENTURES has received preliminary analyses from its trenching program on its Golden Summit project in the Fairbanks District. Prior to release of trench results, the company said it is having supplemental metallic screen analysis completed on 60 of the channel samples and 21 of the grab samples as a means of determining the nugget effect from the preliminary assays. Final assays from the trenching program will be reported in January.

TRI-VALLEY CORP. has acquired all of the royalty and carried working interests of the underlying mineral leases that are part of its 120 square mile Richardson gold property near Delta Junction. Over the past three years approximately 480,000 unregistered restricted common shares of Tri-Valley

see FREEMAN page 9

continued from page 8

FREEMAN

valued at $3,716,500 were used to acquire several layers of royalty interests from underlying claim owners, various financing parties and the estate of John Mitchell, the geologist who originally brought the property to Tri-Valley in the 1980s. With the buyout of these royalties, Tri-Valley will transfer the property to its wholly owned subsidiary, Select Resources Corp. Analytical results are pending on the drilling program recently completed by Select Resources on the Democrat prospect.

Alaska Range

GOLCONDA RESOURCES LTD. announced that as a follow-up to the 2005 drilling completed on their Shulin Lake diamond project, three six-foot deep pits were dug within the drill area and a series of 20-pound samples were collected. Although these samples were taken from glacial till, several diamond indicator minerals were observed, including green chrome diopside, kyanite, sapphire, rutile and anatase. These minerals also were observed in previous samples that contained micro-diamonds.

The company believes the area sampled may be near the pipe which produced the diamonds and indicator minerals found in the past. Bulldozer and backhoe trenching are planned for February 2006. The glacial overburden is estimated to be only a few meters thick in this area. Follow-up diamond drilling will also be conducted to obtain samples from a greater depth.

Northern Alaska

NOVAGOLD RESOURCES announced results from its Ambler volcanogenic massive sulfide project in the southern Brooks Range. Modeling of the Arctic deposit (inferred resource of 36.3 million tonnes of 4.0 percent copper, 5.5 percent zinc, 0.8 percent lead, 0.7 grams of gold per tonne and 54.9 grams of silver per tonne) showed that mineralization was present on two mineralized horizons along both limbs of a relatively flat-lying fold opening to the southeast.

The mineralized horizons in the upper limb of the fold are exposed at surface. Mineralization along the lower limb of the fold remains relatively unexplored and was this year's drilling. Drilling in 2005 totaled just over 3,000 meters in nine holes and has extended known mineralization along the southern and eastern edges of the deposit.

Significant drill results include hole

Golconda Resources Ltd. ... believes the area sampled may be near the pipe which produced the diamonds and indicator minerals found in the past.

AR05-93 which intersected 9.9 meters of 4.8 percent Cu, 0.87 grams of gold per tonne, 54.5 grams of silver per tonne, 0.1 percent Pb and 3.3 percent Zn or 7.5 percent copper equivalent. Hole AR05-97 intersected 4.4 meters of 5.6 percent Cu, 0.63 grams of gold per tonne, 58.2 grams of silver per tonne, 0.1 percent Pb and 2.1 percent Zn or 7.7 percent copper equivalent.

Additional exploration was conducted in 2005 outside of the main Arctic deposit area and included evaluation of past data along with new mapping, sampling and ground geophysics away from the Arctic deposit. Reinterpretation of past airborne electromagnetic and magnetic data in conjunction with mapping and ground geophysics in 2005 identified a significant electromagnetic geophysical anomaly of similar magnitude and intensity as that over the Arctic deposit. The anomaly lies roughly 3 kilometers west of the Arctic deposit in the same stratigraphic position as the mineralization defined at Arctic. This anomaly will be a focus of the 2006 exploration program. The company also acquired 381 additional State of Alaska mining claims totaling 57,000 acres, bringing its total land holdings in the Ambler district to over 92,500 acres.

LITTLE SQUAW GOLD MINING CO. has raised approximately $1 million for 2006 exploration of its Little Squaw gold project in the Chandalar District. Additional funding is being sought to fully fund the company's planned $1.7 million drilling program consisting of 31 holes on 11 targets.

SILVERADO GOLD MINES has installed a new portal to access the Swede Channel at its Nolan placer gold project in the Brooks Range. Previous bulk sampling on the Swede Channel during 1998-1999 yielded 623 ounces of gold from 7,625 cubic yards of gravel or 0.08 ounces of gold per cubic yard, including a 14.06 troy ounce nugget. The drift is targeted at a drill hole (about 250 feet beyond the 1998-99 bulk sample site) which produced a high grade sample valued at 0.22 ounces of gold per cubic yard. Drifting is scheduled for completion by early March.

Southeastern Alaska

COEUR D'ALENE MINES said the U.S. Army Corp of Engineers suspended its previously issued tailings disposal permit at its Kensington gold mine north of Juneau. The company indicated that work is continuing at the mine, outside of federal wetlands, as it waits for the Corps of Engineers to review the disputed permit. The corps' suspension was a result of a lawsuit filed by several environmental groups, including Juneau-based Southeast Alaska Conservation Council.

NIBLACK MINING CORP. announced results from its seven-hole drilling program on the Lookout zone of its Niblack volcanogenic massive sulfide deposit in southeast Alaska.

Drill hole LO-159 intersected three distinct massive sulfide horizons separated by zones of disseminated and stringer sulfide mineralization. The entire interval totals 225.3 feet grading 2.39 grams of gold per tonne, 47 grams of silver per tonne, 1.67 percent copper and 4.05 percent zinc. Higher grade intervals within this mineralized zone include 46.3 feet of 4.55 grams of gold per tonne, 71 grams of silver per tonne, 3.05 percent copper and 7.79 percent zinc and 21.1 feet grading 1.86 grams of gold per

Little Squaw Gold Mining Co. has raised approximately $1 million for 2006 exploration of its Little Squaw gold project in the Chandalar District.

tonne, 88 grams of silver per tonne, 4.03 percent copper and 13.28 percent zinc.

The dip extent of this mineralization is at least 500 feet and remains open and untested further down plunge. Continuous intersections of combined oxide and sulfide mineralization in other holes range in width from 86.4 to 145.6 feet and average 4.96 grams of gold per tonne equivalent.

The property was last explored in 1997 when it was determined that the Lookout zone contained at least four different massive sulfide horizons stacked vertically above one another within a 300 foot thick section of the Lookout Rhyolite. The Lookout zone is hosted on the overturned limb of a large southwest plunging syncline. Sulfide lenses are typically long linear bodies, and have been traced down plunge for a distance of 1,600 feet. Additional drilling is planned for 2006.●

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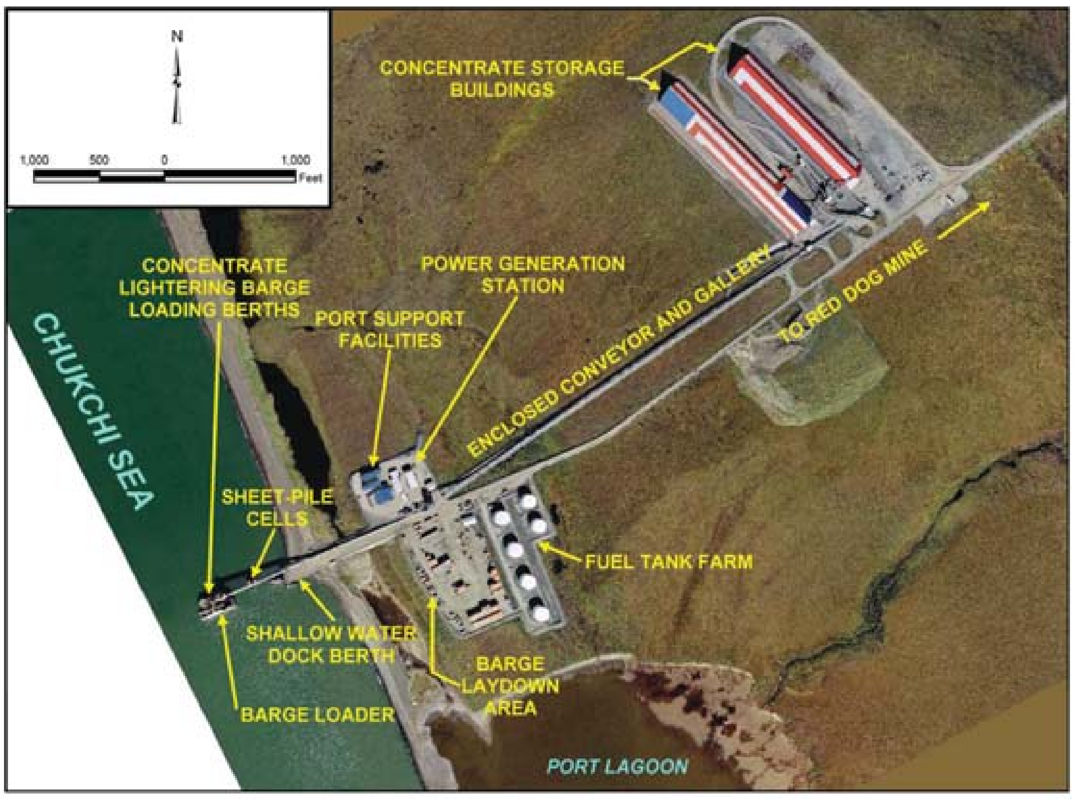
● NORTHWEST ALASKA

Corps launches Red Dog Mine port plans

Draft EIS recommends constructing a trestle and dredged channel to improve navigation and reduce fuel transportation costs

By SARAH HURST
Mining News Editor

The U.S. Army Corps of Engineers has published a draft Environmental Impact Statement for navigation improvements to the DeLong Mountain Terminal, the port that serves the Red Dog Mine in Northwest Alaska. The public review period continues until Dec. 27. The corps' "tentatively recommended" plan is to construct a 1,450-foot-long trestle from shore to a new off-shore loading platform and a 3.5-mile channel from the loading platform to allow navigation by bulk freighters and tanker ships.



COURTESY U.S. ARMY CORPS OF ENGINEERS

Management of the project from the state's point of view recently transferred from the Alaska Industrial Development and Export Authority to the Department of Transportation and Public Facilities. Since 2000 over $9 million has been spent preparing the draft EIS, according to AIDEA's mining specialist, John Wood. AIDEA spent $1 million, the maximum it intended to put into the project, and has now passed it on to DOT to oversee the final EIS. The Corps of Engineers and Teck Cominco, Red Dog's operator, came up with the bulk of the funds.

"Complying with all the federal requirements is time-consuming and the corps wanted to make sure they got it right," Wood told Mining News. The cost of producing the final EIS is still uncertain, he added. "A deepwater port would provide substantial benefits to the Northwest Arctic area with no lasting environmental consequences. The (Murkowski) administration is solidly behind the development of this port," Wood said.

Estimated $75 million in dredging

The estimated cost of dredging the federal channel and turning basin would be $75 million, with annual maintenance costs of $1,245,000. These costs would be shared between the federal government and the "non-federal sponsor" — the State of Alaska or whoever else provided the funding.

Construction of the trestle, a 1.5 million gallon fuel storage tank and other project features would cost $155.5 million according to the corps. all of which would have to be covered by the non-federal sponsor. Annual operation and maintenance costs would be $6.55 million. The project would produce estimated annual benefits of $26,898,700 due to the increased efficiency and lower fuel transportation costs it would provide.

The existing DeLong Mountain Terminal facilities accommodate lightering and fuel barges, but not deep-draft bulk ore freighters or tanker ships. By making these improvements, the corps hopes to increase ore concentrate loading efficiency and lower fuel transportation costs by allowing direct offloading of fuel from tanker ships. The terminal is about 80 miles north of Kotzebue on the southeastern coast of the Chukchi Sea, and connected to Red Dog Mine by the only major road in the region.

Red Dog produces up to 1.5 million tons of zinc and lead ore concentrates each year. Trucks haul the concentrate 52 miles from the mine to the terminal storage buildings, where it is stored until the open-water season, which usually begins in late June or early July and lasts for 90-110 days. During the open-water season, the concentrate is loaded onto barges that are towed by tug to bulk cargo ships moored three to five miles offshore, where concentrate is transferred into the ships. About 250 barge trips are required and about 27 ships are loaded each year.

Supplies come in by barge

Ocean-going barges deliver fuel to heat, generate electricity and power vehicles in the region: about 20 million gallons of fuel each year for Red Dog and another 30 million gallons for the local communities. Tanker ships could deliver fuel more cheaply, but they are not used currently because there are no ports deep enough for them to offload fuel directly into on-shore storage tanks.

A total of 8.1 million cubic yards of material would be dredged from the sea bottom during construction of the channel that the corps proposes. This material would be placed in an off-shore disposal area. The disposal site would be a 5,600-acre rectangular area about two miles wide by about 4.3 miles long. There would also be maintenance dredging in the years following construction.

The main project features could be built in three construction seasons, according to the corps. After construction, shipping and loading operations would be much quieter than they are now. Ships waiting to be loaded would wait in the same mooring areas, but instead of 250 barge trips and about 1,500 hours of operation by four tugs, ships would be assisted to the mooring berth by two tugs, and after loading would be assisted back out to sea by two tugs.

Other alternatives

The preferred alternative was chosen by the corps over a number of others, including a no action alternative. Building a road or rail connection to the existing highway or railroad system was considered too expensive, as was building a highway or railroad to a new port in northwestern Alaska. Reducing fuel costs by using coal or wind generation was considered too expensive, and natural gas has not been found in sufficient quantities in the region to be economically developed.

Using three barges instead of two to lighter ore concentrate to bulk cargo ships was considered, but the corps did not recommend this because it would not be better economically or environmentally than the no-action alternative. Constructing an off-shore breakwater so that barges could be loaded in rougher seas was considered, along with the construction of a new on-shore pumping station and a pipeline to a mooring area to offload fuel from ocean-going tankers. This alternative was not recommended because it would produce less economic benefit than the trestle-channel alternative and would not greatly improve ore concentrate loading efficiency.

None of the alternatives considered in detail would affect movement by people traveling to reach subsistence resources on land, the corps said. During the open water season, people traveling by boat past the port might need to make a quarter- or half-mile detour. The navigation improvements would not cause more than minor, local effects to land plants or animals used in subsistence, according to the corps. Freshwater fish would not be affected, although saffron cod and other marine fish would be affected locally and temporarily in marine waters about 15 miles from the village of Kivalina. They could be displaced during summer construction activities, but these activities would stop long before winter, when marine fish are harvested in local subsistence.

There would be no more than minor local effects on the distribution and subsistence availability of walrus, polar bears and seals. Subsistence harvests of belugas and bowhead whales could be affected by the project, the corps said, but this would be difficult to measure because other factors such as changes in ice conditions also affect whale migration and habitat use. The corps proposed numerous mitigation measures to protect fish, wildlife and cultural resources, and to work with local communities to ensure their participation. ●