Petroleum news

page 15 RCA halts Enstar/Marathon hearing to consider discovery objection

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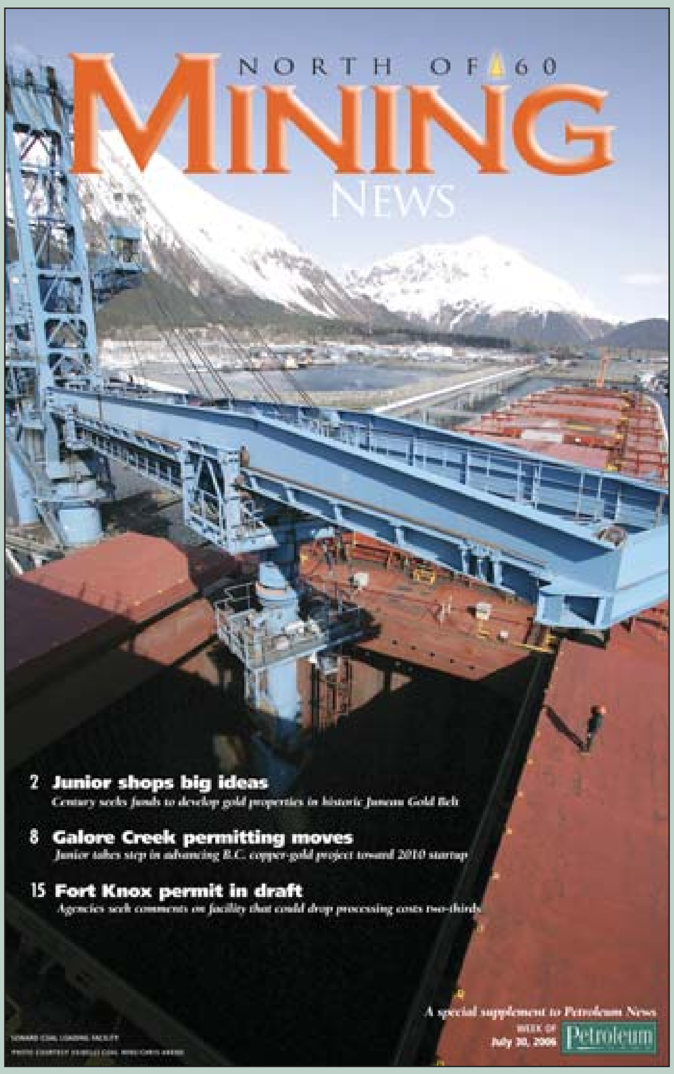
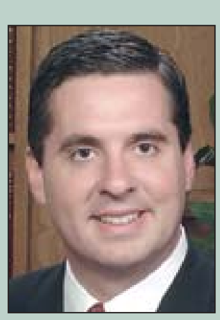
July Mining News inside



The July edition of North of 60 Mining News is enclosed in this issue. Stories include Barrick's move on NovaGold, Northern Dynasty's application for water rights for Pebble, Century's hunt for capital to help develop slew of gold properties in historic Juneau Gold Belt, and the latest on Galore Creek permitting. Pictured is the coal loading dock in Seward.

Hope for ANWR: Congressman offers bill with win-win provisions for both sides



U.S. Rep. Devin Nunes, R-Calif.

It could take the homespun practicality of a California farmer to dig up enough support in Congress to pass a bill this year that would open the 1002 area of the Arctic National Wildlife Refuge to oil drilling.

At least ANWR supporters hope that will result from legislation crafted in the U.S. House of Representatives just before Congress was scheduled to adjourn for the annual summer recess July 28.

The bill, introduced July 26 by Rep. Devin Nunes, R-Calif., would allow oil exploration in the 1002 area of ANWR

see **ANWR** *page 18*

BREAKING NEWS

EXPLORATION & PRODUCTION

A little bit helps

Giant step for North West Upgrading one more small step to ease refining bottleneck

By GARY PARK
For Petroleum News

The drive to increase bitumen upgrading in Alberta made another breakthrough with the signing of a supply agreement between producer Canadian Natural Resources and private start-up North West Upgrading.

Under the deal, Canadian Natural will supply 25,000 barrels per day of Cold Lake Blend heavy crude over five years to the C$2.4 billion North West plant that is due on stream near Edmonton in 2010 with initial capacity of 50,000 bpd, with tentative plans for two more phases of 50,000 bpd

see **UPGRADING** *page 18*

Scattering some of the oil sands gloom

Imperial Oil-ExxonMobil Canada, a Shell Canada-led partnership and Husky Energy are pushing ahead with various aspects of large-scale oil sands projects, taking the high road during a time of accumulating negatives.

The joint effort by the ExxonMobil sister companies involves the 300,000 barrel per day Kearl project that carries an initial cost projections of C$4.5 to C$6.5 billion to recover 4.41 billion bar-

see **GLOOM** *page 19*

FINANCE & ECONOMY

BP's Browne to step down

Admired CEO will take another job as he's 'absolutely hooked on business'

By ALLEN BAKER
For Petroleum News

JOHN BROWNE

John Browne's recent announcement that he plans to step down as BP CEO at the end of 2008 came amid a flurry of rumor and speculation. There were reports he had hoped to escape the company's mandatory retirement policies and stay on past the age of 60. In point of fact, he has managed to escape that policy to some extent, since he'll turn 60 in February of 2008, 10 months before his planned departure.

But on top of the age question are current performance issues for Browne, who nevertheless has made quite a mark in his 11 years, so far, at BP's helm. His retirement announcement came July 26 as part of a quarterly earnings conference. There, he outlined replacement cost profits of $6.1 billion, up 23 percent. Those are pretty nice numbers, but more on that later.

Browne took a struggling company in 1995 and built it aggressively. His acquisition of Amoco and later ARCO made BP the largest oil producer in the United States. The refining assets have been a good deal as well.

BP's market value grew from $37 billion when he took over to nearly $260 billion now. Along the way he added Castrol to the BP fold, and made a success of the TNK partnership in Russia.

Shell a target?

According to Britain's Financial Times and other

see **BROWNE** *page 20*

EXPLORATION & PRODUCTION

Alpine drilling sets records

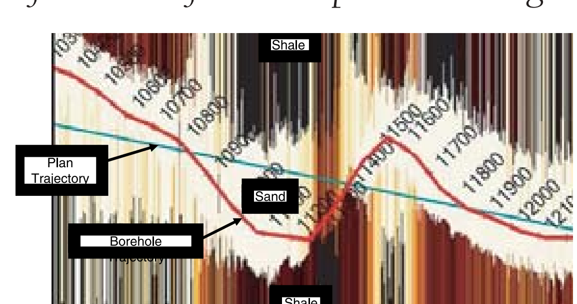
New technologies, teamwork, credited for successful development drilling

By KRISTEN NELSON
Petroleum News

A consistent leadership team and cutting-edge technology have resulted in successful drilling at the ConocoPhillips Alaska-operated Alpine field.

Chip Alvord, ConocoPhillips' Alpine drilling team leader, told Petroleum News the combination of an experienced drilling team from Doyon Drilling, geo-steering technology from Schlumberger and rotary steerable technology from Sperry Drilling Services can be credited for continuous improvement in drilling results at the western North Slope field and its satellites.

Alvord said Doyon rig 19 has been used from the beginning for Alpine and Alpine satellite development drilling. Doyon has done a good job



of keeping its key people on the rig, the tool pushers, while ConocoPhillips has also been fortunate in keeping its drilling team at Alpine, the company rig supervisors — company man — and the geologists.

"We don't relearn lessons too often," Alvord

see **DRILLING** *page 9*

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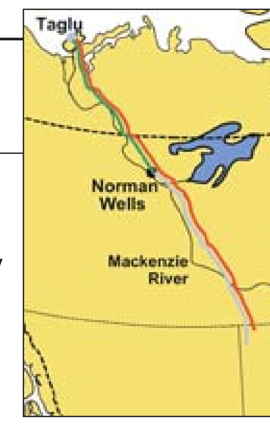

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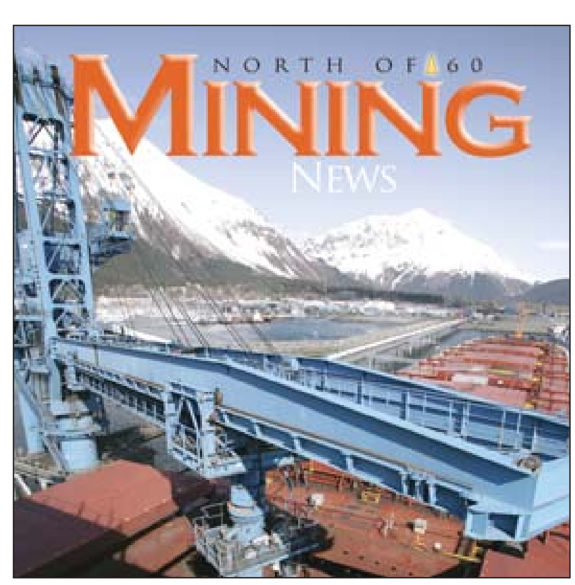

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● NATURAL GAS

Setbacks don't mean backing down

Mackenzie Gas Project hit with 5-month regulatory delay; partners, NWT government keep the big prize in their sights

By GARY PARK
For Petroleum News

The challenges were formidable to begin with and they just keep building.

That's something that neither the proponents of the Mackenzie Gas Project, nor those who stand to benefit from opening a natural gas basin in Canada's Arctic, have ever disputed.

What they can't answer is whether a combination of cost inflation, unresolved aboriginal and environmental concerns, the competing economics of Arctic gas and imported liquefied natural gas and now a further regulatory delay can ultimately bring the venture to its knees.

But there is a stiff resolve among the project partners and the Northwest Territories government to push ahead.

"At the core is our belief that this can be an attractive project" for the companies involved, aboriginal and other residents of Canada's North and the North American gas market, said Pius Rolheiser, spokesman for project operator Imperial Oil.

"The economics that underpin the project are still there" to use the Mackenzie Delta gas resources as a basin-opening venture that can be a source of a sustainable industry in his region, said Northwest Territories Resources Minister Brendan Bell.

But, in interviews with Petroleum News, they both agreed the task ahead is formidable.

"This is not a sure thing," said Rolheiser. "We have recognized from the outset that this is a challenging project on a number of fronts."

To underscore that view, he said the "easiest part" could be the construction of a pipeline through permafrost in midwinter.

Joint review panel adds five months

The latest hitch occurred July 19 when a joint review panel assigned to examine the environmental and social impacts — the National Energy Board is dealing with technical and commercial matters — rattled the proponents by adding another five months to its hearing schedule, setting a new wrap up date of April 12, 2007.

The delay came after the panel asked presenters in March how much more time they would need.

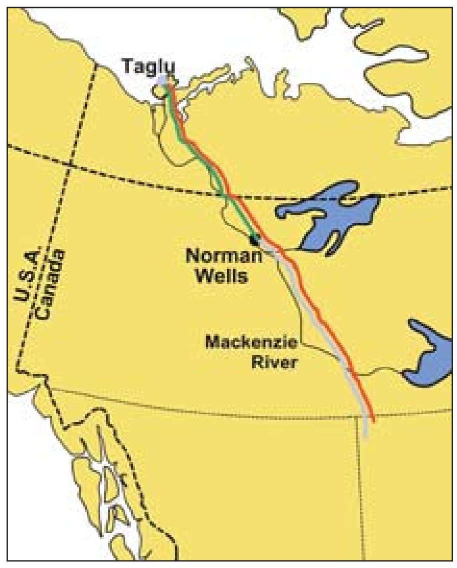
Once final submissions have been made, the joint review panel estimates it will need four months to write its report, pushing the hoped-for start of Mackenzie Delta gas shipments from 2011 (based on regulatory approvals by the third quarter of 2007) to 2012.

That comes at a time when the project partners are updating their budget which has already climbed from C$5.5 billion to C$7.5 billion because of soaring costs of labor and materials.

Some speculate that the new number, expected to be nailed down later this year, will be at least C$9 billion and could top C$10 billion.

LNG costs dropping

As the Mackenzie costs rise, LNG costs are heading in the other direction, undercutting current natural gas prices of US$6 per million British thermal units by a couple of dollars.



If LNG can find greater acceptance in the United States, some observers say there will be downward pressure on North American natural gas prices, raising even more questions about the need for Mackenzie gas.

But the Canadian Energy Pipeline Association warns the slowdown in the joint review panel work will translate into steeper gas bills as well as delaying the benefits of thousands of new jobs and millions of dollars of additional tax revenues to various governments.

It has strongly urged the panel to stick to its original schedule that would have seen public hearings conclude by Dec. 15.

In October 2005 the association issued a 45-page report estimating that a two-year slowdown in completing the Mackenzie Valley pipeline, the proposed Alaska gas line and new LNG terminals, could cost Canadians C$57.7 billion in higher gas bills and reduced government revenues over the 20-year period from 2005-2025.

David MacInnis, the association's president, said in a release that the joint review panel delay "deprives Canadians of project benefits and creates costly uncertainty for project proponents."

The association said the panel's failure to "meet its commitment to conclude hearings this year also means that Canadians will have to wait for the moderating effect on natural gas prices that will occur when this new source of much needed natural gas comes to market."

Rolheiser said the panel decision reflected what the Mackenzie partners have known from the time they revived prospects of developing Mackenzie Delta gas about five years ago — that such a "tremendously complex" undertaking, on a scale without parallel in the Northwest Territories, would encounter obstacles.

Mackenzie partners surprised

But the Mackenzie partners were surprised that the extra time needed by the joint review panel could not have been accommodated within the original 10-month schedule.

"It is too early to know the exact impact of the delay," he said.

Even so, the partnership is pressing ahead with aligning the various stakeholders and "doing the best we can to make the economics work," Rolheiser said.

Bell said he prefers to see a five-month delay than have issues such as the impact of the project on water quality glossed over in the joint review panel's final report.

Although the postponement is disappointing he said "other issues are more significant" — notably the rising cost projections, the long-term outlook for gas prices and efforts to persuade the Deh Cho First Nations and a community in the Sahtu region to become full aboriginal equity partners.

Bell said that despite the drop in gas prices since late last year, they are "still robust and in the grand scheme of things are not too low" to support the project.

He remains confident the aboriginal holdouts will eventually see the business deal they have been offered, including the C$80 million provided by TransCanada to cover aboriginal participation in regulatory hearings, as "too good to pass up."

Bell is also encouraged by signs that Canada's Indian Affairs and Northern Development Minister Jim Prentice, who oversees the Mackenzie file, is able to "make decisions on his own without having to run the gauntlet" of various federal departments. ●

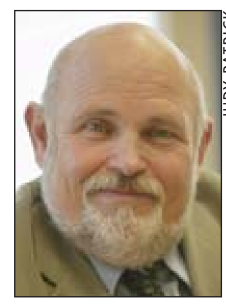
● NATURAL GAS

Menge signs spur line right-of-way

By ALAN BAILEY
Petroleum News

The Alaska Department of Natural Resources said July 27 that Commissioner Michael Menge has signed the conditional right-of-way lease for the Alaska Natural Gas Development Authority's proposed gas spur line between Glennallen and Palmer.

"This lease lays the foundation for a gas pipeline that, when constructed, will bring the benefits of reliable, affordable natural gas and propane to businesses and residents in Southcentral Alaska, the Kenai Peninsula, and rural and coastal communities throughout the state," Menge said.



JUDY PATRICK

MICHAEL MENGE

Menge presented the conditional lease to ANGDA CEO Harold Heinze at a brief ceremony in the ANGDA Anchorage offices. Heinze had signed the conditional lease on July 18 (see "Conditional ROW for spur line approved" in the July 23 edition of Petroleum News).

Lease gives ANGDA 10 years

The conditional right-of-way lease provides ANGDA with a list of conditions that ANGDA needs to meet to show that they are fit, willing and able to build a pipeline, said Mike Thompson, acting state pipeline coordinator. ANGDA now has up to 10 years to produce the necessary development plans covering all technical, financial and environmental aspects of the construction project, he said.

The conditional right-of-way lease provides ANGDA with a list of conditions that ANGDA needs to meet to show that they are fit, willing and able to build a pipeline, said Mike Thompson, acting state pipeline coordinator.

"Providing in-state access to the (North Slope) gas is one of the six fundamental principles I followed in negotiating a natural gas pipeline contract," Gov. Frank Murkowski said. "This right of way is one of the options available to us to fulfill my commitment to get Alaska's gas to the people, and I am very pleased to see ANGDA obtain its lease."

The governor is seeking a $4 million appropriation to the Department of Natural Resource, to allow ANGDA to continue its gas development work. At the July 17 ANGDA board meeting Heinze said that the Alaska Legislature had not appropriated any new funding for the ANGDA work program and that without continued funding the authority would have to cut back on its objectives. ●

LAND & LEASING

Sales set for North Slope, Beaufort Sea

The Alaska Division of Oil and Gas has issued sale notices for the North Slope areawide 2006A and Beaufort Sea areawide 2006A competitive oil and gas lease sales.

Bid opening for the sales will begin at 8:30 a.m. Oct. 25 at the Wilda Marston Theater, Loussac Public Library in Anchorage. Bidding information is available on the division's Web site: www.dog.dnr.state.ak.us. Copies of regional tract maps are available for $25 per set at the division's office in Anchorage.

The division said the commissioner of Natural Resources has issued a decision of no substantial new information for both sales.

Beaufort Sea tracts 27 through 39, east of Kaktovik, and tracts 555 and 557 through 573, between Tangent Point and Point Barrow, are deferred from this lease sale.

For both sales there is a minimum cash bonus bid of $10 per acre on all tracts. In the North Slope sale the royalty rate for tracts north of the North Slope royalty line will be 16.6667 percent, and 12.5 percent below the line. Tracts north of the royalty line have a term of five years; tracts south of the royalty line have a term of seven years. For the Beaufort Sea sale tracts 1 through 26 have a fixed royalty rate of 12.5 percent; all other tracts have a fixed royalty rate of 16.6667 percent. The term for tracts 1 through 26 is 10 years; for tracts 40 through 77, 500 through 554 and 556, the term is seven years; and for all other tracts the term is five years.

For both sales there is a minimum cash bonus bid of $10 per acre on all tracts. In the North Slope sale the royalty rate for tracts north of the North Slope royalty line will be 16.6667 percent, and 12.5 percent below the line.

—PETROLEUM NEWS

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NATURAL GAS

Senator has reservations with natural gas deal

Sen. Lisa Murkowski encourages approval of contract, but not as it is; says some issues need to be worked out

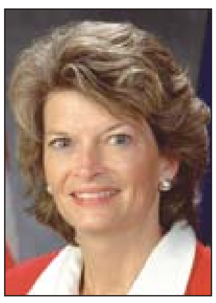
THE ASSOCIATED PRESS

U.S. Sen. Lisa Murkowski was among federal officials encouraging the Alaska Legislature to approve a natural gas pipeline contract with North Slope producers.

But Alaska's junior senator says she's not demanding the contract be approved as is.

"Given what we've got in front of us today, I would say that there are still some issues that have to be worked out," Murkowski told the Fairbanks Daily News-Miner.

She understands Alaska legislators' worries about locking in oil tax rates for 30 years, she said.


Sen. Lisa Murkowski

"I would share their concerns," she said.

However, she wants the Legislature to approve a contract this year.

"I believe very strongly that the basic proposal ... is something that we can make work," she said of the contract negotiated between the North Slope oil companies and her father, Gov. Frank Murkowski.

"Let's figure out a way to get to 'yes' on this project rather than just killing it," she said.

Therriault: approval possible with changes

State Sen. Gene Therriault, R-North Pole, said the Legislature could approve the contract this year — if there's a willingness to make changes.

The Legislature does not have the power itself to change the contract, Therriault noted. It's a deal between the administration and the companies. The Legislature is being asked simply to vote yes or no, he said.

There has been discussion about whether a yes vote could be conditional upon changes worked out between the administration and oil companies, he said.

So far, Therriault said, the administration has not been willing to make those changes, despite warnings dating back a year to 18 months that some provisions are not likely to fly.

State Sen. Gene Therriault, R-North Pole, said the Legislature could approve the contract this year — if there's a willingness to make changes.

The oil companies are not likely to act independently, he said.

"I don't expect the producers to read the public comment and then go back to the administration and request them to change," he said. "It's got to come from the administration."

Legislators are concerned about locking in oil taxes for 30 years as well as gas taxes for 45 years, he said. They also want stronger guarantees that the North Slope major producers cannot exclude other potential gas producers.

They also have misgivings about the state taking possession of its royalty gas to market the gas itself, he said.

"I do think that there are some who, for political reasons, would much rather that this governor not achieve success with this gas line." —U.S. Sen. Lisa Murkowski, R-Alaska

Federal officials urging action

At a hearing in Washington the week of July 17, Sen. Pete Domenici, R-N.M., the chairman of the Senate Energy and Natural Resources Committee, spent several minutes telling Drue Pearce, President Bush's nominee for federal gas line coordinator, about his worries over the slow pace in Alaska.

Vice President Dick Cheney, Energy Secretary Samuel Bodman, U.S. Sen. Ted Stevens, R-Alaska, and the Federal Energy Regulatory Commission all have said in recent weeks that an agreement should be reached soon.

Therriault said he's not viewing the comments as criticism.

"I take them more as encouragement to keep focused," he said.

Federal officials have a different set of priorities, he said.

"It's not their sworn duty as an office holder to look out for the best interests of the state of Alaska," he said. "When I raise my hand and take that oath, that's what I swear to do."

Sen. Murkowski, a former state legislator, acknowledged that her perspective is different these days.

"I'm talking to people who are talking about the world picture and are expressing concern," she said.

Also, while legislative efforts to strengthen the contract are commendable, something else is delaying the process, she said.

"I do think that there are some who, for political reasons, would much rather that this governor not achieve success with this gas line," she said. ●

GOVERNMENT

Court affirms BLM NPR-A decision

A federal appeals court July 26 affirmed a decision that clears the way for oil drilling in part of the National Petroleum Reserve-Alaska.

The Ninth Circuit Court of Appeals backed a ruling by Judge James K. Singleton Jr. of Anchorage in January 2005 that rejected efforts by a coalition of environmental groups to increase wildlife protections in the northwest section of NPR-A.

The coalition asked Singleton to block a planned lease sale in the northwest NPR-A. The judge denied the request and the U.S. Bureau of Land Management went ahead with the lease sale. The appeal was heard before Chief Judge Mary M. Schroeder, who wrote the opinion, and Circuit Judges Arthur L. Alarcon and Andrew J. Kleinfeld.

— AP contributed to this story

● EXPLORATION & PRODUCTION

Total, Hess confirm deepwater Gulf finds

Both Hess Pony, Total Alaminos Canyon discoveries are oil; sidetrack planned on Hess acreage; Total well confirms structure

By RAY TYSON

For Petroleum News

Hess and Total have confirmed separate oil discoveries in deepwater Gulf of Mexico.

Hess' Pony exploratory well, on Green Canyon Block 468, was drilled to a total depth of 32,448 feet and encountered 475 feet of oil saturated sandstones in Miocene age reservoirs, based on wireline log evaluation, Hess said July 13. That is an additional 175 feet of pay from the 300 feet of pay reported by Hess in May, before the well reached touchdown.

Hess said it would next drill an appraisal sidetrack well approximately 4,000 feet to the northeast of the discovery well, adding that whole rock cores and wireline logs would be obtained from the sidetrack. "This information will be used to refine estimates of net pay," Hess said.

Results to date have been consistent with pre-drill expectations, Hess said, noting that total hydrocarbon resource on the Hess acreage is estimated to be in the range of 100-to 600 million barrels of oil equivalent. Hess holds a 100 percent working interest in the well.

"The strong expansion of our natural gas trading and marketing activities in the North American gas market will be increasingly based on the importation of LNG."
—Yves-Louis Darricarrère, Total's president of power and gas

On May 17, Hess announced preliminary drilling results for the Pony prospect based on information collected down to the 29,658-foot level. The company said then additional objective sections were still to be tested beneath the 29,658-foot depth and that a "full suite" of logs were to be run when the discovery well reached total depth.

Total confirms Alaminos Canyon discovery

Meanwhile, France's Total confirmed a discovery on Alaminos Canyon block 856, the company said July 12, adding that the No. 2 well was drilled in 7,800 feet of water to a total depth of 15,625 feet and encountered 85 feet of oil pay in the main objective.

"This second successful well confirms the extent of the structure," Total said. "Development options for this block are currently being evaluated."

The block is roughly 140 miles east of the Texas coast in an area where several discoveries have already been made. Total E&P USA operates the block with a 70 percent interest. Nexen Petroleum holds a 30 percent interest.

Last November Total began to expand its deepwater Gulf of Mexico position in a "like kind" exchange with Shell Exploration & Production. Under the agreement, Total would convey its interests in four onshore fields in South Texas for Shell's 17 percent interest in the deepwater Tahiti field, among the largest finds in the Gulf of Mexico.

The Tahiti field, operated by Chevron and located in Green Canyon blocks 596, 597, 640 and 641 in about 4,100 feet of water, was announced in April 2002. First production is currently planned for mid-2008 from a floating production facility with daily capacity of 125,000 barrels of oil and 70 million cubic feet of natural gas. In the exchange, Shell acquired the four natural gas fields in South Texas with net production of 107 million cubic feet equivalent per day.

That transaction supported Total's previously stated strategy of developing medium- to long-term growth projects and, in the United States, to focus activities on offshore Gulf of Mexico.

Last April Total announced successful results from its Alaminos Canyon block 856 No. 1 discovery well, drilled in 7,600 feet of water to a total depth of 14,600 feet. The well encountered about 290 feet of pay in two oil-bearing zones. The No. 2 appraisal well was drilled to further assess the extent of the accumulation.

Last February Total announced that it had a buyer (XTO Energy) for two mature onshore fields, Bethany and Maben, in East Texas and Mississippi. Total said with that sale the company would "focus its exploration and production projects in the United States on the offshore Gulf of Mexico."

Total also acquires regas rights

Additionally, Total LNG USA, Inc., a subsidiary of Total, acquired liquefied natural gas regasification capacity rights for the Sabine Pass LNG regasification terminal to be built in Louisiana by Sabine Pass LNG, L.P., a fully owned limited partnership of Cheniere Energy Inc.

Under the terms of the agreement, Total will have the right to 1 billion cubic feet per day of regasification capacity for a period of 20 years beginning in 2009. The agreement was pending approval by the Federal Energy Regulatory Commission to build the Pass terminal.

The LNG will come from Total's interests in several projects worldwide and notably from the Middle East and West Africa.

"The strong expansion of our natural gas trading and marketing activities in the North American gas market will be increasingly based on the importation of LNG," said Yves-Louis Darricarrère, Total's president of power and gas. "This capacity at the Sabine Pass regasification terminal, by assuring a market access for the group's production, provides another opportunity for Total to grow our global LNG business."

Total has interests in six liquefaction plants worldwide and interests in three LNG regasification terminal projects. ●

● NATURAL GAS

Governor promises not to sign gas line contract without legislative OK

By KRISTEN NELSON

Petroleum News

The Alaska House Judiciary Committee accepted assurances from Jim Clark, Gov. Frank Murkowski's chief of staff, and a letter from Attorney General David Marquez, that the governor would not sign a fiscal contract without the approval of the Legislature.

The committee's chair, Lesil McGuire, R-Anchorage, said members of the committee wanted to make sure the Legislature is involved in the contract decision. Rep. Max Gruenberg, D-Anchorage, suggested a constitutional amendment to ensure that any natural gas resources development contract obliging the state to spend at least $1 billion is subject to approval by a majority of both the House and Senate. The proposal, House Joint Resolution 301, would have put the constitutional amendment before voters at the November general election and made the amendment retroactive to June 30.

Clark said the administration is proceeding on the basis that the Legislature's role is important, and said the administration doesn't have authority on fiscal certainty and needs that from the Legislature.

He said the letter from the attorney general made it "absolutely clear" that the administration sees the law as requiring legislative approval and ratification of the contract. He said the attorney general has made it clear to the governor that the law requires the Legislature's role. The administration believes the law requires the Legislature to both ratify the amendments and the contract, he said.

Gruenberg said he had reviewed the letter and since the administration was on record on the issue he didn't see the need for the resolution.

What if court says Legislature has no role

Rep. Les Gara, D-Anchorage, repeatedly asked Clark if the governor would sign the contract without legislative approval if after a court challenge the Alaska Supreme Court said the governor did not need legislative approval.

Clark said the administration believes the contract will go to the Alaska Supreme Court; he said the administration doesn't know what the court will say, but said the administration would have to consult with the Legislature on what to do next.

Gruenberg said his concern grows out of his earlier experience in the Legislature: the Legislature disapproved the Exxon Valdez settlement, which Gov. Hickel went ahead and signed. The issue doesn't just involve this contract, this Legislature and this governor, he said. It's difficult to know what contracts should be subject to legislative approval, but if the governor signed the contract without legislative approval, any lawsuit would involve the Legislature weighing in on this issue, Gruenberg said.

Clark said that if the Legislature approved the amendments and ratified the contract and the supreme court said the constitution has been violated, the administration and Legislature can look at the court's opinion and decide what to do going forward. "We will all have a role if the Supreme Court strikes this down for any reason," Clark said.

Rep. Peggy Wilson, R-Wrangell, noted that whatever the governor did, the Legislature couldn't be cut out because the administration would need money to go forward, and the Legislature has to approve money.

Clark said he couldn't say what the court might say and what the issues in an opinion might be, but said the administration would have to consult with the Legislature on what to do next. Moving ahead on a gas pipeline involves the powers of the purse string, he said, and the administration can't move without the Legislature.

Clark said the administration wanted to get past the issue of a constitutional amendment and work on the amendments. He said he was prepared to stay and answer questions, but felt the hypothetical questions put him "in never-never land."

McGuire said she didn't want to continue down the path of asking the same question over and over, and said the committee would address the amendments at its July 25 meeting.

The resolution was held. ●

E&P

Setting a new oil sands Horizon

Canadian Natural Resources is setting a new standard for its oil sands peers by beating both its timetable and budget for the first C$6.8 billion phase of the Horizon project.

The Calgary-based independent said it has a high degree of certainty on C$5.3 billion of the project's total cost, including a C$700 million contingency fund.

To curb costs it is building parts of Horizon with its own mine equipment, avoiding the use of contractors, and is trimming other spending by flying skilled workers in from Quebec, New Brunswick and Newfoundland and will soon add flights from British Columbia to offset labor shortages as well as employing a mix of union and non-union workers on the site.

Some modules built in Edmonton

In addition, some project modules have been built in Edmonton, ducking the over-heated economy of the Fort McMurray area, then assembled at the Horizon site.

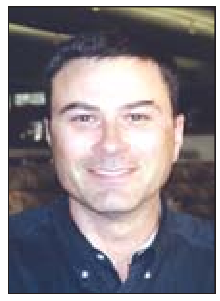
Canadian Natural said in its latest update that it expects to have up to 6,000 workers on the project by mid-2007, compared with 2,500 currently. Oil sands Senior Vice President Real Doucet said the company's emphasis on "front-end engineering coupled with a well-defined execution strategy continues to deliver, allowing our project team

see HORIZON page 8

PIPELINES & DOWNSTREAM

BP directed to complete pipeline testing

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration has directed BP Exploration (Alaska) Inc. "to take additional measures to ensure safety on its Prudhoe Bay pipelines as a result of a pipeline failure in March 2006."


DAREN BEAUDO

The agency said July 20 that it is requiring BP to submit a comprehensive engineering plan for draining 17,000 barrels of oil in the idled Western Operations Area pipeline, to complete engineering plans to assure sediment within the pipelines is safely stored to avoid contamination and maintain the safety of the trans-Alaska oil pipeline system.

Samples from the pipeline walls and photographs of pipeline solids in the Eastern Operations pipeline are being required to determine whether the pipeline is ready for an internal smart pig.

The requirements are a result of the March failure of BP's Prudhoe Bay Western Operations Area 34-inch low-pressure pipeline; the agency said it issued an order requiring smart pigging immediately after the failure.

BP planning transit line draining

BP Exploration (Alaska) spokesman Daren Beaudo told Petroleum News in a July 26 e-mail that BP intends to meet the terms of the July 20 order.

"Addressing the government's concerns on this issue is a top priority with BP," he said.

BP intends to drain Oil Transmit Line 21 that leaked, as mandated by the agency. He said the method for emptying the oil transit line has not been chosen but BP will present a plan to the agency by its Aug. 1 deadline.

The 3.1 mile stretch of oil transit line was taken out of service and stabilized at the time of the spill, Beaudo said. That is where the 17,000 barrels of oil are located. He said BP will replace the line next year.

"BP will take the OT21 oil material to one of the flow stations or gathering centers and add it to the normal production flow of oil," Beaudo said.

He said the total costs associated with the spill from Oil Transmit Line 21 were $50 million, including cleanup costs, replacement of the line, a new pig launcher, the 24-inch production bypass line and another bypass line BP is designing and constructing "that will enable us to handle solids generated by pigging in existing Prudhoe Bay facilities."

—KRISTEN NELSON

● NATURAL GAS

TransCanada's Kvisle sets the record straight

Says producers must be part of gas line project, disagrees with description of how Canada portion would be handled

By KRISTEN NELSON
Petroleum News

Gov. Frank Murkowski read part of a July 13 letter from Hal Kvisle, chief executive officer of TransCanada, at the conclusion of a July 13 address to a joint House-Senate session of the Alaska Legislature. The part the governor read supported the fiscal contract the Murkowski administration has negotiated with BP, ConocoPhillips and ExxonMobil.


TransCanada's (independent) proposal (to build the entire pipeline from the North Slope south) was designed to encourage Alaska North Slope producer participation "by offering them a commercially viable arrangement and an opportunity for ownership in the Alaska portion" of the gas pipeline project. —TransCanada CEO Hal Kvisle

"TransCanada recognizes the importance of the agreement you have reached with the ANS producers — it is difficult to see how a gas pipeline from the North Slope to North American markets could proceed expeditiously without the agreement and support of the ANS supporters," Kvisle said.

He said TransCanada is willing to convey its Alaska "rights, extensive technical and environmental information and other assets … to a producer-led project that involves TransCanada on the Canadian side of the border."

Kvisle went on to say that TransCanada takes no position on the issues that need to be resolved between the state and the producers about specific terms of the contract, "except as noted under section 2 of this letter."

"To the extent that your agreement with the ANS producers would lead to the expeditious construction of the project, and provided that the matters addressed in section 2 are resolved, we are generally supportive of the gas pipeline agreement which you have reached with the ANS producers. We encourage the State of Alaska to resolve the outstanding issues, ratify the agreement and move forward."

So, what's in section 2?

The governor did not read from section 2 of the letter, in which Kvisle says that TransCanada objects to the proposed joint state-producer ownership of the Canadian segment of the line, and provisions committing the state to a National Energy Board regulatory process within Canada.

"As you know, TransCanada holds valid property rights to build and own the Canadian section of the project, and we have no option but to defend those rights on behalf of our Canadian shareholders," he said. The company has "invested several billion dollars to pre-build and pre-engineer the project within Canada, and we will take all necessary actions to protect investments that were reviewed, approved and implemented pursuant to Canada's Northern Pipeline Act," Kvisle told the governor.

In other words, while TransCanada is in general support of the state moving ahead with the Alaska portion of the project in conjunction with the producers, TransCanada maintains its resolve to build the Canadian portion of the line.

TransCanada working with producers

Kvisle said "TransCanada has developed commercial proposals for the construction, ownership and operation of the Canadian section" and continues to dis-

see KVISLE page 11

continued from page 7

HORIZON

to execute on a resource-constrained environment."

But not all analysts are convinced that Canadian Natural has dodged the bullet.

Tom Ebbern at Tristone Capital and Martin Molyneaux at FirstEnergy Capital told the Financial Post that the sternest test won't occur until the workforce reaches its peak and productivity becomes an issue.

Ebbern noted that the Long Lake project by Nexen and OPTI Canada had its toughest test in the last year of construction when costs climbed 10 percent above budget.

—GARY PARK

continued from page 1

DRILLING

said.

ConocoPhillips has a 78 percent interest in Alpine and Anadarko Petroleum has the other 22 percent. Alvord said Anadarko has been supportive. "These are pretty aggressive wells," he said, and Anadarko has "never told us not to try something different, which you have to do sometimes."

Alpine and its satellites produce from four reservoirs: Alpine, Nechelik, Nanuq and Kuparuk. The wells are all horizontal. As of about six months ago more than half a million feet of horizontal interval had been drilled, he said.

Rotary steerable world records

Using Sperry's rotary steerable bit the drilling team at Alpine has set three world records in recent months: 9,002 feet for a single 6-1/8 inch rotary steerable run in the CD3-110 well (Fiord); 12,299 feet for a single 8-1/2 inch rotary steerable run in the CD1-07 well (at the main Alpine pad); and 12,197 feet for a single 8-3/4 inch rotary steerable run at the CD2-02 well (at the CD2 pad in the main field).

The latest technological innovation in use at Alpine is Schlumberger's PeriScope geo-steering tool. The first use of the geo-steering tool on the North Slope — also the first use of the tool in North America — kept drilling 93 percent within the zone in a faulted, eight-foot thick sand.

The geo-steering tool uses resistivity to provide a real-time image of the top and bottom of the target horizontal sandstone.

The tool has been available for about a year and a half but it took a while to get it in the smaller hole size that ConocoPhillips needed for Alpine, Alvord said. The tool was first used in Alaska in October-November of 2005.

ConocoPhillips had previously used the geo-steering tool in Norway and in Indonesia. Because the company has an "initiative on knowledge transfer, knowledge sharing in the geosciences," Alaska knew about the tool and thought Alpine might be a good application because it has really thin sandstone, six to eight feet thick. The 6,000 foot section drilled last year on the North Slope was a world record for the PeriScope, Alvord said.

ConocoPhillips used tool elsewhere

Seismic is used to plan wells, but there are sub-seismic faults, Alvord said, faults you can't see on seismic. Because the geo-steering tool shows the top and bottom of the formation, it lets you get back in the pay zone quickly when it is crossed by sub-seismic faults.

You really can see what is going on: an image on a computer screen shows the top and bottom sand boundaries, the planned trajectory for the well and the actual trajectory being drilled.

Doug Hupp, Schlumberger Data and Consulting Services principal petrophysicist, was monitoring progress on an Alpine well from ConocoPhillips' Anchorage headquarters via computer. A screen (see printout of a portion of a screen graphic on this page) shows the bottom and top boundaries of the sandstone zone which is the drilling target, the planned trajectory of the well and the drilled trajectory, as adjusted to follow the sandstone zone, even where faults have shifted it out of alignment.

"We're monitoring in real time as we go along," Hupp said. The color represents resistivity, he said, with the light representing high resistivity, the pay zone, and the dark low resistivity or shale.

Hupp said the measurements are taken about 30 feet from the end of the drill bit. The information coming from the tool shows when the bit is approaching the bottom or top of the sandstone, so the bit can be turned up or down as needed to stay in the bed.

Data goes from the rig via the Internet to Schlumberger's server in Denver and then back to Anchorage where it is downloaded.

You really can see what is going on: an image on a computer screen shows the top and bottom sand boundaries, the planned trajectory for the well and the actual trajectory being drilled.

Tool used in Kuparuk sands

Alvord said geo-steering tool works well in the Kuparuk sands at Alpine, but not in the Nechelik or Nanuq sandstones. The Kuparuk sand is pretty well developed at Nanuq, the satellite south of Alpine at the CD4 pad, so they've been using the geo-steering technology there.

The tool looks at resistivity contrast, so in "good clean sandstone like the Kuparuk … you can pick up the contrast between the shales above and below and the sandstone." He said ConocoPhillips has tried PeriScope at West Sak, but there the sand has more clay content, and the resistivity contrast isn't as high so you don't get the clear curtain — the sharp distinction — between sandstone and shale that shows you where you need to be as you drill.

ConocoPhillips has used the Sperry Drilling Services' rotary steerable technology at Alpine and West Sak in the last two or three years, allowing it to drill wells faster and to drill longer sections, and to set those world records for rotary steerable technology.

Fiord like an exploration operation

Doyon has set drilling records at both Alpine and its satellites, some of those at Fiord, where drilling is done only in the winter.

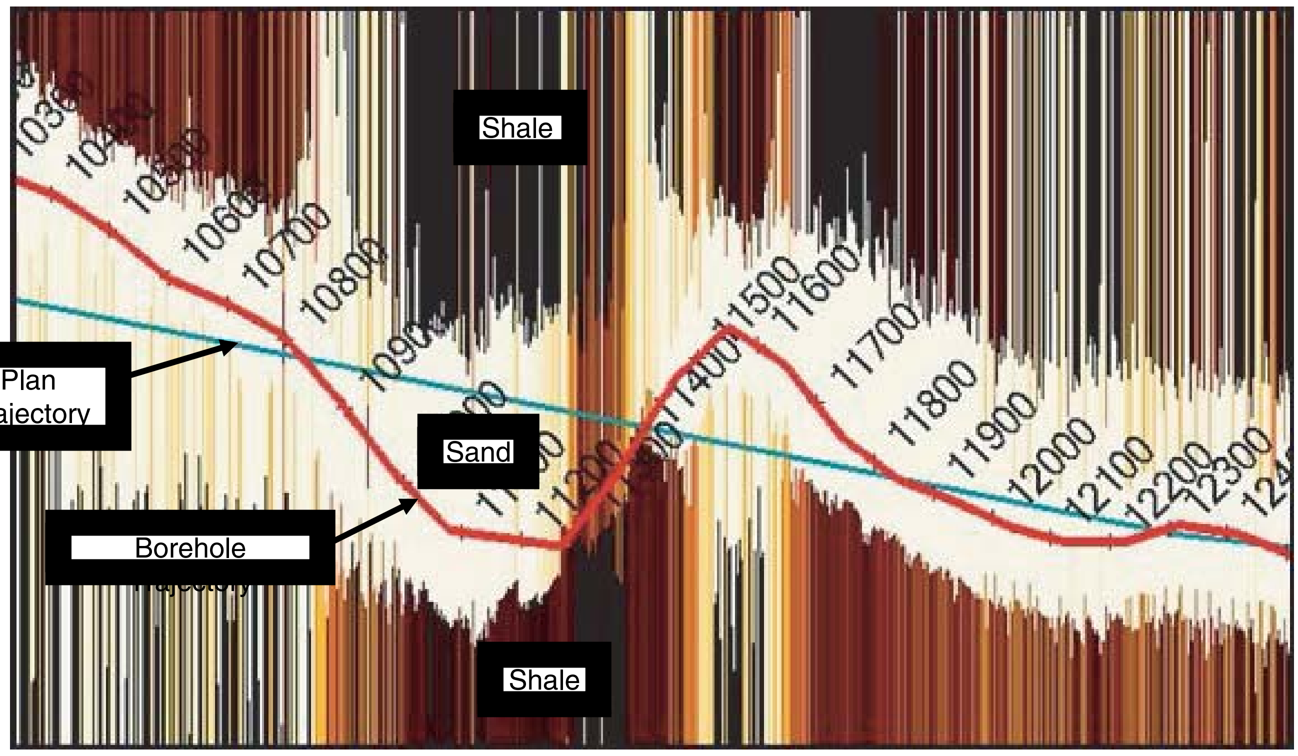
ConocoPhillips had 97 days at Fiord last winter, Alvord said. Fiord is being developed from CD3 as a road-less development. The satellite, north of Alpine, is not yet in production.

The operation is more like an exploration project, he said, because an ice road is required to move the rig and other equipment in at the beginning of the winter drilling season and out at the end of winter drilling.

Some 50 to 55 people support that operation: four from ConocoPhillips (day and night company man; day and night geologist), some 25 with Doyon Drilling, 10-12 with MI Swaco, the drilling fluids company, and people from AES (ASRC Energy Services) doing drilling support. Alvord said Fiord is road-less because it's a sensitive bird habitat and a road would be a bigger disturbance, so construction and drilling are done in the winter when there are no birds around. Two wells at Fiord were suspended and five completed.

"We're going to try to start the pad up later this year," Alvord said, along with CD4 (Nanuq), south of Alpine and connected to the field's main production pad by a four-mile road.●

PeriScope 15 Inversion Canvas at a Fault Crossing



COURTESY CONOCOPHILLIPS

Graphic as it appears on the screen, in real time, as Schlumberger PeriScope geo-steering tool uses resistivity to plot bit location in sandstone, allowing drillers to keep the bit within the narrow sandstone interval, and out of the shale above and below. These graphics are from a western North Slope satellite well.

FINANCE & ECONOMY

Quintavell to succeed Adams at ASRC

Arctic Slope Regional Corp.'s board of directors has selected director Roberta "Bobbi" Quintavell to succeed long-time President and CEO Jacob Adams effective Jan. 1.

Roberta "Bobbi" Quintavell

Adams will continue to serve on the board of the Native regional corporation for northern Alaska, the company said July 25.

Quintavell has been a member of ASRC's board since 2001, serving as chair of its investment committee and co-chair of the audit committee. In addition, she has served as an executive in ASRC's group of companies, most recently as president and CEO of Arctic Slope Construction Holding Co.

Quintavell, an ASRC Inupiat shareholder, has a Bachelor of Arts in management and has completed Harvard University's executive education program in management.

—PETROLEUM NEWS

● EXPLORATION & PRODUCTION

Oil sands extend global reach

South Korea buys in for US$270 million, production by 2010; Eni said to be interested, with deal rumored by end of September

By GARY PARK

For Petroleum News

The Alberta oil sands have secured one more international flag and a second may soon be unfurled.

With the United States, France, China and Japan having already made a footprint in the sticky muskeg, South Korea is joining them and rumors have Italy next in line.

Korea National Oil Corp. or KNOC, South Korea's state-owned oil company and the world's fourth-largest crude importer, has bought out an oil sands property for US$270 million.

Chief Executive Officer Hwang Doo-yui said KNOC expects to start building a facility in 2008 and move to full-scale production of up to 35,000 barrels per day over 25 years in 2010.

The Blackgold Mine in the Cold Lake region of northeastern Alberta is being acquired from the Canadian subsidiary of Newmont Mining.

The Korean government said the lease has recoverable reserves of 250 million barrels.

Currently producing 115,000 bpd from 31 oil fields in 15 countries, Korea estimates the oil sands project will add 1.2 percent to its self-sufficiency once production starts.

It aims to hike that level from the current 4 percent to 18 percent by 2013.

A government official said "we don't think global prices will fall below $40 per barrel so the oil sands projects will be successful."

Eni expected to take oil sands plunge

Meanwhile, Italy's energy giant Eni is touted as the next global power to succumb to the lure of the resource.

An Italian newspaper lent weight to frequent speculation that Eni is on the verge of an agreement for a bitumen license, predicting a deal by the end of September, although it did not provide a location or identify a partner.

Eni was rumored to have held negotiations with Nexen in 2005 and was reported to have made a losing bid for Deer Creek Energy, which was acquired by France's Total.

A possible target is MEG Energy, which raised C$1 billion in debt and equity this year and already has China's offshore producer CNOOC as a 16.69 percent partner.

What Eni brings to the table is proprietary technology which it claims could upgrade raw bitumen into synthetic crude in a more efficient manner than other methods.

It said in June that it was testing the system on Alberta bitumen.

Eni's Chief Executive Officer Paolo Scaroni said the technology could yield an economic gain of US$3 per barrel with oil prices at US$30.

But he also conceded that any investment Eni might make in the oil sands would have to be accompanied by construction of a parallel upgrader.

"It has to be an upstream/downstream investment rather than simply an upstream investment," he said. ●

● FINANCE & ECONOMY

Two more trusts head for the altar

By GARY PARK
For Petroleum News

Consolidation in the Canadian income trust sector took another large stride July 24 when Pengrowth Energy Trust reached an agreement to buy Esprit Energy Trust for C$1.09 billion, boosting its own production by almost one-third to 74,600 barrels of oil equivalent per day.

In the process it also raised natural gas to 52 percent of its total output from 45 percent, taking advantage of what analysts view as an opportune time to bulk up on gas assets.

The deal, scheduled for completion by late September, also gives Pengrowth 291.1 million barrels of oil equivalent in proved plus probable reserves (229.1 million barrels of which are proved), 250,000 net acres of undeveloped land and a reserve life index of 10.6 years.

The purchase costs translate into C$72,450 per flowing barrel, a discounted rate when measured against some recent transactions, and C$18.50 per boe for reserves, up 17 percent from last year's average acquisition price.

The transaction brings to an end a three-month lull on the deal-making front after a flurry of five mergers valued at C$6.5 billion and accounting for a combined 213,000 boe per day.

Will consolidations continue?

Whether the trend to grow trusts is headed for a slowdown is a matter of debate.

Esprit Chief Executive Officer Paul Myers believes consolidation will continue, given that the smaller operations are having difficulty meeting production targets let alone expanding their operations, but Sandy McIntyre, an analyst at Sentry Select Capital, expects an easing off now that junior E&P companies are cheaper to buy than trusts.

Pengrowth Chairman Jim Kinnear said the combination with Esprit is an "outstanding strategic fit," giving his trust a chance to incorporate "long-life natural gas assets in the current price environment."

In particular he welcomes the chance to add shallow gas and coalbed methane acreage in central and southern Alberta to Pengrowth's core area of expertise.

The incentive for trusts to enter the major leagues is driven by several factors, including the leverage they gain in contracting with service companies as they divert more of their cash flow into exploration, and the stronger welcome they receive from financial markets, especially for those that obtain listings in the United States. ●

continued from page 8

KVISLE

cuss those proposals with the producers. "We believe commercial negotiations will lead to a reasonable 'win-win' outcome in Canada, if the determination of ownership of the Canadian section can be deferred until matters in Alaska are finalized," he said. "Alternatively, we are prepared to engage immediately to negotiate a commercial framework for the Canadian section, with the intention of including that framework in your agreement with the producers, prior to state ratification."

Kvisle asked that the state amend its agreement with the North Slope producers "to either defer determination of ownership in Canada or to reflect the key elements of a commercial agreement with TransCanada. Either approach would minimize the risk of delay within Canada."

Independent pipelines defended

Kvisle also defended an independent pipeline project, telling the governor that TransCanada recognizes that its independent pipeline proposal "could lead to delay and litigation" unless the producers were willing to commit their gas to the project.

TransCanada's proposal was designed to encourage Alaska North Slope producer participation "by offering them a commercially viable arrangement and an opportunity for ownership in the Alaska portion" of the gas pipeline project, he said.

"The shipping terms and risk sharing mechanisms contained in our proposal were innovative, competitive and economically sound," he said. "We continue to see our proposal as a realistic alternative in the event you are not able to reach closure on your current arrangement with the ANS producers." ●

GOVERNMENT

AOGCC, ConocoPhillips win in court

Alaska Supreme Court issues opinion on 10-year legal case that could have set a precedent for challenging AOGCC decisions

By ALAN BAILEY
Petroleum News

The Alaska Supreme Court has affirmed the judgment of the Alaska Superior Court in favor of the Alaska Oil and Gas Commission and ConocoPhillips in a long-standing legal case raised by Monte Allen and others. Monte Allen is a veteran Alaska leaseholder. Danco Inc., one of the petitioners in the case, is headed by Dan Donkel, an active investor in Alaska leases.

The case has related to two state oil and gas leases on the northern margin of the North Cook Inlet unit, in the waters of Cook Inlet west of the northern Kenai Peninsula.

The North Cook Inlet unit contains ConocoPhillips' North Cook Inlet gas field. When the estimated gas reserves in the field more than doubled in the 1990s, the petitioners claimed that a revised boundary for the productive gas pool should pass through two leases in which they owned overriding royalty interests.

One day before the disputed leases expired in 1996, Allen and Donkel applied to AOGCC to enforce inclusion of the leases in the North Cook Inlet unit. The petitioners claimed drainage of gas from the leases as a reason to expand the unit. The petitioners have also cited the proven existence of a deeper, non-producing oil pool, variously known as the Sunfish or Tyonek Deep, as a reason for unit expansion. This oil pool, the petitioners claimed, extends under the disputed leases.


ALAN BAILEY

From left, Jim Gottstein, Monte J. Allen and Dan Donkel in front of the Boney courthouse building in Anchorage

Extension of the unit would have entitled the petitioners to a share of royalties from the North Cook Inlet field.

Rejection by AOGCC

AOGCC rejected the petition initially on the grounds that the leases had expired immediately after the petition was filed and that the Alaska Department of Natural Resources could not re-instate the leases. However, the Alaska Supreme Court overruled that position.

Then, after hearings in 2001, AOGCC issued another denial decision in 2002.

In this final decision, AOGCC cited legal and technical reasons for the denial. The commission said that unitization is intended to prevent waste, ensure greater ultimate recovery and protect correlative rights, rather than to deal with issues of hydrocarbon drainage from adjacent tracts.

"The traditional remedy for drainage," the commission said, "is the much more direct self-help expedient of drilling a well on one's own land."

And the commission questioned the quality of the technical evidence that the petitioners presented regarding the drainage question. The commission also commented that compulsory unitization typically addresses the question of forcing into a unit "minority tract owners who do not want to join, rather than to force majority tract owners to accept minority tract owners who do want to join."

The petitioners appealed to the Superior Court and when that court affirmed the commission's decision the petitioners appealed to the Alaska Supreme Court.

Trial de novo

In oral argument before the Supreme Court justices in September 2005 the petitioners' attorney Jim Gottstein requested what is known as a trial de novo — a completely new trial in appeals court that takes a fresh look at the case. A trial de novo is often used in review of administrative proceedings or judgments of a small claims court. Trial de novo admits new evidence, whereas a regular "on the record" appeal only considers evidence presented at an earlier hearing.

"We live or die on this question of de novo trial," Gottstein told the Supreme Court justices (in 2002 the Superior Court denied an Allen and Danco petition to hear the case in a trial de novo at that time).

Granting of the right to trial de novo could have set a precedent for resolving future disputes over AOGCC decisions.

But AOGCC decisions involve technical expertise regarding oil and gas fields — at the heart of the case were the disputed facts regarding the extent of the North Cook Inlet field gas reservoir and the petitioners' claims about gas drainage from the disputed leases.

"The productive gas reservoir in the North Cook Inlet unit does not extend under the two oil and gas leases subject to the appellants overriding royalty interest," Robert Mintz, the Alaska assistant attorney general representing AOGCC, told the justices. "That's what the commission found after an exhaustive analysis of geological, geophysical and engineering data. … So all the appellants' talk about uncompensated drainage is simply beside the point — there is no drainage in this case."

The petitioners also asserted that, in not enforcing unitization around the Tyonek Deep oil accumulation, AOGCC was not fulfilling a duty to protect royalty and leaseholder rights, rather than just ensure conservation of Alaska oil and gas.

Superior Court judgment affirmed

But the Supreme Court justices have upheld the judgment of the Superior Court on all aspects of the case.

On the question of trial de novo, the justices affirmed that an Alaska statute defining the jurisdiction of the Superior Court gives that court discretion in when to grant trial de novo. The justices said that this statute in effect repeals the wording in an earlier statute that granted the right to a trial de novo in an appeal to an AOGCC order. Case law in Alaska supports the view that the legislative intent of new Alaska legislation implies the repeal of earlier legislation that conflicts with the new legislation, the justices said.

The justices also commented that "it seems that a right to trial de novo would be wholly inconsistent with the legislature's creation of an independent commission with a great deal of expertise."

The justices also concluded that AOGCC had correctly applied the Alaska statutes relating to involuntary unitization, in considering whether to force the inclusion of the disputed leases in the North Cook Inlet unit. In their argument to the Supreme Court, the petitioners had used rules that apply to voluntary unitization though the Alaska Department of Natural Resources as a justification for involuntary unitization by AOGCC, the justices said.

The justices also found that AOGCC "has exhaustively explored the issue. Its finding that no part of either productive reservoir extended under the leases was supported by extensive testimony and review of proprietary seismic data."

The justices also commented on "thousands of pages of pre-filed testimony and data, the vast majority of which supports the commission's findings."

And, because the justices upheld the AOGCC finding that the disputed leases did not contain any portion of the gas pool for the North Cook Inlet field or the Tyonek Deep oil pool, the justices also found that the commission had not breached its duty to protect the rights of owners of land overlying a hydrocarbon pool. ●

● NATURAL GAS

ANGDA looks at Alaska NGL needs

Heinze stresses importance of assuring access to NGLs in Alaska; study looks at spur line terminal options for NGL processing

By ALAN BAILEY
Petroleum News

It's crucial that the State of Alaska protects its ability to extract NGLs in state from a North Slope gas line. That was a key message from the Alaska Natural Gas Development Authority's board meeting on July 17.

NGLs, or natural gas liquids, consist of hydrocarbons such as propane and butane that occur alongside methane, the main component of natural gas. Produced gas from an oil field such as Prudhoe Bay commonly contains NGLs, while gas and condensate fields, such as the undeveloped Point Thomson field on the North Slope, contain large quantities of NGLs.

FORREST CRANE

HAROLD HEINZE

Propane from NGLs is commonly distributed in liquid form as a fuel, while several NGL components form feedstocks for petrochemical industries.

Spur line terminals study

The ANGDA board discussion of Alaska NGL related to a study that ANGDA has commissioned, to review options for terminals at the ends of a gas spur line between a North Slope gas line and Southcentral Alaska. Options for these terminals include plants to extract NGLs from the North Slope line at, say, Delta Junction. The spur line could transport the extracted NGLs to Southcentral Alaska.

"One of the things we've argued is that you need to understand that option," Harold Heinze, chief executive officer of ANGDA, said. "It may be in the state's best interest to recover those NGLs within our borders and do things with them here."

Heinze said that the economics of processing NGLs within Alaska are "not a slam dunk case," but that in-state processing might be the right decision for Alaska in the longer term. Consequently, in-state NGL use should be considered in the North Slope gas line contract between the state of Alaska and the gas producers.

"There is one little provision of the contract that basically says that the entity will study the extraction of NGLs in Alaska," Heinze said. But the state needs to worry about the processing of its own NGLs, he said.

"I don't find that in the contract and I think that's an important right that needs to be preserved," he said, adding that the spur line terminal study that ANGDA has commissioned will start to outline the importance of the issue. Heinze also said that composition of the fluids flowing down the pipeline will impact both the pipeline design and the pipeline tariff structure.

Processing in Alberta

Heinze said that, from a business perspective, it makes "infinite sense" for the producers to process the NGLs in existing petrochemical plants in Alberta — NGLs from Alaska would replace diminishing supplies to those plants from other sources.

"It is clearly the premise of the contract, it is clearly the intention of everybody but the state (to move NGLs to Alberta)," Heinze said. "… The concern has been that we not unconsciously or unintentionally export the basis of a petrochemical industry. Somebody has got to keep that option open."

"You can't market your methane without dealing with the NGLs. It's got to be done in some place," said board member Bob Stinson.

Heinze agreed, saying that the issue becomes critical at the point where the pipeline pressure drops from 2,500 pounds per square inch to 1,000 pounds per square inch. The NGLs would foul up the lower pressure system, he said.

Board member John Kelsey raised the question of using the trans-Alaska pipeline, the oil export line from the North Slope, to ship NGLs — the trans-Alaska pipeline already ships some NGLs along with crude oil. Heinze said that the oil line is already carrying its maximum NGL capacity. Increasing that capacity would require major reconfiguration of both the pipeline and the Valdez Marine Terminal, he said. He also said that the maximum amount of butane that can be shipped with the oil is partly a consequence of the air specifications in California.

On the other hand, a 2,500-pound per square inch gas line "will carry anything and everything we want in the way of NGLs," Heinze said.

Heinze also said that oil refineries in Alaska are currently producing about half of Alaska's propane supply of 2,000 barrels per day. The remainder of the supply is trucked in from Canada, he said. ANGDA has long supported the concept of producing propane for use in Alaska from North Slope gas.

But the economics of propane in Alaska are difficult, Heinze said. He said that these economics could be greatly improved by establishing a propane export market from the state. However, current estimates of worldwide propane demand are very uncertain — Heinze cited a recent conference where experts had estimated Chinese propane demand as ranging from zero to the entire current world supply, depending on the Chinese use of coal vs. refined oil.

"Depending on how you answer that question (about coal usage) they're either self-sufficient in propane or they need all the propane that there is," Heinze said.

Given that range of uncertainty, it is important to keep open the option to export propane, Heinze said.

Three options

The ANGDA-commissioned study on spur line terminals is looking at three possible options for connecting a gas spur line to the North Slope gas line. The study is assessing the very high-level conceptual engineering and feasibility of these options and estimating some potential costs, Heinze said.

A high-end option involves the extraction of NGLs from the entire 4.5 billion cubic feet per day of North Slope gas pipeline throughput. This option sets a marker for a maximum capacity terminal plant.

"People would be challenged to think of a bigger case than that one," Heinze said.

That option could provide feedstock for three or four world-class petrochemical facilities. Ethane, for example, would be cracked into polyethylene, a feedstock for the plastics industry. But the likely capital costs for plant construction are huge.

"We're talking $2 billion to $6 billion dollars for some of these plants," Heinze said.

A second option involves extracting NGLs from 900 million cubic feet of gas per day, a volume that corresponds to the potential state share of North Slope throughput in the line.

The 900 million cubic feet per day case could supply at least one world-scale petrochemical plant and would produce about 20,000 barrels per day of propane, Heinze said. That volume of propane would be sufficient to enable the export of substantial volumes of propane from Alaska. Current Alaska propane consumption could increase to 5,000 barrels per day fairly quickly and 10,000 barrels per day would be sufficient to cover all state needs for a long time, Heinze said.

The third option would involve just tying the spur line into the North Slope line, without any special processing at the pipeline junction. This option envisages a spur line gas throughput (including some NGLs) corresponding to the current in-state usage of 500 million cubic feet per day of natural gas.

"You just throw off a side stream of 500 million, which happens to be the in-state

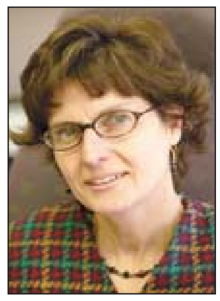
see NGL page 14

EXPLORATION & PRODUCTION

AOGCC checking BP wells for leaks

The state is investigating dozens of BP-operated oil wells on Alaska's North Slope following allegations this week that petroleum-based fluids had leaked onto the Arctic tundra.

The Alaska Oil and Gas Conservation Commission had an inspector on July 20 begin examining the integrity of 57 wells operated by the British oil company, said Commissioner Cathy Foerster. The investigation might be extended to other wells if warranted, she said.


JUDY PATRICK

AOGCC Commissioner Cathy Foerster

"We take these allegations seriously," Foerster said, adding that the state investigation would be conducted independently of one BP PLC is doing.

The allegations were first reported by The Financial Times. The newspaper cited an unnamed "veteran BP employee" in reporting that some BP wells had allowed gas and hydrocarbon fluids to the surface.

The investigation was being launched even though the state agency had no information that any of the wells had leaked fluids onto the tundra, or that BP had operated the wells improperly, Foerster said.

The allegations were first reported by The Financial Times. The newspaper cited an unnamed "veteran BP employee" in reporting that some BP wells had allowed gas and hydrocarbon fluids to the surface.

Foerster said an independent investigator with no ties to the oil industry also would be looking into the allegations for the state. The independent investigator was hired several months ago, in part because of criticism that state regulators are too lenient on oil companies.

BP welcomes the state investigation into the wells, said Steve Rinehart, a spokesman for BP in Alaska. "We are anxious to get to the bottom of this and to find any problems if there are some," he said.

BP had previously shut down 37 of the 57 wells over concerns of petroleum products winding up in well cellars. It then shut down eight more to optimize oil production, leaving 12 wells still in operation. Those wells were being shut down after the Financial Times' report.

—THE ASSOCIATED PRESS

● EXPLORATION & PRODUCTION

Big Foot discovery takes giant step

Chevron's Walker Ridge sidetrack drilled to 24,434 feet, confirms Gulf of Mexico deepwater oil find; confirms discovery

By RAY TYSON
For Petroleum News

Chevron's Big Foot discovery continues to evolve into a first-rate deepwater Gulf of Mexico oil play. The company's latest appraisal well confirmed the same approximately 300 feet of net pay initially found in the discovery well on Walker Ridge Block 29.

The appraisal well was sidetracked to a total vertical depth of 24,434 feet, Big Foot operator Chevron said July 26, adding that the well was drilled into a target roughly one-half mile north and "significantly downdip" of the discovery well.

"This sidetrack encountered the same pay intervals as seen in the discovery well," the company said. "Further appraisal drilling will be conducted, the timing of which is still under consideration."

Walker Ridge Block 29 is located about 225 miles south of New Orleans, La., and is situated in approximately 5,000 feet of water.

Chevron owns a 60 percent working interest in Big Foot. Anadarko Petroleum has a 15 percent interest in the prospect, while Plains Exploration & Production Co. and Shell each hold a 12.5 percent stake in Big Foot.

"Big Foot is potentially a very, very large discovery," Chris Oynes, Gulf regional director for the U.S. Minerals Management Service, said in early May at the Offshore Technology Conference in Houston, Texas.

Big Foot followed Knotty Head

Chevron announced the Big Foot discovery in early January, less than a month after disclosing another and perhaps even more significant deepwater find called Knotty Head, located on Green Canyon Block 512. Anadarko also is a partner in Knotty Head.

Bob Daniels, Anadarko's senior vice president in charge of exploration and production, noted in January that "coming on the heels of … the Knotty Head discovery, the Big Foot discovery further validates the extensive middle-to-lower Miocene play we are aggressively pursuing within the foldbelt area."

Last year Anadarko hit on three of four exploration wells in the foldbelt, including the company's 100 percent owned Genghis Khan discovery in a water depth of 4,300 feet on Green Canyon Block 652.

Like Big Foot, the initial Knotty Head exploration well turned up about 300 feet of net oil pay. However, appraisal drilling increased the estimated pay to around 600 feet, potentially ranking Knotty Head among the largest oil finds ever in deepwater Gulf of Mexico.

"This discovery follows a string of Gulf of Mexico discoveries that is a result of executing our focused, high-impact exploration program," Paul Siegele, vice president of Chevron's Gulf of Mexico deepwater business unit, said of Big Foot. ●

GOVERNMENT

Biofuels sector gets seed money in Canada

Canadian farmers and rural communities are getting an C$11 million injection of federal money to ensure they don't miss out on the benefits of a growing renewable fuels market.

Agriculture Minister Chuck Strahl said the initiatives will primarily help farmers hire the expertise to develop business plans and feasibility studies on what kind of plants are possible in their region and what products they can produce.

The kick-start is part of a C$1.5 billion investment program included in the 2006-07 budget as the government delivers on a promise to mandate that gasoline and diesel contain 5 percent renewable energy by 2010.

That target translates into the need for 8 million metric tons of grain, oil seeds and biomass a year to produce 3 billion liters of renewables.

—GARY PARK

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NGL

use right now," Heinze said.

The spur line would transport the gas to Southcentral Alaska, where there would be choices about what to do with the products in the gas stream. This option envisages the fractionation of nearly 12,000 barrels per day of propane, but no ethane-based petrochemical industry.

Heinze pointed out that in assessing throughputs for the spur line and any associated processing plants, ANGDA needs to estimate how much NGL production would pass through the North Slope gas line. Ultimately, the Alaska Oil and Gas Conservation Commission has jurisdiction over North Slope NGL production. But AOGCC has yet to rule on its requirements.

"It is a very major issue from my point of view of how much (NGL) is in that pipeline," Heinze said. "We're making our best guesses right now but I'd like to have a lot better information." ●

● PIPELINES & DOWNSTREAM

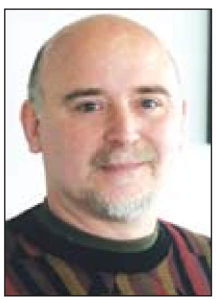
RCA halts Enstar/Marathon hearing

Commission adjourns hearing to consider response to objection by Marathon to order compelling discovery of LNG cost data

By **ALAN BAILEY**

Petroleum News

A Regulatory Commission of Alaska public hearing on the proposed new gas supply contract between Enstar Natural Gas Co. and Marathon Oil Corp. jolted to an abrupt halt on July 13 when Administrative Law Judge T.W. Patch adjourned the proceedings at the point when Marathon was about to take the witness stand for cross examination. Marathon has objected to complying with a discovery request from Tesoro Corp. for confidential information about the production and transportation costs of the liquefied natural gas that Marathon supplies from the Kenai Peninsula to Japan. RCA had ordered Marathon to comply with the request.


FORREST CRANE

"Five years ago Enstar's ratepayers paid the lowest price for gas in the western United States and Canada. Five years from now if the commission adopts the Henry Hub index Enstar's ratepayers will pay the highest price for gas in the western United States and Canada."

—Robin Brena, counsel for Tesoro

"The commission cannot proceed until it has fully considered Marathon's conduct and the consequences that flow from it. … The commission can only continue the hearing after the matter has been dealt with," Patch said, in adjourning the hearing.

The commission had previously set rules for the handling of confidential material, including the signing of non-disclosure agreements by attorneys involved in the case. However, Marathon said that the LNG data are of an especially confidential nature and that the company had signed a non-disclosure agreement for the data with ConocoPhillips, the operator of the Kenai LNG plant.

"Complying with the order will put Marathon in the position of either breaching … agreements with ConocoPhillips or violating a commission order, neither of which is a very appealing place to be," Mark Lewis, counsel for Marathon, said earlier in the hearing.

Announced in November

Tony Izzo, president and CEO of Enstar, announced the new gas supply contract with Marathon in November, saying that, together with other supply contracts, the new contract would ensure gas supplies for Enstar customers through 2016. Gas demand in Southcentral Alaska has started to exceed supply, thus prompting concerns about whether sufficient gas will be available in the future. Without the new contract Enstar could start to run short of gas as early as 2009, Izzo said.

But, following the age-old laws of supply and demand, gas prices in the Cook Inlet area have been increasing. Two previous Enstar contracts, one with Unocal in 2001 and the other with NorthStar in 2004, have indexed gas prices to the Henry Hub gas market in the Lower 48. That represents a substantial hike in price relative to the low prices that Alaska gas consumers have enjoyed in the past.

Under the new Marathon contract, the price that Enstar will pay for the gas would be based on a 12-month trailing average of gas prices at the Henry Hub gas market in the Lower 48, with discounts if that index price climbs above $6 per thousand cubic feet. The price will have a floor of $4.25 per mcf and a cap of $15 per mcf. There is an additional charge for peak gas volumes supplied at volume rates in excess of contracted peak volumes.

Enstar and the gas producers have argued that the linkage to Lower 48 prices results from a need to attract new investment into Cook Inlet gas exploration — there's little or no incentive for companies to explore for gas in the Cook Inlet basin if those same companies can explore for gas at higher prices elsewhere in the United States (or overseas). And without new Cook Inlet gas exploration, gas supplies in the Anchorage area will surely run dry before too long.

But does the Henry Hub index raise the price too high? And will the new contract effectively exclude new producers from the high-value gas utility market,

see **HEARING** page 17

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

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

Petroleum news

Business Spotlight

COURTESY PHOTO

Kaye Laughlin, Sr. Project Manager, Planning and Permitting

ENSR

ENSR is a global provider of environmental and energy development services to industry and government with 1,700 employees and worldwide offices. As an AECOM company since 2005, ENSR is now part of a global design and management company with 24,000 employees worldwide serving the energy, transportation, facilities and environmental markets.

Kaye Laughlin has joined ENSR with a rich background in planning and permitting for oil and gas activities, including 28 years’ experience in permitting and project review for state and federal agencies. Now in Anchorage, she has worked all over the state since 1981. Kaye’s been an American Red Cross volunteer instructor since 1986, teaching community first aid and safety/CPR. She and her large family enjoy impromptu celebrations.

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HEARING

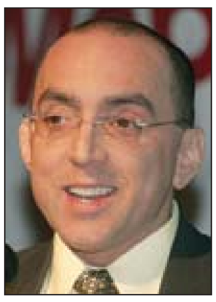
thus reducing competition in the Cook Inlet area?

These questions have sparked intense debate, culminating in the many hours of statements and cross-examinations that have already taken place in the adjourned RCA hearing.

Enstar accountable

In opening statements at the hearing, Julian Mason, counsel for Enstar, said that Enstar is held accountable if it cannot supply gas to meet its customers needs.

And although the Cook Inlet gas scarcity is causing higher prices, those higher prices are also triggering new gas exploration and development, he said. Mason also said that price capping the gas, as some have suggested, has historically resulted in gas shortages in the United States.



JUDY PATRICK

Tony Izzo, president and CEO of Enstar

Mason also said that Cook Inlet was the only reliable source of gas for Enstar "in 2009 and 2010 and perhaps for many years after" because of uncertainties regarding either a future gas line connection from the North Slope or the possibility of importing LNG to Southcentral Alaska (some people have said that the proposed development of a gas spur line into Southcentral eliminates the need for further Cook Inlet gas exploration).

"What this contract does is preserve for Enstar a set of options, so that when the facts are actually known (about other options) it can make the choices that are best for the ratepayers," Mason said.

And Mason argued for the use of the Henry Hub index as a basis for gas pricing. Everybody agrees on the use of a commodity price index and Henry Hub is the principle gas reference in North America, he said.

Nik Patel, counsel for Marathon, said that the Henry Hub pricing in the Enstar contract with Unocal had encouraged Marathon to explore for more gas.

"Marathon undertook sizable efforts to increase its reserve base in order to … position itself for the future of supplying gas here in the Cook Inlet," Patel said. "… Exploration is exactly what the commission wanted to encourage here. Exploration is exactly what Marathon did."

Patel said that some people have proposed using markets other than Henry Hub for price indexing because those other markets have enjoyed lower prices than Henry Hub. However, the supply and demand characteristics of the other markets do not resemble the Cook Inlet market, he said.

High pricing

But Robin Brena, counsel for Tesoro, took issue with the use of the Henry Hub pricing.

"Five years ago Enstar's ratepayers paid the lowest price for gas in the western United States and Canada. Five years from now if the commission adopts the Henry Hub index Enstar's ratepayers will pay the highest price for gas in the western United States and Canada," Brena said. "… Why should Enstar's ratepayers pay Marathon a windfall profit to blow down proven reserves?"

Tesoro uses 4.5 million cubic feet per day of Cook Inlet natural gas at its Kenai Peninsula refinery, Brena said. A $1 per thousand cubic feet increase in the price of gas results in $5 million per year off the Tesoro refinery's bottom line, he said.

Brena said that Tesoro is not asking RCA to reject the contract outright, but that the company wants "some economic rationality to this deal."

In particular, Brena said that the proposed gas price is above the local market rate because Marathon can continue to sell gas to Japan.

"The sale to Japan would be at substantially lower prices than anything you've been asked to consider," Brena said.

If the commission starts approving prices that take the marketplace out of balance then the end result will be that you won't have industry in this state on the demand side, he said.

Brena said that when, in the future, southern California has LNG receiving terminals it will make more sense to export Cook Inlet LNG to California rather than Japan. And if a gas pipeline in future connects the Cook Inlet to the Lower 48 through Canada, Alberta hub pricing will determine Cook Inlet prices. Hence, Tesoro is pushing the use of price indexes other than Henry Hub, to determine Cook Inlet prices.

"We didn't choose these indexes because they were geographically close," Brena said. "We chose the three indexes we did because they're the only three places our gas from this inlet will ever go."

And Brena wants Marathon's disputed LNG cost data, so that he can calculate a current netback price for LNG sold in Japan without depending on estimated costs.

What next?

"This is starting to feel a little bit like I may be Gary Cooper at high noon," said Enstar counsel Mason in his comments on the impasse over the discovery request to Marathon. "The central theme here should not be an ongoing feud between Tesoro refinery and Marathon Oil Company."

The data in question relate to a 10-year old contract that expires at about the time that the new contract activates, Mason commented.

And Lewis offered, as a way out, that Marathon would not challenge LNG production and transportation cost estimates presented by a Tesoro expert witness.

Brena said that there is no feud between Marathon and Tesoro and that he had nothing critical to say about Marathon. But given the substantial increase in proposed pricing, "they ought to step up with some information."

But now everyone awaits an RCA ruling.

"You will be informed of the commission's further action by order," said Patch, as the hearing adjourned. ●

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ANWR

(coastal plain), provided the resulting $40 billion in federal lease and royalty revenues would fund research and development of domestic alternative energy supplies.

A second-term congressman from the agriculturally rich San Joaquin Valley of California, Nunes credits a trip to ANWR four years ago with opening his eyes to the realities of the arctic drilling debate.

"I expected to see running water in streams through trees and animals running around," Nunes said in a speech on the House floor in May. "Instead, it was a barren slope with nothing there.

"With gas prices at $3 a gallon and nearing $4 a gallon in some places in California, it's time the Congress passed this legislation and made this into law," he added.

"I expected to see running water in streams through trees and animals running around. Instead, it was a barren slope with nothing there." **—U.S. Rep. Devin Nunes, R-Calif.**

ANWR to fund alternative energy R&D

Known as the American-Made Energy Freedom Act, Nunes' bill calls for the creation of a trust fund into which the estimated $40 billion in lease and royalty revenues from ANWR over 10 years would be deposited.

Nunes said the bill represents a comprehensive national energy policy that addresses America's growing energy needs and the nation's current dependence on foreign sources of energy.

"Congress has a responsibility to deal with our nation's energy demands in a bipartisan manner that benefits all Americans," he said in a statement July 26. "As such, we have proposed the largest investment in alternative energies in the history of the United States, and most importantly, it can all be done at no expense to the taxpayer."

All monies in the trust fund would only be used for development of new home-grown technologies that will fuel America in the future, Nunes said.

ANWR supporters say the trust fund would, in fact, fund many of the alternative energy provisions of the Energy Policy Act passed by Congress in 2005.

Specifically, the fund would support the following provisions:

• Cellulosic Ethanol Tax Credit. Cellulosic ethanol, the next generation ethanol, is a renewable fuel produced from plants and agriculture waste which can be found in all 50 states. This can be developed as a primary fuel for cars and trucks to potentially displace our dependence on foreign oil.

• Coal-to-Liquid Tax Credit. Coal liquefaction can produce a virtually sulfur-free diesel fuel which is cleaner than conventional diesel and can also produce jet fuel. At the very least, this technology could produce about 2.6 million barrels of fuel (109 million gallons) per day by 2025 and meet 10 percent of projected U.S. oil demand.

• Solar and Fuel Cell Investment Tax Credits. Extends the residential and business tax credit through 2012. In California, residential solar installations rose 53 percent in 2004, thanks to a generous state rebate program. This could be magnified with expanded federal incentives.

• Fund Emerging Renewable Fuels Development. Allocates funds to the Advanced Biofuel Technologies Program, the Integrated Biorefinery Demonstration and University Biodiesel Programs, the Improved Biomass Use Grant Program. All of these programs foster the production technology, facility construction, and capacity improvements for renewable fuels.

• Fund Clean and Advanced Energy Loan Guarantee Program. Provides financial commitment by investing in projects that avoid, reduce, or sequester air pollutants and greenhouse gases.

Bill could attract more ANWR votes

"With rising turmoil in the Middle East and other oil-producing nations, we can no longer outsource our energy stability to countries that put our national security at risk. Funding future home-grown energy innovations is what has to be done to produce lower prices at the pump and increase security in America," Nunes added.

Observers said GOP strategists believe that funding alternative energy with ANWR revenues will gain additional votes for the legislation in both the House and U.S. Senate, especially in the Midwest.

No further action is expected on the measure before the House adjourns July 28.

Action on offshore drilling measure

The U.S. Senate, meanwhile, voted 86-12 July 26 to begin work on an election-year bill that would open Lease Area 181, a large area of the central Gulf of Mexico, to oil and gas drilling.

It directs the U.S. Department of the Interior to begin offering oil and gas leases for waters that lie 125 miles to 230 miles off Florida's coast. The bill would guarantee that much of Florida's Gulf coast would be protected from drilling until 2022.

But it would fall far short of a broader offshore energy development measure already approved by the House.

And opponents fear the legislation could open the way to lifting a federal drilling moratorium that has protected 85 percent of the country's Outer Continental Shelf from New England to Alaska for a quarter century.

Lease Area 181 and an adjacent area cover 8.3 million acres and are believed to contain 1.3 billion barrels of oil and 5.8 trillion cubic feet of natural gas, enough to heat 6 million homes for 15 years. The area has been off limits to development largely because of concerns from Florida that drilling could jeopardize its beaches and lucrative tourist sector.

Congress may consider ANWR after recess

Senate Resources Chairman Sen. Pete Domenici, R-N.M., reiterated his support for ANWR drilling legislation July 19. "Opening ANWR is the most meaningful thing Congress can do for domestic oil production," Domenici said, vowing to take up ANWR legislation as soon as possible.

With gasoline prices soaring at record levels, ANWR drilling supporters are hoping that voters exert considerable pressure on their representatives to take action on energy legislation when Congress reconvenes Sept. 5 after the August break.

The pending energy legislation likely will be used by members of both parties to show constituents concerned with high gasoline and heating fuel prices that they are tackling the energy issue, observers say.

However, none of the three ANWR bills now before Congress are expected to pass before mid-term election in November.

—ROSE RAGSDALE

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UPGRADING

each if the venture succeeds.

Canadian Natural also has an option to hike the agreement by 20,000 bpd once the expansion receives final take off.

For the industry, it's a case of every little bit helps as refiners run out of ability to handle any more Canadian crude — not just the slate of oil sands volumes but conventional crude as well — without undertaking plant conversions and additions. That in turn forces producers to reconsider the pace of their plans to increase supplies.

North West aims to become major processor

North West Chief Executive Officer Robert Pearce said the Canadian Natural deal is "a gesture of support for upgrading within Alberta," adding another notch to the provincial government's declared ambition of reaping more of the rewards from the value-added end of oil sands production.

He said North West's objective is to become a "major processor of increasing supplies of bitumen and will support North America's growing demand for light sweet products."

"For us it's an important step in that it says we are on our way," Pearce said.

The company recently raised C$175 million through a private placement and expects to raise funds in the public markets prior to a construction start late in 2007.

Canadian Natural gains new outlet

Canadian Natural Senior Vice President Real Cusson said the contract gives his company a new outlet for a port of its heavy oil production and reduces the need for condensate to aid the shipment of bitumen to more distant upgraders.

Canadian Natural is still committed to building its own upgrader to handle production from the Wolf Lake/Primrose operation that is being designed to produce 120,000 bpd by 2009, in addition to an upgrader that is in the works for its Horizon mega-project.

The first phase of the Horizon upgrader, costing about C$2.5 billion, is planned to handle 110,000 bpd of synthetic crude in 2008. A second phase expansion will add about 45,000 bpd in 2010, followed by 77,000 bpd in 2012, although Canadian Natural is evaluating the merits of combining those two stages.

Fourth and fifth phases could boost the total from 232,000 bpd to 500,000 bpd by 2017.

North West's application is currently before the Alberta Energy and Utilities Board and expected to obtain approval by mid-2007.

It aims to have total processing capacity of 231,000 bpd of blended feedstock by 2015, with crude bitumen accounting for 150,000 bpd.

The pact is another step forward in the challenging task of doubling bitumen processing in Alberta to double to 1.43 million bpd over the next four years.

For upgrader proponents, the good

see **UPGRADING** *page 19*

continued from page 1

GLOOM

rels of bitumen over 50 years, is ready to enter the regulatory approval stream.

Similarly, Albian Sands Energy — a joint venture by Shell Canada, Chevron Canada and Western Oil Sands — has a regulatory date as it asks for changes to existing approvals to expand its existing Muskeg River mine.

Canada's Environment Minister Rona Ambrose and Neil McCrank, chairman of the Alberta Energy and Utilities Board, have formed a three-member joint panel to review the two proposals.

Neil McCrank, chairman of the Alberta Energy and Utilities Board

They will examine the environmental impacts, decide whether the projects are in the public interest and receive public comments..

Kearl Lake could start construction in 2007

Assuming timely approvals and positive results from project engineering and design work, along with favorable business and market conditions, Kearl Lake construction could start in 2007, resulting in first production in 2010, with two more trains coming on stream in 2012 and 2018.

Although the Albian partners have waved a yellow flag by ordering internal and external project reviews, indicating estimates could soar 50 percent from the initial forecast as they target an expansion by 100,000 bpd to 270,000 bpd, are not ready to bow out of the regulatory process.

Despite any budget misgivings about expansion of the Muskeg River mine, operator Shell Canada said it has taken into account the need for a measured approach in expanding the venture.

That includes a decision to award a contract to ATCO Structures to construct a permanent camp at the site to accommodate 800 people in the first-phase expansion and grow to 2,500.

The partners are also continuing front-end engineering work, reinforcing its hopes that initial oil from the expansion will come on stream as scheduled in 2010.

Husky is contemplating taking a fresh route by building its own rigs for the Sunrise project as one way to get a grip on costs.

It will take Husky another 12 to 15 months to work on the details to effectively become its own drilling contractor for the 200,000 bpd thermal in-situ development.

—GARY PARK

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UPGRADING

news is that they are largely managing to stay close to budget at a time when oil sands mining projects are exceeding forecasts by billions of dollars because of the cost of labor, materials and equipment.

BA Energy upgrader under construction

A second private merchant upgrader, BA Energy, has already entered the field by starting construction of its C$900 million stand-alone Heartland upgrader, also near Edmonton.

It received a regulatory green light in 2005, expects its initial phase to start processing 77,500 bpd of bitumen blend in early 2008 and has two more stages of 77,000 bpd each in the line up, yielding refinery-ready sour light crude.

The two merchant projects are part of a slate of upgraders in the works for northern Alberta that could involve capital spending of more than C$50 billion (and uncalculated additional spending if tentatively planned expansions proceed), although the labor shortage has caused misgivings among companies such as Husky Energy and Imperial Oil.

Upgraders have been described as the heavy lifters of the oil sands world. They turn the tar-like bitumen into lighter crudes that more conventional refineries can use to produce gasoline, diesel fuel, lube oils and asphalt.

Upgraders in the works

The list includes:

• An upgrader at the Nexen-OPTI Canada venture at Long Lake, which is about half completed and targeted to turn out 59,000 bpd of primarily 39-degree API sweet crude within a year.

The partners also have regulatory clearance to add 60,000 bpd of capacity in 2010-2011.

Like Canadian Natural, the joint venture appears to have its costs under control, having committed 75 percent of the budget, limiting the chances of a major cost overrun.

• Total E&P Canada, the Canadian subsidiary of the French oil giant, has declared its intention to build an upgrader to handle output from the Joslyn and Surmont oil sands operations and expects to launch a 200,000 bpd plant by 2015.

• Petro-Canada has the green light for a 190,000 bpd upgrader to support its Fort Hills project, although its Fort Hills partners, UTS Energy and Teck Cominco, think something in the range of 100,000-170,000 bpd is more likely by the first phase start up in 2011.

Later additions by about 2015 could push the total towards 400,000 bpd.

• Recently emerged North American Oil Sands has set its sights on a 70,000 bpd upgrader, scheduled to debut in 2014, although an application has yet to be filed with regulators pending a final decision on a location.

• Oil sands power Suncor Energy is pushing ahead with plans to grow its upgrading capacity from 260,000 bpd to 350,000 bpd in 2008 and has filed for a third upgrader to achieve 500,000-550,000 bpd in the 2010-2012 period.

• Shell Canada and its Athabasca partners, Chevron Canada and Western Oil Sands, is on track to introduce its first addition later this year as it doubles output to 300,000 bpd by late 2009.

• Syncrude Canada, the other oil sands pioneer, will grow its capacity by 110,000 bpd to 350,000 bpd later this year despite being slowed by odor problem emanating from the site in May.

• Despite indications that severe labor shortages could put a crimp in its plans to build an upgrader tied to its Sunrise oil sands project which is scheduled to come on stream in 2010-2012 and recover 3.2 billion barrels of bitumen, Husky Energy has not been diverted from almost doubling output at its established Lloydminster upgrader to 150,000 bpd. Front-end engineering is under way and if a final go-ahead is received construction of the Lloydminster addition will take up to four years to build. ●

EXPLORATION & PRODUCITON

True North releases assessment

True North Energy Corp. has announced the results of an initial geological and geophysical assessment of its Harriet Point prospect on the west side of the Cook Inlet — a team of geoscientists has estimated 180 million to 700 million barrels of recoverable oil in the prospect that occurs in 17,000 acres of contiguous leases in onshore and offshore areas along the coastline of Trading Bay.

True North recently purchased the leases from private Cook Inlet leaseholders (see "Independent makes aggressive Alaska play" in the June 25 edition of Petroleum News). A team of geoscientists led by Jerry Hodgden of Hodgden and Associates completed the assessment using some earlier geological work by Hodgden and using seismic data that includes data that True North licensed in 2006.

"This initial assessment of the Harriet Point Prospect, although limited in scope, is very encouraging and presents an excellent high reward/high risk exploratory opportunity for us," True North President and CEO John Folnovic said. "We are planning to conduct further seismic analysis to confirm and refine the current interpretation and to further define the Harriet Point prospect."

Folnovic also said that his company is holding preliminary discussions with several companies regarding a potential joint venture in the Cook Inlet.

True North has purchased other acreage in the Cook Inlet and on the North Slope; Folnovic told Petroleum News June 21 that True North plans to showcase its Alaska projects at a popular oil and gas conference in Houston in August.

—ALAN BAILEY

GOVERNMENT

Court dismisses oil sands challenge

Canada's highest court has rebuffed attempts by a coalition of environmental groups to force a sweeping review of a Petro-Canada led oil sands project.

The Supreme Court issued a terse and blunt decision in turning down a bid by the Prairie Acid Rain Coalition, the Pembina Institute and the Toxic Waste Society of Alberta to see the entire Fort Hills project come under an environmental probe, expanding the terms beyond the impact on a single creek in the area.

But a panel of three judges said the federal Fisheries and Oceans Department operated within its powers when it turned down the coalition's request.

The environmentalists insist the verdict exposes weaknesses in Canada's environmental legislation and put pressure on the government to close the "loopholes" because the rapid expansion of the oil sands has national consequences.

They claim that air pollution from plants crosses from Alberta into neighboring Saskatchewan, while wastewater is being poured into the Athabasca River and drains north into the Northwest Territories.

The Alberta Wilderness Association also argues that a boreal "treasure" will be pushed one step closer to destruction if Fort Hills, with UITS Energy and Teck Cominco as junior partners, proceeds to 2009 start-up and reaches its initial goal of 100,000 barrels per day.

—GARY PARK

continued from page 1

BROWNE

publications, Browne had an even bigger transformation up his sleeve — a merger with arch-rival Shell. Just how serious that plan ever became isn't clear. It appears the idea was brought up to Shell leaders in the second half of 2005 and didn't gain much traction. In any case, Peter Sutherland, BP's chairman, is said to have shot it down, and the company later dismissed the idea as merely "scenario planning."

Shell's CEO, Jeroen van der Veer, refused to comment on a possible merger in his own press appearances a day after Browne's, dismissing the reports as speculation not meriting a response.

Tensions with chairman

Browne alluded to tensions with Sutherland in his press appearance.

"I want to make it clear there is no rift between Peter and me; ours is a very long-standing relationship based on mutual respect," he said. "Neither of us is a pushover," he continued, "and I may say that, in line with everything that we do at BP, mutual respect means having a good and vigorous discussion about things."

As far as extending Browne's tenure, it was apparent that some major shareholders were lobbying for him to be kept on. There were reports that he was lobbying them to lobby the board and that may not have helped him.

Sutherland, the chairman, was pictured as standing firm that the company's retirement policy should apply to everybody. The Financial Times said that Browne was echoing Sutherland's private words when he said at the July 26 conference that "a company isn't about one person."

Current troubles

Browne's position was undercut by recent events that have shaken the company repeatedly. And while BP's profit increase was pretty hefty at 23 percent, rival ExxonMobil announced a day later that its bottom line rose 36 percent and Royal Dutch Shell reported earnings that were 40 percent above the number a year ago. Then there was that 65 percent increase at ConocoPhillips.

Browne took some pointed questions at the news conference about whether the Texas City refinery tragedy, which took 15 lives, was representative of BP's practices across the refining sector, an allegation Browne denied. But the big spill from the North Slope pipeline and other recent safety and environmental problems in Alaska didn't help his credibility as far as rigorous maintenance practices.

Brown also came in for some questioning about BP's billion-dollar investment in Rosneft, which is controlled by the Russian government and gained the old Yukos assets through what some said were shady circumstances.

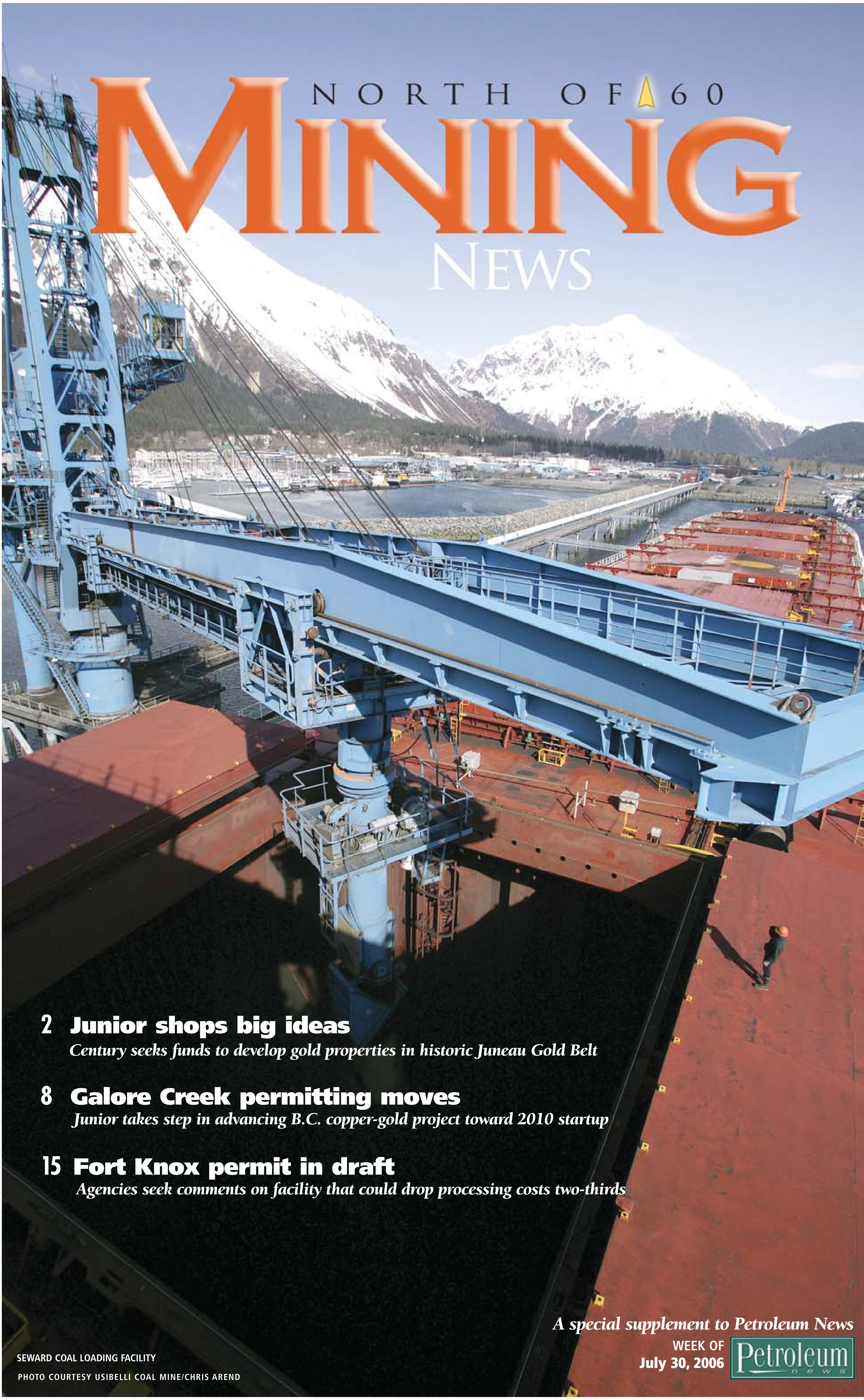
On top of that, the hugely expensive Thunder Horse platform in the Gulf of Mexico continues to have problems stemming from damage sustained in last summer's hurricanes. Leaks in two subsea manifolds mean it won't be back in operation until the early part of next year. That's far beyond the time BP originally said would be needed for the repairs.

Upstream production continues on a steady decline at BP, for four straight quarters now. This quarter's liquids flow of 2,531,000 barrels a day was down by 88,000 barrels a day or 3 percent compared with the number a year earlier. Natural gas production declined slightly.

In the downstream end, with Texas City still hobbled, throughputs were down 10 percent compared with the figure a year ago.

As for Browne's life after his long career at BP, he says he won't spend it playing golf.

"I don't believe in retirement," he said after his announcement. "I think the idea, which was invented by Bismarck, seems to be a touch out of date. … I am going to leave BP, but I am not retiring. I am going to change jobs. I am absolutely hooked on business." ●



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MINING NEWS

SEWARD COAL LOADING FACILITY

PHOTO COURTESY USIBELLI COAL MINE/CHRIS AREND

A special supplement to Petroleum News

WEEK OF
July 30, 2006

Petroleum news

● SOUTHEAST ALASKA

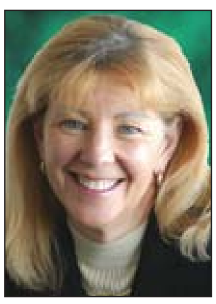
Aggressive junior shops big ideas

Century Mining seeks joint venture partner or investor to help develop slew of gold properties in Southeast Alaska's Juneau Gold Belt

By ROSE RAGSDALE

For Mining News

When Margaret "Peggy" Kent corralled partners and a core staff in 2003 to launch Century Mining Co., it was a package of nine groups of promising mining claims near Juneau in Southeast Alaska that she waved in front of investors to incite a stampede of capital to the startup.



PEGGY KENT

Kent knew properties such as the Treadwell Mine and surrounding claims in the historic Juneau Gold Belt had a venerable reputation for rich deposits of precious metals. The belt, after all, did produce 6.8 million ounces of gold and 3.1 million ounces of silver in the 20th Century, mainly from the Alaska-Juneau and Treadwell mines in Juneau.

"We got off the ground by putting together an Alaska land package because we were able to recognize the potential," said Kent in a July 18 interview. "We did a number of deals with some of the miners in the area who were getting elderly and no longer wanted to work on the mines."

Where there once was gold, Kent reasoned, there likely still is gold.

"We go where a lot of gold has been found, places like old gold camps," Kent said. "The Treadwell mine produced 3 million ounces of gold, and we believe it has another 1 million ounces sitting in the 200 feet of (rock) below the mined areas," she said.

Kent's thinking has become the centerpiece of Century Mining's business strategy.

Mining legend at helm

That's understandable when you consider that Kent is a legend in the Canadian mining industry. The first female CEO in the business, Kent formerly was known as Peggy Witte. "Being a woman in the mining industry, I've never acted like a woman," observed Kent, who said she loves the diversity of career opportunities in the mining field.

Her tumultuous career spans the 30 years since she earned a master's degree in metallurgical engineering at the University of Nevada in 1976.

Century Mining is Kent's seventh time at bat, having founded, financed and operated two publicly traded mining companies and four private companies, including Neptune Mining and Royal Oak.

Known as an aggressive, outspoken and tenacious executive, Kent completed a number of mergers and acquisitions and raised more than $1 billion in the U.S. and Canadian public and private equity and debt markets to fund the acquisition and development of mining projects in Canada.

Both lauded and vilified over the years, Kent has even been the subject of a docudrama in Canada.

"A lot of things have been said about me, but one thing they have to say is, I've protected my shareholders," Kent observed.

Other projects come first

But a funny thing has happened on the way to Alaska. Century Mining detoured to Quebec and Peru.

Just three years after startup, the Blaine, Wash.-based junior mining company is a mid-tier gold producer in Canada, mining 4 million ounces of resource in Val d'Or, Quebec, at the Sigma Mine, an open pit operation that aims to produce 90,000 ounces of gold in 2006 and at the Lamaque Mine, an underground project scheduled to begin production this year.

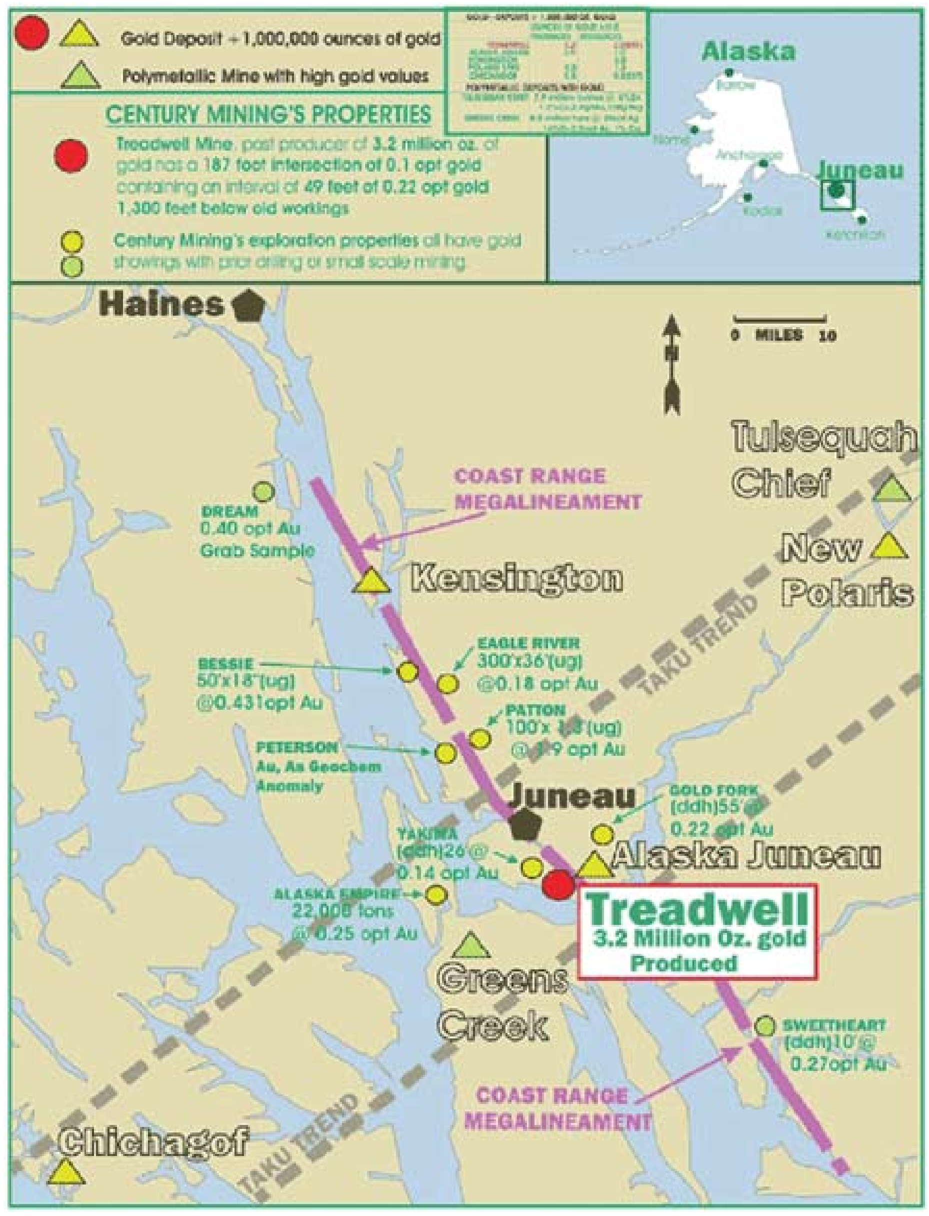
Century Mining is also close to becoming an overseas gold producer, working to extract 2 million ounces of known resource and explore substantial mineral claims held by San Juan Gold Mines in Peru. The company, which owns 60 percent interest in the project, plans to refurbish the mine and mill to restore production to 36,000 ounces of gold in 2006 and eventually expand the mine to produce 80,000 ounces of gold annually.

Century Mining also acquired the Carolin Mine in British Columbia, which produced 45,000 ounces of gold in the early 1980s. The mine closed when gold prices dropped and a socialist government in B.C. frowned on the developer's approach to the project.

Believing Carolin hosts another 1 million ounces of gold, Century Mining is pursuing a $300,000 exploration program for this year.

"We picked up the property when gold prices were lower, and with new technology, a change of government in British Columbia, it's realistic to develop this

see CENTURY page 3



A look at the Juneau Gold Project

In October 2003, Century Mining acquired nine groups of mining claims in Alaska collectively known as the Juneau Gold Project. The properties were purchased from Kent Burns Group LLC for C$300,000, plus 1,014,000 shares of Century Mining stock with an additional 986,000 shares provided to nine other parties in connection with the transaction.

- Treadwell/Douglas Beach Property, which consists of six state claims covering about 100 acres (40 hectares) at the south end of the town of Douglas, which is joined to downtown Juneau by a bridge over Gastineau Channel.
- Alaska Empire Mine is on Admiralty Island, about 20 miles (32 kilometers) west of Juneau and five miles (eight kilometers) from the Greens Creek Mine, along the same northeasterly lineament within the Taku terrain.
- Eagle River Mine is 20 miles (28 kilometers) north of Juneau.
- Bessie Property is one and a quarter miles (1.5 kilometers) west of the Eagle River Mine on the west side of the Coastal Range

see LOOK page 3

● NORTH AMERICA

No coal mine safety issues in Alaska

Lower 48 mine accidents, federal legislation likely will affect region's underground mines, future coal mines in Alaska

By ROSE RAGSDALE

For Mining News

As coal mine safety leaped into the national spotlight this year, miners in Alaska and Canada thankfully have been left out of the loop. That's because Canada has only two underground coal mines and Alaska has none.

Steve Borell, executive director of the Alaska Miners Association

The only underground coal mine in Western Canada is on Vancouver Island and is a mostly mechanized operation with just 17 employees. Canada's other mine that fits the profile is located in Nova Scotia.

"It's primarily underground coal mining at issue, and we don't have any, right now," said Steve Borell, executive director of the Alaska Miners Association.

Alaska, however, is headed toward the development of underground coal mines in the future, Borell predicted.

Meanwhile, operators of underground hard-rock mines (Alaska has only two, the Greens Creek gold-silver-zinc-lead mine on Admiralty Island near Juneau and the Pogo gold mine near Delta Junction) are most likely watching the mine safety developments closely, Borell said.

Both mines are relatively new operations. "Every time you go underground, whether at Greens Creek or Delta Junction, safety is a concern" Borell said. "Every mine manager knows the importance of proper safety equipment."

Lower 48 deaths spark change

Sadly, much of the spotlight on the need for improved safety measures came after the deaths of 33 coal miners across the nation this year — 19 of those deaths in West Virginia.

The safety concerns emerged after an explosion at a coal mine in West Virginia in January and escalated after a similar blast in southeastern Kentucky in May.

The tragedies prompted the federal Mine Safety and Health Administration to toughen safety standards temporarily, as Congress prepared the first major overhaul of mine safety laws in nearly 30 years.

Borell said key concerns for miners who work underground include having enough emergency air supplies and having working equipment necessary to survive a disaster. These include the so-called self-rescuers, which enable miners to breath safely despite an atmosphere of carbon monoxide.

The new legislation, signed by President Bush June 15, requires miners to have two hours' worth of oxygen on hand while they work, rather than the one hour required under the old rule.

Known as the MINER Act, the legislation was endorsed by the United Mine Workers of America and the industry-backed National Mining Association.

The law also requires operators to leave extra air packs at various points throughout mines. Routine checks on the packs are also mandated.

New law poses challenge

Borell said one of the challenges for mine operators is where to store air supplies. "Underground coal mines are very spread out. If they have five or six entrances, some roads or passageways take in fresh air from outside, while others vent the underground air to the outside," he said. "These mines may cover many, many square miles, so where do you place the oxygen cylinders?"

Further, the new law requires operators to install new communications equipment in mines within three years to track lost miners. These devices must provide a minimum of one-way communication if a miner is trapped underground.

It also sets a deadline for development and deployment of two-way, wireless devices. Seals used to block off sections of mines are also addressed in the legislation. At West Virginia's Sago Mine, where 12 men died in January, seals made of lightweight fiberglass were used. These seals must be strengthened under the new law.

Also, the legislation requires rescue teams be within one hour's distance of mines instead of two hours, and it calls for timelier reporting of accidents.

The Congressional Budget Office has estimated that mine owners will spend up to $128 million to meet the new standards. Almost half the money will go toward putting together 260 mine-rescue teams.

Undoubtedly, the new requirements will increase the cost of safety programs at Greens Creek and Pogo, Borell said.

Greens Creek and Pogo safety officials did not return telephone calls. ●

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CENTURY

property now," Kent said.

Wanted: Alaska partner

Work at Century Mining's Alaska project, meanwhile, is moving at a crawl

The Juneau Gold Belt is a 120-mile-long by 10-mile-wide strip along the Alaska Panhandle. It is home to several large mineral deposits, including Coeur d'Alene Mines Corp.'s Kensington Gold Property about 40 miles northeast of Juneau, which has reserves of 3.2 million ounces of gold.

"We had the vision three years ago. We'd like to joint venture these properties or find another company to work with us on them," she said. The company also would consider selling its Alaska properties, she added.

Developing the Juneau-area claims will present significant environmental challenges. For example, two of the mines are located in downtown Juneau, and some of the properties are next to the ocean. But Century Mining is ready to tackle these issues, provided it can find the right partner, Kent said.

"A small company can only do so much," she explained. "Being a junior and having all these properties is not easy."

Century Mining is currently entertaining offers for some of its exploration properties in the Juneau Gold Belt and one major company is doing due diligence on the past producers in the Alaska portfolio, Kent said.

Given gold prices today, there is a lot of interest by other companies in this package," she said. "We are very open for business in Alaska and doing deals on any of the properties."

Century Mining expects new developments in Alaska within the next two months, Kent said.

"You should look for other announcements in the next few weeks and with respect to Alaska, something should happen in the next couple of months," she added. ●

continued from page 2

LOOK

Megalineament.

- Peterson Property is nine miles (14.4 kilometers) north of Juneau and covers 206 acres (83.6 hectares).
- Sweetheart Property is 30 miles (48 kilometers) south of Juneau near Sweetheart Lake.
- Dream Property is on the west shore of the Lynn Canal, 40 miles (64 kilometers) north of Juneau.
- Patton property is eight miles (12.8 kilometers) north of the Juneau airport and has three small adits.
- Yakima Property is three miles (4.8 kilometers) from Juneau and is near the former Treadwell Mine. The property is upslope from the Treadwell and has similar features.

—ROSE RAGSDALE

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● NORTH AMERICA

Appeals court rules against Teck Cominco

Favors members of Confederated Tribes of the Colville Reservation in hazardous waste case, says suit against company can proceed

By ROSE RAGSDALE

For Mining News

A U.S. appeals court ruled July 3 that a lawsuit can proceed against Canadian mining company Teck Cominco Metals Ltd. over the release of hazardous waste in Canada that reached the United States.

Teck Cominco, the world's biggest zinc producer, had argued the lawsuit should be dismissed because U.S. environmental laws don't apply to a Canadian company that dumped waste in Canada.

The lawsuit was filed by two members of the Confederated Tribes of the Colville Reservation in Washington state who claimed Teck should be responsible for waste that flowed into the U.S. along the Upper Columbia River in northeast Washington state from the company's smelter in Trail, British Columbia.

The San Francisco-based Court of Appeals rejected Vancouver-based Teck's claim that it wasn't responsible for the cleanup because the release of hazardous waste in the U.S. is a domestic issue.

"The passive movement and migration of hazardous substances by mother nature is still a 'release'" under U.S. environmental laws, Circuit Judge Ronald M. Gould opined on behalf of the court.

"We reject Teck's argument that it is not liable under (federal regulation) § 9607(a)(3) because it did not arrange for disposal of hazardous substances 'by any other party or entity,'" Gould wrote.

Teck will investigate contamination

In June Teck Cominco agreed with the U.S. Environmental Protection Agency to investigate contamination in the Upper Columbia River.

From that effort, Teck Cominco and the EPA aim to produce a science-based report on the ecological and human health conditions of the Columbia River from the Canadian border to the Grand Coulee dam, an area encompassing Lake Roosevelt.

The investigation is also the initial step in the cleanup process, according to EPA officials.

Teck Cominco said at the time that it has always wanted to address the public's concerns about the level of hazardous waste in the river and in Lake Roosevelt.

A large portion of the zinc and lead concentrates treated in the past 15 years at Teck Cominco's Trail smelter comes from the Red Dog Mine in Northwest Alaska and the remainder comes from other mines in Canada, the United States and South America.

The lawsuit alleged the Trail smelter discharged as much as 145,000 tons of waste a year from 1906 to 1995 that polluted U.S. waters.

The case is Joseph A. Pakootas and Donald R. Michel of the Confederated Tribes of the Colville Reservation, State of Washington, v. Teck Cominco Metals Ltd., U.S. Court of Appeals for the Ninth Circuit. ●

● SOUTHWEST ALASKA

Northern Dynasty applies for water rights

If the Pebble project is developed, water will not be used until June 2010, but applying now will give company legal standing

By SARAH HURST

For Mining News

In its application for water rights for the Pebble project, Vancouver-based Northern Dynasty reveals details of its environmental baseline studies and proposed mine facilities. Northern Dynasty filed the application with the state of Alaska's Department of Natural Resources in mid-July, providing three hefty folders of information regarding the North Fork Koktuli, the South Fork Koktuli and the Upper Talarik Creek watersheds in the Bristol Bay area.

The state will likely request additional material from Northern Dynasty before taking a decision on whether to grant water rights, according to DNR. Alaska statutes require that the proposed use of water be beneficial and in the public interest. In determining the public interest, the DNR commissioner must consider factors such as the benefit to the applicant, the effect of the proposed economic activity, the effect on fish and game resources and public recreational opportunities, the effect on public health and the effect on access to navigable or public water.

Northern Dynasty's application states that the expected date for water use to begin is approximately June 2010, and the expected date for water use to be fully developed is approximately November 2012. Applying for water rights at this early stage of the mine development process — permit applications are not expected to be filed until January 2008 — is a standard practice for mining companies, according to Northern Dynasty. "Applying for water rights in advance of developing a final mine plan will provide Northern Dynasty engineers and environmental scientists with the greatest flexibility to mitigate potential impacts on fish and fish habitat," the company said in a briefing note July 17.

Some groundwater flow will be cut off

Development of the mine site will modify catchment hydrology, the water rights application says. Construction of the tailings dam will cut off groundwater flow from some areas, and development of the site will reduce interception and transpiration by vegetation, increasing runoff. Existing vegetation at the site is predominantly low shrubs, grasses and mosses. Northern Dynasty's goal is to continuously recycle water so that no process water is released to the downstream environment.

The tailings storage facility will cause increases to evaporation in the summer and wind-blown snow transport and sublimation in winter, resulting in a net increase to water loss from the catchment, the application says. Global warming over the next few decades will also increase evapotranspiration and sublimation rates in the area, and less precipitation will fall as snow. These effects suggest that water quantity at the site will reduce over the mine life, Northern Dynasty says.

If the Pebble project proceeds, development will require capture of surface and groundwater flows at the site. This water will be used for "beneficial mining uses," Northern Dynasty says, including mill operations and tailings slurry transport, providing potable water, ensuring that fluctuations in the tailings pond do not impact the mining process, and protecting downstream aquatic resources — for example by submerging potentially reactive waste materials, and controlling sediment.

Tailings storage for 500 million tons

The tailings storage facility has been designed to store approximately 500 million tons of tailings and potentially reactive waste rock, as well as mill process water and site runoff, the application says. The flotation process will create two separate tailings streams: a bulk tailings stream, accounting for around 97 percent of the total, and a pyritic tailings stream, accounting for the remaining 3 percent. The bulk tailings, which test work has shown to be non-reactive, will be discharged from delivery pipelines located along the embankment crests and adjacent high ground. The pyritic tailings, which will be potentially acid generating if allowed to oxidize, will be deposited below ponded water to prevent oxidation.

If DNR grants the water rights to Northern Dynasty, the company will have legal standing to assert the rights against conflicting water users who do not have water rights. The company will also have priority to use water over anyone who later files for water rights from the same source. The Pebble project is already facing strong opposition from local residents who engage in commercial, sport or subsistence fishing, as well as from environmental organizations. ●

Note to readers: Rio Tinto agreed to purchase a 9.9-percent interest in Northern Dynasty in July. See story, "Rio Tinto gives Pebble project thumbs up," in Petroleum News, July 2, online at www.PetroleumNews.com.

GUEST COLUMN

Mining news summary: Alaska mining industry running at over capacity

The annual running of the bulls in Pamplona can't hold a candle to the statewide frenzy that is going on right now across the length and breadth of Alaska. Measure it any way you like — meters drilled, helicopter hours used, geologists or engineers on the payroll, gallons of fuel burned or gallons of peanut butter consumed — it all comes out the same. The Alaska mineral industry is running at or over capacity and there is no sign that that will change any time soon.

The last month saw the start of multiple drilling programs in the Brooks Range, Seward Peninsula, Southwest, Southcentral and Interior Alaska; permit applications for Interior Alaska's newest heap leach gold project; and a major leap forward at Alaska's largest copper-gold deposit. Perhaps most satisfying and telling of all is the fact that thousands of e-mails and phone messages have gone unanswered because their intended recipients are in the nearly electron-free world of the Alaska bush!

The author

CURT FREEMAN

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column July 20. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his web site is www.avalonalaska.com.

Western Alaska

NORTHERN DYNASTY MINERALS LTD. announced that **KENNECOTT CANADA EXPLORATION INC.** has acquired a 9.9 percent stock interest in Northern Dynasty. While the acquisition does not give Kennecott any rights to Northern Dynasty's Pebble copper-gold-molybdenum deposit, it does give Kennecott the right of first refusal to participate in up to 50 percent of future share placements by Northern Dynasty until Kennecott reaches 19.9 percent of Northern Dynasty's outstanding shares.

Kennecott also has the right to supply up to three technical advisors to complement Northern Dynasty's project management team. The agreement has been hailed as a very positive development in the industry due to Kennecott's worldwide expertise with deposits such as Pebble.

TONOGOLD RESOURCES and JV partner **CALISTA CORP.** announced initial assay results from its Nyac project. Of the 833 grid soil samples reported to date for the Cox Mountain, Saddle Mountain and Nugget Ridge prospects, 57 soil grid samples ranged from 0.10 parts-per-million gold to 2.9 parts-per-million gold. Of the 52 rock chip samples taken during grid sampling, 11 ranged from 0.10 parts-per-million gold to 132 parts-per-million gold. The best results in 2006 have been from Saddle Mountain. Core sample results are pending from the first four drill holes on the Bonanza Ridge.

QUATERRA RESOURCES said core drilling has begun on its Big Bar copper-lead-zinc project on the Seward Peninsula. The 1,500-foot drilling program is targeting a 4,000-foot long soil anomaly that contains up to 1,920 parts-per-million copper in felsic schist that corresponds to gravity and induced polarization geophysical anomalies. Gossans collected as float from the anomalous area contain up to 0.06 grams of gold per tonne, 49.8 grams of silver per tonne, 4,260 parts-per-million copper and 3,900 parts-per-million zinc. The previously un-drilled prospect was identified by Anaconda in the early 1980s during a stream sediment and soil geochemical reconnaissance survey.

LINUX GOLD announced approval of a 3,000-foot core drilling program at its Granite Mountain project on the Seward Peninsula. The drilling, with depths averaging 500 feet, is to commence during late July as part of the company's $1.4 million 2006 exploration program.

LIBERTY STAR GOLD said it plans further geophysical and geochemical sampling at the Big Chunk copper-gold and Bonanza Hills gold projects for late August. At Big Chunk, field efforts will focus on the White Sox, Point Grey, Baltusrol, Bay Hill, and Silver Leaf copper prospects. In addition a large gold and indicator-element geochemical anomaly in the west portion of the Big Chunk Caldera, covering parts of the Augusta, Black Diamond and Bel Aire blocks, is recommended for additional geochemical sampling and more geophysics prior to additional drilling. At Bonanza Hills, additional rock, soil and stream sediment sampling is planned prior to possible drilling later in the year.

Eastern Interior

The biggest news of this month was from **KINROSS GOLD**.

The company said it has submitted initial draft permits to conduct a valley leach system as part of its overall operations at the Fort Knox mine near Fairbanks. The valley fill heap leach will be in the upper end of the Walter Creek drainage immediately upstream from the existing tailings impoundment. The heap leach system will cover approximately 310 acres and will have a total capacity for 160 million tons of rock. The pad is to be constructed in five stages using run-of-mine rock from the Fort Knox Pit and at least 29 million tons of ore from the Barnes Creek and Fish Creek stockpiles.

The ore is characterized by relatively high permeability that will promote efficient flow in the heap, rapid solution recovery and rapid rinsing at mine closure. In-heap storage of process solution and storm water will be accomplished behind an embankment in the downstream toe of the heap. The valley fill heap leach pad will be constructed with a 12-inch prepared subbase overlain by a high density geomembrane liner. Above the geomembrane liner, there will be an overliner consisting of three feet of crushed rock containing a network of piping to promote rapid drainage. The overliner will provide liner protection during ore loading, promote leachate collection, and maintain a low pressure on the geomembrane liner.

The facility will utilize an in-heap storage pond for collection of pregnant solution. This storage area will possess sufficient capacity for pregnant solution as well as a 24-hour storm drain down plus the runoff from the 100-year/24-hour storm event.

Beneath the in-heap storage pond, a leachate collection and recovery system will be constructed between an overlying primary geomembrane liner and an underlying secondary geomembrane liner underlain by a 12-inch-thick layered prepared subbase.

Barren solution will be applied on the heap leach using drip emitters, or possibly sprinklers, during the warm months. Pregnant solution containing gold in solution will flow to the in-heap storage reservoir, which will have an operating capacity of about 68 million gallons. Pregnant solution will be pumped into the existing Fort Knox mill for recovery and refining.

The heap leach pad will be located immediately upstream of the existing zero discharge tailing impoundment which has been designed and will be maintained to contain the 100-year/24-hour storm event and the average 30-day spring breakup plus provide three feet of freeboard. The mill and heap leach process will recycle water from the tailings impoundment for reuse in the beneficiation process. Public comments on the proposed facility are due by July 31 and details relating to the project can be acquired at www.dnr.state.ak.us/mlw/mining/largemine/fortknox.

TERYL RESOURCES CORP. and JV operator **KINROSS GOLD** announced their intent to conduct drilling on the Gil project. The new gold target being explored was located by integrating geological and geochemical information with the recent geophysical data. A total of three drill holes initially is planned to test the most favorable geophysical targets.

FREEGOLD VENTURES LTD. announced the discovery of new areas of veining and shearing to the south and along strike of the Cleary Hill mine on their Golden Summit project. Trenching commenced at the old Beistline shaft, located 1,300 feet southeast of the Cleary Hill mine.

Chip channel samples by prior operators along the Beistline shaft walls graded 0.61 ounces of gold per ton over the 109 feet of the shaft, with the top 46 feet grading 1.25 ounces of gold per ton. Trenching followed a shear zone that hosts the gold mineralization at the Beistline shaft and continued in a northwesterly direction for more than 1,000 feet towards the Cleary Hill Mine.

The shear zone width expanded from 12 feet near the Beistline shaft to more than 25 feet halfway between the Beistline shaft and the Cleary Hill Mine. The 25-foot width of the shear exposed by a cross trench matches extremely well with results from the company's prior drill hole CHM96-01 which intercepted 0.16 ounces of gold per ton over 25 feet at a depth of 25 feet. An additional 900 feet of trenching was conducted approximately 1,000 feet south of the Cleary Hill Mine, where a new shear zone was discovered parallel to and 50 feet south of the Wackwitz vein which contained coarse stringers of gold to 12.0 ounces per ton.

Veins in the Beistline and Wackwitz zones have converging strikes and trenching in their apparent intersection revealed a 200-foot wide zone containing extensive alteration and quartz veining. Assays are pending.

RIMFIRE MINERALS CORP. said field work has begun on its large property position in the Goodpaster district. The 2006 field program will include reconnaissance silt geochemical surveys to explore a 110,000 acre claim package staked last winter. Additional work consisting of mapping and prospecting will be undertaken to examine high priority targets generated in previous programs.

Alaska Range

FULL METAL MINERALS announced additional high grade result from its Lucky Shot gold project near Anchorage.

To date, 28 core holes have been completed over a 200 foot strike length in the Coleman Block of the Lucky Shot Shear Zone. Significant intervals include 4.53 meters true width averaging 51.5 grams of gold per tonne in hole C06-17, 1.20 meters true width averaging 134.5 grams of gold per tonne in hole C06-19, 2.51 meters true width averaging 60.3 grams of gold per tonne in hole C06-21, 1.90 meters true width averaging 21.3 grams of gold per tonne in hole C06-20, 3.48 meters true width averaging 32.8 grams of gold per tonne in hole C06-23 and 1.68 meters true width averaging 34.1 grams of gold per tonne in hole C06-27.

Mineralization is typified by quartz veins within a strongly sericite-carbonate altered shear zone, with disseminated visible gold, tellurides and minor sulfides occurring within multiple phases of quartz veining and cataclasites. Continuity of the gold-bearing structure is excellent, with local minor offsets due to post-mineralization faulting.

Northern Alaska

LITTLE SQUAW GOLD MINING said work has begun at its Little Squaw gold project in the southern Brooks Range.

Field activities to date have included collection of 235 soil samples and 15 rock samples while seven drill sites have been prepared on the Little Squaw quartz vein and four on the Rock Glacier quartz vein. Drilling was scheduled for a mid-July start-up.

SILVERADO GOLD MINES said alluvial gold recovery operations have begun at its Nolan gold project in the southern Brooks Range.

Last winter and spring saw the completion of 1,200 feet of underground development on the Swede Channel and extraction of approximately 40 percent of the resources outlined in the underground workings.

Underground work will begin after freezeup and will include the removal of the remaining gold bearing gravels which were blocked out this year. Underground work will also be conducted on gold bearing gravels which were discovered in prior years drilling. ●

NORTHWEST ALASKA

DEC working on Red Dog dust permit

The Alaska Department of Environmental Conservation is seeking public comment on its plans to issue an air quality control minor permit to Teck Cominco Alaska Inc. for the Red Dog Mine in northwest Alaska, according to a public notice published June 22.

Teck Cominco plans to install a 50,000 cubic feet per minute baghouse, or giant industrial filter, to control dust emissions that are escaping from the coarse ore storage building at the huge zinc and lead mine.

Teck Cominco has been monitoring the level of ore concentrate being deposited on the tundra immediately adjacent to the Red Dog Mine. In December 2004, the company notified regulators that the concentrate levels were elevated and appear to be related to fugitive dust emissions from the mining operation.

Dust from transferring, handling

Coarse ore storage is located in an existing enclosed building. Teck Cominco said the dust stems from the transferring and handling coarse ore via conveyors and heavy equipment. In addition to the baghouse, the company also plans to install a building fan.

Teck Cominco said the baghouse and fan will reduce emissions of particulate matter, while not increasing toxic emissions such as nitrogen oxide and sulfur dioxide

DEC said it has classified the move as a de-bottlenecking action that requires a minor permit under state law.

DEC said it intends to incorporate these minor permit provisions into the U.S. Environmental Protection Agency Title V operating permit for the mine after that agency's 45 day review.

—MINING NEWS

SOUTHCENTRAL ALASKA

Seward weighs coal, other power sources

City officials in Seward are entertaining the idea of using coal to fuel an electricity generation plant in the Southcentral Alaska coastal town.

But Seward's city council is also investigating the merits of tidal waves and wind and other possible sources of power to replace all or part of the electricity Seward currently purchases from Chugach Electric Association, an Anchorage utility.

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Chugach's power has proven to be unreliable when winter avalanches knock down power lines and cause blackouts. To address the problem, city council members have begun to investigate alternative-power projects.

Coal-fired plant proposed

Anchorage developer Marc Marlow has proposed to build a coal-fired power plant in the community of 2,600 people. Seward already hosts coal shipments from Usibelli Coal Mine in Healy, brought to town by rail and loaded onto barges bound for South Korea.

Marlow is redeveloping the decades-vacant MacKay Building, dubbed the "pink elephant," in Anchorage. He wants to lease five acres in Seward from the Alaska Railroad Corp. and build a 20-megawatt coal-fired power plant on the site, he told Seward officials. Seward would then purchase power from the plant.

Seward Mayor Vanta Shafer said July 19 that Marlow's idea "is one of many power generations options we're looking at."

"I'm going to a presentation on tidal energy tonight and other council members are getting information on several options, including wind generation," Shafer said. "Believe me when I say the council is nowhere near ready to make a decision on this."

—ROSE RAGSDALE

● YUKON

Feasibility study supports Minto project

Sherwood Copper aims to bring Yukon mine into production in 2007, shipping concentrates to Alaska's Skagway Ore Terminal

By SARAH HURST

For Mining News

A feasibility study published in July has confirmed that Vancouver-based Sherwood Copper's Minto copper-gold-silver project in the Yukon could be economic for at least six years. That is the initial projected mine life, but Sherwood is continuing its exploration program to expand the current resources. A key component of the project is the plan to retrofit Alaska's Skagway Ore Terminal to receive shipments of concentrate.

Sherwood acquired Minto from ASARCO last year and gave the open pit project a new lease of life, fast-tracking it towards production. "The original concept when we acquired the project was just to update the capital costs, bring the project current and then recommence production," Stephen Quin, Sherwood's president and CEO, said in a conference call with investors July 11. "However, we saw there were quite a number of opportunities to improve the project, to add resources, reserves, to increase the mill throughput, options for improving power and concentrate shipment," he added.

In most of these respects Sherwood has succeeded, according to the feasibility study. Based on approximately 231 drill holes, 99 percent of Minto's resource is now in the measured and indicated category, with 77 percent of that in the measured category, sufficient for six years of high grade production of 2,400 metric tons per day at 2.4 percent copper and 0.88 grams-per-ton gold. Lower grade material — less than 1 percent copper — will be stockpiled and processed at the end of the mine life.

Mine fully permitted

Sherwood will use a larger mill and camp than ASARCO had envisaged, as well as increasing pre-stripping, all with the goal of accessing higher grade copper sooner. The mine is fully permitted and much of the large equipment has already been ordered, to ensure that it arrives on time and that costs are locked in. In terms of infrastructure, Sherwood is working with the Alaska Industrial Development and Export Authority to expedite improvements to Skagway Ore Terminal, and the company also hopes to tap into Yukon Energy's hydroelectric power grid.

Escalating fuel, labor and equipment costs over the past few years have pushed the total capital cost of the mine up to C$90 million, and one of the biggest chunks of that will be an estimated C$10-13 million for the tailings filter plant. The feasibility study assumes that a dry stack tailings method will have to be used in order to meet the requirements of Minto's Type A Water License. This is the same method that was required at Alaska's Pogo gold mine, which has also caused cost overruns as an additional filter had to be ordered after the mine went into production.

Sherwood is now looking into the option of a pressure filter system, which could be less expensive. Test work is under way and the results should be in by the end of July, according to Quin. A gravity circuit in the mill will improve gold recovery, he added. If all goes well, Minto should be in production in mid-2007.

Over the life of the mine Sherwood expects to produce 300 million pounds of copper, 122,000 ounces of gold and 1.8 million ounces of silver. ●

NORTHWEST ALASKA

BHP Billiton studying Arctic coal

Arctic Slope Regional Corp. and multinational BHP Billiton signed a series of agreements in July providing BHP Billiton an exclusive right to explore and possibly develop the coal-bearing land held by ASRC in northwestern Alaska. The Western Arctic region includes a number of known low-sulfur bituminous coal-bearing areas. ASRC holds land and mineral rights in the region as a result of the Alaska Native Claims Settlement Act of 1971.

BHP Billiton will begin an exploration program on ASRC lands north of the Brooks Range in the Western Arctic, inland from the Inupiat communities of Point Lay and Point Hope, later this year.

BHP Billiton will begin an exploration program on ASRC lands north of the Brooks Range in the Western Arctic, inland from the Inupiat communities of Point Lay and Point Hope, later this year. In addition to exploration, BHP Billiton is committing to continuation of ASRC's environmental studies of the area and establishing a community consultation process. Should exploration results prove positive, BHP Billiton will begin project concept studies to determine preliminary feasibility and possible mine development.

BHP Billiton brings extensive Arctic exploration and mining experience gained through development of the Ekati diamond mine in Canada's Northwest Territories. ASRC is one of the 12 Alaska-based regional corporations established by Congress under the Alaska Native Claims Settlement Act of 1971. It represents eight North Slope villages including Point Hope, Point Lay, Wainwright, Atqasuk, Barrow, Nuiqsut, Kaktovik and Anaktuvuk Pass. ASRC has nearly 9,000 shareholders and has paid nearly $150 million in dividends since its inception. The corporation has investments in energy services, petroleum refining and marketing, technical services and engineering and construction.

—SARAH HURST

● CANADA'S NORTH

Diamonds restore shine to Far North economy

Canadian government analytical paper tracks effects mining precious gemstones had Northwest Territories, country

By ROSE RAGSDALE

For Mining News

Diamond production in Canada's North is delivering more than vast profits to mining companies and millions of carats to eager consumers around the globe.

Since its first diamond was discovered in 1991, Canada's North has emerged as a world-class diamond producer. Three of the biggest diamond mines, all in the Northwest Territories, are expected to generate $26 billion in gross domestic product over their lifetimes and provide around 125,000 person years of employment.

Diamond mining also has spawned a support industry of cutting and polishing factories in Yellowknife, further stimulating the far north economy.

Two mines, Ekati and Diavik, are currently in production in the Northwest Territories while a third, Jericho, began production earlier this year in Nunavut. Another operation, the Snap Lake Diamond Project in the Northwest Territories, is scheduled to begin production in 2007.

Extraction of the brilliant gemstones has had a profound effect on the local economy.

Per-capita gross domestic product of the Northwest Territories jumped dramatically in 1999 with the first diamond exports from the region and since has climbed at an annual average rate of 12.5 percent. This was nearly three times the average annual rate of national per-capita GDP growth of 4.2 percent.

These are among findings in "Diamonds: Still shining brightly for Canada's North," an analytical paper published by the Canadian government's international trade division in June.

The paper, prepared by Craig Byrd, examines the overall impact of diamonds on the Northwest Territories since 1999 and provides statistical data on production values from 2002 to 2005.

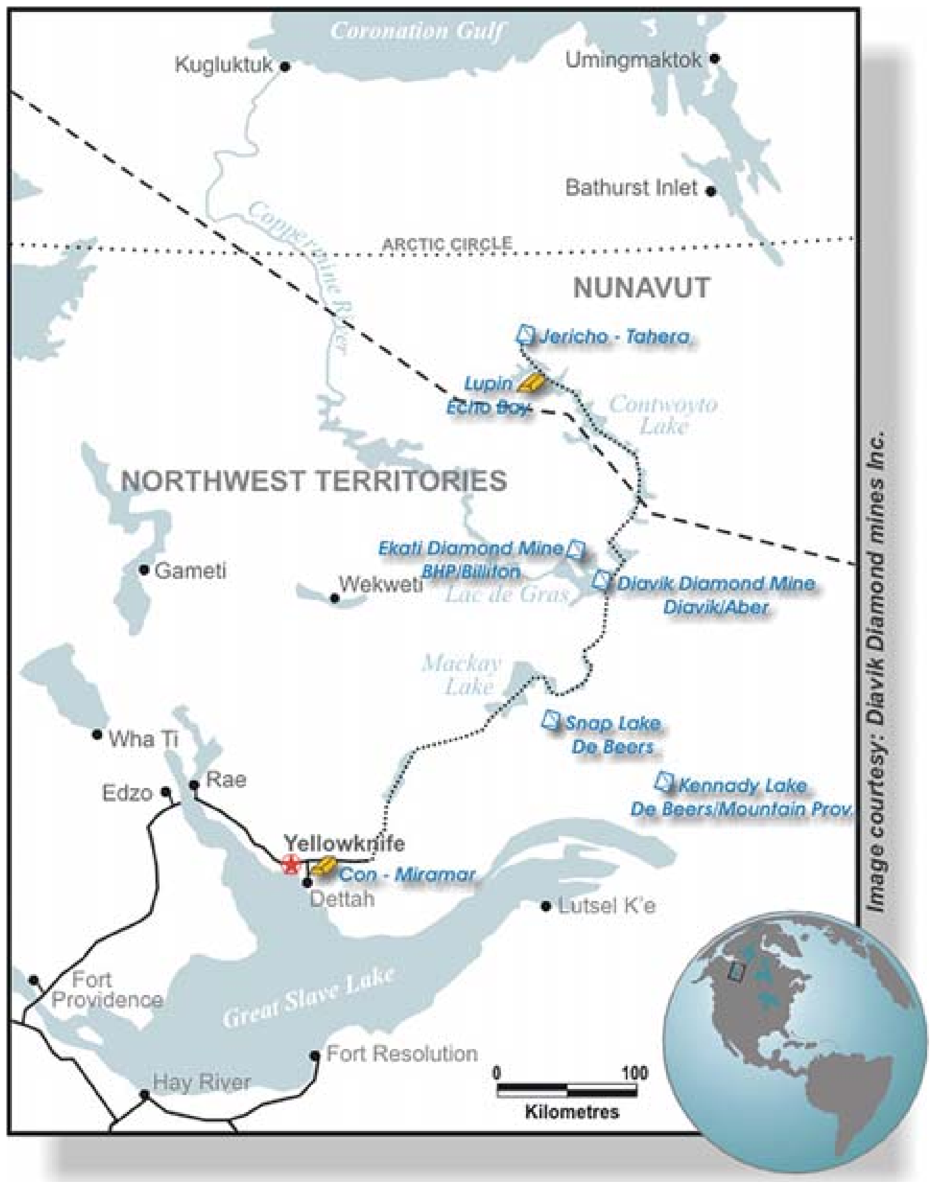


Image courtesy: Diavik Diamond mines Inc.

Leading diamond producer

In just five years, the rapidly growing Northwest Territories industry propelled Canada to the forefront of global diamond markets, moving the country to third in the world in terms of output value and sixth in terms of volume by 2004.

The value of Canadian diamond production trails that of long-time leader, Botswana, and is rapidly catching Russia.

The value of diamond exports from the Northwest Territories surged to more than $1.6 billion in 2005, nearly twice the level in 2002, and more than three times the value exported during the first year of production.

Since 1999, diamond exports have risen at an annual average rate of 29 percent in value. In addition, growth in actual volume of diamond exports mushroomed nearly six-fold. Mining companies exported 12 million carats of diamonds from the Northwest Territories in 2005, up 141 percent from nearly 5 million carats in 2002 and up 476 percent from 2.1 million carats in 1999.

Today, diamond mining and related activities are the driving force behind an economic turnaround that is transforming Canada's North. The discovery of, and resulting boom in, diamond mining coincided with a scaling back of gold production in the Northwest Territories, thus further magnifying its effect.

Remarkable turnaround

Manufacturing shipments, employment and income per capita as well as GDP have all seen remarkable reversals since the onset of diamond production, according to Byrd.

Between 1999 and 2005, manufacturing shipments in the Northwest Territories also climbed at an average annual rate of 38 percent, compared with minus 12.5 percent during the previous five years.

By contrast, Canada's annual average manufacturing shipments grew at a rate of 2.8 percent during the latter period, down sharply from 7.5 percent annual growth between 1993 and 1998.

Unlike the robust 12.5 percent growth in GDP in recent years, per-capita GDP in the Northwest Territories fell well below the national average to 1.7 percent prior to the start of diamond production, about half the national average of 3.3 percent.

With growth in GDP has come substantial jobs creation. Employment in Canada's diamond mining industry has experienced strong growth. From 2001 to 2003, both production employment and total hours worked in the diamond mining industry more than doubled.

The number of production workers increased to 992 in 2003 from just 84 in 1999. Jobs growth has continued. Today, the Ekati mine, operated by BHP Billiton, employs nearly 2,000 people, about 1,300 of whom are production workers. The Diavik mine, which began production in 2003, employs about 700 workers. It is operated by Diavik Diamond Mines Inc., a subsidiary of London-based Rio Tinto plc.

Wages strong and steady

Average wages for miners, however, fell from $70,000 in 1999 to about $61,000 in 2001 and since have remained virtually unchanged.

Prior to diamond production, personal income per capita in the Northwest Territories languished well below the Canadian average. Growth in annual per-capita personal income was just eight-tenths of 1 percent from 1993 to 1998, while the national average exceeded 2 percent. But by 2004, annual growth in per-capita personal income had accelerated in the Northwest Territories to 4.8 percent, well above the national average of 2.8 percent.

Another closely related measure of the economic impact of diamonds is retail sales. The average annual rate of growth in retail sales between 1999 and 2005 was virtually unchanged in the rest of Canada from the pre-diamond period between 1993 and 1998. In the Northwest Territories, however, retail sales per capita increased sharply.

Between 1993 and 1998, the territory registered a 4.5 percent annual increase in retail sales, just below the national average of 4.8 percent. From 1999 to 2005, the territory's retail sales grew at an annual average rate of 8.2 percent, compared with the national average of 5.1 percent.

Retail workers in the Northwest Territories also saw their earnings increase at a faster rate from 1999 to 2004. In addition, the annual increase in average weekly earnings in the territory was much higher than in the rest of Canada in the six-year period since diamond production began.

Between 1993 and 1998, the annual increase in average weekly earnings in the territory was just six-tenths of 1 percent, less than half the national average of 1.4 percent for the same period.

But this trend completely reversed itself by 2005, when the annual increase in average weekly earnings in the territory accelerated to 3 percent, a full percentage point higher than the national average of 2 percent for the period.

Indirect benefits

While diamond mining is not itself a manufacturing industry, it requires a significant amount of goods and materials to get plants and mine operations under way, some of which is manufactured in the Northwest Territories. As a result, manufacturing shipments can be used to gauge the impact of diamond-related spin-offs in the territory's economy, according to Byrd.

During the pre-diamond period 1993 to 1998, manufacturing shipments in the NWT fared quite poorly, declining at an average annual rate of 12.5 percent. In contrast, manufacturing shipments in the rest of Canada rose at an annual rate of 7.5 percent.

After the start of diamond production in 1999, the 38 percent average annual

see **DIAMONDS** page 9

Union members ratify first agreement with Ekati diamond mine

Ekati Diamond Mine reported June 30 reaching a tentative bargaining agreement with its union members that effectively ended a nearly three-month-long strike by the workers.

The collective agreement, reached on June 21, was ratified by a majority of the 375 members of Diamond Workers UNW Local X3050 of the Public Service Alliance of Canada, who walked off the job April 7 at the Northwest Territories mine, which is about 186 miles northeast of Yellowknife and about 124 miles south of the Arctic Circle.

The agreement comes after the union rejected several earlier company offers.

Ekati workers voted 66 percent in favor of the one-year contract, which contains a full grievance procedure to protect workers from arbitrary and unfair treatment, wage increases, a signing bonus, more vacation days and other improvements, according to Jean-François Des Lauriers, PSAC executive vice president-north.

"This has been a tough strike but our members are going back to work with significant improvements in their workplace as a result of their determination," Des Lauriers said. "And we will be back at the bargaining table on our members' behalf next year."

Richard Morland, vice president operations Ekati Diamond Mine, said the collective agreement represents the first of its kind, with world-class compensation

see **AGREEMENT** page 9

● BRITISH COLUMBIA

NovaGold seeks permits for Galore Creek

Aggressive junior mining company takes important step in advancing huge B.C. copper-gold project toward 2010 startup

By ROSE RAGSDALE
For Mining News

The British Columbia Environmental Assessment Office is seeking public comment on an application for an environmental assessment certificate filed by NovaGold Canada Inc. in May.

The Vancouver, B.C.-based junior mining company proposes to construct and operate a $1.1 billion open-pit mine operation at its Galore Creek Project in northwestern British Columbia east of the Alaska Panhandle.

NovaGold Canada is 100 percent owned by NovaGold Resources Inc, which is also developing the Donlin Creek and Rock Creek mining projects in Alaska.

Located within the historic Stikine Gold Belt, Galore Creek is in Tahltan Traditional Territory near the communities of Dease Lake, Iskut and Telegraph Creek. The 214,000-acre (86,600 hectare) property is about 43 miles (70 kilometers) west of Highway 37 and 90 miles (150 kilometers) northeast of Stewart, B.C., which has a year-round deepwater port available for shipping ore concentrates.

Situated in the rugged Coast Mountain Range, Galore Creek is expected to produce 5.9 billion pounds of copper, 3.7 million ounces of gold and 40 million ounces of silver over the 20-year life of the project. The property's total measured and indicated resource is 12 billion pounds of copper, 13.7 million ounces of gold and 156 million ounces of silver.

Pact with Tahltan Nation

B.C.'s EAO called for public comment during a 60-day period, beginning July 10 and ending Sept. 8.

The project is subject to review under B.C. environmental regulations and Canada's Canadian Environmental Assessment Act. NovaGold also applied for provincial authorizations under the Forest Range and Practices Act, Land Act, Water Act, Environmental Management Act, Drinking Water Protection Act, Transportation Act and Health Act to be reviewed concurrently with the application, the B.C. regulators said.

NovaGold said it has worked since 2003 in cooperation with the Tahltan Nation to develop "Out of Respect," a document that outlines a strategy and program for use by the mining industry to advance Tahltan well-being. The strategy became a foundation for a socio-economic impact assessment and the NovaGold-Tahltan Participation Agreement, ratified by the Tahltan Nation and signed on Feb. 10.

"NovaGold intends the Galore Creek Project to be a showcase of sustainable mining practices. The company commits to make every reasonable effort to minimize long-term environmental impacts while generating substantial income and various ancillary opportunities for shareholders, the Tahltan Nation, employees and the broader community," NovaGold told B.C. regulators.

The promise includes giving preferential hiring and contracting opportunities to members of the Tahltan Nation during construction and ongoing operations phases of the project.

NovaGold expects to employ up to 1,000 people during two years of construction and about 553 permanent workers when the mine project begins full production.

Slurry pipeline proposed

In addition to a mill and processing facilities at the project site, NovaGold also plans to build an 86-mile (140-kilometer) underground pipeline to transport concentrate slurry to a filter plant near Highway 37. A large pump will move concentrate slurry through the pipeline at a rate of 90 tonnes per hour, the company said. Corrosion protection, insulation for sections that cross waterways, five monitoring stations along the route and an emergency drain point are all features of the pipeline, the company told B.C. regulators.

NovaGold's timeline for Galore Creek is to submit permit applications in the first half of 2006, complete the final feasibility study in the third quarter, obtain key construction permits in early 2007, start construction in mid-2007 and start commercial production in 2010-11.

A smaller pipeline will be installed adjacent to the concentrate slurry line with similar protections to haul diesel fuel to the site for power generation, NovaGold said.

Concentrate removed from the slurry solution at the filter plant will be hauled by trucks to the port at Stewart, while cleaned and treated water will be discharged into the Iskut River, NovaGold said.

At the mine site, water used in processing the ore will come from wells dug on site, and residual materials will be removed and placed in a tailings pond. The water will remain in the concentrate slurry, the company said.

NovaGold also aims to use the nearby Grace property as part of a tailings disposal facility for Galore Creek. NovaGold is seeking to acquire the Grace property's owner, Pioneer Metals, in a hostile takeover. The plan resulted in two companies becoming embroiled in litigation.

Located within the historic Stikine Gold Belt, Galore Creek is in Tahltan Traditional Territory near the communities of Dease Lake, Iskut and Telegraph Creek. The 214,000-acre (86,600 hectare) property is about 43 miles (70 kilometers) west of Highway 37 and 90 miles (150 kilometers) northeast of Stewart, B.C., which has a year-round deepwater port available for shipping ore concentrates.

NovaGold, meanwhile, has become the target of a hostile takeover bid by its partner in the Donlin Creek Project, Barrick Gold Corp.

NovaGold plans to process 65,000 tonnes per day of ore and waste rock, according to a pre-feasibility study published in October. Annual production in the first six years would average over 300,000 ounces of gold, 2.31 million ounces of silver and 370 million pounds of copper.

The study, which was prepared by independent engineering services company Hatch Ltd., estimates that after-tax annual cash flow would total more than $200 million, using long-term average metal prices and over $350 million at current metal prices for the first six years.

Permitting focus of 2006 spending

In its second-quarter financial report, NovaGold said the majority of its spending at Galore Creek in 2006 will relate to finalizing environmental and engineering work for the environmental assessment report application and paying for an independent feasibility study scheduled for completion later this year.

NovaGold plans to spend about $40 million on programs that are planned to lead to completion of the feasibility study in the second half of 2006 and to assist permit completion in 2007. Included in the budget are about 18,000 meters of infill and exploration drilling, continuation of detailed design, particularly of the road access, continued metallurgical testing, monitoring and community projects as well as a $7.5 million property payment due in October. The company is also reviewing activities and the ordering of long-lead time equipment that may be carried out prior to obtaining development permits to assist with the construction timeline of the project.

NovaGold said its board of directors has approved up to $49 million in additional expenditures at Galore Creek in 2006 as the permitting process advances.

NovaGold's timeline for Galore Creek is to submit permit applications in the first half of 2006, complete the final feasibility study in the third quarter, obtain key construction permits in early 2007, start construction in mid-2007 and start commercial production in 2010-11.

Send comments by midnight Sept. 8, to: Anne Currie, Project Assessment Director, Environmental Assessment Office, P.O. Box 9426, Stn Prov Govt , Victoria, BC V8W 9V1; or fax them to: (250) 356-6448. Comments also may be sent by e-mail to eaoinfo@ gov.bc.ca. ●

● NORTH AMERICA

Barrick makes move on NovaGold

Heavyweight wades in to break up feud between two Vancouver-based juniors, eyeing Alaska and British Columbia properties

By SARAH HURST
For Mining News

In a significant, but not altogether surprising move, Toronto-based Barrick Gold has made a hostile takeover bid for Vancouver-based NovaGold Resources, the owner of several assets in Alaska and British Columbia. At the same time, Barrick and Vancouver-based Pioneer Metals announced an agreement for Barrick, the world's largest gold producer, to acquire Pioneer. The deals are all related because NovaGold was in the midst of a hostile takeover bid for Pioneer. Pioneer owns claims that could be crucial to the development of NovaGold's Galore Creek project.

The offer from Barrick was somewhat predictable as the company had already moved into Alaska late last year when it acquired Vancouver-based Placer Dome, which was developing the Donlin Creek gold project. Donlin Creek, located in Alaska's historic Kuskokwim Gold Belt, is a joint venture with NovaGold, which owns a 70 percent interest in the property. Barrick was set to earn an additional 40 percent interest in NovaGold if it produced a bankable feasibility study by November 2007.

Barrick's offer of US$14.50 per NovaGold share, which it announced July 24, represents a premium of 24 percent over the July 21 closing price of the company's shares on the AMEX. The transaction is valued at US$1.29 billion (or $1.53 billion on a fully diluted basis), according to Barrick. The major also offered C$1.00 per share for Pioneer, in a transaction valued at C$60.1 million (or C$64.7 million on a fully diluted basis). This topped NovaGold's hostile bid of C$0.57 per share, which Pioneer had been fighting vigorously. Pioneer announced that its directors, officers and largest shareholders had agreed to accept Barrick's offer.


COURTESY NOVAGOLD

The offer from Barrick was somewhat predictable as the company had already moved into Alaska late last year when it acquired Vancouver-based Placer Dome, which was developing the Donlin Creek gold project. Donlin Creek, located in Alaska's historic Kuskokwim Gold Belt, is a joint venture with NovaGold, which owns a 70 percent interest in the property.

NovaGold permitting projects

NovaGold recently submitted permit applications for its Rock Creek gold project near Nome and its Galore Creek copper-gold-silver project in northwestern British Columbia. The Galore Creek project was being hindered by a dispute between NovaGold and Pioneer that flared up when Pioneer sued NovaGold last year. NovaGold was hoping to use Pioneer's Grace property as part of its tailings facility for Galore Creek, after completing condemnation drilling that showed there was no significant mineralization on the claims. Pioneer refused to agree with that assessment, and as a consequence, NovaGold made its bid for Pioneer in June.

The possibility of NovaGold taking over Pioneer served as a catalyst for Barrick to act immediately, according to the company's president and CEO, Greg Wilkins. Barrick's management had previously held talks with NovaGold about opportunities for more joint projects, but nothing that was discussed seemed satisfactory to Barrick. The major gave NovaGold no prior warning about its bid, but Barrick was obviously well-prepared, with a Web cast and a presentation going up on its Web site on the day of the bid.

The integration of Placer Dome into Barrick has been very successful, Wilkins said in an interview with Bloomberg News. "Our strategy is really to build a portfolio of long-life assets, and so we sort of looked around at various opportunities, we actually did a small deal in Pakistan back in March, and we just looked at Nova's assets and the two projects that they had were very attractive to us," Wilkins said. The two projects he was referring to were Galore Creek and Donlin Creek. Barrick is giving no indications yet about what it might do with Rock Creek or NovaGold's Ambler exploration project, also in Alaska.

Wilkins: more work needed at Donlin Creek

Wilkins gave few details about current activities at Donlin Creek in the Web cast, during which he answered questions from investors. He did say that "significant" exploration is taking place there and that Placer Dome's original timeline for the development of Donlin Creek was "on the optimistic side." A lot more work will be needed to take Donlin Creek to the pre-feasibility stage, Wilkins added.

Barrick's Eskay Creek mine is very close to Galore Creek and is not expected to be in operation much longer. As Eskay Creek winds down, manpower and expertise will be available for Galore Creek, Wilkins told investors. It is also useful that Barrick has experience dealing with the government of British Columbia and with the First Nations in the region, he said. On the whole, North America is an attractive place for mining for geopolitical reasons, too, Wilkins said. Donlin Creek and Galore Creek play to Barrick's strengths in the spheres of permitting and development, and there should be a "minimal integration risk", according to Wilkins, since Barrick already manages Donlin Creek.

While gold is volatile and there is momentum in the market, it makes sense for Barrick to increase its exposure to gold through the NovaGold transaction, Wilkins said. If the bid is successful, Barrick will "have an unrivaled pipeline of reserve replacement and growth potential in the industry," he added.

see **BARRICK** *page 11*

continued from page 7

AGREEMENT

and benefits, continued protection and safety for the mine's work force and provisions that allow Ekati to honor its" Impact Benefit Agreements and Socio-Economic Agreement."

"On behalf of Ekati, I'd like to thank the Northern and Aboriginal communities for their ongoing support and continued commitment during this difficult time," Morland said. "We look forward to bringing the entire team back together and making Ekati an even better place to work."

Union: Workers had hoped for more

Todd Parsons, president of the Union of Northern Workers component of PSAC, which represents Local X3050, said the vote results indicate it was a difficult decision for members to go back to work.

"Ekati workers clearly had hoped to achieve more in this round of bargaining but facing a multinational employer who makes $7.5 billion in annual profits and just getting a first contract with the terms and conditions we won is quite an accomplishment," Parsons said. "Our union is now in place and we can build on this success in the next round of negotiations."

Ekati is owned by BHP Billiton, one of the world's largest mining companies. The mine employs up to 2,000 workers and staff, including the 375 union members.

Ekati officials said they would develop a return-to-work plan to ensure the returning employees had a safe, timely transition as they resumed their duties at the mine. The union members were expected to come back to work in a staggered manner, starting in mid-July, which gave them time to wrap up personal affairs and ensure their return to shift rotation was smooth, mine officials said.

The tentative agreement announced June 23 was reached with the assistance and direction of the Canada Industrial Relations Board.

Ekati is Canada's first diamond mine. It produces 6 percent of the world's diamond supply by value, or 4 percent by weight, and yields 3 million to 5 million carats annually.

Parsons said PSAC's Dirty Diamonds campaign urging an international boycott of Ekati-produced AuriasTM and CanadaMarkTM diamonds is now over, and the union will instead encourage consumers to buy union-produced diamonds.

—ROSE RAGSDALE

continued from page 7

DIAMONDS

jump in manufacturing shipments in the territory far outpaced comparable shipments nationwide, which had fallen to just 2.8 percent a year.

Favorable outlook

The outlook for the economy of Canada's North is also bright with two more diamond mining projects entering the picture.

The Jericho mine, Nunavut's first diamond mine, came on line with production in early 2006. Developed by Tahera Diamond Corp. of Ontario, Jericho is located about 250 miles northeast of Yellowknife. The mine is expected to produce more than 500,000 carats of diamond annually and employ 125 to 175 workers.

The Snap Lake Project about 136 miles northeast of Yellowknife will be the Northwest Territories' third diamond mine and Canada's first fully underground diamond mine. Developed by DeBeers, it is expected to employ about 500 workers and produce 1.5 million carats per year when in full production. Production is set to start at the mine in October 2007. ●

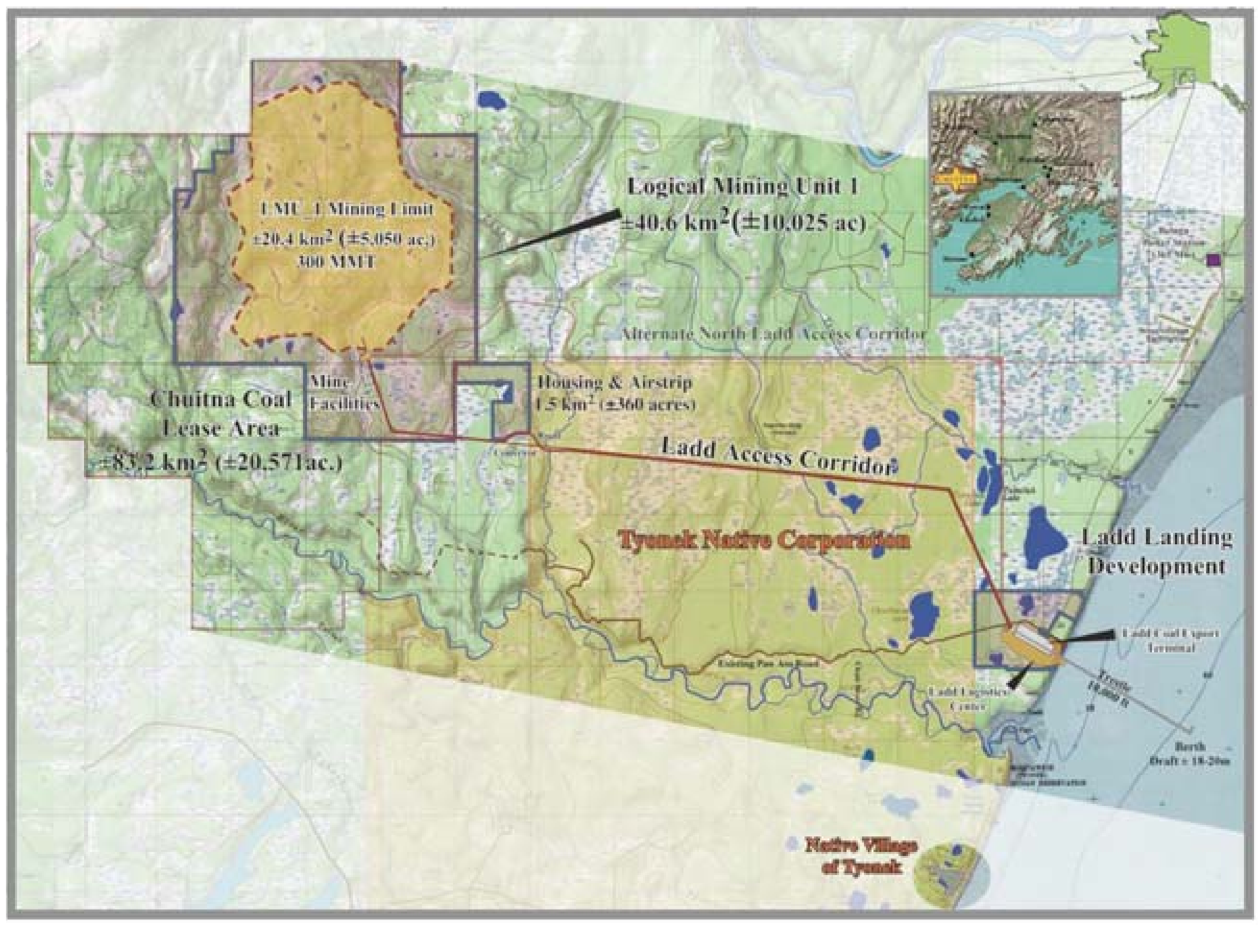
● SOUTHCENTRAL ALASKA

Chuitna coal permitting process fires up

It's the second EIS to be prepared, but still the first time for development of coal resources in Alaska's Cook Inlet area

By SARAH HURST

For Mining News



COURTESY EPA

Alaskans are taking their first look at proposals to develop the coal resources in the Cook Inlet area, as project developers attempt to complete the NEPA process for the second time. A previous design for the Chuitna coal project was evaluated in an environmental impact statement and permitted in the early 1990s, but it never got off the drawing board. Since then there have been substantive changes in the project design and in the regulatory requirements, so a new EIS will be prepared.

Public scoping meetings to discuss the project took place in Anchorage, Soldotna and the village of Tyonek in July. As expected, environmentalists expressed their opposition, and set netters also raised concerns about impacts on the fishing in Cook Inlet. The Chuitna project is in the Beluga coal field, about 45 miles west of Anchorage. The project includes a surface coal mine, 12-mile mine access road, coal transport conveyor, employee housing for 200-250 people, airstrip facility, logistics center and a coal export terminal. The coal export terminal would include a 10,000-foot trestle constructed into Cook Inlet to load ocean-going ships.

The developer, PacRim Coal, predicts a minimum 25-year mine life, according to scoping documents published by the U.S. Environmental Protection Agency. The Beluga field contains about 1 billion metric tons of sub-bituminous coal. No coal has been produced in the region before, and except for the Beluga power plant, owned and operated by Chugach Electric Association, there is no existing supporting infrastructure. A 4.5-mile-long 138-kilovolt power line would be constructed to connect the power plant to the mine access corridor.

Two road corridors being considered

Two road corridors are currently being considered for the project, the North Ladd access corridor and the Ladd access corridor. The coal transport conveyor would have an annual throughput capacity of 15 million metric tons. The conveyor belt would be covered on the top and one side with a weather hood to protect the coal from moisture and wind. The open side would permit visual inspection of and access to the rollers for maintenance. Whenever the conveyor crosses streams, it would be partially enclosed on the underside to prevent coal or dust from entering the stream.

The coal stockyard would have the capacity to store 100,000 to 500,000 metric tons. It would be contained within a graded foundation and surface water collection ditches. Surface water would be routed to two sediment ponds, where suspended solids would be removed to meet discharge limitations before being discharged to Cook Inlet.

One issue that is likely to figure prominently in the permitting process for the Chuitna project is the status of the estimated 326 beluga whales in Cook Inlet. Conservation groups are calling for the whales to be listed under the Endangered Species Act, and if this occurred, all industrial development in the area would be subject to additional restrictions.

EPA selects contractor for Chuitna's EIS

The U.S. Environmental Protection Agency has selected ENSR as the third-party contractor for preparation of the supplemental environmental impact statement for the Chuitna coal project. ENSR is a global provider of environmental and energy development services to industry and government with 1,700 employees and 70 worldwide locations, operating in Alaska since 1977. ●

● GUEST COLUMN

Confused about clean water? Tell it to the judge

By J.P. TANGEN

Guest Columnist

Alaska's placer mining industry has been almost wiped out by the Clean Water Act. In addition, every surface and subsurface lode mining operation has been forced to go through the dreaded process of getting a "404" dredge and fill permit from the Army Corps of Engineers. From Kensington to Pogo, access roads have been engineered and redesigned at great cost to minimize the impact on Alaska's "wetlands," even where the road is miles away from any water body.

Since 1972, when the Federal Water Pollution Control Act Amendments were passed, Americans have been laboring to reconcile themselves, frequently unsuccessfully, to the action-forcing provisions of this unprecedented ingérence into the sanctity of property rights. Millions of dollars have been paid in criminal and civil fines. While no one criticizes the benefits of clean water or the progress that has been made in making "navigable waters" (defined as "the waters of the United States") more swimmable and fishable, the human cost in achieving these objectives has been monumental. The way the Clean Water Act is written, if you were to brush your teeth in a mountain stream, you literally would be at risk of a severe penalty.

What constitutes navigable waters?

A significant part of the Clean Water Act problem relates to the question of what constitutes navigable waters. Under the statute, the Army Corps of Engineers has the responsibility for permitting the disposal of dredged or fill material into the navigable waters. The Corps has interpreted this mandate to include wetlands (i.e., swamps, bogs, muskegs, permafrost and the like); and wetlands are whatever the Corps says they are. Because of the presence of permafrost, over half of the state of Alaska comes within the definition.

Until recently, there was no requirement that the water from wetlands flow into any other body of water; it just had to be within about 20 miles of water that does flow into other water to bring it within the scope of the Corps' perception of its jurisdiction.

For a while, the Corps took the position that even isolated water bodies were navigable waters if migratory waterfowl landed on them. The United States Supreme Court drew the line at that, but the question of where the limits were with regard to wetlands remained open.

On June 19 of this year, the Supreme Court of the United States handed down a decision (Rapanos v. United States) that addressed this question. In a split decision, the court remanded to the Sixth Circuit for further consideration two cases upholding the imposition of civil and criminal penalties on individuals who had filled wetlands on their private property in furtherance of developments to be placed thereon.

Mining & the law

J.P. TANGEN

The author, J.P. Tangen has been practicing mining law in Alaska since 1975. He can be reached at jpt@jptangen.com or visit his Web site at www.jptangen.com. His opinions do not necessarily reflect those of the publishers of Mining News and Petroleum News.

No consensus from Supreme Court; case remanded

Five of the court's nine Justices filed opinions. No single opinion garnered the majority of the court, but there was a majority in favor of sending the cases back to the Sixth Circuit. Notably, Justice Scalia entered a detailed opinion in which Justices Thomas, Roberts and Alioto joined. Scalia detailed the burdens and inequities of the Corps' broad brush approach to regulation, rightly noting that its perception of its jurisdiction seemingly knows no bounds. Scalia was of the view that in order to be navigable waters, wetlands must have at least some surface connection to a river or stream, etc. and that a hydrological or intermittent connection was not sufficient.

Justice Kennedy, who concurred with the Scalia result, took the position that a surface connection was not required under the statute, but that a "significant nexus" was; therefore, he carved out a standard somewhat less restrictive for the Corps to follow, but agreed that the Corps' interpretation of its own jurisdiction had gone too far.

Chief Justice Roberts opined that the failure of the plurality to give a clear direction to the lower courts

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BARRICK

NovaGold: 'disappointed'

NovaGold's president and CEO, Rick Van Nieuwenhuyse, responded that he was "disappointed" by Barrick's offer. "NovaGold management believes that the offer proposed by Barrick dramatically undervalues NovaGold's world-class portfolio of gold and copper assets and would not adequately compensate NovaGold's shareholders for the loss of opportunity to participate in the future growth in the value of the company's assets as they continue to move toward production," the company said in a release July 25.

"By making an offer for NovaGold, Barrick has clearly acknowledged the quality and caliber of the NovaGold assets," Van Nieuwenhuyse said. "We have assembled one of the best teams in the industry and are confident in our ability to turn these projects into world class producing mines and thereby add shareholder value over the next few years."

NovaGold drew attention to Barrick's statement that acquiring NovaGold would expand Barrick's North American measured and indicated resources by 54 percent and its inferred resources by 89 percent. NovaGold has appointed a special committee to deal with the takeover bid, and has retained RBC Dominion Securities as a financial advisor and Blake, Cassels & Graydon LLP as a legal advisor. The company recently adopted a shareholder rights plan which is designed to protect the interest of all shareholders. ●

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TANGEN

would lead to further uncertainty and litigation, especially if the Corps did not develop clear regulations defining its jurisdictional reach.

Justice Stevens filed a dissent in which Justices Breyer, Ginsberg and Souter joined. Stevens pointed out that the Corps, in contrast to the Congress or the Courts, possesses unique technical expertise to determine what constitutes wetlands and whether pollutants located at a given site would derogate from the quality of the waters of the United States.

Since 1972, when the Federal Water Pollution Control Act Amendments were passed, Americans have been laboring to reconcile themselves, frequently unsuccessfully, to the action-forcing provisions of this unprecedented ingérence into the sanctity of property rights.

Stevens cleaved to the view that executive agencies are entitled to substantial deference in interpreting the statutes they are charged with enforcing, and that so long as their interpretation is rational, it should be upheld. Stevens further concluded that the lower courts, in interpreting this ménage, should rule in favor of the Corps if either of the standards articulated by the plurality (surface connection of substantial nexus) were met. Justice Breyer filed a separate dissenting opinion stressing the objective of the Clean Water Act in cleaning up the environment.

What does the law require?

The upshot of this opinion is to leave miners, developers and litigators alike in a state of confusion as to what the law requires. It seems self-evident that in order for a person to comply with the requirements of any law, the meaning of that law should be readily understandable. The Army Corps of Engineers, however, reserves the right to make that judgment on a case-by-case basis. It is as if the State Troopers reserved the right to determine what the speed limit should be for each individual car that passes by.

The Corps should promulgate broad, generally applicable and readily understandable rules that anyone can follow when developing a mine or other private property. Going to the government for ad hoc decision-making is an unjustifiable burden.

When the Corps was previously criticized by the U.S. Supreme Court for its attempt to regulate isolated water bodies, it had the chance to avoid further backlash by amending its regulations. It elected not to do so. Now the Corps has been hauled before the Supreme Court for further instruction. This opinion is an even clearer mandate in for the Corps to revisit its practices and policies. ●

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NORTH OF 60

MINING NEWS

Companies involved in Alaska and northwestern Canada's mining industry

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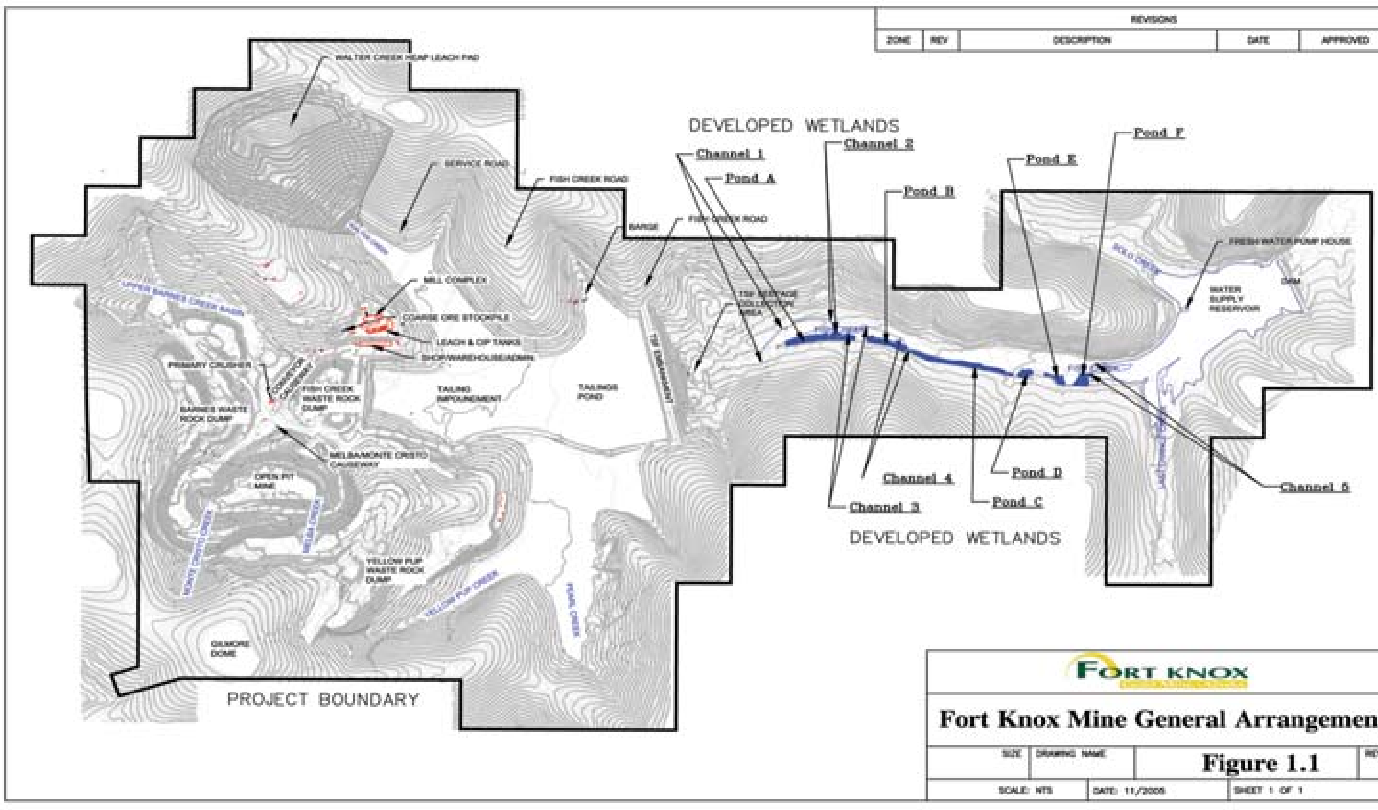
● INTERIOR ALASKA

Fort Knox gold recovery permit in draft

Federal, state agencies seek public comment on Fairbanks Gold Mining proposal to build 50,000-ton-per-day heap leach facility



By ROSE RAGSDALE

For Mining News

Fairbanks Gold Mining Inc. is moving ahead with plans to build a heap leach facility at the Fort Knox gold mine that could reduce its gold ore processing costs by as much as two-thirds.

The U.S. Army Corps of Engineers and Alaska departments of Natural Resources and Environmental Conservation released applications, draft permit, public notice and decisions June 29, relating to Fort Knox and the proposal for a 30-day public review and comment period.

Fairbanks Gold is a subsidiary of Kinross Gold Corp.

Fort Knox is an open-pit gold mine 26 miles northeast of Fairbanks. Fairbanks Gold wants to add a heap leach gold recovery facility in the Walter Creek drainage and is updating various existing permits and authorizations. The mine was originally permitted in 1994, and currently produces more than 400,000 ounces of gold annually. The mine site is located primarily on state-owned and Mental Health Trust lands. The mine and mill employs 400-425 employees and operates two shifts, year around.

The valley-fill heap leach is part of $170 million in capital expansions budgeted for Fort Knox in 2006. It will be in the upper end of the Walter Creek drainage immediately upstream from the tailing impoundment. Excluding the haul road and access roads, the heap leach pad with the in-heap storage embankment and base platform will cover about 310 acres and will have a total capacity for 160 million tons. It will be constructed in five stages. The haul road to the pad will cover another 40 acres.

Construction could begin in 2006

Clearing of brush and trees, initial earthwork in preparation of liner construction, the site access road, the portion of the in-heap embankment outside the pad limit, and establishment of drainage control will occur over the entire 319 acres at the beginning of the project. That work could begin later this year, and the project could get under way in 2007.

DNR prepared a draft plan of operations amendment approval (including a draft reclamation plan approval) and a draft addendum to Fort Knox's mill site lease.

DEC prepared a draft waste management permit for disposal of tailings, mined material to be placed on a heap leach facility, and inert solid wastes at the Fort Knox Mine. DEC also anticipated that it will issue a certification of the 404 permit to be prepared by Army Corps authorizing the placement of fill in wetlands.

The permit covers disposal of 50,000 tons per day, as a monthly average, of tailing deposited in the mine's storage area. Relatively low-grade ore mined from the Fort Knox Pit will be crushed and placed in gravity separation cyanide-leaching in a carbon in-pulp circuit. Once separate, the gold will be fashioned into 1,000-ounce gold doré on site.

Heap leaching could reduce costs

From work done by engineering consultant Knight Piésold and Co., Fairbanks Gold defined costs and developed a construction scheduled for the proposed project. As designed, operating costs for the pad will be about one-third of the mine's mill operating costs. The lower cost would allow the mine operator to process gold at a greatly reduced rate.

To meet the conditions of the permit, tailings from the heap leach facility must undergo a cyanide destruct process prior to discharge to the storage area.

The permit also covers disposal of 161 million tons of run-of-mine material, mined from the Fort Knox pit to the Walter Creek Valley Heap Leach facility. Drip or sprinkler emitters will apply cyanide containing solution to the material placed on the heap. The solution will be collected and processed for gold recovery in carbon in-pulp columns in the mine's mill facility.

A spokeswoman for the Army Corps of Engineers said the agency had received two comments in support of Fairbanks Gold's permit application and none in opposition to it as of July 18.

Other government agencies are expected to submit comments by a July 31 deadline. ●