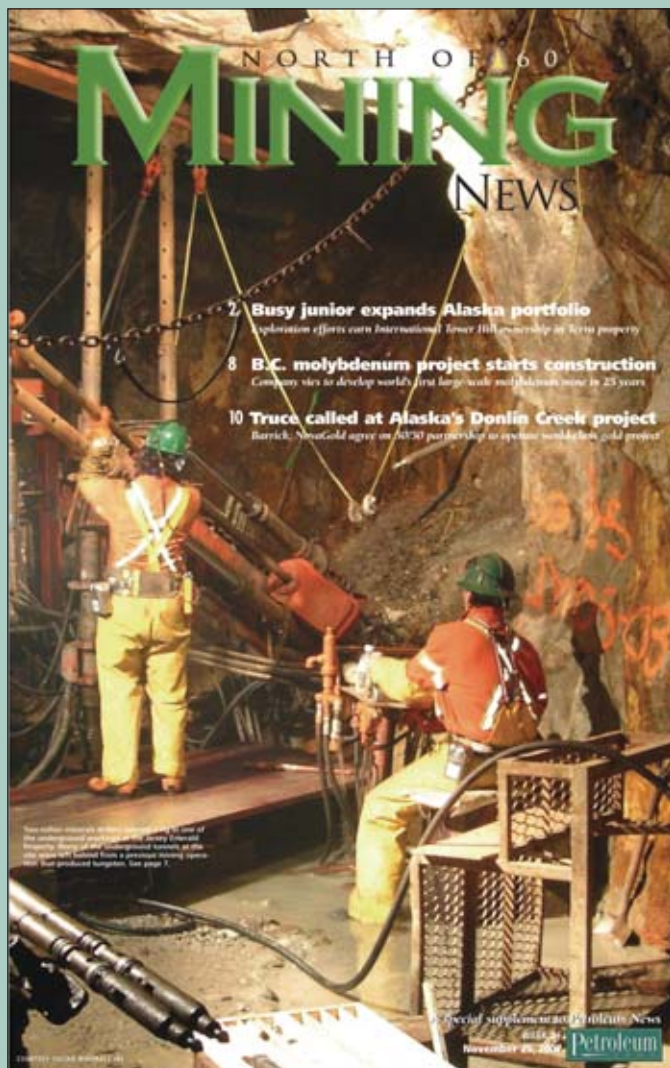




This month's Mining News inside



Mixing zones measure passes legal test for Alaska voters

Lt. Gov. Sean Parnell has certified an initiative that would prohibit mixing zones in water used by salmon and resident fish, setting the stage for the proposal to go before Alaska voters.

Certification allows the initiative sponsors to gather signatures required to place a measure on the ballot.

Parnell's decision follows a Nov. 8 Alaska Department of Law legal opinion that concluded that the proposal complied

see **MEASURE** page 19

For whom the Bell tolls

THESE ARE EARLY DAYS, but Brendan Bell could be entering rarified atmosphere as a politician from northern Canada who can make his mark at the federal level.

Youthful, energetic and on top of his file, he is about to try putting a dent in history.

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EXPLORATION & PRODUCTION

Chevron ups stake

Back on North Slope, 2007-08 AK investment doubled, might again in 2009

By **KRISTEN NELSON**

Petroleum News

Chevron is back exploring on the North Slope — for the first time since the early 1990s — and will start a two-year drilling program at its White Hills exploration prospect later this year.

John Zager, Chevron's Alaska assets manager, told the Resource Development Council's annual conference Nov. 14 that since Chevron acquired Unocal in 2005 and made the decision to stay in Alaska the company has "really upped the ante in investment in Alaska."



JOHN ZAGER

JUDY PATRICK

He did not discuss total investment dollars, but he said Alaska investment has been approximately doubled for 2007 and 2008 and could potentially be doubled again by 2009. "So we'll be up to the several hundred million dollar range in the year 2009."

Chevron is "being much more aggressive in the Cook Inlet as well as the North Slope. We see a lot of opportunities in both those areas," Zager said.

Cook Inlet work includes both development and exploration drilling, and expansion of natural gas

see **CHEVRON** page 22

NATURAL GAS

LNG a continental wild card

North America could benefit from tapping into global resource; greater LNG volumes could displace higher-cost conventional, unconventional, frontier supplies

By **GARY PARK**

For Petroleum News

Liquefied natural gas could play a key role in ensuring supply-and-demand balance and steady prices in North American markets over at least the next seven years, offsetting declines in Canadian exports and keeping gas prices at an average US\$7 per million British thermal units, Canada's National Energy Board says in a new long-term energy outlook for the 2005-30 period.

LNG also holds the potential to displace higher-cost conventional, unconventional and frontier supplies within Canada.

Under what it calls a Reference Case, which the NEB views as the most likely of four scenarios

The NEB speculated that in recognition of the potential for such price-eroding LNG-on-LNG competition, some current and prospective LNG suppliers have "begun very preliminary discussions of the potential to form a gas equivalent of OPEC to assist in cooperatively managing worldwide LNG supply."

tested in its study, the federal regulator "definitely sees more LNG" arriving in North America, said Paul Mortensen, the board's technical leader of natural gas.

Significant expansion of U.S. imports is on the

see **LNG** page 21

EXPLORATION & PRODUCTION

Breaking through the ice

Finland leading the way in evolving icebreaker designs from Baltic Sea that are opening new opportunities for marine operations in Arctic seas worldwide

By **ALAN BAILEY**

Petroleum News

The old adage of necessity being the mother of invention would certainly seem to apply to the icebreaker industry in Finland: The country depends on marine trade routes through Baltic Sea waters that become covered with pack ice for much of the winter. As a consequence, Finnish companies have designed and built many of the world's icebreakers and the country continues to pioneer new technologies for navigating through sea ice.

"Our exports are in trouble if we don't have any icebreakers," Göran Wilkman, manager, sales and

see **ICEBREAKERS** page 23



AKER ARCTIC TECHNOLOGY INC.

This double acting containership built for Russian mining company Norilsk Nickel has been successfully tested in the Kara Sea and Gulf of Yenisei. The vessel travels astern through sea ice.

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A weekly oil & gas newspaper based in Anchorage, Alaska

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EXPLORATION & PRODUCTION

Energy board: Jury out on oil sands

Beset from all sides, sector production scaled back by 200,000 barrels per day by 2015; despite costs and regulatory burdens

By GARY PARK

For Petroleum News

It is one of those wake-up calls that come in the middle of a disturbed sleep.

You're not sure whether it is real or imagined.

But the message is clear enough, spelled out in temperate language by one of the most trusted voices in Canada's petroleum industry.

In releasing its 2005-30 energy outlook, the National Energy Board quietly offered the thought on page 24 of a 123-page study that challenges confronting the oil sands sector have "slowed the pace of activity somewhat and a number of companies are reassessing the economics of the projects."

The challenges have been detailed ad infinitum, led by the surging cost of construction materials and a shortage of professionals and skilled labor resulting in a 40-50 percent rise in capital costs over the past two years, with budgets for integrated mining and upgrading projects in the 2010-11 time-frame now estimated at C\$80,000-\$100,000 per flowing barrel.

In addition, the NEB notes that volatile oil and gas prices and volatile light-heavy crude price differentials compound the risks of predicting rates of return, while a stronger Canadian dollar against its U.S. counterpart has a "significant negative impact on project economics."

The recent elimination of the Canadian government's Accelerated Capital Cost Allowance has "also had an effect," the study says.

Additional uncertainties due to greenhouse gas regulations

The oil sands sector now faces additional uncertainties relating to federal and provincial regulations covering greenhouse gas emissions, while provincial regulations concerning water use, air quality and land use are "not yet fully defined."

And, to cap it all off, the Alberta government is pledged to hike oil sands royalties in 2009.

But the NEB finds reason to argue that the outlook is not all one-sided.

It says the "challenges faced by the oil sands industry are counter-balanced by the opportunities."

In an age of "increasing resources nationalism around the world, Canada's huge oil sands reserves, set in a climate of relatively stable political and economic policy, represent an attractive target for investment."

"The potential for technological innovation to reduce the costs of bitumen extraction and upgrading is an additional attraction.

"Given the outlook for continued higher oil prices, return on investment should be sufficient to drive oil sands expansion," the study says.

Chill from cautionary signals

Even so, there is a slightly chilling aspect to the board's cautionary signals at a time when oil prices have nudged US\$100 per barrel.

Applying its baseline projection, known as the Reference Case, which is the board's "view of the most likely outcome up to the year 2015" — with oil prices averaging a modest US\$50 per barrel — the regulator suggests oil sands operators should be able to generate "sufficient cash flow ... to actively expand production levels."

Even so, it has put one foot on the brake pedal, forecasting that even if C\$80 billion is spent on projects over the period 2005-15, the end result is likely to be total output from the oil sands of 2.8 million barrels per day, down 200,000 bpd from what was predicted only a year ago.

Bill Wall, an NEB market analyst, said the reduction stemmed from the "rapid escalating costs of putting in capacity."

If that estimate is accurate, Canada's total oil production by 2015 will be 4.05 million bpd of crude, 61 percent more than in 2005.

If oil prices remain high, the output could grow to 6 million bpd by 2030, 5 million bpd coming from the oil sands, but a return to US\$35 per barrel would slash total production in half, with the oil sands contributing 2.7 million bpd — a prospect that Wall rated as unlikely.

Greg Stringham, vice president of the Canadian Association of Petroleum

Producers, told the Calgary Herald that although the NEB and CAPP are on a similar wavelength with their forecasts, oil sands predictions might need further revisions as projects scheduled to start construction in the next couple of years are weighed against a higher Canadian dollar, increased royalties, GHG regulations and tax changes.

He said many companies, given the turmoil they are experiencing, have already postponed decision-making.

Stringham said it is almost guaranteed that the oil sands can rise to 2 million bpd from the current 1.2 million bpd, but taking the next step to 3 million bpd between 2012 and 2015 involves projects that are under close scrutiny.

Resources remain unchanged

For all of its scenarios, the NEB says

see NEB page 4



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• ASSOCIATIONS

Chamber report issues energy wakeup call

Business group calls for fiscal, energy strategies to meet short- and long-term needs of Alaska economy, beleaguered residents

By ROSE RAGSDALE
For Petroleum News

Getting a grip on Alaska’s energy outlook and developing a successful strategy to meet the needs of Alaskans now and in the future is the subject of a new 11-page report published by the Anchorage Chamber of Commerce Nov. 19.

In plain concise language, “Hope is Not a Strategy: Findings and Conclusions about Alaska’s Energy Crisis,” enumerates the wide range of ills and issues facing the state and offers specific recommendations aimed at alleviating increasingly urgent energy-related problems.

Prepared by a special 12-member volunteer task force of Anchorage business-people, the report identified the state’s lack of a fiscal plan and a comprehensive energy policy as major concerns.

Moreover, the task force, which was co-chaired by consultant Tony Izzo, formerly of Enstar Natural Gas Co. and Joe Griffith, who formerly headed Chugach Electric Association, noted that energy is a statewide concern that should be approached from a statewide perspective.

“Current energy issues and the future of our state economy are linked. With increasing energy prices across the State of Alaska, the status quo is creating ‘energy refugees,’” the report said. Former Dillingham resident Nels Anderson used the term “energy

“Current energy issues and the future of our state economy are linked. With increasing energy prices across the State of Alaska, the status quo is creating ‘energy refugees.’”
— Anchorage Chamber of Commerce report

refugees” in his presentation to the chamber task force in March.

Fiscal plan, energy policy tops priorities

The report said Alaska needs a plan to address the huge disparities in the cost of energy and fuel throughout the state, rising costs that are sucking up all of the discretionary income of many Alaska.

“Alaska needs a fiscal plan that prepares us to get beyond the transfer economy — a plan that bridges the gap between present day spending, declining oil royalty revenue and expected surpluses from a gas pipeline. A budget is not a fiscal plan,” the report said.

It noted that the Alaska economy is linked to energy issues and is obligated under terms of the Alaska Constitution to make the most of the state’s energy resources to meet its citizens’ needs.

The task force also complained that Alaska’s regulatory environment is inconsistent and reactive, thus increasing business risks and reducing reliability and consistency.

The chamber report urged state leaders and policymakers to look to BC Hydro for an effective model of how to manage energy resources.

It asked policymakers to view the Cook Inlet natural gas situation without blinders, recognizing that prices are climbing while supply is dwindling and to ensure that the Railbelt grid has sufficient electricity generation and transmission capacity to meet the state’s needs.

“High energy prices and reduced supplies are likely to damage the economy of Southcentral Alaska and have already damaged rural economies. This directly impacts virtually every business in Alaska,” the report said.

In addition, industrial gas usage should be encouraged in Southcentral Alaska to broaden the region’s market for North Slope gas, the task force noted.

Energy czar needed

The chamber report also outlined issues that need immediate attention. Among them:

- A Cabinet-level individual, charged with creating a statewide energy policy to manage in-state energy delivery assets, should be appointed and given rein to resolve the energy issues at hand.
- State government must understand the severity of the problem and take appropriate steps to respond to the compelling need for leadership.
- As a business community, the 1,300-company member chamber sees benefits in integrated solutions among the business entities that make up the current electrical power system.
- Engaging the business community in

finding mitigating programs to deal with the energy challenge is needed and overdue.

- Consumer education programs explaining the benefits of energy conservation in reducing consumers’ energy bills and increasing the state’s energy efficiency need to be developed, and the public urged to participate.

- Develop regulatory guidance for rate-makers that will encourage energy conservation.

- Alaska possesses substantial renewable energy resources that could be developed using fairly mature technologies, e.g. wind, geothermal, hydro.

- Alternative and renewable energy sources should be studied and thoroughly evaluated both on an economic basis and with respect to the value of diversifying our energy portfolio.

- Power cost equalization should be continued until a better system of meeting the energy needs of rural Alaska is developed.

- The propriety of a statewide propane distribution system must be evaluated such as the demonstration project suggested by Alaska Natural Gas Development Authority.

- The possibility of cost-increasing monopolies that may exist in the supply or logistics of energy delivery in Alaska should be examined.

- Alaska’s university system should be encouraged to develop curricula to train more Alaskans in energy development, production, delivery and management.

- Energy research that will benefit Alaska in the 21st Century should be encouraged and supported. ●

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NEB

crude oil and bitumen resources remain unchanged — 173 billion barrels in Alberta’s oil sands deposits, 3 billion barrels of conventional reserves in the Western Canada Sedimentary basin and 1.3 billion barrels in Eastern Canada and frontier areas.

Because the WCSB is a mature supply basin, exploration efforts yield increasingly smaller pools, but development drilling and improved oil recovery methods, primarily waterflooding, make up a larger portion of reserves additions.

Following successes in Saskatchewan, the NEB believes carbon dioxide flooding will play a larger role in mature oil reservoirs in the WCSB.

But the bottom line for conventional crude oil and equivalent in the WCSB indicates that by 2015 conventional light crude production will be 328,000 bpd and conventional heavy crude will be 399,000 bpd, an overall drop of 30 percent from 2005 levels.

For the East Coast offshore, assuming a new field of 500 million barrels is found and brought on stream by 2015, production levels are estimated at 473,000 bpd, compared with this year’s expected 416,000 bpd. ●

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EXPLORATION & PRODUCTION

Cash-strapped Fox sets sights on high-cost Alaska

By RAY TYSON

For Petroleum News

Alaska newcomer Fox Petroleum is a very small player in a very large oil patch inhabited by much larger, better-financed, better-equipped, and more successful exploration and production companies.

Financial reports and other disclosures required of publicly traded companies by the U.S. Securities and Exchange Commission depict an E&P hopeful with limited resources to fulfill its plans for the oil and gas properties it recently acquired, especially in the high-cost and environmentally unforgiving regions of Alaska and the North Sea.

"Yes, it is expensive," Richard J. Moore, Fox's chief executive officer, acknowledged in an e-mail interview with Petroleum News. "However, our team comprises over two hundred years of oil and gas experience in over 25 countries to date."

Moore himself says he has 30 years of industry experience dating back to the 1970s with British National Oil Corp., better known today as BP, for years a major player on Alaska's North Slope.

"In the intervening years, I have worked four continents and been in the hottest and coldest places," Moore said, "I guess I've worked with just about most of the majors in one way or another. At one time, Chevron, BP, Shell, Mobil, Conoco and I've had good times, with a whole bunch of independents in that time, too."

No current production

At mid-November, Fox had zero production and no booked reserves from any of its properties and, therefore, no revenue stream to help support its infant exploration plans, although the company is hoping to generate some income soon from an old reworked natural gas well in Texas.

Based in London and initially incorporated in Nevada in late 2004 under the name Nova Resources, Fox initially set its sights on gold mining in Canada's remote Northwest Territories. Assuming Nova's SEC filings are accurate and complete, nary a shovel of dirt was turned on the prospect, due to a lack of investment capital. However, as Fox has done in Alaska and the United Kingdom, Nova sold a ton of its own shares, purportedly to raise capital to keep the mining venture afloat.

Upon changing its name in February



Three executives from London-based Fox Petroleum visited Alaska Aug. 20-23. Pictured above are Andrew Alex Craven, Fox CFO, Richard Bullock, chairman and director and Michael Rose, geological and exploration adviser, standing in front of an Air Logistics helicopter on Fox's East Prudhoe Bay prospect.

2007 "to better reflect" its shift from gold to hydrocarbon mining, Fox established wholly owned subsidiaries in Alaska and the UK, retained a new chief executive officer (Moore), surrounded itself with industry advisors, acquired seed money in exchange for Fox shares and, within a span of a few months, bought into exploration properties, including 37,000 acres on the North Slope and 42,000 acres in the Cook Inlet.

Startup in a hurry

Fox is acting like a startup company in a hurry to enhance its image and improve its share price, no doubt hurt from a diluting six-for-one forward stock split in January. Fox's stock price doubled between early July and mid-August but also had begun to slip. The company reportedly spent \$300,000 on advertising in national publications, including Fortune and Barron's, but failed to mention in the ads that it had no production and income and likely would need millions upon millions to finance its ambitious exploration plans, particularly in Alaska. And, as it continues to do on its website and in press releases, Fox emphasized that its oil and gas leases were located near existing production owned by big industry names, such as BP, Chevron and ExxonMobil.

"One has to wonder why Fox spent thousands on magazine and newspaper advertising for investors to check out a stock when it needs millions for drilling operations," Stock Watch columnist Thomas A. Anderson wrote on Sept. 11,

noting that Fox had only \$1.7 million of cash on hand, according to its most recent quarterly report filed with the SEC.

Industry analyst Ernest C. Schlotter, in a report he wrote for Zurich,

Moore himself says he has 30 years of industry experience dating back to the 1970s with British National Oil Corp., better known today as BP, for years a major player on Alaska's North Slope.

Switzerland-based SISM Research & Investment Services, maintained a 12-month share price target of \$5.40 for Fox, a hefty increase from the \$1.92 per share the stock was trading for on Oct. 23, the day the report was issued. Schlotter's price target appears to be based largely on the projected value of pre-drill reserve estimates and Fox's own ambitious business plan. Moreover, Fox is paying SISM \$1,750 per month for its services over a two-year period "solely to ensure independent coverage," the companies disclosed in a joint statement.

Started on North Slope

In mid-July Fox announced that it had

see **FOX** page 6

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FOX

signed an agreement to purchase exploration rights to some 32,000 acres on the North Slope, 11 of which are east and southeast of the Prudhoe Bay unit and south of the Duck Island unit. A single tract is farther south and west of the trans-Alaska pipeline. The acreage, consisting of a dozen state oil and gas leases, is held by Samuel H. Cade (75 percent) and Daniel K. Donkel (25 percent). Fox said it would issue 20,000 restricted shares in exchange for the lease rights. Fox estimates reserves of up to 160 million barrels of oil.

In late October Fox said it signed an agreement to acquire roughly 42,000 acres in the Cook Inlet region and contracted a petroleum geologist to complete a technical report on the Catcher's Mitt gas prospect. Fox said it hopes to define several test well targets, which could be permitted for drilling in 2008.

Fox did not identify the current owner(s) of the Cook Inlet acreage, but described the acreage as "high-impact gas prospects in the Kenai Peninsula region of Alaska's Cook Inlet." Fox said the leases are onshore "and are in close proximity to many major production sites."

"One has to wonder why Fox spent thousands on magazine and newspaper advertising for investors to check out a stock when it needs millions for drilling operations," Stock Watch columnist Thomas A. Anderson wrote on Sept. 11, noting that Fox had only \$1.7 million of cash on hand, according to its most recent quarterly report filed with the SEC.

The company said two wells, "the BA Bell Island well and the Unocal Figure Eight well, drilled on the structure downip demonstrated gas shows."

Alaska Oil and Gas Conservation Commission records show the British American Oil Bell Island 1 was a vertical well with a total depth of 11,365 feet, drilled and plugged and abandoned in 1962. That well is on lease ADL 390752 on the Susitna River the west side of Cook Inlet in section 12, township 15 north, range 7 west, Seward Meridian. The Union Oil Company of California Figure Eight Unit 1 well was a 10,660-foot vertical hole drilled and plugged and abandoned in 1976 in section 15-T15N-R6W, SM. This lease, ADL 390750, is due east of the first lease.

Five leases in this immediate area are held by various percentages by Cade and Donkel, several in partnership with Monte Allen.

More North Slope acreage

In early November Fox said it signed yet another agreement with Cade and Donkel to acquire the exploration rights to about 5,000 acres on the North Slope located near the BP-operated Badami unit and ExxonMobil-operated Point Thomson unit (the State of Alaska has terminated the undeveloped Point Thomson unit, although the outcome of current court proceedings could change that determination).

Fox, in a May 25 press release, said it had signed off on a financing deal with Swiss-based investor EuroEnergy Growth Capital S.A. to provide the company with an initial \$8 million in exchange for Fox shares. The agreement included an option to secure another \$5 million from EuroEnergy under similar equity terms, bringing the total value of the agreement to \$13 million, Fox said.

Negative cash flow

However, in an Oct. 27 report filed with the SEC, Fox painted a dismal picture of the company's future, noting that it had experienced net losses from its inception, "and expect to incur substantial losses for the foreseeable future."

"We will not be able to generate significant revenues in the future and our management expects operating expenses to increase substantially over the next 12 months following the commencement of oil and gas exploration activities," Fox added. "As a result, our management expects the business to continue to experience negative cash flow for the foreseeable future and cannot predict when, if ever, our business might become profitable."

Fox said in the SEC filing that it might have to raise money beyond what EuroEnergy provided and that additional commercial financing might not be available.

"If we are unable to raise funds on acceptable terms, we may not be able to execute our business plan, take advantage of future opportunities, or respond to competitive pressures or unanticipated requirements," the company added. "This may seriously harm our business, financial condition and results of operations."

Fox's Moore, in his interview with Petroleum News, sounded anything but defeated, touting the experience of his staff and advisory board and the reserve potential of the company's North Slope

leasehold.

"We are sure there are hydrocarbons there, and we are working up the best prospects we can for drilling as soon as we feel ready," Moore said, adding that while Fox had not yet identified a specific prospect, "historically the slope has proven to be highly prospective."

Smaller fields the target

As to why former owners had not pursued development on its North Slope acreage, Moore answered in a way that many of the small independents working the North Slope today would have responded:

"From personal experience, there are a good few smaller fields in these regions which were considered uneconomic back in the seventies and eighties. Times and economics have changed. These so-called smaller fields are diamonds nowadays, and Fox wants to be part of their success. The expense may be high, but the rewards justify. We like that."

There are seven oil and gas companies planning to drill exploration wells on Alaska's North Slope this winter; an eighth company is moving forward with plans to re-enter an old exploration well on an undeveloped prospect. Five of the eight companies are small independents looking for pockets of oil left behind by major operators — Brooks Range Petroleum Corp. Group, Savant Alaska, Renaissance Umiat, UltraStar Exploration and Alaskan Crude.

Likes Alaska's stability

Moore noted that both Alaska and the UK have "super-infrastructure with some real talented people" and that both regions are "secure and stable."

"The UK and the USA go a long way back, and we feel that by doing business in these areas that we are going some way toward securing tomorrow's energy, and we like that," he said.

Fox also acquired a 33.33 percent interest in the Anglesey Prospect, located on Central North Sea License P.1211, covering Blocks 14/9a and 14/14b. As part of the farm-in agreement, Fox has an option to increase its stake from 33.33 percent up to 60 percent after completion and appraisal of recently acquired seismic data. Fox estimates the acreage could hold up to 213 million barrels of oil.

Back in the United States, Fox agreed to pay \$500,000 for a 22.5 percent joint venture interest in the Spears Gas Unit 2, Well No. 1 in the Gomez Field, Pecos County, Texas. The well was to be reopened for drilling on Nov. 15. ●

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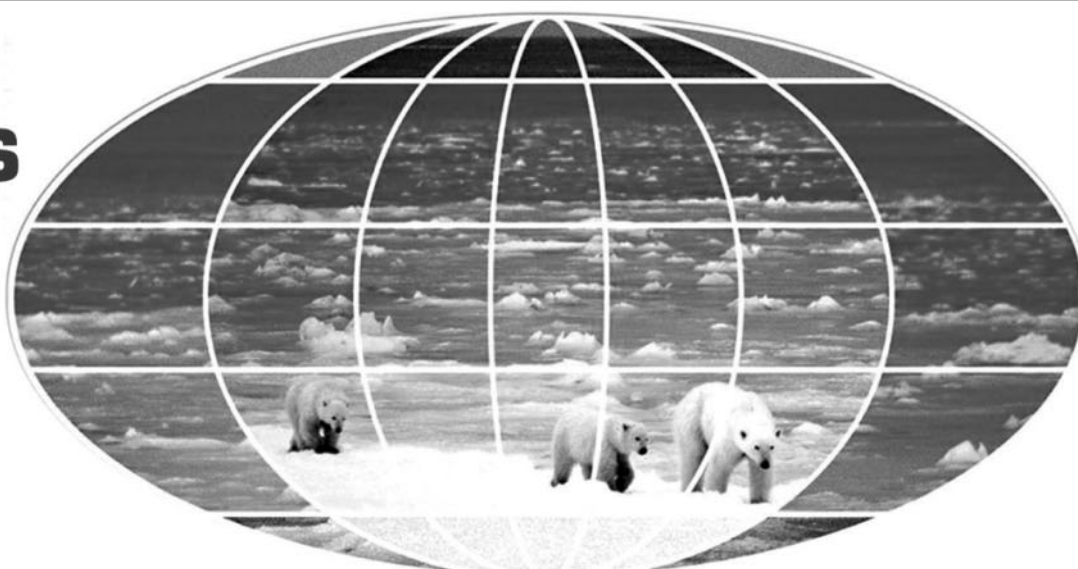
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GOVERNMENT

Administration wins on tax increase

Gov. Sarah Palin gets 25% tax requested in ACES, Democrats get standard deduction; level of continuing investment the worry

By KRISTEN NELSON

Petroleum News

An expected Nov. 16 knuckle-biter finish to the Alaska Legislature's 30-day special session never materialized.

The Senate completed most of its work on the bill changing state's oil and gas production taxes late Nov. 15 and returned in the early afternoon Nov. 16 to address some additional amendments and technical glitches discovered overnight.

By the time the bill reached the House for concurrence with Senate changes it was all over but the shouting: Democrats — who came away with a standardized operating cost deduction for Prudhoe and Kuparuk — teamed with Republicans to pass the tax increase.

The bipartisan approach was necessary, because enough Republicans were worried about the impact of the tax increase on investment by Alaska's oil and gas industry that Republicans could not by themselves pass the bill.

The situation was complicated by the bipartisan working majority in the Senate. Some Republican members of the bipartisan group voted against the bill while most members of the Senate Republican minority voted in favor. The final vote in the Senate was 14 yeas and five nays. The House vote concurring with Senate changes to the bill the House passed Nov. 11 was 26 yeas and 13 nays (the House passed the original bill 28-12).

Thus the bill that began life as a tax increase with a gross floor, Gov. Sarah Palin's Alaska's Clear and Equitable Share, or ACES, became a tax increase, a progressivity increase, a standard operating deduction — all retroactive to mid-year.

Governor happy with bill

"We're happy with this bill," the governor said at a Nov. 16 press conference, and thanked legislators for their teamwork in gaining its passage. She said the bill met the three requirements the administration had when it started out: "We wanted to receive an equitable share for our resources, of course; also to maintain a positive investment climate; and to gain the tools needed to protect the state's interest and manage a net tax."

Commissioner of Revenue Pat Galvin, who managed the bill in the Legislature for the administration, joined the governor in thanking legislators for their work on the bill, and also thanked the members of the

administration's team — from the departments of Revenue and Natural Resources and the governor's office — for their work.

Galvin noted that the administration team began work about six months ago, "looking at the state production tax system as it existed and identifying the best way to move forward."

The governor, he said, told them to evaluate all options and that was what they did, using both in-house and outside expertise.

He said the Legislature responded "in kind ... looking at all the information and wanting to make the decision based upon the best information that was available ..." from agency expertise, from the industry and from outside consultants.

"As we went through the legislative process one of the things that I think was probably our biggest skill was the adaptability of our team to the different ideas, different concepts that were brought forward and the ability to respond quickly with information to legislators in a way that allowed them to evaluate their choices in a real-time basis," Galvin said.

The governor said she appreciated "law-makers asking the questions and ... also recognizing the need to get it right this time."

With the standard deduction added, the bill is "truly a hybrid ... and that's where the consistency, the stability will lie," she said.

Palin said her message to industry is: "We're glad you're here; we want to see revitalization in our industry here in Alaska; and we don't believe there is a need to come back and revisit (the oil tax) again."

Investment a worry

The possibility of negatively impacting oil and gas investment in Alaska worried a number of Republicans, including House Speaker John Harris, R-Valdez, who voted for the bill.

In a statement from House Republicans issues after House passage Harris said:

"The governor and her administration have crafted a bill and pushed it through the Legislature that will either tap the producers for another \$1.5 billion without harm, or end up hurting our economy by driving away oil industry investment. We will need



Gov. Sarah Palin



House Speaker John Harris

billions of dollars of investment to keep our production up, so I am hopeful the governor has not made a serious mistake with this legislation. But we won't really know for sure for a couple of years."

Oil and gas company executives told legislators during committee hearings that they were worried about both the tax increase and other portions of the bill which would increase costs to industry, and said that investment decisions already made would have to be revisited in light of the proposed tax changes.

The Senate Bipartisan Working Group did not issue a release after bill passage, but

Sen. Joe Thomas, D-Fairbanks, said in a statement that his amendment on the Senate floor gives "all natural gas produced for Alaskan in-state use the same favorable tax rate previously applied only to Cook Inlet gas."

Sen. Johnny Ellis, D-Anchorage, said "this idea did not have much traction" at the beginning of the special session. "Senator Joe Thomas worked this issue and convinced senators to help the people of the Interior," Ellis said.

Democrats, Senate Minority pleased

"The standard deduction creates one stable point in our tax structure. It anchors a system with many moving parts and allows us to control costs and ensure predictable

see TAX page 8

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FINANCE & ECONOMY

Employment booming on North Slope

Employment is booming in the North Slope oil fields, according to a state labor economist.

Projected employment is expected to reach 11,400 jobs this year — the highest number since oil production began at Prudhoe Bay and other North Slope fields in the mid-1970s, economist Neal Fried said. Last year, there were 10,200 jobs, he said Nov. 14 in Anchorage at the Resource Development Council's annual conference.

The vast majority of the state's oil comes from the North Slope.

Alaska's other oil and gas province, Cook Inlet, is a smaller and older producer.

The projected jobs this year represent about 3 percent of total Alaska employment, Fried said.

The jobs represent workers employed directly by oil companies such as BP and ConocoPhillips, as well as workers for oil-field contractors such as drilling firms.

Oil production in Alaska has been in a long, slow decline for years. The employment jump is partly due to last year's Prudhoe Bay pipeline corrosion problems, including oil leaks and an effort to inspect and replace old pipes, Fried said.

But it began well before the corrosion crisis.

"It really began at the end of 2005," Fried said.

Alaska oil has fetched record prices of more than \$90 a barrel this year, and that's helped spark more oil-field projects and hiring, he said.

—THE ASSOCIATED PRESS

GOVERNMENT

President likely to veto OPEC lawsuit bill

U.S. President George W. Bush is still likely to veto legislation allowing U.S. institutions to sue the Organization of Petroleum Exporting Countries over its alleged actions in pushing up oil prices, an American diplomat said Nov. 16.

"We don't think this legislation has a high likelihood of passage," said Shannon Ross, U.S. energy attaché in Riyadh, according to Dow Jones Newswires.

Ross told OPEC delegates and officials meeting here that Bush "has indicated that he will veto it if it is passed by Congress."

In May, the House of Representatives passed the bill with a 345-72 vote, allowing the government to sue OPEC over oil production quotas. A similar vote awaits in the Senate. U.S. House Judiciary Committee Chairman John Conyers, a Democrat from Michigan, introduced the bill, arguing that OPEC is partly to blame for high gasoline prices.

The bill would enable American institutions to block OPEC countries like Iran, Kuwait, Saudi Arabia and Venezuela from invoking immunity from U.S. court action relating to concerns about oil production.

OPEC is the cartel that accounts for 40 percent of the world's oil production.

The White House argued the bill would backfire on the U.S., making less oil available to U.S. refineries and further inflating gasoline prices.

U.S. Energy Secretary Samuel Bodman said the week of Nov. 12 that he had asked OPEC to boost output to reduce oil prices, which reached new highs of US\$98 a barrel for U.S. light sweet crude. That price has since fallen to US\$93.43 a barrel overnight Nov. 16.

OPEC's Secretary General Abdalla Salem el-Badri said the group sees no need to add more oil to the market as the U.S. requested.

—THE ASSOCIATED PRESS

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continued from page 7

TAX

revenue," House Minority Leader Beth Kerttula, D-Juneau, said in a statement.

House Democrats introduced the standard deduction provision on the House floor; it was stripped out by Senate Finance but amended back into the bill on the Senate floor.

"This landmark legislation was made possible by the Senate Minority working across the aisle to pass a number of critical amendments previously stripped in the Senate Finance Committee," Senate Minority Leader Gene Theriault, R-North Pole, said in a statement following House approval of the bill.

Bill basics

The bill raises the base rate from the petroleum profits tax, or PPT, enacted in 2006 from 22.5 percent to 25 percent. It raises the progressivity rate, a surcharge, to 0.4 percent when the net value of a barrel of oil is more than \$30 (under PPT the progressivity rate was 0.25 percent and the trigger was \$40 net). The Senate made the tax changes retroactive to July 1.

Transitional investment expenditure credits — credits for expenditures under the pre-2006 oil and gas severance tax with its economic limit factor or ELF — are eliminated for fields under production.

The House created a standard deduction for operating costs at Prudhoe Bay and Kuparuk based on 2006 operating costs with a 3 percent escalator each year. The Senate put a three-year sunset on that standard deduction.

Revenue will write regulations defining what costs can be deducted and new language — retroactive to April 1, 2006 — excludes any cost associated with a criminal act, including any pleas under the federal Clean Water Act.

The administration wanted to move oil and gas auditors out of the state's classified service and make the positions exempt so that they could pay enough to attract auditors with experience in the oil industry. Legislators would only agree to create six exempt audit master positions — four in Revenue and two in DNR.

The bill also contains a provision related to taxes on natural gas: natural gas used in the state for fuel will be taxed on the same basis as Cook Inlet gas. ●

INTERNATIONAL

Ecuador's president urges political role for OPEC

THE ASSOCIATED PRESS

Ecuadorian President Rafael Correa, in his first public speech since his country's official re-entry into OPEC, said Nov. 18 that the 13-nation oil producer group must take on a more political role and that current oil prices remain historically low.

Correa said he joined his Venezuelan ally, President Hugo Chavez, in arguing for the Organization of Petroleum Exporting Countries to assume a more political role — a position that other members, including the group's de facto leader, Saudi Arabia, have clearly opposed.

"I agree completely" with Chavez, he told a news conference in the Saudi Arabian capital of Riyadh on the sidelines of OPEC's heads-of-state summit.

"OPEC needs a political vision to manage a strategic resource," Correa said. "It is denying reality," to try and reduce OPEC to a purely technocratic role, he said.

Correa did not directly back comments by Chavez that \$100 a barrel is a "fair" price for oil, but said that current prices, when adjusted for inflation, still remained low.

"The price of oil is still lower than in the 1980s," he said.

The weakening of the U.S. dollar has

eroded the value of oil earnings for producers, and Iran and Venezuela have pushed for possible ways to counter that, such as an oil currency basket — a move Saudi Arabia opposed earlier in the week.

"We have to trade (our oil) in a strong currency," Correa said Nov. 18, arguing that to do otherwise means that oil producing countries end up "transferring" the value of their oil to richer countries. He did not further elaborate.

Correa also said OPEC has the clout in the energy market to help coordinate a battle against global warming.

He suggested an environmental tax could be imposed on richer, consumer nations that would help advance alternative fuels and also "compensate" poorer, developing countries trying to industrialize.

"There must be co-responsibility," between consumer and producer nations in battling environmental issues and ensuring energy security, Correa said.

Ecuador left OPEC in 1992 saying it couldn't afford to pay membership dues and disagreed over OPEC's production quotas at the time.

Although Ecuador currently produces around 510,000 barrels per day of crude oil, the government aims to have an OPEC quota of 530,000 bpd. ●

GOVERNMENT

Canada lags behind emissions target

The Canadian government will fall far short of its own 2020 target of reducing greenhouse gas emissions by 20 percent from 2006 levels, the government's own energy regulator predicts.

Even with bold measures to lower energy demand, widespread acceptance of demand efficiency and fuel-switching strategies, Canada's GHGs will drop by just 0.1 percent annually over the period 2005-30.

As a result, the National Energy Board estimates, GHGs will be 722 million metric tonnes by 2020, 5.2 percent above the goal of 686 million metric tonnes set by the government.

However, the board notes that the steady decline, resulting mostly from the phasing out of older, coal-fired power plants, will see Canada reduce its GHGs for the first time after many years of promises.

The NEB excluded from its calculations the GHG reductions that could result from forestry or agricultural practices, or from the purchase of credits on the international market — a combination of which "could go a long way in contributing to Canada meeting its target of 20 percent by 2020."

The NEB study said there has been an "unprecedented level of activity" in recent times by federal and provincial governments to tackle energy and environmental policies.

But the challenge is considerable, given that Canada's GHG emissions rose by 26 percent between 1990 and 2004, resulting from several factors, including increasing population and economic growth.

As a result, Canadians are "beginning to recognize a personal responsibility for environmental action ... (which) is driving more robust policies and programs."

The study said policy developments at both federal and provincial levels "constitute important steps in the achievement of Canada's energy and environment objectives ... developments that are still a work-in-progress," with not all provinces and sectors on the same page.

"It is important to note that significant uncertainty exists over how consumers and technology will react to energy demand management and GHG emission policies," the NEB said.

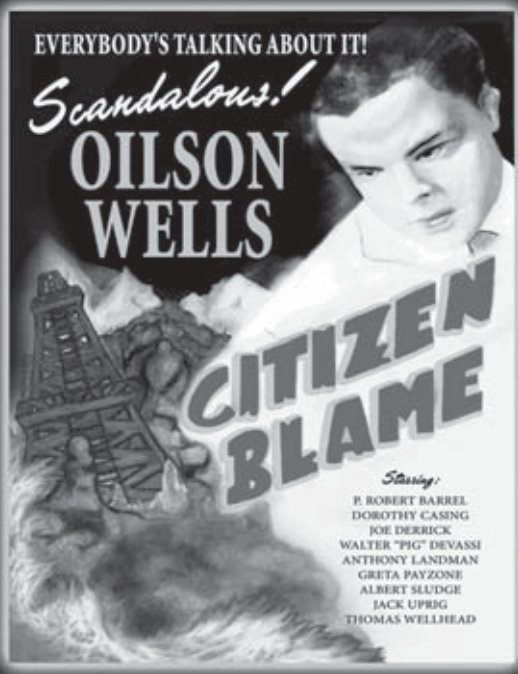
For instance, it said the emerging technology to capture carbon dioxide emissions from power plants, refineries and oil sands upgraders could contribute significantly to Canada's climate change fight.

The construction of a pipeline to pipe CO2 to aging oil fields, where the gas would be injected underground to stimulate production, could reduce emissions by 3.6 percent by 2030, trimming overall emissions to 719 million metric tonnes from 746 million metric tonnes.

—GARY PARK



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Cosmo drilling done, flow test next

By KAY CASHMAN

Petroleum News

Pioneer Natural Resources Alaska has finished drilling a horizontal appraisal well in the 25,000-acre Cosmopolitan unit in the Cook Inlet basin.

Company President Ken Sheffield told attendees of the mid-November Resource Development Council conference in Anchorage that Pioneer was “wrapping up drilling operations” on sidetrack Hansen 1A L1 and hoped to have it “flow-tested by year end.” Spud Sept. 9 with Rowan Rig 68, the extended reach well was “drilled from shore to a target some two miles under the Cook Inlet,” the body of water that shares the name of the Southcentral Alaska basin.

Unit operator Pioneer holds 100 percent working interest in the joint state-federal Cosmopolitan unit, which is near Anchor Point on the southwest coast of the Kenai Peninsula, about one-half mile west of the Sterling Highway.

Discovered in 1967 and deemed uneconomic to date, Sheffield said the results of the most recent well would be integrated into Pioneer’s geologic and economic models for the unit to “figure out what is the next step for this opportunity.”

First well with jack-up

Pennzoil drilled the Starichkof State No. 1 discovery well in what is now called the Cosmopolitan unit. The 12,112-foot vertical well was drilled offshore with a jack-up rig.

Pennzoil recovered 30 barrels of 20 degree API gravity oil from a drill stem test at about 6,900 feet and 21 barrels from a drill stem test at about 6,800 feet. The company reported encountering the top of the Hemlock formation at 6,745 feet. A second well, also drilled in 1967, found some gas at 4,000 feet, but water in the Hemlock formation at 7,355 feet some two miles from the

Company President Ken Sheffield told attendees of the mid-November Resource Development Council conference in Anchorage that Pioneer was “wrapping up drilling operations” on sidetrack Hansen 1A L1 and hoped to have it “flow-tested by year end.”

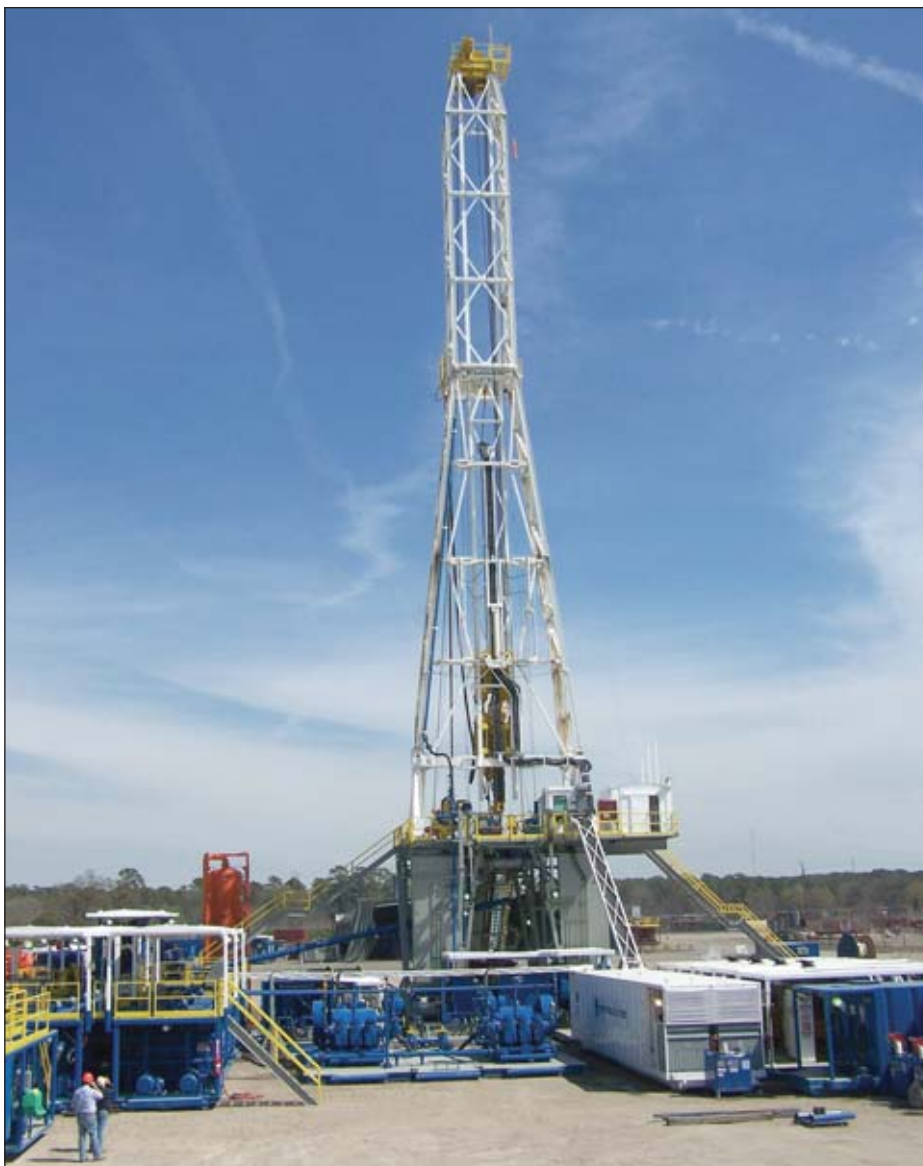
first well. In 2003, former Cosmopolitan unit operator ConocoPhillips drilled a long-reach well and sidetrack, the Hansen No. 1 and Hansen No. 1A, from the same onshore site Pioneer is using. Since that time Pioneer has bought out all the working interest owners, including ConocoPhillips, Devon Energy and Forest Oil, although ConocoPhillips retained a small royalty share.

In mid-2005 Pioneer executive Tim Dove said the 2003 Hansen well and sidetrack “tested at a stabilized rate of 600 to 800 barrels a day over different intervals that lasted for three to four months.”

In the third unit plan of exploration approved by Alaska’s Division of Oil and Gas in 2006, Pioneer was required to drill a new well or a sidetrack well to a minimum true vertical depth of 6,000 feet, with drilling to commence by Nov. 14, 2007. The well was to penetrate the Lower Tyonek sand-prone interval found in the Starichkof State No. 1 well.

30-50 million barrels gross

Pioneer says Cosmopolitan’s “gross resource potential” is 30-50 million barrels of oil equivalent. In September, Sheffield said that if the Hansen sidetrack was successful, the company would drill 12 more horizontal directional wells for development. Pioneer’s tentative development schedule at that time called for permitting in 2008, facility construction in 2008-09 and development drilling in 2009-10. If all went well, the Texas independent was hoping for first production in 2010, he said, emphasizing development had not yet been sanctioned by Pioneer. ●



Pioneer is using Rowan 68 to drill its sidetrack 1A L1.



KEN SHEFFIELD

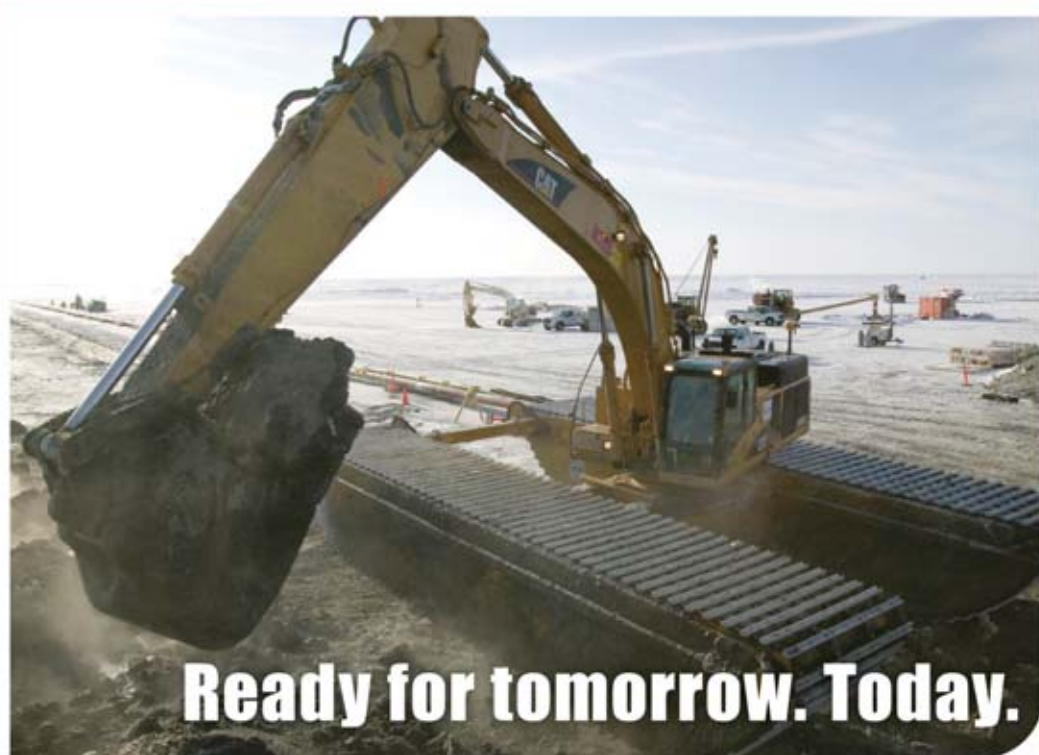
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• EXPLORATION & PRODUCTION

Pioneer to spud first development wells

Big independent in final stages of offshore North Slope Oooguruk oil field construction; prepares to drill first of 40 wells

By KAY CASHMAN
Petroleum News

In mid-November Ken Sheffield, president of Pioneer Natural Resources Alaska, told attendees of the Resource Development Council's annual conference that Pioneer is nearing the end of the construction phase for its Oooguruk oilfield development in the shallow waters of Harrison Bay just offshore Alaska's North Slope.

The big Texas independent expects to spud the first of approximately 40 development wells in December, Sheffield said, noting that Oooguruk is the "largest development project" in Pioneer's history.

"We're getting ready to drill. ... We're finalizing facility hookup," he told attendees of the RDC conference in Anchorage.

Referring to Oooguruk as the company's "cornerstone property" in Alaska, Sheffield said the field would cost "over a half billion dollars to develop."

Development drilling "will take about three years to complete," he said.

Precedent setting event

Sheffield said Oooguruk was a "precedent setting event for the State of Alaska," in that Pioneer is "poised to become the first independent to operate a field on the North Slope and the first to secure a third-party facility access agreement" with the adjacent ConocoPhillips-operated Kuparuk River unit.

Jim Weeks, president of tiny independent Winstar Petroleum, actually secured the first facility access agreement with the owners of the Kuparuk unit prior to drilling the Oliktok Point State No. 1 exploration well in 2003, but the agreement was never activated because the well was a dry hole. So, Pioneer will be the first independent to have a working agreement with the Kuparuk unit owners.

Modified Nabors 19 AC

Nabors Rig 19 AC dominates one end of the man-made island Pioneer constructed for Oooguruk. The rig has been modified with "a new derrick, a new top drive and a fit-for-purpose moving system," Sheffield said.

Sheffield said Oooguruk was a "precedent setting event for the State of Alaska," in that Pioneer is "poised to become the first independent to operate a field on the North Slope and the first to secure a third-party facility access agreement" with the adjacent ConocoPhillips-operated Kuparuk River unit.

Although the "reservoir depths are only about 6,000 feet the well depths will average about 17,000 feet to accommodate 6,000 and 8,000 foot undulating horizontal sections in those wells, and we'll do that to try to maximize throughput," he said.

The island and the rig will be supplied "annually via an ice road," Sheffield said.

First production from Oooguruk is expected in first quarter 2008.

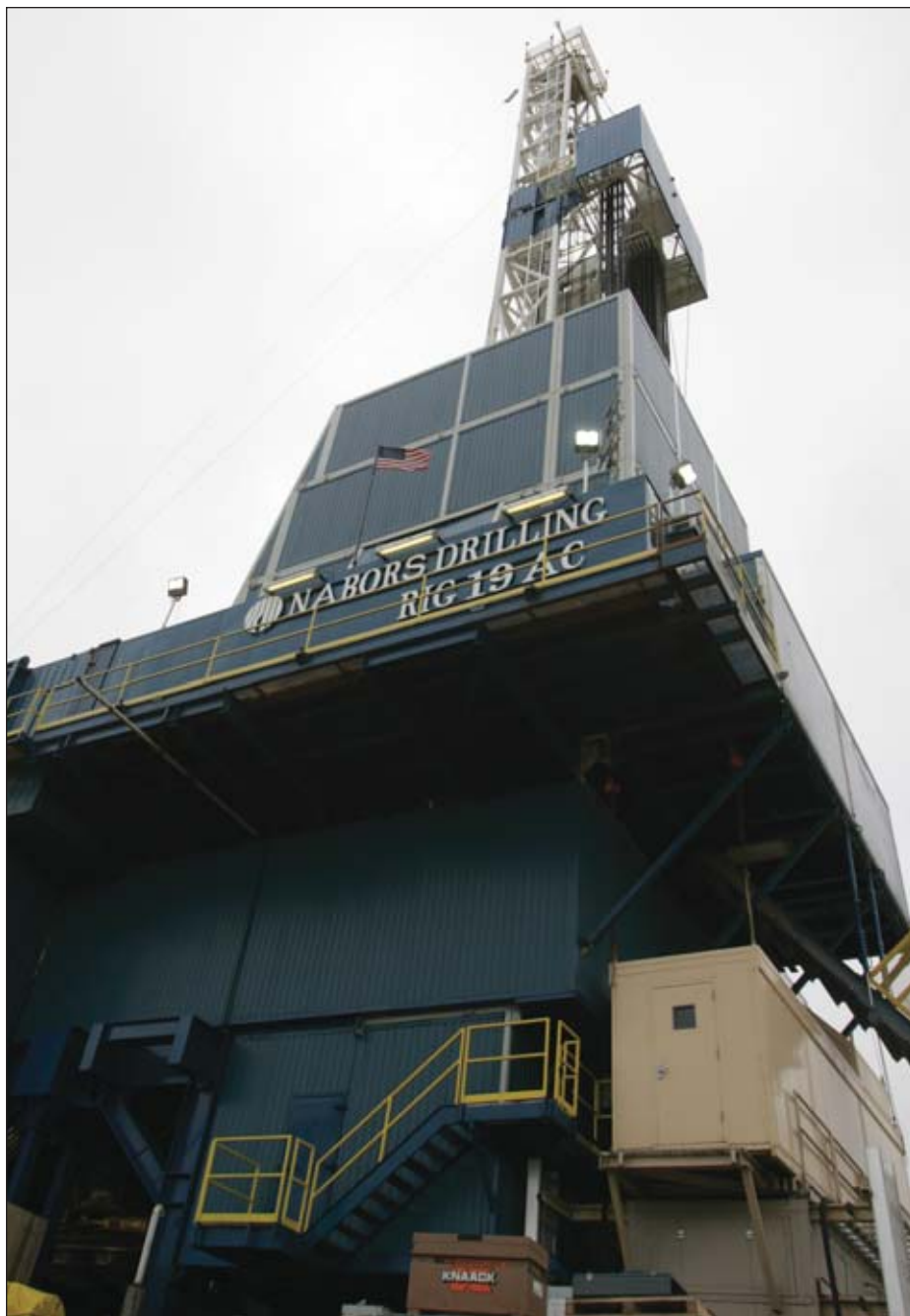
Sheffield said Pioneer estimates "potential recovery in the 70-90 million barrel range" with Oooguruk producing "15,000 to 20,000 barrels per day at peak production in the 2010 timeframe."

Currently Pioneer produces about 100,000 bpd from its assets outside Alaska. He said "over 90 percent" of the company's reserves and production are concentrated in the Lower 48" — primarily in Texas, New Mexico and Colorado, including the deep-water Gulf of Mexico. The company is also "growing" a gas business in South Africa and an oil and gas business in Tunisia.

Eleven wells to date in Alaska
Pioneer currently has 35 full-time employees in Alaska, Sheffield said, with numbers in the 600 range during peak construction of Oooguruk. The company has 1,600 employees worldwide.

Pioneer entered Alaska in late 2002, drilling three exploration wells in the first quarter of 2003. Including those wells, the company has participated in 11 exploration wells, "with limited success outside of our Oooguruk project," he said. (See related Pioneer story on page 10 of this issue.)

Pioneer holds 1.5 million gross acres in Alaska, mainly on the North Slope, with a "big part of that acreage in NPR-A with partners ConocoPhillips and Anadarko," Sheffield said. ●



Nabors Rig 19 AC was modified for development drilling on Oooguruk island. Photo taken in late September.

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• EXPLORATION & PRODUCTION

Rick Fox: Shell in Alaska for long haul

Although a lawsuit has put Beaufort Sea drilling on hold in 2007 company moved ahead with Chukchi seismic and other programs

By ALAN BAILEY

Petroleum News

Despite the setback of a court-enforced suspension of Shell's Beaufort Sea drilling program, Rick Fox, the company's Alaska asset manager, gave an upbeat assessment of Shell's progress in Alaska at the Resource Development Council annual conference on Nov. 14.

"We had an excellent year although we didn't get to drill," Fox said.

The U.S. Court of Appeals for the 9th circuit has placed an injunction on Shell's Beaufort Sea drilling plans until resolution of a court case against U.S. Minerals Management Service approval of the company's Beaufort Sea exploration plan. But the company was able to proceed with a planned program of seismic data acquisition in the Chukchi Sea in preparation for an MMS Chukchi Sea lease sale scheduled for February 2008.

"A week ago Sunday, we wrapped up



RICK FOX



WesternGeco's M.V. Gilavar acquired 3-D seismic in the Chukchi Sea for Shell in the summer 2006 and fall 2007.

our seismic operations in the Chukchi Sea," Fox said. The seismic crew had continued acquiring 3-D seismic until late in the season but had to stop eventually for safety reasons, as ice started to build up on the ship superstructure, he said.

Shell's Beaufort Sea site clearance and shallow hazards surveillance work also

proceeded as planned.

Marine mammal monitoring

And a marine mammal monitoring program swung into action.

"We had a marine mammal monitoring program with acoustic transponders all across the Chukchi and the Beaufort Sea in arrays from 5 miles out to 50 miles out," Fox said. "We collected aerial data and there were many other efforts we had going on."

The acoustic monitoring equipment captured quite a bit of data on marine sounds, including noise from industrial activities as well as sounds from marine animal life.

"We've started establishing trends of impacts," Fox said. "... We're very interested in providing the science that gives us the confidence and gives the communities the confidence that what we're going to do will work. ... We co-designed that with the North Slope Borough wildlife department."

At one point Shell had deployed close to 1,100 people in its summer program — the Alaska team did a great job of bringing that number of people on in a short time and of conducting a safe and environmentally sensitive operation, Fox said.

Fox compared Shell's challenges in the Alaska outer continental shelf with the company's pioneering work in oil development in deep water.

As far as Shell can tell there was no negative impact on the subsistence hunt.

"I think they had a very successful hunt in all areas," Fox said.

Focus on the Arctic offshore

Shell's interest continues both in offshore regions and in the Arctic, with operations in the Sakhalin, Norway and Canada, as well as in Alaska, Fox said. So Shell's experience and interests dovetail into offshore development in Arctic Alaska, he said.

"We're very much focused on the Beaufort Sea where we have quite a lease holding," Fox said.

Fox compared Shell's challenges in the Alaska outer continental shelf with the company's pioneering work in oil development in deep water.

"We stayed with that when it was difficult, very much hung in there and made that work," Fox said. "... I think that's the spirit within Shell."

And MMS has estimated major oil and gas resources in the U.S. Arctic offshore.

"We believe the country needs energy and we'd like the chance to go look for it," Fox said.

Beaufort Sea exploration back in the 1980s came up with some promising results, but Shell needs to do more exploration and appraisal work to understand the potential of the region, Fox said.

"We've got to know before we can start making the sort of commitments this will take," Fox said.

Importance for Alaska

The number of Shell jobs and contracts seen this year represents just the beginning of the potential impact of Shell's operations in Alaska. Following exploration would come an extended period of oilfield development and production, benefiting people some of whom are not yet born, Fox said.

"That's what we're looking for: A long campaign in Alaska and development in the OCS," Fox said. "We're absolutely committed to bringing economic opportunity to Alaska companies and jobs to Alaskans."

And Shell is very much involved in dialogues with Alaska communities — they obviously have many concerns about

see **SHELL** page 13

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COURTESY OF SHORE DIVERS

Shell managed to get to the company that operates the Nanuq, the oil spill response vessel that Shell commissioned for the Beaufort Sea drilling, to paint the vessel blue and white instead of red. The color change was in response to a community request not to bring in any red boats because those scare the whales or cause them to divert.

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SHELL

what may happen, Fox said.

"For the past two years we've been in the communities talking and learning," Fox said. "Obviously we wanted to go maybe faster than the communities were prepared. We are continuing in that discussion ... and we're very hopeful that we'll make progress and find the common ground that we'll need to proceed."

Listening to communities

Fox cited some sample situations where Shell has listened to the communities.

In one instance the community said not to bring any red boats because those scare the whales or cause them to divert.

"We asked them what color to paint (the boats) and they said blue and white," Fox said.

Shell managed to get to the company that operates the Nanuq, the oil spill response vessel that Shell commissioned for the Beaufort Sea drilling, before the vessel was painted.

"I think it's the only boat in their fleet that's blue and white," Fox said. "If we can apply the traditional knowledge, we're going to."

Shell also heard that just using Deadhorse in the central North Slope as a communications center does not work. Instead people wanted a greater level of communication in all of the communities, including the communities on the Chukchi Sea coast.

"We actually established communications centers in all six coastal villages, with full-time employment, 24-7," Fox said. "... The North Slope Borough partnered with us and gave us the licenses to operate (the system)." A whaler offshore Wainwright, for example, could click on his VHF radio and talk to an operator in Barrow or in Wainwright, he said.

Another community asked if it would be possible to avoid disturbing the subsis-

"For the past two years we've been in the communities talking and learning. Obviously we wanted to go maybe faster than the communities were prepared.

We are continuing in that discussion ... and we're very hopeful that we'll make progress and find the common ground that we'll need to proceed."

—Rick Fox, Shell's Alaska asset manager

tence hunting by acquiring seismic data from the sea ice during the winter. After an investigation, Shell established that people had already researched the possibility of doing this but that further testing was required to establish a viable technique.

"So we executed a \$25 million research project last winter and we'll be using it for real, if all the permits work out, this winter," Fox said.

Egress training center

Shell, in conjunction with the Challenger Learning Center and the University of Alaska, has established a helicopter underwater egress training center in Kenai in Southcentral Alaska. That's very important for long helicopter flights over cold water, Fox said.

"We had almost 600 people trained through there this year," Fox said.

And for the second year running Shell

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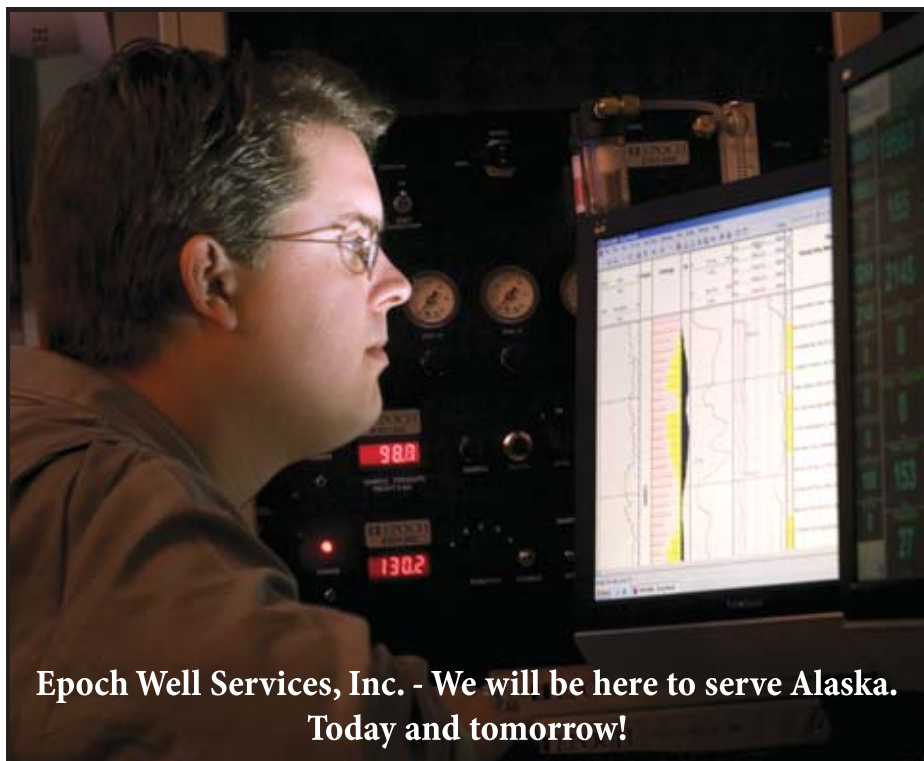


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SHELL

provided the emergency cache and supplies for the Cross Island subsistence hunt.

Following advice from the North Slope Borough, the Shell search and rescue helicopter has a winch, so that it does not have to land.

"Our search and rescue helicopter participated in a number of events with the North Slope Borough ... as well as they did in Canada," Fox said. "... In Canada we actually rescued some people who otherwise might not have survived."

Shell's operations manager, Sue Moore, is very involved in statewide workforce development, as Shell looks into what it will take to operate in Alaska, Fox said.

Shell is currently assessing its options for the coming year — meantime one of

the company's Beaufort Sea drilling rigs has gone to Australia to work on a Shell project there and the other rig is being over-wintered in Canada.

"We have choices for some of that equipment, so we'll have to make a choice a little earlier this year than we did last year," Fox said. "We're working very closely with the North Slope and others to find that common ground that it's going to require to get through this. The 9th Circuit hears oral arguments on Dec. 4 and we're optimistic about that process."

Shell is strongly committed to its endeavors in Alaska, Fox assured the conference audience.

"There's a lot in the future for the OCS in Alaska and we want to be part of it. We're very focused on getting the job done in the Beaufort Sea," Fox said. "... We're here for the long term and we're going to work things out, that's our belief." ●

INTERNATIONAL

Tupi find has Brazil considering OPEC

Brazil is to consider joining OPEC after it has gauged the impact on its oil exports from its newly discovered giant offshore Tupi oil field, the country's ambassador to Saudi Arabia said Nov. 16.

Isnard Penha Brasil told Dow Jones Newswires on the sidelines of an Organization of Petroleum Exporting Countries summit that he was here to talk with OPEC officials and that "a membership decision will come after we know what our export capacity will be and we think this will be good."

Earlier in November Brazil confirmed a monster offshore oil discovery and promising fields near the find which could help the country join the ranks of the world's major oil exporters, although full-scale extraction is unlikely until 2013 and will be very expensive.

State-run Petroleo Brasileiro SA (PBR), or Petrobras, said reserves at the ultra-deep Tupi field could be up to a massive 8 billion barrels of oil equivalent, and initial production should exceed 100,000 barrels daily, though experts believe the amount will then go much higher.

Pilot production in 2010

Petroleo Brasileiro SA will start pilot pumping in 2010 or 2011 but it will take several more years for full production to get under way, at a cost of billions of dollars.

The ambassador said Brazil will have a clearer idea about Tupi's export viability within six to 12 months.

Business Monitor International forecast Brazil's daily crude output will rise from 1.8 million barrels to 2.75 million barrels by 2011 and that Tupi could mean continued high-level growth well into the next decade, taking exports to a potential 1 million barrels a day by around 2015.

Brazil doesn't export any crude oil today, making it essential that Tupi yield huge commercial amounts of crude if South America's biggest economy is to join OPEC.

Brazil imports light oil for refining into gasoline products. A lot of the oil Brazil produces is a heavier, high-sulfur crude more suitable as lubricant rather than transport fuel.

Petrobras is Tupi's leading field operator with a 65 percent stake, and British energy company BG Group PLC holds another 25 percent of the field. The remaining 10 percent stake is controlled by Portugal's Galp Energia SGPS SA.

—THE ASSOCIATED PRESS

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• GOVERNMENT

Climate change takes U.S. center stage

Consultant: Climate change, energy security concerns setting the agenda for U.S. government energy policy; could favor NS gas line

By **ALAN BAILEY**
Petroleum News

There was a time not too long ago when the forces that guided what passed for a U.S. energy policy in the corridors of Washington, D.C., could be summed up as a three-statement mantra: maximize supply, keep it cheap and keep the government out of the production and consumption of energy, energy consultant Thomas Roberts of Van Ness Feldman told the Law Seminars International Energy In Alaska conference in Anchorage on Nov. 12.

“That is changing, and it is changing dramatically,” Roberts said. “In the last 18 to 24 months I have seen a remarkable transformation in Washington with respect to how policymakers view energy.”

Those three traditional pillars of energy decision making have been replaced by a focus on U.S. energy security and climate change, with climate change seen as the top priority, Roberts said.

Radical change

Evidence for what is happening in Washington can be gleaned by comparing the Energy Policy Acts of 1992 and 2005 with recent actions in Congress. Whereas the Energy Policy Acts tended to “nibble around the edges” of the energy issues facing the United States, recent bills introduced in Washington indicate a radical change in direction, just two years after the major 2005 bill was passed, Roberts said.

“The fact that it’s back two years later is indicative of what has happened to energy policy in Congress,” Roberts said. “... There’s an ever growing consensus in the public, the elected officials, the political parties that it is important, that it is in fact mandatory, that the federal government gets its act together and does something about climate change and national energy security.”

But adjusting to the new emphasis represents a major departure from the past and does not come easy.

“If we address climate change the way the majority of the scientists say that we need to, energy will no longer be cheap, it will no longer depend on maximizing supplies and the government will be in every aspect of energy production and consumption,” Roberts said. Reducing

the U.S. dependence on imported crude oil would have similar impacts, he said.

Everyone is struggling to understand what this major change in direction will mean in practice — massive reductions in U.S. greenhouse gases would be enormously expensive.

“People will continue to believe that you can have your cake and eat it too,” Roberts said. “Politicians and consumers will complain about the price of energy.”

Rep. John Dingle, D-Mich., has said that a bill he recently introduced to impose a carbon tax would enable people to understand the cost of achieving the greenhouse gas emission reductions that people are talking about, Roberts said.

Government involvement

Government involvement in the production and consumption of energy will occur in two ways: direct intervention in fuel consumption and indirect intervention through a cap on greenhouse gas emissions, Roberts said.

Direct intervention will involve mandatory programs such as fuel efficiency standards for automobiles.

“Certainly before the 2008 election Congress will enact a modification to the existing program that will raise mandatory fuel efficiency levels for all automobiles and light trucks,” Roberts said.

Roberts also thinks that there will be further legislation for the mandatory use of renewable fuels in the mix of transportation fuels. The 7.5 billion gallon renewable fuel mandate of the 2005 Energy Policy Act has resulted in a boom in the construction of ethanol plants, has doubled the price of corn and has put the program on target for achievement of the mandate in 2008, four years ahead of schedule, Roberts said.

So, politicians are now proposing a mandate of 36 billion gallons of renewable, alternative transportation fuel in the mix by the early 2020s, he said. And regardless of how that particular proposal pans out, more federal mandates on the use of renewable transportation fuel are coming.

“Congress will act directly to say ‘when you are consuming energy in your automobile ... a minimum percentage of that must come from alternative fuels,’”

Roberts said.

There may also be a federal mandate that a certain percentage of electricity production must come from renewable sources. That type of legislation will be tough to enact in Congress — the utility sector is adamantly opposed to it and some individual states have already taken the initiative on this, thus raising a big federal pre-emption issue, Roberts said.

Cap on greenhouse gas

While mandatory limits on how fuels are consumed will target specific types of energy consumption, caps on greenhouse gas emissions will affect every aspect of energy use.

“It will affect the price of food. It will affect the price of transportation. It will affect the cost of heat and lighting homes,” Roberts said.

On Nov. 1 a subcommittee of the Committee on Environment and Public Works drafted a climate change bill, the America’s Climate Security Act. That is the first time in history that Congress has

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ENERGY

recorded a comprehensive, economy-wide regulatory program dealing with climate change, Roberts said.

"This is the marker for all other markers to compare themselves to," Roberts said.

This new bill shoots for a reduction in greenhouse gas emissions to 70 percent below 2005 levels by 2050 by imposing a cap on emissions across the economy. Any electricity generation facility or any industrial facility that emits more than 10,000 metric tons of carbon dioxide and carbon dioxide equivalents per year will have to reduce its emissions by an ever increasing amount. A similar cap would also apply to any entity that imports petroleum-based or coal-based transportation fuel or non-fuel chemicals that involve carbon dioxide emissions.

Regulated entities would have to turn in annual allowances for the emissions cap, either by reducing emissions or by buying offsets from entities that have cut emissions below the cap, or that have implemented some form of greenhouse gas reduction program.

This proposed cap-and-trade program would likely cover entities that together create 85 percent of the U.S. greenhouse gas emissions, even though the 10,000-metric ton limit would only bring about 3 percent of U.S. industrial facilities into the scheme.

The proposal would in effect make the refiners of gasoline responsible for automobile emissions — the alternative of trying to impose a greenhouse gas regulation on each of perhaps hundreds of millions of U.S. vehicles would prove impossible in practice, Roberts said. Under a cap-and-trade program the refiners would

likely try to reduce their carbon footprints by supplying fuels that produce fewer greenhouse gas emissions. And the price of gasoline would rise to cover the cost of the refiners purchasing carbon dioxide allowances from elsewhere.

Similarly, the greenhouse gas emissions from natural gas usage would likely be capped at the producer or utility level.

"Congress has never done anything like this before ... that will have such a comprehensive economy-wide effect," Roberts said.

The complexity and potential impact of what is involved is going to make this legislation difficult to enact.

"But the fact is that there is a massive public sentiment to do this," Roberts said. "Poll after poll after poll consistently shows 60 to 70 to 80 percent of respondents saying that it is important that Congress do something about climate change."

Impact on Alaska

So what does all this mean for Alaska?

On the plus side, there will be a huge effort to develop and commercialize alternative and renewable energy sources. That effort could pay big dividends in Alaska, particularly in terms of finding stable, reliable and cost efficient sources of energy in rural Alaska, Roberts said. Those benefits would especially come from the development of any new technologies that bring down the cost of alternative energies.

Alaska may also benefit from the impact of greenhouse gas emissions on climate change, through the reduction of problems such as coastal erosion. However, that type of benefit is highly theoretical, Roberts said.

There's a large potential downside in Alaska to what is happening in Washington. For example, capping greenhouse gases would likely pose problems for the development of Alaska's coal resources.

"It's one more bump in the road, along

with distance from market, harsh conditions, transportation to get it to export," Roberts said.

The opening of the Arctic National Wildlife Refuge for oil and gas development also looks improbable under the prevailing climate of opinion.

"I think it means the end of the road for ANWR, certainly in the foreseeable future," Roberts said. "... I think this is icing on the cake for those who do not want to see ANWR developed."

Gas line opportunity

But Roberts thinks that the evolving situation at the federal level is creating a significant opportunity for the development of the Alaska gas pipeline.

"There will be strong ... growth in demand for natural gas if and when climate change legislation is enacted," Roberts said.

The United States will see a continuing demand growth for electricity, while power companies will experience difficulty in making decisions regarding long-term investments. Although the price of coal makes that fuel attractive, the burning of coal results in huge greenhouse gas emissions requiring unproven techniques for carbon dioxide sequestration, Roberts said. Nuclear power is extremely expensive and politically sensitive, he said. And, although there will be a substantial increase in the use of renewable fuels, these will not be sufficient to supply the base load that the country needs.

So future electricity supplies must come predominantly from natural gas, despite the price volatility and probability of future price increases, Roberts said.

"The market dynamic from the consuming end says natural gas is the way to go," Roberts said.

And since the import of liquefied natural gas runs counter to the drive for U.S. energy security, the trillions of cubic feet of proven gas on Alaska's North Slope constitute an obvious source of gas for the United States, he said. ●

FINANCE & ECONOMY

Wood Group enters oil sands

A subsidiary of Scottish-based John Wood Group has become the second international firm this year to acquire an engineering company with a major role in the Alberta oil sands.

In a US\$140 million all-cash deal, it is buying out IMV Corp., whose 650 employees provide engineering, procurement and construction management services to the Canadian petroleum industry, with a heavy emphasis on in-situ oil sands projects.

Mike Straughen, group director and chief executive officer of Wood Group's engineering activities, said IMV will work closely with other Wood units, including Mustang Engineering and JP Kenny in "heavy oil, Arctic, upgrading/downstream and trunkline sectors."

The transaction follows the C\$1 billion acquisition of Colt Engineering in February by Australia's WorleyParsons.

Straughen said IMV will continue to function as a standalone business, building on its "leading position for in-situ heavy oil projects."

Founded in 1999, IMV has operations in Western and Northern Canada, the Atlantic coast of Canada and the Middle East. It has pre-tax earnings of C\$231.6 million for the year to August 2007.

Aside from the initial cash consideration, Wood Group will make three further cash payments in the period to 2014, based on the future performance of IMV.

Wood Group has 22,000 employees in 46 countries with annual sales of more than US\$4 billion.

—GARY PARK



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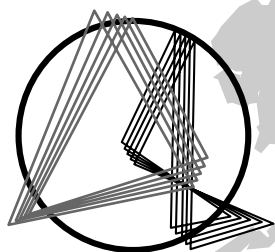
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• FINANCE & ECONOMY

Oil futures jump on dollar Fed forecast

Crude oil prices approach \$100 a barrel after U.S. dollar hits new low, talk Federal Reserve will cut interest rates again

By JOHN WILEN

Associated Press Business Writer

Oil prices resumed their march toward \$100 Nov. 20, rising to records over \$98 a barrel as futures drew strength from a declining dollar, news of refinery problems and speculation that the Federal Reserve will again cut interest rates. Heating oil futures also rose to new records.

Gasoline prices, meanwhile, extended their decline at the pump.

Oil futures, which offer a hedge against a weak dollar, picked up momentum as the dollar fell to a new low against the euro, and added to their gains after the Fed forecast slowing growth and tame inflation next year.

Light, sweet crude for January delivery surged \$3.39 to settle at a record \$98.03 a barrel on the New York Mercantile Exchange. Prices continued rising in electronic trading after the Nymex closed, matching the trading record of \$98.62 a barrel set the week ending Nov. 16.

Crude prices are within the range of inflation-adjusted highs set in early 1980. Depending on how the adjustment is calculated, \$38 a barrel then would be worth \$96 to \$103 or more today.

Gasoline prices down

Gasoline prices fell 0.5 cent overnight, retreating further from their most recent spike above \$3. At a national average of \$3.09 a gallon, according to AAA and the Oil Price Information Service, gasoline prices have fallen 2.2 cents in a little less than a week. The week ending Nov. 16, many analysts predicted prices would instead rise another 10 to 15 cents a gallon to catch up with surging oil prices.

"More than likely, (prices will) probably hold steady through the end of the year," said Fred Rozell, retail pricing director at the Oil Price Information Service. "But that doesn't mean you're going to see relief in terms of lower prices."

Because gasoline prices are closely tied to the price of crude, pump prices could start rising again if crude does reach \$100 a barrel, or higher.

Speculative investing cited

Many analysts cite speculative invest-

ing fueled by the weak dollar as a key reason for oil's fall rally.

"Expectations of interest rate cuts by the Federal Reserve are sending the dollar lower and this is once again drawing buyers ... into the crude oil market," said Addison Armstrong, an analyst at TFS Energy Futures LLC in Stamford, Conn., in a research note.

The Fed said it thinks business growth will slow next year, with gross domestic product growing between 1.8 percent and 2.5 percent. That's less than the Fed's previous projections. Meanwhile, overall inflation should fall next year to between a 1.8 percent and 2.1 percent increase, the Fed said.

"They just opened the door for the possibility of more rate cuts," said Phil Flynn, an analyst at Alaron Trading Corp. in Chicago.

However, the rising cost of energy could also persuade the Fed to either leave rates stable or raise them — the latter would likely lend support for the dollar and could pull oil prices back down.

Energy futures received an additional

lift from word of problems at two oil facilities Nov. 20. A Valero Energy Corp. refinery in Memphis, Tenn., that processes 180,000 barrels of crude a day has shut down for 10 days of unplanned maintenance and a Royal Dutch Shell PLC plant that converts bitumen from Alberta's oil sands region into 155,000 bpd of synthetic crude oil was temporarily shut down due to fire.

Oil product futures surged on the news. December heating oil futures climbed 8.59 cents to settle at a record \$2.6901 a gallon while gasoline futures for December delivery rose 6.99 cents to settle at \$2.4515 a gallon.

"When you get this kind of problem in this kind of environment, prices will rise," Flynn said.

Natural gas futures fall

Natural gas futures fell 31 cents to settle at \$7.477 per 1,000 cubic feet on the Nymex. Natural gas inventories are at record levels, and several recent forecasts have predicted a warmer than normal winter.

In London, January Brent crude futures rose \$3.21 to settle at \$95.49 a barrel on the ICE Futures exchange.

Traders were also anticipating the Nov. 21 petroleum inventory report from the Energy Department's Energy Information Administration. Analysts surveyed by Dow Jones Newswires, on average, predict that crude oil inventories rose by 800,000 barrels the week ending Nov. 16, while refinery use grew by 0.4 percentage point to 88.1 percent of capacity.

Gasoline inventories likely grew by 700,000 barrels, the analysts predicted, while inventories of distillates, which include heating oil and diesel fuel, fell by 400,000 barrels.


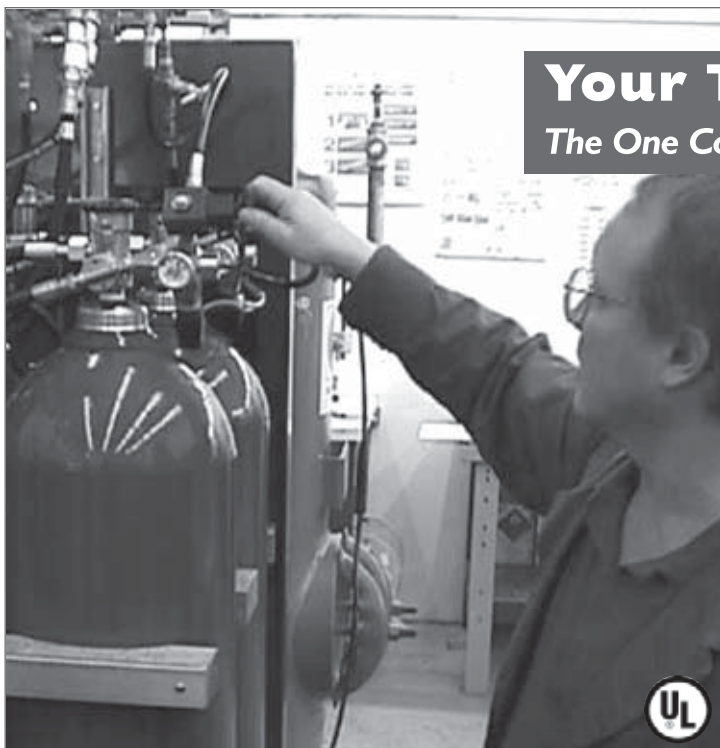
While oil supplies likely rose the week of Nov. 12, prices were being supported Nov. 20 by concerns there would be a bullish surprise in the EIA report, such as an unexpected decline in inventories. ●

—Associated Press Writers Pablo Gorondi in Budapest and Gillian Wong in Singapore contributed to this report.

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Former executives hit with fines, bans

Hefty penalties have been imposed on two former oil patch executives found by Alberta securities regulators to have misrepresented production and reserves volumes to security holders, analysts and the public.

In verdicts issued by the Alberta Securities Commission, Gordon Ironside, former chief executive officer of Blue Range Resources, has been permanently banned from holding any position as an officer or director of any stock-issuing company, and Robert Ruff, the former chief financial officer, faces a 10-year ban.

Ironside was also ordered to pay an administrative penalty of C\$180,000 and C\$675,000 towards the cost of the commission investigation, while Ruff must pay a C\$50,000 penalty and C\$175,000 in costs.

A hearing into the allegations started in 2002 and covered 137 days of testimony — the longest in the commission's history.

"The penalties reflect the seriousness of the misconduct and send a message to corporate executives on the importance of issuing reliable information to the market," the commission said.

It said the actions by Ironside and Ruff "were contrary to the most basic standards that the public expects — and that we demand — of CEOs and CFOs."

Men 'compromised their duty'

When it delivered its initial verdict almost a year ago, the commission said Ironside and Ruff "showed indifference to and disdain for the functioning of the capital market ... (and) compromised their duty to act honestly and in good faith in favor of their own-self-interests."

The two men were found to have: overstated Blue Range natural gas reserves

see **EXECUTIVES** page 19

INTERNATIONAL

Iran: OPEC will study currency basket

By **SEBASTIAN ABBOT**

Associated Press Writer

OPEC will study the weak U.S. dollar's effect on the oil cartel's earnings and investigate the possibility of a currency basket, Iran's oil minister said Nov. 18.

"We have agreed to set up a committee consisting of oil and finance ministers from OPEC countries to study the impact of the dollar on oil prices," Gholam Hussein Nozari told Dow Jones Newswires at a rare heads-of-state OPEC summit.

Iraqi Oil Minister Hussein al-Shahristani also confirmed that the Organization of Petroleum Exporting Countries was forming the committee, which would "submit to OPEC its recommendation on a basket of currencies that OPEC members will deal with." He did

Iran and Venezuela have been pressuring OPEC to study the effect of the falling dollar. But the suggestions were met with resistance from other OPEC members, including Saudi Arabia's foreign minister, who warned Nov. 16 that even talking publicly about the currency's decline could further hurt its value.

not give a timeline for the recommendation.

Though a final statement issued Nov. 18 at the end of the summit in Riyadh, Saudi Arabia, did not specifically mention the dollar or a committee, it did say the oil-producing group would look into ways of improving financial cooperation.

OPEC will "study ways and means of enhancing financial cooperation among OPEC ... including proposals by some of the heads of state and governments in their statements to the summit," OPEC Secretary General Abdalla Salem el-Badri said, reading the statement.

Falling dollar an issue

Iran and Venezuela have been pressuring OPEC to study the effect of the falling dollar. But the suggestions were met with resistance from other OPEC members, including Saudi Arabia's foreign minister, who warned Nov. 16 that even talking publicly about the currency's decline could further hurt its value.

Oil is priced in U.S. dollars on the world market, and the currency's depreciation has concerned oil producers because it has contributed to rising crude prices and has eroded the value of their dollar reserves. Cartel officials have resisted pressure to increase oil production to ease prices.

During his final remarks, el-Badri stressed he was committed to supply — but did not mention changing oil outputs, as expected.

"We affirm our commitment ... to continue providing adequate, timely, efficient, economic and reliable petroleum supplies to the world market," he said.

Speculation on production

The run-up to the meeting was dominated by speculation over whether OPEC would raise production following recent oil price increases that have closed in on \$100.

U.S. Energy Secretary Samuel Bodman called on OPEC prior to the meeting to increase production, but cartel officials have said they will hold off any decision until the group meets in December in Abu Dhabi, United Arab Emirates.

They have also cast doubt on the effect any output hike would have on oil prices, saying the recent rise has been driven by the falling dollar and financial speculation by investment funds rather than any supply shortage.

The meeting in Riyadh, with heads of states and delegates from 12 of the world's biggest oil-producing nations, was the third full OPEC summit since the organization was created in 1960. Libya's oil policy head, Shokri Ghanem, confirmed to Dow Jones that Libya is to host the next heads of state summit in 2012. ●

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continued from page 1

MEASURE

with Alaska laws.

Attorney General Talis J. Colberg said the initiative would prohibit mixing zones in water used by salmon and resident fish for spawning, rearing and migration. A mixing zone is an area in a body of water into which liquid wastes may be discharged and exceed water quality standards. It allows wastes to be diluted enough to meet those standards when they exit the area.

The proposal also provides exceptions to the prohibition against mixing zones for certain users including some placer mines, shore-based seafood processors and municipalities that process less than 1 million gallons of water a day.

Colberg said the initiative's language is broader in geographic scope than current law, but the exceptions it allows could result in it being interpreted by the U.S. Environmental Protection Agency as providing fewer protections than current regulations. EPA must approve all state regulations governing water quality standards. The federal agency conceivably could decline to sign off on the measure, he added.

The Alaska Division of Elections is preparing petition booklets for the sponsors of the initiative, who will need to collect at least 23,831 valid signatures from qualified voters in 30 election districts in order for the proposed bill to be placed on the ballot.

—PETROLEUM NEWS

continued from page 18

EXECUTIVES

by 8.9 percent by using raw numbers rather than sales gas volumes; overstated gas sales production volumes; and issued press releases claiming 30 percent increases in new production without revealing that overall production was expected to decline by 20 percent.

The actions were uncovered following a hostile takeover of Blue Range by Big Bear Exploration in late 1998.

Once it had access to Blue Range's books, Big Bear was forced to make a C\$152 million writedown of the assets, shrinking reserves by 25 percent or 20 million barrels of oil equivalent.

Ironside has already filed a notice of appeal against the securities commission's initial ruling and has indicated he will soon submit formal information to the Alberta Court of Appeal. Ruff has not said what if any steps he plans to take.

—GARY PARK

continued from page 1

INSIDER

When the next Canadian election is called — either 2008 or 2009 — he will be the standard bearer in the Western Arctic (read Northwest Territories) for the currently governing Conservative party.

Right off the bat, that puts him in a tough league. The last Conservative to represent the district in the House of Commons was Dave Nickerson, who was the region's Member of Parliament from 1979 until he was unseated in 1988 by the Liberal party's Ethel Blondin-Andrew, the first aboriginal woman to be elected to the Parliament of Canada.

She made the Western Arctic a Liberal stronghold until being toppled in 2006 by Dennis Bevington, from the left-leaning New Democratic Party.

After serving in the NWT legislature from 1999, most recently as industry minister with key responsibility for overseeing the Mackenzie Gas Project, Bell opted not to seek re-election in October, choosing to test the federal arena.

The first step was easy enough. He won the Conservative nomination by acclamation earlier in November.

Now he has an uncertain wait for the next federal campaign to be called.

That could come next year if the opposition parties decide to overthrow the minority government of Prime Minister Stephen Harper, or 2009, if Harper has his way.

Bell is not bothered by that prospect, telling the Canadian Broadcasting Corp. he needs time to "build some regional teams, get out and talk to the people about the issues that are important to them."

If he and the Conservatives are elected, he will arrive in Ottawa at what could be a pivotal moment in the history of the NWT.

Assuming the Mackenzie Gas Project is still alive and moving forward, it will likely have evolved from a regional to a full-blown national issue.

By then, unless all of the pieces are in place, debate could be raging over the exploitation of Canada's Arctic natural

resources, the impact on the northern environment and lifestyle and the federal government's role in negotiating key fiscal terms. Before stepping down as the NWT's industry minister, Bell made a U.S. tour to promote northern gas as an affordable, secure and low-emission energy option to coal-fired electricity plants.

He argued Arctic gas could reduce carbon emissions in Texas alone by 75 million metric tons.

It was the kind of message a re-elected Harper government would be eager to spread.

—GARY PARK



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Business Spotlight



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Taylor Brelsford, Sr.
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Trained as a cultural anthropologist, Taylor Brelsford has worked with Alaska's Native community and on subsistence issues for 25 years. At URS, he manages environmental impact and socio-cultural analyses and facilitates planning meetings. A great experience was managing the bowhead whale subsistence hunting environmental study. Taylor and his wife Terry enjoyed raising their family in Yup'ik villages during their early years. The kids are now in graduate schools studying ecology, law and environmental engineering.

—PAULA EASLEY



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LNG

horizon for 2008 and three LNG import terminals in Canada are expected to handle volumes of 1.4 billion cubic feet per day by 2015, he said.

Given the multiple objectives and options on the table, the NEB is calling for a long-term energy vision and strategy in Canada that is "well-integrated at the regional level," taking into account environmental issues and economic growth and developed with citizen input.

"Only then will we be able to overcome challenges ahead and take advantage of the opportunities available," it said.

NEB projects growing imports

For Canada, the NEB forecasts LNG imports are expected to start at 500 million cubic feet per day in 2009 and grow steadily to 5.3 bcf per day by 2029, with volumes offloaded at seven terminals in Nova Scotia, New Brunswick, Newfoundland, Quebec and British Columbia.

Projected LNG imports would be the equivalent of 50 percent of Canadian production by 2020 and could slightly exceed domestic production by 2030.

The study noted that in 2005, the U.S. and Canada accounted for 26.3 percent of the world's natural gas consumption, of which 98 percent was sourced from within the two countries, but 96 percent of global remaining proved reserves are thought to be outside the U.S. and Canada.

"Under certain market conditions, it may be advantageous for North America to tap into a larger share of the global natural resource base and import greater amounts in the form of ship-borne LNG," the board said.

LNG supply could triple

Quoting Calgary-based investment bank Tristone Capital, it said LNG projects under construction or proposed could potentially increase LNG supply to 60 bcf per day in the next decade, triple the 2005 volumes.

If a build-up occurs on that scale, the rise in LNG could exceed growth in market demand, forcing LNG suppliers to compete on price "to deliver volumes into already adequately supplied markets."

Such an outcome could drive prices down to the average marginal cost of LNG, currently about US\$5.30 per million British thermal units, Tristone predicts.

At that price level, higher-cost domestic production could be displaced by incremental LNG imports.

Role of Arctic gas uncertain

Regardless of how Canada's energy consumption evolves, the National Energy Board has no doubt that demand for natural gas will rise, led by home and business heating uses, with oil sands extraction and gas-fired power plants playing a secondary role.

What is less clear, based on the federal regulator's projections for 2005-30, is what sources will be tapped to offset the shrinkage of conventional gas output from the Western Canada Sedimentary basin as older fields become less productive.

The NEB's broad conclusion is that gradual declines in basin output could lead to development of additional northern, offshore and unconventional gas sources and to imports of LNG.

But relatively flat to declining overall production and growing demand for gas in oil sands extraction and electricity generation "could eventually diminish Canada's role as a natural gas exporter."

The study says the North American market is evolving from one of self-sufficiency to an increasing requirement for offshore liquefied natural gas.

"The scope of imports into North America will depend to some extent on the success of gas projects in Alaska, Mackenzie Delta, the East Coast and non-conventional developments, such as coalbed methane in Western Canada and the U.S. Rockies ..." the NEB says.

But it warns that recent cost-escalation for northern projects adds to the uncertainty about in-service dates and raises concerns about whether these projects will proceed."

The study says that under one of its three scenarios — the so-called Triple E model that balances economic, environmental and energy objectives within well-functioning energy markets, cooperative international agreements and a rigorous energy demand management policy — Western Canada Sedimentary basin production could fall by 80 percent by 2030 from current levels.

That decline would be due to lower gas prices which can't absorb the "higher costs of producing other gas resources such as unconventional gas or developments in the North."

The decline emerging from the other two scenarios would be partially offset by the development of unconventional gas in the WCSB, combined with the expectation of more gas production from the North by 2014.

Those two scenarios are labeled Continuing Trends (trends that are apparent in 2005 and are maintained throughout the entire forecast period) and Fortified Islands (dominated by security concerns, with geopolitical unrest, a lack of international cooperation and trust and protectionist government policies).

Under Triple E, the NEB says LNG imports would account for more than half the gas available in Canada by 2030, which would cost less than developing and bringing northern and unconventional gas to market.

In both Continuing Trends and Triple E, imports would gradually exceed exports, making Canada a net gas importer before 2030.

In Fortified Islands, security concerns would curb worldwide LNG supply and high prices would generate development of unconventional and northern gas, allowing Canadian gas exports to rise.

—GARY PARK

The NEB speculated that in recognition of the potential for such price-eroding LNG-on-LNG competition, some current and prospective LNG suppliers have "begun very preliminary discussions of the potential to form a gas equivalent of OPEC to assist in cooperatively managing worldwide LNG supply."

Terminal expansion planned

The study said substantial increases in North American LNG import capacity have or are taking place, including expansion of four of the five existing terminals and seven new terminals (four on the U.S. Gulf Coast, two in Mexico and the

Canaport terminal in New Brunswick).

In addition, more than 40 new import terminals have been proposed by the U.S. and Canada, although "only a fraction of these might ever be built," the board said, adding that in general planned terminals for the U.S. Atlantic and Pacific Coasts "have tended to attract greater site-related opposition than those along the Gulf Coast."

Finally, the NEB suggested North America's large underground storage capacity compared with other major LNG markets (most located in the Northern Hemisphere) could result in greater LNG imports during the summer months than during the peak heating season. ●

GOVERNMENT

AEA Railbelt conference set

The Alaska Energy Authority has announced the venue and a draft agenda for its technical conference on a potential Alaska Railbelt Electrical Grid Authority. The conference will be held on Nov. 26 and 27 at the Anchorage Sheraton Hotel. People wishing to attend should register with Sherrie Siverson at ssiverson@aidea.org.

The conference kicks off a five-month study into the possibility of forming an authority to manage and dispatch electricity on the Railbelt grid and will provide a public forum for discussion of the issues involved. Panels of experts will present information pertinent to the discussion.

The need for new and possibly different sources of power for the grid have raised some important questions about how to generate and manage the electricity supply in the Railbelt (see "Resolving Southcentral power puzzle" in the Oct. 14 edition of Petroleum News).

Information about the conference can be found on the AEA web site at www.akenergyauthority.org.

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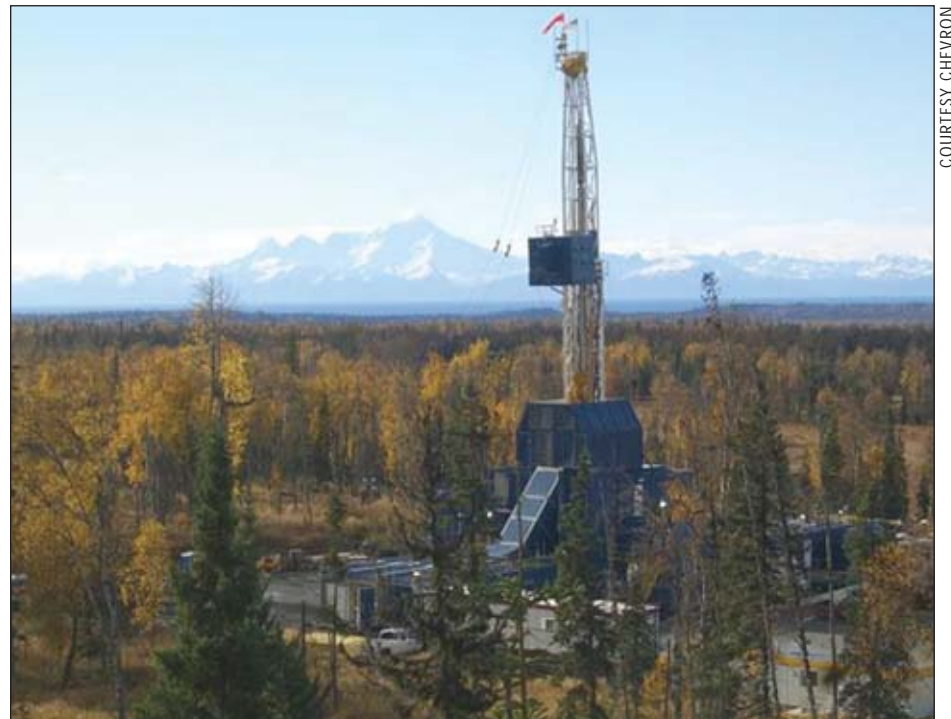
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The purpose-built lightweight AC rig, Nabors 106E is a new generation rig and can be broken down into 53 different loads for moving — 38,000 pounds is the heaviest load, Zager said.

continued from page 1

CHEVRON

storage capacity.

The Cook Inlet focus is on oil. Production today from Cook Inlet oil fields is 90 percent water, Zager said, so Cook Inlet "oil fields are severely challenged on costs."

Nabors 106E to White Hills

While Chevron's main North Slope exploration activity "is focused around our exploration program at White Hills," the company is "also looking within existing fields where we have ownership along with the major producers on the North Slope."

Between Chevron and Unocal legacy North Slope assets, we "own a little bit of everything," Zager said.

On the exploration side, the White Hills work came together relatively quickly: It's been just four to five years since the idea was put forward by the company's exploration group.

Zager said the bulk of spending on White Hills will be in the next couple of years, an estimated \$160 million to evaluate the prospect.

He said Nabors Rig 106E is ready to be mobilized and if Chevron is successful in its two-year exploration program it thinks it could see production in the seven- to 10-year timeframe.

A lot of field work has been done at White Hills over the last couple of seasons, Zager said, and quite a bit of seismic over the last couple of years.

Snow roads are being built at White Hills and equipment is being mobilized. The purpose-built lightweight AC rig, Nabors 106E is a new generation rig and can be broken down into 53 different loads for moving — 38,000 pounds is the heaviest load, Zager said. The rig is "quite a bit lighter, one-third to one-half lighter than a traditional rig," he said. The rig drilled its first well at Happy Valley in October. Zager said Chevron wanted to do the rig's shakedown in a friendlier climate than on the North Slope in the winter.

New oil well in Cook Inlet

At Granite Point Chevron is setting up a

Chevron is also continuing to expand its Cook Inlet natural gas storage, he said. Currently the company can deliver 70-80 million cubic feet a day from storage to meet peak demands on a cold day.

rig to spud the first new oil well in Cook Inlet in quite a few years from the Anna platform. Other activities in the MacArthur River field will be in the 2009 timeframe, Zager said.

On the natural gas side, the Happy Valley well is geared to the Enstar Market, as is planned drilling at Steelhead.

In the second quarter of 2008 Chevron plans a gas well off the Anna platform, targeting a large structure never drilled in the shallow gas horizons.

Chevron is also continuing to expand its Cook Inlet natural gas storage, he said. Currently the company can deliver 70-80 million cubic feet a day from storage to meet peak demands on a cold day.

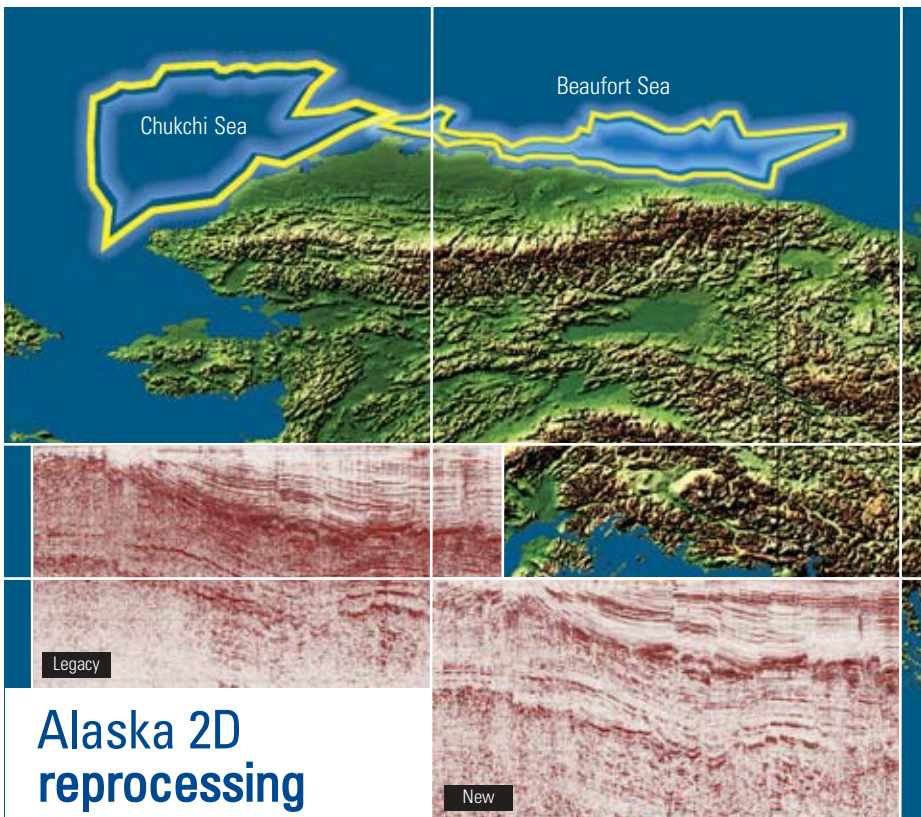
Partnership with state

Zager said partnership with the state is essential. The industry provides teams, prospects, skills, technology, capital and people, he said, but needs a return on people employed, not just capital. It's very hard to come by teams to do the work now, he said.

He said the state does a good job of providing access to land through areawide lease sales and has reasonable permitting requirements, although there is room for improvement there.

What is needed is a competitive and stable fiscal regime.

Zager, speaking a couple of days before the Alaska Legislature passed an increase in the production tax, said he has tried to figure out the "disconnect" between what industry is saying and what consultants are saying to the Legislature. One disconnect, he said, seems to be that consultants are looking at the industry and production today and are not looking at production five to 10 years out. They also are assuming that the same amount of production will occur under different tax scenarios, an assumption which doesn't take into account the impact of taxes on investment, Zager said. ●



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The azimuthal propulsion system on an icebreaker/supply ship. Twin diesel-electric "azipods" suspended under the stern can be swiveled in any direction.

continued from page 1 ICEBREAKERS

marketing for Helsinki-based Aker Arctic Technology Inc., told an audience at a presentation in Anchorage on Oct. 12.

And with climate change causing changing ice patterns and an increasing prevalence of loose drifting ice, the design of ships that can negotiate polar waters has become more challenging, Wilkman said.

Prudhoe tanker experiment

Aker Arctic Technology, a leading Finnish icebreaker design and consulting company and a spin-off of shipbuilding company Aker Yards, actually became involved in the initial development of the giant Prudhoe Bay field on Alaska's North Slope in 1969 when Exxon wanted to test the possibility of exporting Prudhoe Bay oil direct from the slope by oil tanker. Aker Yards designed modifications to the S.S. Manhattan, a U.S. tanker, so that the ship could negotiate the passage through the Canadian islands to the slope. Although the Manhattan did succeed in transiting to and from Prudhoe Bay, the sea route for oil export was deemed impractical and the North Slope oil producers elected instead to build the trans-Alaska pipeline.

But the test tank facility established in Helsinki for the Manhattan project set in motion a program of icebreaker research and development that has continued to the present day and has seen some major evolution in Arctic ship design.

Up through the 1980s the focus was on innovative bow forms for smashing through the ice, Wilkman said. However, despite quite a bit of competition between different companies to discover the best bow design for this purpose, the end results fell short of expectations — specialized icebreaker bows work in calm, restricted water but prove much less effective in passing through ice free areas in open water, where the wave actions and

other complications encountered restrict the operability, Wilkman said.

Going backward

By the late 1980s people were casting around for some new way to improve icebreaker design. Then a surprising but obvious discovery was made: simply reversing the direction of motion of the ship made icebreaking a whole lot easier.

"Conventional icebreakers have been able in certain conditions to move astern in thicker ice than that of running ahead at slow motion, but they were lacking the steerability and possibility to run astern at higher speeds," Wilkman said.

It turned out that the ship's propellers up front can carve up the ice and then flush the broken ice out of the ship's path,

enabling the ship to augur its way through an ice field.

Installing bow propellers was abandoned as a design concept long ago because of the complexity and cost of the required propulsion system inside the ship's hull, Wilkman said. However, the

development of diesel-electric drive technology has enabled a design breakthrough in which a diesel engine inside the ship's hull powers an electrical drive system outside the hull. In the resulting azimuthal

see **ICEBREAKERS** page 24

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Artist's impression of a double acting shuttle tanker approaching an offshore platform in Russia's Prirazlomnoye oil field in the Pechora Sea. Two of these tankers are scheduled to start operations in 2008-2009.

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continued from page 23

ICEBREAKERS

propulsion system a pod suspended under the stern of the ship holds the propeller and the electric drive. The pod can be rotated 360 degree, thus allowing the propeller to face in any direction.

In this system, the ship drives forward through open water, with the "azipods" holding the electric drive motors and propellers directed towards the rear. In sea ice, the azipods swivel 180 degrees to point in the opposite direction and the ship goes backwards through the ice.

Going astern may reduce the ice resistance by 50 percent or more and that typically reduces the power required to drive a ship through the ice to 60 percent of what used to be required, Wilkman said.

Negotiating ice ridges

Not only that, a "double acting" vessel that can travel both forwards and backwards can, when going astern, traverse ice conditions that would otherwise prove impassable.

For example, in the late 1990s Aker Arctic Technology was testing icebreaker designs for the Caspian Sea that enabled negotiation of grounded ice ridges 4 to 8 meters (12 to 24 feet) in height, Wilkman said. When trying to move forward through these ridges the bow became stuck on top of the ice, but after turning the ship around to go astern the ship could carve its way through, he said.

Aker Arctic Technology is also engaged in a research project, using models in its test tank facility to evaluate how best to use azimuthal drive icebreakers to protect offshore structures such as drilling rigs from sea ice. In this type of ice management operation, icebreakers typically move in circles through the ice upstream of the fixed structure, Wilkman said. The idea is to break the ice into small pieces, to

In this system, the ship drives forward through open water, with the "azipods" holding the electric drive motors and propellers directed towards the rear. In sea ice, the azipods swivel 180 degrees to point in the opposite direction and the ship goes backwards through the ice.

reduce the force imparted by the ice on the structure.

But, by using an icebreaker with twin azipods it is possible to orient the azipods in different directions and, thus, vary the mode of ice breaking. For example, aiming each azipod somewhat outwards while moving astern through the ice might help widen a channel to clear a broad area. And pointing the azipods in opposite directions fore and aft might help demolish ice ridges or flush ice from localized areas.

The company expects the report from these tests to be available for purchase early 2008.

Aker Arctic Technology has also been forging ahead with new icebreaker designs. The latest concept is an asymmetric icebreaker that looks a bit like a regular ship that somehow got bent out of shape. Armed with three azipods at bow and stern, the icebreaker would move sideways through pack ice, thus clearing a much wider channel than a conventional icebreaker moving forwards or backwards. This strange looking vessel may be effective in cleaning up an oil spill, as well as in clearing channels for other vessels. A 9-megawatt icebreaker of this design could clear a 50-meter wide channel through 1.2-meter-thick ice, Wilkman said.

Cargo vessels

Evolution of the double acting azipod powered icebreaker design led to a realization that purpose-built cargo vessels might also be able to negotiate sea ice using the same principle. In March 2006 a revolutionary new icebreaking container ship built for Russian mining company Norilsk Nickel successfully underwent testing in the Kara Sea and Gulf of Yenisei (on the northern coast of Siberia), Wilkman said.

Aker Arctic Technology has also designed double acting oil tankers for the Baltic for Neste Oil transporting oil from Russia to Finland. In addition, two double acting 70,000-tonnage-dead-weight tankers are scheduled to start shuttle operations in the Pechora Sea in 2008-09 in what Aker Arctic Technology has described as "the world's first marine Arctic oil export systems," transporting oil from the offshore Prirazlomnoye oil field and Varandey terminal.

The latest stage of evolution in the development of double acting ships is the design of ice-breaking LNG carriers. In particular, Aker Arctic Technology is researching the feasibility of exporting LNG by double acting LNG carrier from Russia's Yamal gas field on the east side of the Kara Sea, north of Siberia.

"To get to Yamal you have to go through the Kara Sea and there we have a problem of lots of ice," Wilkman said. "... It's a giant ice mass moving back and forth."

In addition to normal sea ice, the Kara Sea often has ice ridges normally 10 to 15 meters deep, Wilkman said.

All of these cargo vessel designs offer the enticing possibility of shipping freight or petroleum products through sea ice without the need for expensive icebreaker escorts — nearly 40 years after the Prudhoe Bay Manhattan experiment, the concept of operating cargo ships through sea ice appears to be coming of age. ●

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Barrick, NovaGold agree on 50/50 partnership to operate world-class gold project

Two sultan minerals drillers operate a rig in one of the underground workings at the Jersey Emerald Property. Many of the underground tunnels at the site were left behind from a previous mining operation that produced tungsten. See page 7.

A special supplement to *Petroleum News*

WEEK OF
November 25, 2007

Petroleum
news

• A L A S K A

Busy junior expands Alaska portfolio

Exploration efforts earn company ownership in Terra; Livengood to be exploration focus in 2008 after first-of-its-kind discovery

By SHANE LASLEY

Mining News

Since agreeing to acquire the Alaska portfolio of South Africa major AngloGold Ashanti in August 2006, International Tower Hill Mines of Vancouver, B.C., has been exploring the state and expanding its claims as it goes.

A total of nine properties were involved in the junior exploration company's agreement with AngloGold. In the 15 months since, International Tower Hill has purchased 100 percent interest in seven of the properties and entered into joint ventures with AngloGold on the two most advanced holdings, Terra and LMS.

International Tower Hill also added two other Alaska properties, BMP and West Tanana, to its claims.

Of the 11 properties now in the company's Alaska portfolio, the company considers seven of them as primary — Livengood, Terra, BMP, West Tanana, LMS, Chisna and Coffee Dome. The other four properties — West Pogo, Gilles, Caribou and Blackshell — are being pursued as joint venture opportunities.

Junior earns ownership at Terra property

Terra, near Rainy Pass in the Alaska Range, is a high-grade low-tonnage property discovered by Kennecott Minerals Co. in the late 1990s.

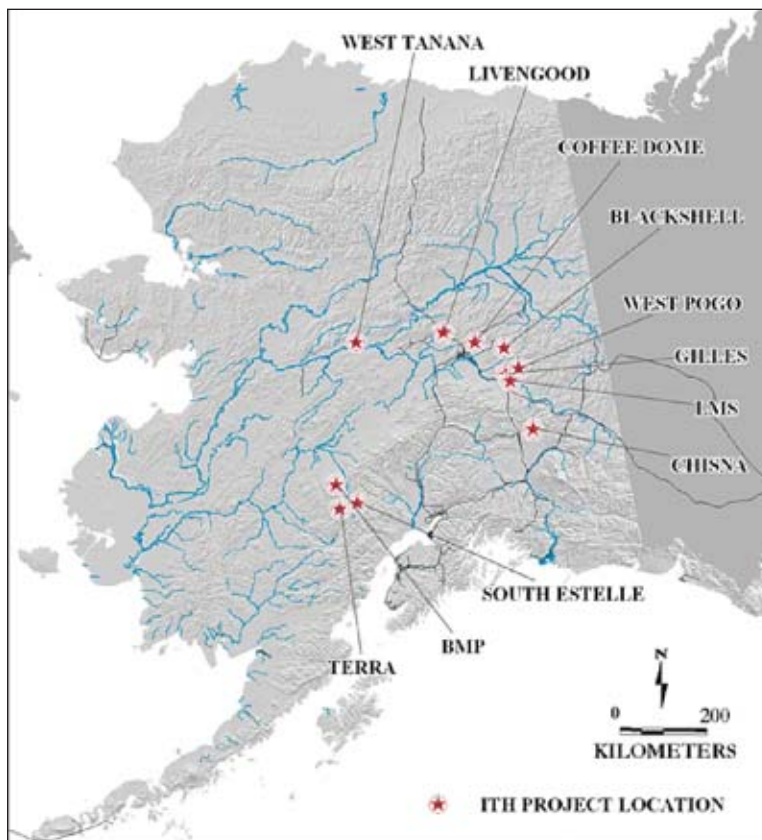
AngloGold acquired the property in 2004 and followed up with a drill program in 2005. This summer, International Tower Hill drilled 15 holes on the Ben and Ice veins at Terra. Most of the drilling (12 holes) penetrated the Ben vein. All the holes drilled at the Ben intersected the main vein. The high-grade zone of the Ben vein averaged 1.27 meters (4.17 feet) at 23 grams per ton.

All three holes drilled into the Ice vein intersected a previously unknown high-grade gold zone. The drilling also showed a shallow zone that assayed up to 4 grams per ton over 5 meters (16 feet). The initial results suggest that Ice has the potential to add to the overall resource at Terra, company officials say.

International Tower Hill sent notice to AngloGold that it has spent the \$3 million in exploration necessary to earn 60 percent interest in Terra. AngloGold has the right to earn back 20 percent interest in the project by spending \$4 million at Terra during the next two years. AngloGold has 90 days to let the junior know what it plans to do.

South Estelle similar to Terra

About 40 kilometers (25 miles) to the west of Terra is the South Estelle project, a high-grade gold system that is believed to be similar in structure to Terra. Exploration on the property has discovered three prospects, Shoeshine, Train and Portage.



International Tower Hill projects

International Tower Hill took rock and soil samples at South Estelle this summer, and the best results came from the Train and Shoeshine prospects.

"It is an impressive system, especially in percentage of veins that are mineralized," according to Russell Myers, president of TalonGold Alaska Inc.

West Tanana

International Tower Hill has entered a lease option agreement with the Doyon Native Corp. on the West Tanana property 250 kilometers (155 miles) west of Fairbanks on the Yukon River. The company drilled 1,000 meters (3,280 feet) in nine holes at the West Tanana property this summer.

Due to faulting, core recovery on some of the drill holes on the project was poor. Drilling did intersect a 0.3 meter per 1-foot section of 15.6 grams of gold per ton and a wider breccia zone assaying 2.5 grams of gold per ton over 4.3 meters (14.1 feet). The company said it is working to define the mineralized zone to plan future drilling on the property.

Chisna shows promise

International Tower Hill staked 100 state claims about 100 kilometers (62 miles) east of Paxson. The Chisna project is a copper-gold target. The company worked this summer on collecting soil and rock chip samples on the property. The average results on the rock samples averaged 2.5 grams of gold per ton and 0.68 percent copper mineralization.

Internationally renowned geological consultant Dr. Richard Sillitoe visited Chisna, as well as Livengood and Terra, this summer.

"The geologic characteristics at Chisna Southeast are those commonly observed in gold-rich porphyry copper system," he wrote in a report.

Exploration surprises

International Tower Hill said it found more than it expected at the BMP project located to the north of Terra. The average rock sample taken from the 6120 prospect at BMP assayed at 3.4 grams per ton gold, 33 grams per ton silver and 2 percent copper. The surprising thing, according to Meyers, was that the samples also showed 0.16 percent nickel and 0.07 percent cobalt.

The junior said it has the opportunity to earn a 60 percent partnership with AngloGold on the LMS property by investing \$3 million in exploration over four years.

LMS consists of 92 state mining claims near the Pogo Mine, about 40 kilometers (25 miles) north of Delta Junction in the Goodpaster Mining District. The company began drilling on the high-grade gold property in the fall of 2006.

Expansion at Coffee Dome

International Tower Hill expanded the Coffee Dome project about 37 kilometers (23 miles) north of Fairbanks in March when it optioned to lease 3,215 acres from the University of Alaska. This property lies to the south of 7,030 acres that the company acquired from AngloGold.

To maintain an option on the property, the company is required to pay the university \$117,500 over five years and complete \$400,000 in exploration over the same period.

The junior has found significant gold anomalies in the 819 soil samples and 111 rock samples it has taken from the property.

Junior targets exploration at Livengood

International Tower Hill also discovered high-grade sediment-hosted mineralization while drilling at the Livengood project, about 120 kilometers (75 miles) north of Fairbanks. This type of mineralization is not only a new discovery for Livengood, but is believed to be the first of its kind in Alaska, company officials say. The extension of mineralization into the sediment rock has the potential to considerably expand the project beyond the central zone of volcanic hosted mineralization. The company drilled 7,998 meters (26,240 feet) in 15 holes at Livengood this year.

The company plans to spend \$7 million in 2008, drilling 150 holes totaling 50,000 meters (164,000 feet) at Livengood. According to Meyers, this will be the company's primary focus of exploration for the upcoming year. ●

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• WASHINGTON, D.C.

Is U.S. Senate end of road for H.R. 2262?

Hardrock Mining and Reclamation Act of 2007 passes U.S. House; other body looks at throwing it out and starting with clean slate

By SHANE LASLEY
Mining News

Representatives Nick Rahall, D-W.V., and Jim Costa, D-Calif., introduced H.R. 2262, the Hardrock Mining and Reclamation Act of 2007, in the U.S. House of Representatives as a replacement for the 1872 Mining Law. Since the bill passed the House with a vote of 244-166 Nov. 1 it has received criticism from Democrats and Republicans alike.

Just before the legislation came up for a vote in the House, the Bush administration issued a statement that the president strongly opposed H.R. 2262 because the bill imposes a royalty on claims where property rights already have been vested, could reduce the continued domestic production of hardrock minerals and restates and expands some environmental standards and permitting requirements that are unnecessary and redundant.

The measure also establishes new public participation standards rather than using existing and well-established processes to engage the public, the White House said. If H.R. 2262 were presented to the president in its current form, his senior advisors would recommend he veto the bill, the statement added.

Democratic presidential hopeful Sen. Barack Obama, D-Ill., added his voice to those criticizing the bill. Obama said he is particularly opposed to provisions in H.R. 2262 that call for a 4 percent royalty tax on new mines and an 8 percent royalty tax on existing operations.

"Given the difficulties that the industry is already having in maintaining its operations, I think it is important for us not to move with royalty payments that are so significantly higher than they were previously," the Illinois senator said.

Obama said he will work with Senate Majority Leader Harry Reid, D-Nev., and others to develop reasonable compromise legislation that requires fair compensation for the use of federal land, enhances environmental protection and cleans up abandoned mines that pollute fish and wildlife habitat.



Sen. Lisa Murkowski



Sen. Pete Domenici

Senators want to start with clean slate

Reid predicted that H.R. 2262 will not stand up in the Senate. Reacting to the bill passing the House, he pledged to work with New Mexico's senators, Democrat Jeff Bingaman, and Republican Pete Domenici, on legislation "that will provide a constructive counterpoint to the Rahall-Costa bill."

Sen. Lisa Murkowski, R-Alaska, said that even though she believes the current mining law is in need of reform, she does not support H.R. 2262 in its current form. Murkowski told delegates to the Alaska Miners Association's annual convention in Anchorage in early-November that she agrees with Domenici's statement that "the Senate should start with a clean slate and draft legislation that will make reasonable changes to the mining law."

Both Murkowski and Domenici are members of the U.S. Senate Energy and Natural Resources Committee, which is expected to take up mining law legislation in January after the holidays. Many ranking senators on both sides of the aisle have said that the House bill will not attract the support needed to pass the Senate and they believe a new bill will emerge from Resources.

National minerals policy

The debate on mining law reform has given congressmen an opportunity to talk about implementing a national minerals policy. It is believed by some that the United States needs a plan for the extraction and stockpiling of minerals vital to the nation's well being.

"We have allowed ourselves to become dependant on foreign sources of minerals that are critical to our national security and our national economy," Murkowski told the miners.

Time for change

During field hearings in Elko, Nev., on H.R. 2262, Reid vowed to not leave the fate of the industry in the hands of future administrations. "Now is the right time to develop a responsible minerals policy," he said. Several Democrats also have indicated that they will follow Reid's lead on mining law reform.

Laura Skaer, executive director of the Northwest Miners Association, told Alaskans attending the miners' convention that the industry believes that now is the time to reform the mining law, "but not at all costs."

Republicans, Democrats, environmentalists or industry leaders; all seem to agree that the time is right to replace the 135-year-old mining law. ●

Mining industry seeks reasonable reform

Laura Skaer, executive director of the Northwest Miners Association, outlined the top 10 problems she sees with H.R. 2262 at the Alaska Miners Association convention in early November. The bill:

- Would require a 4 percent gross royalty tax on existing mining operations, and an 8 percent levy on new operations;
- Has a mine veto provision that allows the Secretary of the Interior to deny an operations permit to a project that complies with all other laws and regulations if the secretary determines that the operation will cause undue degradation to public lands and resources;
- Includes massive withdrawals from mineral entry;
- Allows states, political subdivisions, and Indian tribes to petition to have lands withdrawn from mineral entry;
- Provides no life of mine permits. Permits would be for 20 years with only one renewal of 20 years. The total life of a mine could only be 40 years;
- Establishes new and duplicative environmental standards that are vague, ambiguous and inconsistent with current federal and state environmental laws;
- Codifies the Leshy Ancillary Use Opinion by requiring a valid mining claim, valid mill site or valid tunnel site in order to have any rights under the mining law;
- Fails to provide security of title and tenure needed to attract investment capital;
- Requires buffer zones near national parks and National Conservation System Units, and;
- Calls for unnecessary and harsh enforcement mechanisms.

Skaer said the mining industry supports commonsense and reasonable mining law reform. Reasonable changes would include requiring a net-proceeds royalty of 5 percent, instead of the 8 percent proposed in H.R. 2262; providing security of tenure on federal lands; and guaranteeing the right to occupy lands from entry to closure.

Mining companies also envision a new mining law recognizing existing state and federal laws that govern the mining industry.

—SHANE LASLEY

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• ALASKA

Mining values set records in 2006

Higher prices, world-class projects such as Red Dog, Pebble drive Alaska exploration, development, production, employment

By SHANE LASLEY

Mining News

Alaska mining activity climbed to new heights in 2006 with the value of exploration, development and production exceeding \$3.5 billion.

Production values more than doubled, leaping to \$2.86 billion from \$1.4 billion in 2005, according to Alaska's Mineral Industry 2006, an annual report released Nov. 7.

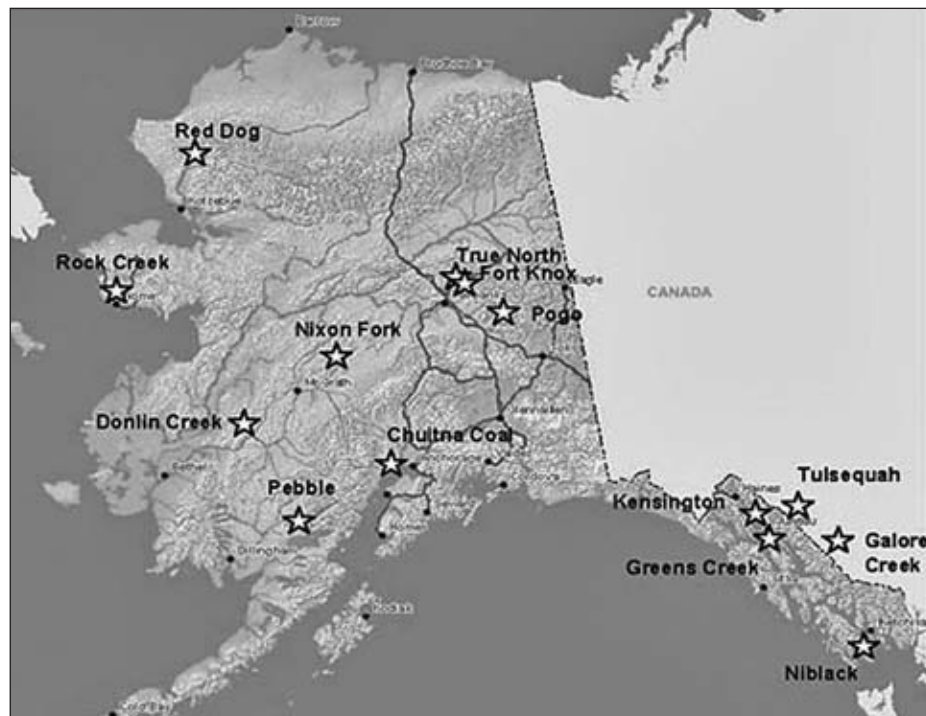
Continuing high zinc prices played a key role in the record-breaking tally for the industry, the report said. The Red Dog Mine north of Kotzebue, the world's largest zinc mine, produced 614,538 tons (557,500 metric tons) of zinc concentrate and about 138,850 tons (123,500 metric tons) of lead concentrate in 2006. With zinc prices that dipped as low as 35 cents per pound in 2003 rising to nearly \$2 per pound in 2006, Red Dog's 2006 production was worth \$1.54 billion, representing 44 percent of the value of Alaska's mining industry.

"The information contained in this book-



Alaska Gov. Sarah Palin said the men and women who make up Alaska's mining community "carry with them a hard-won air of energy and optimism that says as much about the quality of their characters as it does about the economics of their industry."

JUDY PATRICK



let — production figures, investment totals, workforce strength, and more — shows clearly that Alaska is successfully developing its mineral wealth for the good of our people. It is important for Alaskans to understand our mineral industry's significant contribution to our state, especially in light of the increasing level of concern about mining's impacts and ability to 'pay its own way,'" said Natural Resources Commissioner Tom Irwin. "... Mining has become a significant contributor to our economy. ... Rural Alaskans in particular stand to benefit tremendously from the

potential economic input to their regions. We must recognize the significant positive impacts that responsible mining can have for Alaskans."

Alaska Gov. Sarah Palin said the men and women who make up Alaska's mining community "carry with them a hard-won air of energy and optimism that says as much about the quality of their characters as it does about the economics of their industry."

"Alaska is blessed with a vast array of natural resources, and one of the fundamental responsibilities of state government is to provide responsible stewardship and wise development of this endowment for the benefit of the people of our state," she added.

All sectors up

Exploration spending statewide jumped 72 percent to a record high of \$179 million, up more than \$75 million from \$103.9 million in 2005. More than \$123.7 million, or 69 percent, of exploration spending went to investment in southwestern Alaska, the home of the Pebble project. Pebble represented Alaska's largest single exploration target of the year, with its operators announcing a resource of 67 billion pounds of copper, 82 million ounces of gold, and 5.2 billion pounds of molybdenum, making it one of the world's largest mineral deposits.

Spending on mine development climbed

42 percent in 2006 to a record \$495.7 million from \$347.9 million a year earlier. Continued construction of the Pogo gold mine southeast of Fairbanks, the Kensington gold mine project near Juneau, and the Nixon Fork Mine near McGrath drove this sector, along with startup of construction at the Rock Creek gold project near Nome.

Mineral production also soared in 2006, nearly doubling in value to \$2.858 billion from the previous year's total by \$1.46 billion. Production volumes were up for all metal commodities, except zinc and were down for all non-metal commodities, except peat.

The industry also posted its 11th straight year of total production exceeding \$1 billion, and its first-ever \$2 billion-plus year of output. One factor was Pogo Mine coming on line with first gold production late in the year.

Mining related employment in Alaska mushroomed to more than 3,523 jobs, up by 700 positions in 2006.

The mineral industry paid a record \$172.3 million in taxes, rents, royalties, and various fees to the State of Alaska and Alaska municipalities in 2006, up more than \$111 million from similar fees paid in 2005. Mining companies also were the largest taxpayers in the City and Borough of Juneau and the Fairbanks North Star, Denali, and Northwest Arctic boroughs.

Special Report 61, Alaska's Mineral Industry 2006, was prepared by the Alaska Department of Natural Resources Division of Geological & Geophysical Surveys and the Office of Economic Development in the state Department of Commerce, Community and Economic Development.

The 82-page special report is available in PDF format from the Division of Geological & Geophysical Surveys Web site, www.dggs.dnr.state.ak.us/ or on mini CD-ROM or in printed form from DGGS at 3354 College Road, Fairbanks AK 99709-3707; (907) 451-5020. Mail orders should be sent to the Fairbanks DGGS office, fax (907) 451-5050.

The report also will be available Nov. 30, at the Alaska Resources Library and Information Service, 3150 C St., Suite 100, Anchorage, and at the Historical Collection of the Alaska State Library in the State Office Building in Juneau. ●

ALASKA

Parnell appeals anti-Pebble initiative ruling

Alaska Lt. Gov. Sean Parnell has appealed a lower court ruling to the Alaska Supreme Court concerning the proposed Alaska Clean Water Initiative, he said in a statement Nov. 7.

The lieutenant governor denied certification of the proposed 07WATR initiative submitted earlier this year by Art Hackney, who represents the Renewable Resource Coalition, on grounds that it appropriated a water resource from one user group for another.

The coalition is a group that is fighting proposed development of the giant Pebble copper-gold-molybdenum deposit in Southwest Alaska, and critics say the initiative is a ploy to block Pebble's development.

Parnell's decision was overturned by the Alaska Superior Court in Dillingham. He has asked the state Supreme Court to "decide whether the proposed initiative, which prohibits certain uses of water by mining companies, is indeed a violation of the Alaska Constitution, which reserves appropriations of public resources for the state Legislature."

Initiative supporters are currently collecting signatures required to place a revised version of the initiative on the ballot in 2008.



Lt. Gov. Sean Parnell

—MINING NEWS

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• BRITISH COLUMBIA

Northgate drops Kemess North plans

Vancouver junior charges \$32.3M against third-quarter profits; moves on with takeover of Australian company, more ventures

By ROSE RAGSDALE
For Mining News

Northgate Minerals Corp. of Vancouver has posted a loss of \$11.9 million for the third quarter after dropping plans to develop the Kemess North project in northern British Columbia. The quarterly loss reflects a \$32.35 million charge against the value of the Kemess North project, which a joint panel of the governments of British Columbia and Canada recommended be scrapped.

The loss compared with a profit of \$14.9 million, or 7 cents a share, in the third quarter of 2006. Northgate reports its financial results in U.S. dollars.

The company also announced a friendly \$257 million deal to acquire Perseverance Corp. Ltd. of Australia, a move that will nearly double its annual production.

Northgate also said it is looking for acquisitions with potential to produce between 50,000 and 200,000 ounces per year and properties with regional exploration potential in politically stable jurisdictions. The company further vowed to look for underperforming gold or gold and copper mines where it thinks it could add value.

In early November, Northgate CEO Ken Stowe told analysts that with the addition of Perseverance, the company will have three operating mines, including a key foothold in Australia to build on.

“We’ll still have a strong balance sheet, we’ll have no debt and at the conclusion of the transaction we’ve already funded getting out all the hedges Perseverance has,” he said.

No go with Kemess North expansion

Northgate, operator of the Kemess South Mine, wanted to extend the life of its existing mine by developing the lower grade, higher sulfide copper-gold deposit about 5.5 kilometers, or 3 miles, to the north. Kemess South is the second-largest metal mine in British Columbia with annual production of 16.4 million metric tons, or 18.1 million tons, of gold and copper concentrate.

Northgate believed the expansion could deliver another 14 years of mine life with production averaging 85,000 to 100,000 metric tons per day of copper-gold concentrate from estimated ore reserves at Kemess North.

After two and a half years of review and multiple rounds of public hearings, the Kemess North Joint Federal-Provincial Environmental Review Panel issued a report Sept. 17 recommending that the project be scrapped because it would not be in the public’s interest. The Canadian and B.C. governments are now studying the panel’s report and are expected to make a final decision on permitting the development sometime in the first half of 2008.

While they strongly disagree with the panel’s recommendation, Northgate officials said the uncertainty it has cre-

Northgate, operator of the Kemess South Mine, wanted to extend the life of its existing mine by developing the lower grade, higher sulfide copper-gold deposit about 5.5 kilometers, or 3 miles, to the north. Kemess South is the second-largest metal mine in British Columbia with annual production of 16.4 million metric tons, or 18.1 million tons, of gold and copper concentrate.

ated for the Kemess North project forced the company to redefine its project development priorities.

Northgate has ceased all project activities at Kemess North including exploration, feasibility study work and detailed engineering and is refocusing its development activities on projects in other jurisdictions.

As a result of the panel report, Northgate also wrote off the full carrying value of its investment in Kemess North, the company said.

“In the event that the federal and provincial governments also disagree with the panel’s recommendation and grant approval for the Kemess North project to proceed and the First Nations reconsider their stance on the project, Northgate will revisit the project at that time,” Stowe said.

First Nation chief calls Kemess North ‘ill-conceived’

While news of the panel’s decision raised questions about the future of other mine projects in the region, some observers said the Kemess North expansion is a special case rather than the beginnings of a trend.

Takla Lake First Nation Chief Dolly Abraham said the difference between the “ill-conceived Kemess North project” and current and future resource projects in British Columbia is that they do not include the total destruction of a lake, with the exception of Taseko’s proposed Prosperity Mine.

Abraham said Northgate’s Stowe “was wrong to give the impression that the Tse Keh Nay’s spiritual connection to Amazay Lake was the lone factor that swayed the panel against his project.”

“In fact, the panel assessed many impacts, including those to the environment in the short-term and the long-term,” Abraham said in a letter Nov. 9.

The chief said the review panel was further concerned that once Northgate was no longer available to cover the costs of the impacts, reclamation and remediation expenses would revert to government.

Those factors, combined with the marginal nature of the project as determined by an independent analysis commissioned by the panel, led to the conclusion that “the benefits of (the project) do not outweigh the costs,” Abraham added. ●



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• GUEST COLUMN

Shall we count our blessings or our fingers?

By J.P. TANGEN

For Mining News

The price of gold surged through \$800 per ounce recently, headed north; and all gold miners (as well as the producers of many other commodities in the United States) are bound to have a happy Thanksgiving because of it. At the recent Alaska Miners Association Convention the faces of the more than 600 attendees confirmed the good news.

Happy days are here again — or are they? The cautionary note, of course, is that currency traders are also hooting and hollering. If the price of gold was going up, and the price of the Canadian dollar was holding fast, or the pound sterling was not moving, or the increase was measured against a static Swiss franc as well, then glee would be warranted.

Mining & the law

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.



J.P. TANGEN

Unfortunately, that is not what is happening. In fact, the greenback is dropping like a rock relative to most other currencies.

Without putting too fine a point on the situation, caution at the moment seems prudent, as it often does. If the U.S. dollar

is being devalued, can inflation be far behind? Will it stimulate an increase in exports? Will interest rates have to be adjusted upwards? Will economists ever reach a conclusion?

How does the dollar value of gold play on the global scene? Barrick and NovaGold have recently buried the hatchet with regard to the Donlin Creek Project, but will investing in gold projects in the United States compete favorably for capital with other projects around the world, including those just over the border in Canada?

Small miners may trip happily to the refinery with their production and rake in the credits, but is now the time for them to be hiding a few extra ounces under the mattress? Only time will tell. The United States seems to be bleeding money in the Middle East. The national debt is increas-

ing. Inferentially, the money for the war is coming from borrowing. It would seem to follow that with the current low interest rates, lenders are losing their shirts when the relative value of the U.S. dollar is diminishing.

Ask yourself whether you would invest in a leaking boat. What would you recommend if you were the chief financial officer of a global mining company, even if you were in the game for the long haul?

Now is not the time for pessimism or gloom. Things will work out; they always do. Sound planning calls for considering all of the likely contingencies and the associated implications. In the meantime, celebrate the high price of metals. This is what we have all been praying for. As the saying goes, eat drink and be merry, for tomorrow, we may die. ●

• BOOK REVIEW

‘Barren Lands’ delivers wild ride

Chronicle of North American diamond exploration sparkles with suspense, intrigue, adventure amid rare gems of history, geology

By ROSE RAGSDALE

For Mining News

If you ever wondered how Canada's diamond mining boom got its start, then taking the time to read “Barren Lands: An Epic Search for Diamonds in the North American Arctic” by Kevin Krajick is a good idea.

Published in 2001, this nonfiction treatise on the subject is technical enough for professionals and yet simple enough for laymen. In 388 pages,

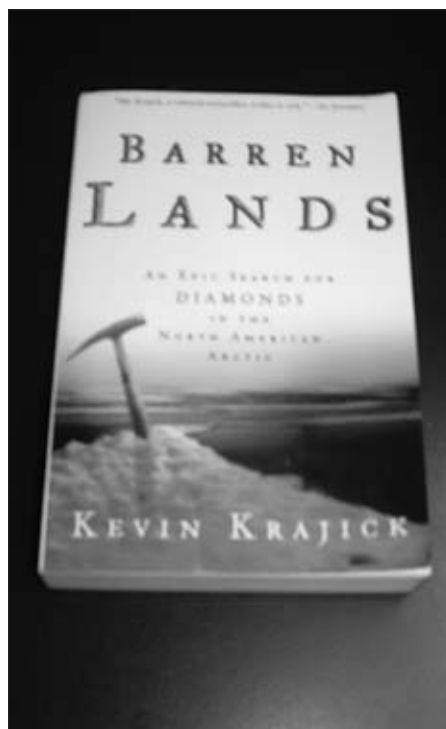
Krajick, a prizewinning journalist, transports the reader like some literary “Dr Who”, through 464 years of diamond exploration in the Arctic and elsewhere around the globe.

From the adventures of early French navigator Jacques Cartier to the intense machinations of the international DeBeers cartel, Krajick sets a breakneck pace through a niche of history seldom explored. In telling the real story behind the advent of Canada's diamond mines, he crafts an intriguing, but believable “rags to riches” tale that is hard to put down.

The book's central figure, Chuck Fipke is the prospector mainly responsible for the discoveries that led to development of BHP Billiton's Ekati diamond mine in the Northwest Territories and a modern-day mining exploration rush unprecedented in Far North history.

Krajick sweeps the reader along with Fipke from his earliest days as an explorer to the aftermath of striking it rich.

He also shares countless asides along the way that bring to life people and places that otherwise would remain shrouded in time. Consider, for example, the tenant farmer in Wisconsin who found a wine-yellow stone while digging



a well. His wife kept it on a shelf for seven years and when he died took it to a jeweler who told her it was a topaz and paid her one dollar. It turned out to be a 15.37 carat diamond. Or the 4.25 carat beauty found by a little girl in a pile of dirt beside her home in Shelby, Ala.

The author of Barren Lands recounts the adventures of countless heroes, vil-

lains and hapless hunters whose close encounters with diamonds earned them at least footnotes in history. There's the Utah college student who conducted his search for diamonds from a wheelchair and the young men that Fipke sent to Arkansas to slog through swamps and briar patches on the trail of one hunch after another.

Krajick also manages to slip in numerous observations, seemingly with scant effort, that add up to a meaty introduction to the mineral geology of diamonds and how a general understanding of that geology evolved through the centuries.

Writes Krajick: “Chemists had by now analyzed countless whole-rock samples from pipes both barren and diamondiferous, hoping to find some compound useful as a diamond tracer. ... The task was complicated by the wild assortment of xenoliths and minerals, many of which chemists subjected to separate analyses. These included green diopsides found in T.G. Bonney's xenolith of eclogite decades before. But even if chrome diopside was associated with diamond — not proven — it was useless. It quickly disintegrated in weather and thus was rarely found outside a pipe.”

Krajick also opens a brief window on how various stakeholders, including environmental groups, reacted to the discovery of diamonds near Lac de Gras in the Northwest Territories.

Best of all, he captures the flavor and spirit of the Canadian Arctic in ways reminiscent of John McPhee's “Coming into the Country.” Some critics say he did it with considerably more skill than McPhee. I won't make the comparison, but I will attest to the presence of magic — the kind that for me, created a rush of “déjà vu” replete with the sights, sounds and smells of a blustery late summer day on the coastal plain of the Arctic National Wildlife Refuge.

As a journalist covering the mining industry, reading this book gave me a fresh appreciation for how unsophisticated I am about diamond mining, and the mining industry, in general.

More importantly, “Barren Lands” made me regret my lack of exposure. ●



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• BRITISH COLUMBIA

Exploration pays off in triplicate

Junior Sultan Minerals says Southeastern B.C. historic mine property holds valuable tungsten, lead-zinc, molybdenum deposits

By ROSE RAGSDALE
For Mining News

Sultan Minerals Inc. is another Canadian junior with ambitious plans to cash in on higher prices by taking up where others left off in British Columbia.

Sultan, a publicly held company in the Lang Mining Group, is hoping to revive tungsten and lead-zinc mining at the historic Jersey-Emerald property in southeastern B.C. The Vancouver, B.C.-based junior mining company is also eager to exploit a potentially larger molybdenum mineralization encountered beneath the other metals deposits.

Incorporated in 1989, Sultan has focused on expanding its gold, silver and base metals portfolio, primarily in British Columbia. This year, the company is chasing three different minerals — tungsten, lead-zinc and molybdenum — on the same property, the historic Jersey Emerald claims near the Canada-Idaho border in southeastern British Columbia.

The junior also has outlined a drill program to expand the gold resources at its Kena Gold Property near the town of Nelson in southeastern British Columbia.

Deposits stacked like a layer cake

Once home to the Emerald Tungsten Mine, Canada's second largest tungsten mine and the former Jersey Lead-Zinc Mine, which was British Columbia's second largest lead-zinc producer, Jersey-Emerald has languished, all but forgotten for more than 35 years. Low metals prices forced Placer Dome, now part of Barrick Gold Corp., to close the two mines in 1973 after more than three decades of production.

Sultan purchased the property from a prospector in 1993, and now believes its previous owners left considerable reserves of both tungsten and lead-zinc ore in the ground as well as a bonus deposit of molybdenum.

Sultan is aggressively exploring for all three mineral types at Jersey-Emerald, a property it also expanded to encompass 56 square miles.

President and CEO Arthur Troup described mineralization on the Jersey-Emerald property as resembling a layer cake. Lead-zinc deposits are close to the surface with wide bands of molybdenum at depth and tungsten between them.

Sultan estimates a measured and indicated resource of 2.5 million metric tons, grading 0.38 percent for the tungsten deposit, with an inferred resource of 1.2 million metric tons with about the same grade for the property.

Sultan would like to take the Jersey-Emerald's tungsten reserves into production after completion of a feasibility study.

It would likely take three years to complete the feasibility study along with permitting and environmental work needed for



Two drillers operate a rig in one of the underground workings at the Jersey Emerald Property. Many of the underground tunnels at the site were left behind from a previous mining operation that produced tungsten.

the project, according to Sultan spokesman Marc Lee.

A scoping study completed by the company favors development at today's prices of a 1,000 metric ton-per-day tungsten mining operation. But Sultan would like to prove up another 2.5 million metric tons of tungsten reserves and develop a 2,000 metric ton-per-day mine because it would achieve better economies of scale, Lee said.

Work under way to assess lead-zinc potential

Sultan, meanwhile, is doing additional drilling and cavity monitoring to obtain a resource estimate for the lead zinc ore in the old Jersey mine and in numerous undeveloped targets on the property. In the past, some 8 million metric tons, grading 6 percent, of the metals were mined from Jersey.

The company aims to follow up existing development to extract the lead-zinc in conjunction with the proposed tungsten mining operation. Earlier development work included about 10 miles of underground haul roads, Troup said.

In trenching this summer, Sultan discovered a western extension of the Jersey lead-zinc mine, exposing a stratiform band of lead-zinc-silver mineralization that has now been traced along strike for more than 1,200 feet.

Troup said the attitude of the mineralization discovered to date suggests a considerable portion of the area of the deposit might be extracted by surface mining methods.

Moly mine could stand alone

Sultan also envisions developing a sep-

arate 20,000- to 30,000 metric ton-per-day molybdenum mine at Jersey-Emerald.

"We believe the molybdenum deposits could support a standalone mine," Troup said.

Sultan has estimated an indicated resource of 28,000 metric tons of molybdenum, grading 0.1 percent, with 480,000 metric tons inferred.

Situated in granite, the moly deposit's "potential is quite large," but the company has yet to do enough infill drilling to move the much larger resource estimate into the measured category, Lee said.

While at least one recent drill hole encountered a whopping 1,500 feet of moly mineralization, Lee said he believes it is more significant that 580 feet of that

interval graded at 0.1 percent molybdenum.

Reopening the tungsten mine will require Sultan to raise C\$60 million to C\$120 million in new capital, depending on whether the company purchases new or used equipment for the project.

Troup said Sultan aims to pursue the development on its own with the help of bank financing, but exploiting the potentially much larger molybdenum deposit would require the company to attract a joint venture partner.

If the molybdenum deposit proves to be as big as exploration results indicate, Sultan and a partner likely would need to raise C\$500 million to C\$600 million in capital, Troup said. ●



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• BRITISH COLUMBIA

B.C. molybdenum project starts construction

Vancouver-based junior vies to develop world's first large-scale molybdenum mine in 25 years near headwaters of remote Ruby Creek

By ROSE RAGSDALE
For Mining News

Adanac Molybdenum Corp. said Nov. 7 it has begun construction at its open-pit molybdenum mine site near the headwaters of Ruby Creek about 125 kilometers, or 78 miles southeast of Whitehorse, near Atlin, B.C.

With a permit from the B.C. Ministry of Forests, work is under way on an access road and associated earthworks. Construction is expected to continue through the winter of 2007-08 on excavation of overburden, installation of a 550-person onsite camp and preparation of all construction infrastructures.

"The years of preparation have paid off, and now we're actually beginning construction of a molybdenum mine,"

said Adanac President and CEO Michael MacLeod, who describes Ruby Creek as the company's flagship property. Adanac owns three other moly prospects in Nevada.

The Ruby Creek project has open-pit reserves of 143.7 million tonnes (metric tons) grading 0.059 percent molybdenum at a 0.04 percent moly cutoff grade.

Molybdenum hit a 16-month low of C\$21 a pound in February 2006, but has since recovered to around C\$32 a pound, only C\$7 away from the record high of about \$39 a pound set in June 2005, when a processing bottleneck hit supplies.

Demand for molybdenum drives project

Three-quarters of global annual molybdenum production is used to manufacture stainless steel, demand for see RUBY CREEK page 9



New cores from drill holes on north end of open pit area and current drilling through and beyond the north side of the Adera Fault.

COURTESY OF ADANAC MOLYBDENUM CORP.

• NUNAVUT

Exploration spending peaks in Nunavut

Uranium hunters drive mineral industry activity to eighth yearly high in Canada's Far North territory

By ROSE RAGSDALE
For Mining News

The government of Nunavut reported figures in early November suggesting the Canadian territory is heading for its eighth year of record spending on mineral exploration and development.

A sector that injected about C\$26 million into the economy in 1999 is now expected to pump in more than C\$256 million in 2007. That's nearly one-quarter of Nunavut's entire gross domestic product and a 17 percent jump from last year.

Over 65 exploration companies were active in Nunavut in 2006.

With the Jericho diamond mine, operated by Tahera Diamond Corp., leading the pack, Nunavut also has three advanced exploration projects expected to become operating mines over the next three to five years, and many other projects with prospects of becoming mines over the next 10 years, Nunavut officials say.

The now closed Lupin, Polaris and Nanisivik mines are also in reclamation, which is expected to continue for the next few years.

As in 2006, uranium drove most of the exploration spending in Nunavut this year. Of Nunavut's 135 active exploration projects, 49 involve uranium. Diamonds come next at 41 projects, followed by gold with 25.

High commodity prices have even spurred interest in lower-value resources. Nunavut has nine base metals projects,

The now closed Lupin, Polaris and Nanisivik mines are also in reclamation, which is expected to continue for the next few years.

Existing and near-potential mining projects in Nunavut

Mining Project	Operations Stage	Commodity	Duration
Jericho	Producing mine	Diamonds (4.7 million carats)	2006-2014+
Hope Bay (Doris North)	Mobilization of construction materials	Gold	2007-2009+
Meadowbank	Mobilization of construction materials	Gold (330,000/yr avg.)	2008-2015+
High Lake/Ulu	Preparing to seek start of review process	Copper, gold	2009-2020+
Exploration Project	Operations Stage	Commodity	Duration
Mary River	Pre-feasibility completed	Iron ore	Up to 34 years
George Lake, Goose Lake		Gold	
Hackett River		Gold, silver, zinc, copper	
Coppermine		Diamonds, uranium, Diamonds	
Victoria Island Kimberlites		Nickel, copper, PGMs	
Ferguson Lake		Gold	
Committee Bay		Gold	
Meliadine		Gold	
Churchill Diamonds		Diamonds	
Aviat JV		Diamonds	
North Baffin		Diamonds	
Qimmiq		Gold	
Beluga		Sapphires	

Source: Government of Nunavut Department of Finance

ects, six companies examining nickel-copper deposits and two focused on iron.

The activity is spread all over the territorial map — from the massive Mary River iron project on the tip of Baffin Island to the advanced gold and uranium projects around Baker Lake and Rankin Inlet in the central region to diamond exploration around Coronation Gulf in the far west.

In 2007, two major mining multinationals — Zinifex Ltd. and Newmont Mining — have bought out junior companies with projects in Nunavut.

Territorial figures show about half the money is spent in the central region. The rest is equally divided between Baffin Island and western Nunavut.

Industry interest is expected to intensify as more prospecting permits become available Dec. 1. ●

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• A L A S K A

Fort Knox mine to add jobs, equipment

Army Corps OKs new heap leach facility; improved operations, exploration will boost yearly production and extend life of project

By ROSE RAGSDALE

For Mining News

Between phase 7 of its exploration program, a new heap leach facility and an extended mine life, Fairbanks Gold Mining Inc. is ramping up activity to boost production more than 6,000 ounces annually at the Fort Knox gold mine in Interior Alaska.

The “exciting” growth will mean new hires and major equipment purchases, Fairbanks Gold executive Dan Snodgrass told the Alaska Miners Convention in early November.

Snodgrass said Fairbanks Gold, a wholly owned subsidiary of the Canadian mining giant Kinross Gold Corp., plans to hire significantly more employees, including 19 people to work in ore processing and 30 or so in mine operations. The mine currently employs 400 people full time.

To meet the needs of a new heap leach facility, Fairbanks Gold also has placed orders for six more 240-ton trucks and is buying a larger 35-yard shovel. Workers are stacking stockpiled waste rock at a rate of 40 tons per day in 3-foot lifts in the heap leach operation, Snodgrass said. The process will enable Fort Knox to extract additional gold from millions of tons of stockpiled low-grade (0.0064 average) rock formerly categorized as waste that now can be processed for \$1.28 per ton vs. nearly \$5 per ton if the ore were processed through the mill, he said.

“Our priorities are in line with our environmental responsibilities,” Snodgrass said. “If you are going to mine in this day and age, you ought to be able to do so with this set of priorities.”

Heap leach facility will extend mine’s life

The U.S. Army Corps of Engineers, Alaska District, issued a permit Oct. 31 for a heap leach facility at Fort Knox capable of handling 161 million tons, or 153.3 million metric tons, of rock.

The proposed Walter Creek Fill Heap Leach Facility project would be situated in the northwest portion of the mine site upstream of the mine’s tailings ponds and



Fairbanks Gold Mining Inc. said it plans to purchase six new 240-ton haul trucks to help out with expanded mine operations at the open pit Fort Knox gold mine near Fairbanks. Here, one of six 190-ton Caterpillar haul trucks purchased in 2004 hit the dirt during a past capital investment in the mine’s extensive dirt-moving fleet.

seepage collection system. It would encompass 403 acres, including 57.6 acres of U.S. waters, the Corps said.

Kinross originally expected Fort Knox production to end in 2010. The heap leaching should keep the mine active until 2014 and processing facilities operating through 2019.

Since December 1996, when the mine opened, Fort Knox has produced more than 3.5 million ounces of gold.

Kinross reported a 5 percent increase in gold production in the third quarter at Fort Knox, compared with the same period in 2006, due to the processing of higher grade ore somewhat offset by less plant throughput. Revenue from Fort Knox rose 19 percent to \$64.1 million from \$54 million a year ago due to higher realized gold prices and higher sales of gold equivalent ounces.

Gold prices recently have climbed to more than \$750 an ounce.

The cost of third-quarter sales of Fort Knox production also jumped 29 percent year-over-year, due mainly to increases in revenue-based royalties and higher costs, especially for fuel, power and steel.

Fort Knox will produce 338,000 ounces of gold this year on an operating budget of \$102 million, Snodgrass said. A major employer in the Fairbanks area with a \$39 million annual payroll and \$2.3 million in taxes, the mine also draws on goods and services from some 500 local companies

and contractors. It also is expected to consume more than \$14 million in fuel and some \$80,000 per day in electricity this year.

Process clears intensive federal, state scrutiny

Heap leaching is a gold ore-processing technique used to recover gold from low-grade, oxidized ore. It involves stacking ore on an impermeable pad and spraying or dripping a solution of sodium cyanide over the ore. Microscopic particles of gold dissolve in the solution, which is later retrieved and processed to extract the gold.

A valley fill heap leach uses a valley’s walls as part of the containment structure for the stacked ore.

Fairbanks Gold applied for the Corps permit in May 2006.

After an extended review that included consultation with the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service and others, the Corps issued the permit provided that the State of Alaska oversee the operation and any reclamation required when production is completed.

The Alaska departments of Natural Resources and Environmental Conservation issued state authorizations for the project July 3.

“It took a lot of work,” said Snodgrass, who observed that obtaining regulatory permits require a lot of back and forth between agencies and applicants rather than a simple “yes or no.”

“We got a lot of ‘No’s and a lot of ‘Hell, no’s, but we got it done,” he said.

Programs add gold to resource estimate, production

Fort Knox, meanwhile has entered phase 7 pit expansion and completed 19 percent of a \$9 million exploration program. The operator also has added 300,000 ounces of gold to the mine’s resource estimate, according to Snodgrass.

With five rigs running throughout the year, explorers have drilled more than 166,000 feet, he said.

The mine also completed a major equipment upgrade at the mill that should boost annual gold production by 6,000 ounces, he added. ●

COURTESY OF ADANAC MOLYBDENUM CORP.



Adanac purchased 40 acres of deeded land at Surprise Lake in 2007 for Ruby Creek mine construction materials storage, pre-production for a 50 man camp, Leducor Construction field offices and fenced staging area compound. Those are now completed and ready for occupancy.

continued from page 9

RUBY CREEK

which is expected to grow by around 6 percent a year for some years to come.

Adanac hopes to make Ruby Creek the world’s first large-scale primary producer molybdenum mine in 25 years, and company officials estimate they have an 18-month head start on rivals.

Plans call for developing a low-grade bulk-type mining operation expected to produce 12-14 million pounds of molybdenum annually during the first four years of

an estimated 21-year mine life. Startup and commissioning of a 20,000 tonne (metric ton) per day concentrator is scheduled for the first quarter of 2009.

Adanac hired Leducor CMI Ltd. of Vancouver to act as general contractor for the construction, along with local and regional subcontractors.

The British Columbia government issued an Environmental Assessment Certificate for the Ruby Creek project in September. The project is described by regulators and stakeholders as “socially and environmentally” clean. ●

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BRITISH COLUMBIA

Agencies challenge ruling on Red Chris

Canada's ministries of Fisheries and Oceans and Natural Resources have joined the attorney general of Canada and Imperial Metals Corp. subsidiary bcMetals Corp. in appealing a Sept. 25 ruling of the Federal Court of Canada, which set aside a federal screening report issued May 2006 on bcMetals' Red Chris project, according to Imperial Metals.

At issue is the nature of the discretion of federal authorities to scope a project under the Canadian Environmental Assessment Act.

Imperial is pursuing startup in 2008 of Red Chris, a C\$228 million open-pit porphyry copper-gold development 280 miles north of Smithers, B.C. The project is expected to produce 110 million pounds of copper and 75,000 ounces of gold in concentrates during its first five years in operation.

The Red Chris project was subject to both provincial and federal environmental review. Based on the initial project description, Red Chris was first scoped for comprehensive study level review by the responsible federal agencies. After the federal regulators received additional project information, including word that the project was undergoing a full provincial environmental assessment, it was determined that the federal environmental assessment would proceed via a screening report, the company said.

A comprehensive environmental review was then carried out by the province under the B.C. Environmental Assessment Act, in full cooperation with the federal regulators. The review covered the technical, environmental and socio-economic elements of the project and included consultation with the Tahltan First Nation and other local communities as well as public scrutiny.

In July 2005, the B.C. government issued a provincial environmental assessment report that concluded the project was not likely to cause significant adverse environmental effects. The project subsequently received a provincial environmental certificate.

In April 2006, federal regulators issued their screening report, which also concluded that the project was not likely to cause significant adverse environmental effects.

The appeal, announced Oct. 31, affects only the federal environmental assessment. If it is successful, the federal screening report will stand. Otherwise, the federal agencies will be required to carry out a comprehensive study level review, which Imperial contends will substantially duplicate work already done by the provincial government.

—MINING NEWS

Imperial is pursuing startup in 2008 of Red Chris, a C\$228 million open-pit porphyry copper-gold development 280 miles north of Smithers, B.C.



COURTESY BARRICK GOLD CORP.

• A L A S K A

Truce called at Alaska's Donlin Creek project

Toronto heavyweight and Vancouver junior agree on 50/50 partnership to operate world-class gold project in western Alaska

By SHANE LASLEY

Mining News

Toronto-based Barrick Gold Corp., the world's largest gold producer, and Vancouver-based junior NovaGold Resources Inc. have agreed to a 50-50 partnership on the world-class Donlin Creek project in western Alaska.

Barrick and NovaGold have agreed to form Donlin Creek LLC. The new company will operate the project and is owned equally by both partners. Donlin Creek LLC will have four board members, with two members selected by each company. NovaGold nominated Doug Nicholson, vice president NovaGold Resources Alaska, to be the general manager of the project until Dec. 31, 2009, and Barrick has agreed to this. All major decisions on the project would require agreements by both Barrick and NovaGold.

The agreement was announced a week before Barrick's deadline to meet certain requirements, including submitting a feasibility study on the project, to raise its ownership stake in the project from 30 to 70 percent.

Since 2003 when Barrick bought Placer Dome, which at the time was NovaGold's joint venture partner in the Donlin Creek project, the major has spent about \$127 million on the project. NovaGold will pay back half of that amount as part of the agreement.

Rocky past

The two companies have had a rocky relationship from the start. NovaGold asserted that Barrick was behind schedule in the mine development program and would not be able to make its deadlines. Barrick countered with an unsuccessful takeover bid for NovaGold.

In response to that aggression, NovaGold filed suit in Alaska Superior Court to have the agreement between the companies nullified. This would have given NovaGold a permanent 70 percent share in the project. Barrick and NovaGold have agreed to drop all outstanding litigation.

"This agreement represents the best way forward for the advancement of Donlin Creek," Barrick's President and CEO Greg Wilkins said. "It removes the uncertainty of pending litigation and will allow us to make further progress on the project."

As part of the settlement Barrick has agreed to sell the Grace Claims to Galore Creek Mining Co., which is owned 50-50 by Tech Cominco and NovaGold. The claims lie adjacent to the copper-gold-silver Galore Creek project in northwestern British Columbia.

Moving forward

The companies have said that Donlin Creek LLC will continue to work closely with the two Native corporations in the region, Calista Corp. and Kuskokwim Corp.

Both Calista and Kuskokwim say they support responsible development of Donlin Creek. Calista owns the property on which Donlin Creek sits and would receive royalties generated by the project, which is considered one of the largest undeveloped gold deposits in the world with a measured and indicated resource of nearly 20 million ounces.

Donlin Creek LLC will compile the necessary data to complete a final feasibility study in the first half of 2008, the companies said. Once the feasibility study is complete, the JV said it will pursue necessary permits to move Donlin Creek into production. •

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• GUEST COLUMN

Most exciting industry developments in a decade highlight '07 Alaska Miners Convention

By CURT FREEMAN

For Petroleum News

For those of you who could not attend the Alaska Miners Association convention in Anchorage in early November, you missed what I understand was a record attendance and presentations on some of the most exciting mining developments in the last decade. In addition, I noticed a lot more business being conducted around the conference hotel than is normally the case. Geologists and engineers from companies large and small could be seen hunkered down over reports and maps with prospectors and consultants. The atmosphere was electric with anticipation over what 2008 will bring.

Western Alaska

TECK-COMINCO reported third-quarter 2007 results from their Red Dog mine which turned in operating profits of \$380 million vs. an operating profit of \$216 million in the same period in 2006. For the quarter, the mine generated 154,400 metric tons of zinc and 36,000 metric tons of lead in concentrate versus 155,300 and 32,900 metric tons of zinc and lead, respectively, in the third quarter of 2006. The mine sold 177,800 metric tons of zinc and 91,300 metric tons of lead during the third quarter.

Average zinc and lead grades mined were 20.5 percent and 6.2 percent vs. 20.5 percent and 6.1 percent, respectively, in the third quarter of 2006. Mill throughput of 884,000 metric tons in the third quarter was down slightly from the 891,000 metric tons milled in the third quarter 2006.

During the early July to late October shipping season the mine shipped a total of 1,070,000 metric tons of zinc concentrate and 262,000 metric tons of lead concentrate. During the third quarter the mine paid out \$127 million in royalties to its partner, **NANA REGIONAL CORP.**

Hands down, best news of the month: **NOVAGOLD RESOURCES** and partner **BARRICK GOLD** reported that they have reached an agreement to advance the development of the Donlin Creek project and resolve all outstanding legal disputes between the two companies. The various transactions contemplated in the settlement include formation of a 50-50 limited liability company to develop Donlin Creek, dismissal of all legal suits between the par-

ties and a transfer to NovaGold of the **GRACE** claims at the Galore Creek copper project in northern British Columbia.

The companies have appointed Doug Nicholson, vice president of NovaGold Resources Alaska, to serve as the initial general manager of the Donlin Creek project until Dec. 31, 2009. As part of the restructuring, NovaGold has agreed to reimburse Barrick over time for approximately \$63.5 million by paying the next approximately US\$12.7 million of Barrick's share of project development costs.

The remaining approximately \$50.8 million will be paid out of future mine production cash flow.

In early October **ST ANDREW GOLDFIELDS** reported a temporary suspension of production at its Nixon Fork gold mine in order to concentrate its efforts on better defining the existing mineral resources and identify new zones of gold-copper mineralization. The company has been encountering ore production issues at the upper portion of the 3300 zone of the Crystal deposit as the actual geometry of the mineralized zone is much different than the mineral reserve estimated.

During the temporary suspension in production the company will con-

tinue delineation drilling of the existing mineral resources and reserves in the 3000 and 3300 zones in order to better define the irregular geometry of the gold mineralization. In addition, both underground and surface drilling will be conducted during the winter and spring of 2007-08 at various locations along the approximately 4 kilometer long, monzonite-limestone skarn contact zone where previous drilling has intersected a number of anomalous zones, namely the Mystery, J5A, Southern Cross and Whalen zones. The company also is considering a grassroots exploration program for the summer of 2008, which will focus on several known zones of gold mineralization on the mine property, such as the Pupinsky and Cowboy Shear zone.

NPN INVESTMENT GROUP and JV partner **MILLROCK RESOURCES INC.** reported drilling results from their Divide gold project near Nome. Five holes totaling 561.1 meters were drilled to test a strong gold-arsenic soil anomaly on the property. The anomaly measures more than 2,600 meters long and 660 meters wide.

The strongest portions of the anomaly, which exceed 200 parts-per-billion gold over a broad area, had not been

previously drill tested. Highlights of the drilling program include 8.99 meters grading 1.5 grams of gold per metric ton in hole DIV-07-03, 3.05 meters grading 10.0 grams of gold per metric ton in hole DIV-07-04 and 8.23 meters grading 5.8 grams of gold per metric ton in hole DIV-07-05. The companies are planning on expanding exploration activities in 2008.

FULL METAL MINERALS LTD. and **TRIEX MINERALS CORP.** reported the discovery of a new uranium zone at its Boulder Creek project on the Seward Peninsula. Exploration focused on the Boulder Creek deposit and the newly discovered Fireweed prospect.

A total of 1,790 soil samples were collected at McCarthy Marsh 30 kilometers west of Boulder Creek and 230 soil samples were collected over the new Fireweed occurrence 25 kilometers north along-strike from Boulder Creek.

A ground magnetic survey was completed over the entire McCarthy Marsh grid and a portion of the Fireweed grid. Detailed mapping and scintillometer prospecting were done in both areas. A total of 129 biogeochemical samples were also collected from these two grid areas.

Following discovery of a 1,800 meter long east-west by 700 meter wide north-south area of anomalous radiometric content, five short drill holes were completed for a total of 267 meters. Quartz syenite is the predominant host rock. Brick red hematite-silica zones similar in appearance to the pebbles mapped on surface were observed in hole 5 and were five times background radioactivity. Geochemical results are pending. Diamond drilling also was conducted at the Boulder Creek deposit where eight holes were completed for a total of 890 meters. No new and continuous zones of significant radioactivity were intersected at Boulder Creek.

GOLD CREST MINES reported exploration results from its Luna project. During 2007 exploration included 16 line-miles of induced polarization-resistivity geophysics and 40 line-miles of ground magnetics. A total of 41 stream silt samples from the prospect area outline a 10 square mile gold, arsenic, and antimony anomaly. Silt samples returned values up to 1052 parts-per-billion gold. A total of 40 of 72 rock chip samples collected from the prospect area contain anomalous gold, with values as high as 0.75 ounces of gold per ton.

Gold is associated with anomalous arsenic (up to 8,400 parts per million), antimony (up to 158 parts per million), bismuth (up to 36 parts per million), molybdenum (up to 64 parts per million), silver (up to 23 parts per million,) copper (up to 0.44 percent), lead (up to 0.12 percent) and

see FREEMAN page 12

The author

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• S O U T H E A S T A L A S K A

Greens Creek touts strong output, longevity

Mine's geologists, engineers adopt new technologies to improve efficiency of underground operation, offset declining ore grades

By ROSE RAGSDALE

For Mining News

Though owners of the Greens Creek Mine on Admiralty Island 18 miles south of Juneau say the underground operation ore grades have begun declining after some 15 years of production, they estimate the mine will produce commercial quantities of gold, silver, lead and zinc for at least another decade.

"We have 7.6 million tons of reserves left ... and it gives us 10 more years of production," said Mike Satre, mine technical superintendent at Kennecott Greens Creek Mining Co.

Greens Creek Mine is a joint venture between Kennecott and Hecla Mining Co. Operator and 70.3 percent owner Kennecott is a subsidiary of mining giant Rio Tinto plc.

Satre, a featured speaker at the Alaska Miners Convention in early-November, outlined changes under

In the third quarter which ended Sept. 30, Hecla said its 29.7 percent share of Greens Creek production was 679,884 ounces of silver, which cost an average of negative \$7.42 per ounce, reflecting a 148 percent improvement over the same period in 2006.

way at Greens Creek aimed at improving the efficiency of mine operations with the help of new software systems for mine planning, scheduling and production tracking.

Explorers, meanwhile, will continue to seek more tonnage and better grades of ore to replenish the mine's reserves, in part to offset the impact of declining grades, Satre said.

Higher metals prices offset higher costs

Greens Creek, so far, has produced 1.36 million

ounces of gold, nearly 2 million ounces of silver, 400,000 tons of lead and almost 1 million tons of zinc, Satre said.

In the third quarter which ended Sept. 30, Hecla said its 29.7 percent share of Greens Creek production was 679,884 ounces of silver, which cost an average of negative \$7.42 per ounce, reflecting a 148 percent improvement over the same period in 2006. The company said higher zinc, lead and gold prices earned enough byproduct credits at the primarily silver mine to more than offset increased costs from higher diesel prices and the use of contract labor to compensate for a shortage of qualified miners.

In the first nine months of 2007, Greens Creek provided \$30.6 million in gross profit for Hecla's account. In September, Greens Creek set a record for the largest monthly ore concentrate shipment in its history, the result of unusual timing between mining and shipping schedules, the company said. ●

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FREEMAN

zinc (up to 0.6 percent). Mineralization is hosted in calcareous siltstones, cherts and tuffaceous sedimentary rocks as well as in dikes, sills and small stocks ranging in composition from diorites and granodiorites to rhyolites.

The prospective area contains ubiquitous disseminated, vein and stockwork sulfide mineralization including several zones of stratiform sulfide replacement mineralization with cherty silica alteration containing up to 70 percent sulfides, primarily fine-grained pyrite, arsenopyrite and stibnite and to a lesser extent chalcopyrite and sphalerite. Additional work is planned in 2008.

GEOINFORMATICS EXPLORATION INC. reported additional drilling results from its Whistler project in southwestern Alaska. Work in 2007 has confirmed that the mineralization at Whistler is a gold-copper porphyry system which crops out at the surface over a 750 meter by 460 meter area and has been followed to a depth of 570 meters. Within this broadly mineralized envelope, the higher-grade Main Zone extends for 350 meters along strike averaging more than 100 meters in width with mineralization confirmed from surface to depths between 200 and 570 meters.

Additional drilling results include 354.6 meters grading 0.38 grams of gold per metric ton and 0.12 percent copper in hole 3; 64 meters grading 1.08 grams of gold per metric ton and 0.40 percent copper in hole 4 within a longer intersection of 238.7 meters grading 0.64 grams of gold per metric ton; and 0.27 percent copper and 54 meters grading 1.52 grams of gold per metric ton and 0.16 percent copper in hole 5 within 180 meters grading 0.84 grams of gold per metric ton and 0.16 percent copper. Additional drill results are pending for two of the seven holes in the 3,300-meter 2007 drill program.

INTERNATIONAL TOWER HILL

MINES has reported drilling results from its Terra gold project The Ben vein system, where most drilling has been completed, has been explored along strike for 400 meters and to 300 meters down dip and remains open in all directions. The mineralized vein varies in true width from 0.2 to 3.0 meters, and averages 1.04 meters at 19.8 grams of gold per metric ton with the high-grade zone averaging 1.27 meters at 23.0 grams of gold per metric ton.

The company also released results from the Ice vein prospects which returned 2.42 meters grading 9.53 grams of gold per metric ton in hole TR07-29 and 5.30 meters grading 3.89 grams of gold per metric ton in hole TR07-30. Initial drill testing of the Ice vein has established the continuity of this vein system for 175 meters down dip from the outcrop. An initial resource estimate is planned for this winter.

Eastern Interior

KINROSS GOLD reported third-quarter 2007 production results from its Fort Knox mine near Fairbanks. For the quarter the mine produced 85,755 ounces of gold vs. 81,348 ounces produced in the third quarter of 2006. Cash costs were \$338 per ounce vs. \$281 per ounce in the previous third quarter.

The mine processed 3,106,000 metric tons of ore grading 0.90 grams of gold per metric ton. Recovery for the quarter was 87 percent. Production increased 5 percent in the third quarter of 2007 as compared with the third quarter of 2006 due to a higher grade offset by lower plant throughput. Revenue increased 19 percent to \$64.1 million from \$54.0 million year-over-year due to higher realized gold prices and higher sales of gold equivalent ounces.

Cost of sales increased 29 percent year-over-year mainly due to increases in revenue-based royalties and higher consumable costs, in particular, for fuel, power and steel. The company continues to work on advancing the phase 7 pit expansion

and the Walter Creek heap leach project.

FREEGOLD VENTURES LTD. reported additional drilling results from the Tolovana vein prospect at its Golden Summit project. Drilling has extended the strike length of the high grade Tolovana vein to more than 825 feet. The Tolovana vein and its accompanying hanging and footwall gold mineralization remain open in all directions.

Highlights from the drilling include 78 feet averaging 4.11 grams of gold per metric ton in hole 581 including 9 feet averaging 28.53 grams of gold per metric ton; 75 feet averaging 1.24 grams of gold per metric ton in hole 589; and 69 feet averaging 2.18 grams of gold per metric ton in hole 600 including 3 feet averaging 26.98 grams of gold per metric ton. The company believes the Tolovana vein is continuous with the previously drilled and bulk sampled Wackwitz vein approximately 1,100 feet away to the east.

TECK-COMINCO reported third-quarter production results from its Pogo mine. For the quarter the mine produced 57,600 ounces of gold at a cash cost of \$554 per ounce. The operation treated 170,000 metric tons of ore grading 13.0 grams of gold per metric ton with a mill recovery of 81 percent.

Third-quarter production was lower than full capacity due to poor equipment availability and lower recoveries. Ore grades were also below planned levels due to stope sequencing and higher than expected ore dilution.

INTERNATIONAL TOWER HILL MINES reported additional drilling results from its Livengood gold project. Significant drilling results include 155 meters grading 0.77 grams of gold per metric ton in hole MK07-23 and 145 meters grading 0.74 grams of gold per metric ton in hole MK07-22.

In addition, step-out drilling 400 meters to the south intercepted 76 meters grading 0.60 grams of gold per metric ton in hole MK07-24 and 26 meters grading 0.65 grams of gold per metric ton in hole MK07-25. The company is planning to spend \$7 million on a 50,000 meter drilling program in 2008.

Northern Alaska

ANDOVER VENTURES INC. reported additional drilling results from its Sun massive sulfide project in the Ambler Mining District. Highlights included 37.01 meters grading 1.17 percent copper, 1.85 percent lead, 7.26 percent zinc, 44.0 grams of silver per metric ton and 0.179 grams of gold per metric ton, including 11.9

meters grading 1.07 percent copper, 5.38 percent lead, 16.54 percent zinc, 86.6 grams of silver per metric ton and 0.210 grams of gold per metric ton. Additional assays are pending.

LITTLE SQUAW GOLD MINES reported trenching values from its Chandalar gold project in the Brooks Range. Trenching on the Summit prospect cut a 20-foot-wide structure that assays 10.58 parts-per-million gold. The Summit structure is an east-west-trending shear zone that has been traced for more than a mile across the central sector of the project.

Prospecting along this structure has identified gold mineralization over at least 1,800 feet of its strike length. Gold values are hosted in irregular quartz lenses and in a shear zone. Core drilling is planned for this zone in 2008.

Southeast Alaska

COEUR D'ALENE MINES said it will join the Southeast Alaska Conservation Council, Lynn Canal Conservation and the Juneau Group of the Sierra Club in requesting that the U.S. Forest Service examine the use of a site near Comet Beach for disposal of the Kensington mine tailings. The site is essentially the same as the previously approved Dry Tailings Facility site, but Coeur is now proposing to store the tailings using paste technology instead of dry stacking.

Based on the 1997 supplemental environmental impact statement for this site and the work of environmental consultant Dr. David Chambers, the conservation groups believe that the potential adverse environmental impacts of the Comet Beach site are less than the impacts of alternative sites that have been identified. If the Comet Beach site is approved, Lower Slate Lake would not be used in any way for tailings storage or disposal.

Any revised operations plan is subject to federal, state and local regulatory approval and permitting. The next step is for the parties to meet with the Forest Service to discuss the regulatory process that would be followed to evaluate the Comet Beach site.

PURE NICKEL INC. announced its plans for exploring its Salt Chuck copper-palladium property on Prince of Wales Island. The company has completed ground reconnaissance and mapping, community consultation with area stakeholders and is planning to carry out 2,500 meters of diamond drilling beginning in late November. ●



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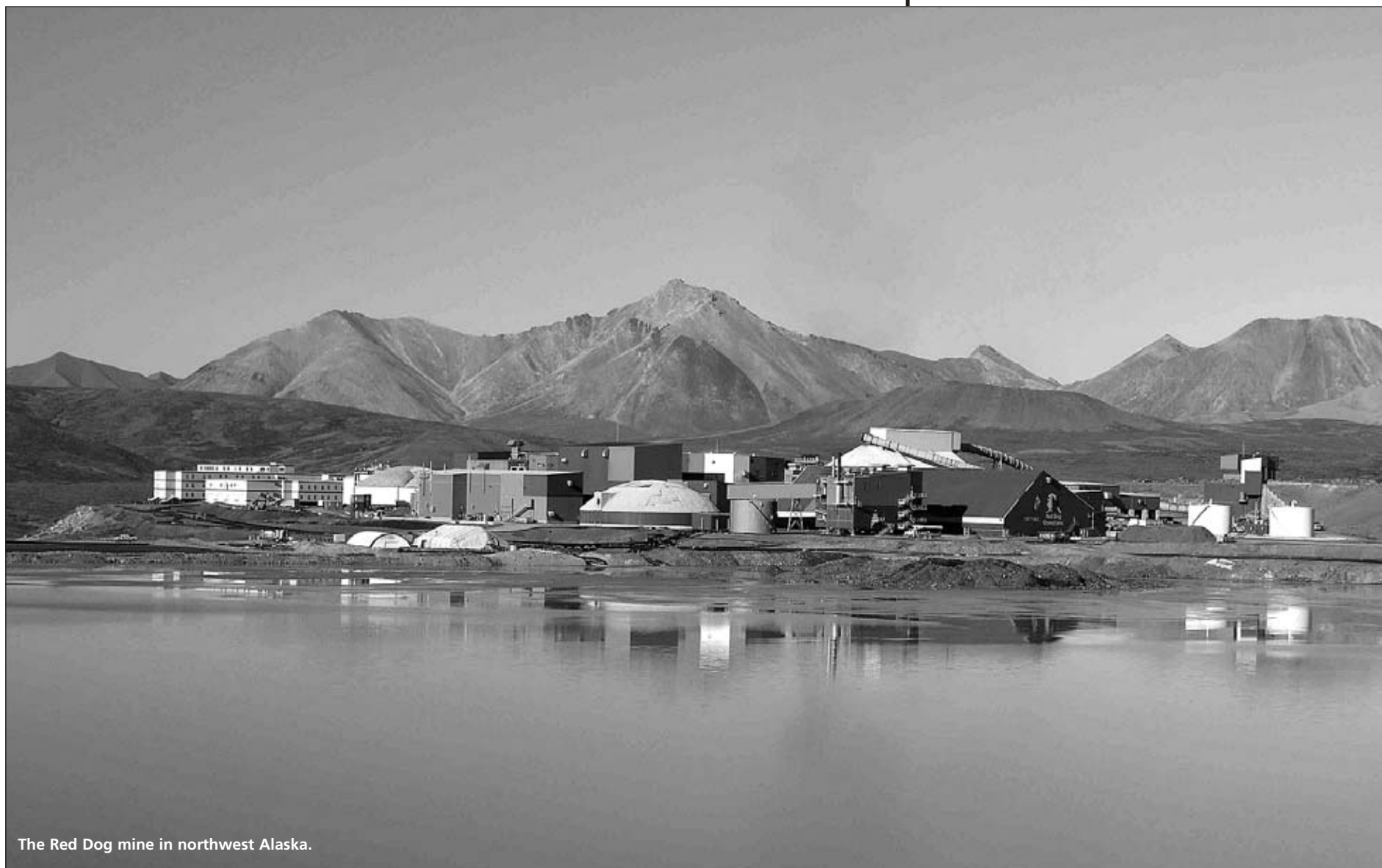
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DIRECTORY



The Red Dog mine in northwest Alaska.

Mining Companies

Fairbanks Gold Mining/Fort Knox Gold Mine

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Located 25 miles northeast of Fairbanks, Fort Knox is Alaska's largest operating gold mine, producing 340,000 ounces of gold in 2004.

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• S O U T H E A S T A L A S K A

Coeur, enviros unveil tailings plan

Parent company reports lower profits on less production; appeals court denies rehearing on wet tailings disposal for Kensington

By ROSE RAGSDALE & SHANE LASLEY

Mining News

Coeur Alaska Inc., operator of the Kensington Gold Project near Juneau, has joined Southeast Alaska Conservation Council, Lynn Canal Conservation and Juneau's Sierra Club in drafting a new plan for disposing of tailings from the mine project.

Juneau Mayor Bruce Botelho announced the agreement Nov. 15, saying Coeur Alaska and the groups "will ask the U.S. Forest Service to examine the use of a site near Comet Beach for disposal of the Kensington mine tailings."

Two weeks earlier, a three-judge panel of the 9th Circuit Court of Appeals refused to reconsider an earlier decision that deemed disposal of the tailings in a near-by lake illegal.

The appeals judges denied requests for rehearing from Coeur Alaska, the State of Alaska and Goldbelt Inc. as well as a limited petition for rehearing filed by the U.S. Department of Justice, representing the U.S. Forest Service and the U.S. Army Corps of Engineers.

The same 9th Circuit panel had ruled May 22 in favor of an appeal by SEACC, the Sierra Club and Lynn Canal Conservation challenging the Kensington Section 404 Permit issued by the corps.

Though the wet tailings disposal plan had survived federal and state regulatory scrutiny, the groups filed suit to block it on the grounds that it violated the federal Clean Water Act.

In August, Coeur Alaska, a subsidiary of Idaho-based Coeur d'Alene Mines Corp. asked the 9th Circuit to allow the case to be reviewed by all 15 appeals judges. The request was denied Oct. 30.

'Paste' tailings bring parties together

Coeur now proposes to convert tailings from mine waste generated in processing gold ore at Kensington into a dense paste similar to wet concrete and store them on dry land near Juneau. The move would eliminate the need to use the 20-acre Lower Slate Lake for wet tailings disposal.

Coeur Alaska met with the environmental groups in October and early November in hopes of crafting a mutually agreeable dry tailings plan for the mine. The City and Borough of Juneau had offered to sponsor a third-party facilitator to meet with the parties to work toward a desirable outcome.

The Comet Beach site is essentially the same as the previously approved dry tailings facility site, but Coeur is now proposing to store the tailings using "paste technology" instead of dry stacking, Botelho said.

Based on the 1997 supplemental environmental impact statement for this site and the work of environmental consultant Dr. David Chambers, the conservation groups believe that the potential adverse environmental impacts of the Comet Beach site, which is about 45 miles northwest of Juneau, are less than the impacts of other alternatives that have been identified. If the Comet Beach site is approved, Lower Slate Lake would not be used in any way for tailings storage or disposal, he said.

"Any revised operations plan is subject to federal, state and local regulatory approval and permitting. The next step is

for the parties to meet with the Forest Service to discuss the regulatory process that would be followed to evaluate the Comet Beach site. Development of a final plan of operations is expected to be an iterative process because both Coeur and the conservation groups expect that the regulatory process will help define further details of the disposal plan. All of the parties have pledged to cooperate and work with the regulators to complete evaluation of the proposed site in as timely a manner as possible. The parties have preserved all of their legal rights, pending final permitting of the mine," Botelho added.

Coeur, which has spent \$250 million developing the Kensington project, cannot start production without a permit for tailings disposal. The company can come up with an approved method for disposing tailings or appeal the case to the U.S. Supreme Court.

Coeur Alaska spokesman Tony Ebersole said an appeal to the high court has not been ruled out.

Parent company's third-quarter profits dip

Coeur d'Alene Mines Corp., parent of Coeur Alaska, meanwhile, reported a decline in third-quarter profits to \$3.6 million, or 1 cent per diluted share, on revenue of \$52.9 million. That compared with \$18.4 million, or 6 cents per diluted share, on \$50.6 million during the same period in 2006.

Included in the 2007 third-quarter results were expenses of \$2.5 million associated with the halt of mining activities at the Rochester mine during the third quarter.

Profits for the first nine months of 2007 also lagged performance a year earlier, totaling \$29.6 million, or 10 cents a diluted share on revenue of \$155.4 million. That reflects a 56 percent drop from \$65.3 million, or 23 cents a share, on revenue of \$149.5 million a year ago. Results for the first nine months of 2006 included a gain of \$11.1 million from the sale of Coeur Silver Valley as well as \$2 million of income from Coeur Silver Valley's operations.

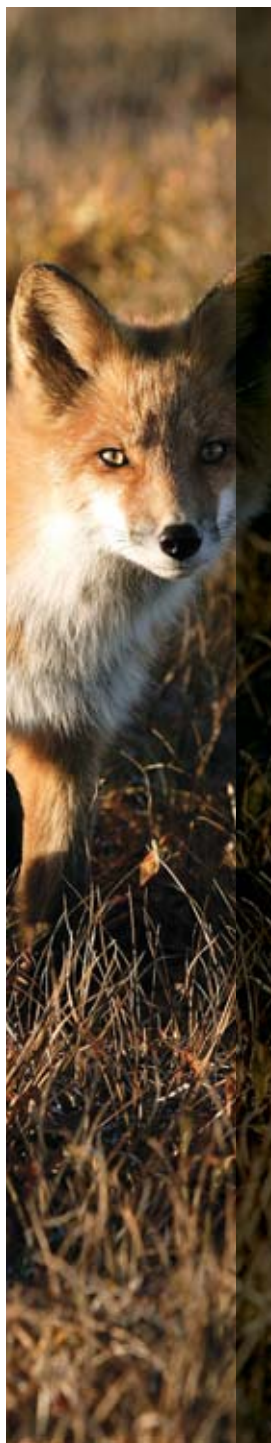
Coeur said it produced 2.7 million ounces of silver and 20,500 ounces of gold during the third quarter and 8.3 million ounces of silver and 70,500 ounces of gold through the first nine months of the year, respectively. That compared with production of 3.3 million ounces of silver and 30,000 ounces of gold and 9.4 million ounces of silver and 84,500 ounces of gold during the same periods in 2006.

Coeur reported that the mill and related surface facilities at the Kensington Gold Project are now 100 percent complete, as is the nearly 2.5-mile underground tunnel connecting the Kensington and the Jualin properties, where the mill and processing facilities are located. Contractors from Kake Tribal/Redpath Native Corp. joint venture, along with Coeur Alaska, completed the final 6,800 feet of tunneling during the past year.

The Kensington Mine is expected to produce 150,000 ounces of gold per year in its initial years at an estimated cash cost of \$310 per ounce of gold, with an expected 10-15 year mine life based on current mineral inventory. The mine has 1.35 million ounces of proven and probable gold mineral reserves. ●



The Kensington Gold Project near Juneau



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