Petroleum news

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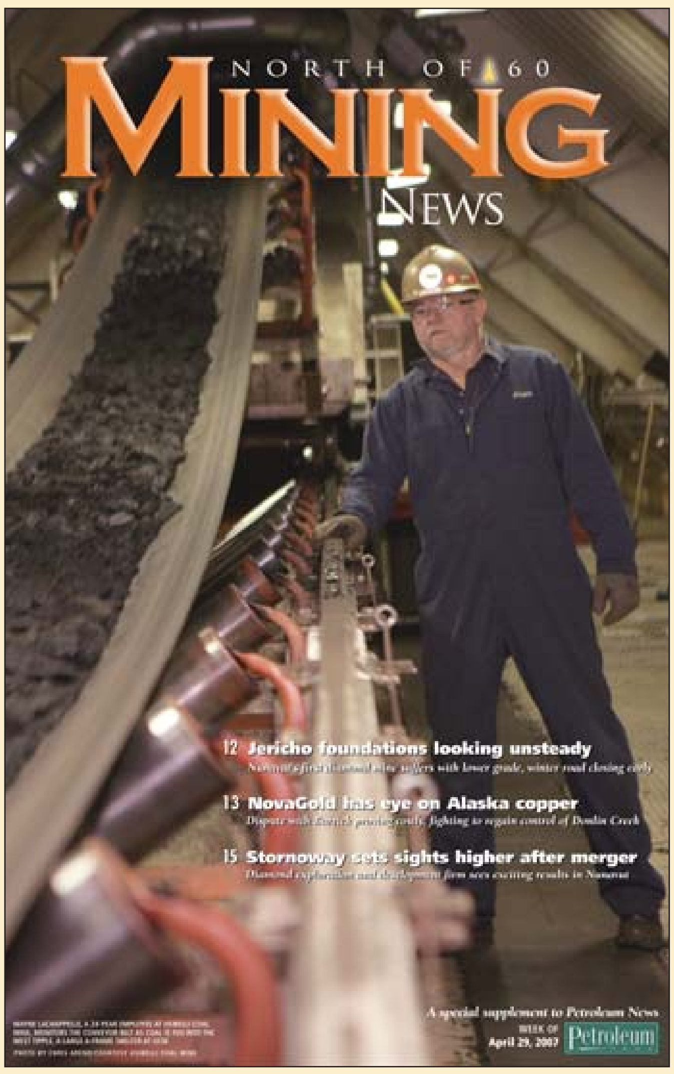
page 5 Sue, lose and you'll pay: Alaska high court upholds Rule 82 change

This month's Mining News inside



Alaska governor's office seeks new D.C. lobbyists

Oil Patch Insider

AFTER NEARLY THREE DECADES of working with the same firm in Washington, D.C., the State of Alaska is advertising for new lobbyists to help drive home its messages in Congress.

In a request for proposal issued April 4 on behalf of the governor's office in D.C., Alaska officials advertised for "LOBBY SERVICES, General, ANWR, and Oil & Gas Development."

The deadline for responses to the RFP, initially April 25, has been extended until May 7.

Asked if the new lobbyists are being hired to promote oil and gas development in the Arctic National Wildlife Refuge, John Katz, director of the governor's office in D.C, said the RFP is "broader than ANWR."

So does this hiring effort signal the beginning of a new

see **INSIDER** *page 19*

BREAKING NEWS

NATURAL GAS

AGIA moves in House

Resources CS has contractual tax freeze, vouchers, multi-tier projects

By KRISTEN NELSON

Petroleum News


SARAH HURST

It was a hard night's work, but shortly after 11 p.m. April 24 House Resources agreed on a committee substitute for the Alaska Gasline Inducement Act. House Finance is scheduled to begin hearing the bill April 27.

Senate Finance began hearing the companion bill April 23, so both bills are now before their final committees.

The House Resources committee substitute included a number of changes recommended by the administration and changes incorporated from the Senate Judiciary version as well as amendments proposed by committee members. The bill, 21 pages when the administration introduced it in

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FINANCE & ECONOMY

Husky runs with the big dogs

Announces two-for-one stock split; looking at stake in U.S. refinery

By GARY PARK

For Petroleum News


Husky CEO John Lau

Once the runt of the litter, Husky Energy is now a full-fledged member of the pack, snapping at the heels of its peers and nuzzling up to its investors.

In quick succession in mid-April it announced a two-for-one stock split, put out word that it is considering swapping equity in its planned Sunrise oil sands project for a stake in a U.S. refinery, served notice to operator Petro-Canada that it believes it is entitled to a larger share of Newfoundland's Terra Nova project and retained its place among Canada's leading drillers despite inflationary costs.

In the same league as Imperial Oil, Suncor Energy, Petro-Canada and Shell as a fully integrated (producer, refinery and marketer) producer, Husky — controlled by Hong Kong business tycoon Li Ka-shing — has been on a roll over recent years.

Its shares have climbed 35 percent over the past 15 months, peaking at C$84.85 on the Toronto Stock Exchange — enough to prompt the split.

As it pushes ahead with engineering work on its planned 240,000 barrel-per-day Sunrise project it is also exploring solutions for transporting, upgrading and refining the production, scheduled to start at 60,000 bpd in 2010-11.

Industry sources have identified Husky as one

see **HUSKY** *page 20*

FINANCE & ECONOMY

Alaska's PPT rides again

Bill would exclude cost deductions related to improper maintenance

By KRISTEN NELSON

Petroleum News


Alaska Sen. Tom Wagoner

Despite early fanfare and many co-sponsors, bills to restrict deductions under the state's new petroleum profits tax (PPT) looked to be dying a slow death in both the House and Senate. But in spite of furor over last year's transit-line corrosion at the BP-operated Prudhoe Bay field and BP's intention to deduct pipeline replacement costs as capital expenses under PPT, House Bill 128 and its partner, Senate Bill 80, seemed to be fading in the dust behind ethics legislation and the governor's Alaska Gasline Inducement Act.

The bills, sponsored by Kenai Republicans Rep. Kurt Olson and Sen. Tom Wagoner, would add repair and replacement costs due to improper maintenance to the list of items that cannot be deducted as lease expenditures under PPT.

The House Special Committee on Oil and Gas heard HB 128 and moved a committee substitute, but that stalled in House Resources and was consigned to a subcommittee March 28 as Resources prepared to take on AGIA. Resources has now finished its work on AGIA, but if it clears Revenue, HB 128

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contents

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

NATURAL GAS

Ins, outs of developing ANS gas fields

MMS's Jim Craig talks about what, and how long, it will take to develop new natural gas discoveries on Alaska's North Slope

By ALAN BAILEY
Petroleum News

The ongoing debate about a natural gas line from Alaska's North Slope has focused attention on the economics of the line and issues such as expandability of pipeline capacity to accommodate as yet undiscovered gas. But what might be involved in bringing on stream a new gas field on the North Slope, in the Brooks Range foothills or offshore in the Beaufort or Chukchi Seas? Could such a field be viably developed? And how does all of this play into the economics and risks of gas line development?

U.S. Minerals Management Service geologist Jim Craig talked to Petroleum News April 12 about the practicalities of gas field development; Craig has been involved in MMS economic evaluations of northern Alaska oil and gas resources.

In essence, there's relatively little difference between gas fields and oil fields, in terms of what is involved in exploration and development, Craig said. Both types of field are discovered through the use of seismic surveying and exploration drilling. Following a discovery, delineation wells clarify the extent of the petroleum pool. And field development in Arctic Alaska entails the construction of gravel pads, production facilities and an export pipeline, as well as the drilling of field development wells.

In northern Alaska, both exploration and development often require the construction of airstrips and winter ice roads.

JUDY PATRICK

Next winter Anadarko Petroleum and its partners (the Alaska subsidiaries of Petro-Canada and BG Group) will likely drill its first gas targets in the winter of 2007-08. In early 2007 the partners ordered a new drilling rig and remote camp from Nabors Alaska Drilling for a multi-year drilling program on their shared acreage in the gas-prone Brooks Range Foothills. To date, no explorers have targeted gas on the North Slope for anything other than the tiny local market at Barrow. Pictured above is Anadarko's first oil exploration well in Alaska in the National Petroleum Reserve-Alaska at the company's Altamura prospect.

Fewer wells

But the development drilling in a gas field typically requires fewer wells than an oil field, and that could reduce field development time — the relatively wide spacing of gas production wells might drive a need for more, smaller drilling pads than would be found in an oil field.

"Because gas moves more easily through the rock (than oil), the spacing on the wells … is a lot farther apart than on an oil field," Craig said. "As a rule of thumb it's usually four times the drainage per well for a comparable reservoir. …So you'd drill a lot fewer wells, maybe a quarter of the wells."

And unlike an oil field, a gas field doesn't need injection wells to maintain reservoir pressure and drive the petroleum fluids to the production wells, Craig said.

In addition, gas well completions tend to be fairly simple, with typical wells penetrating vertically through the gas reservoir.

However, Craig cautioned against assuming that the simpler drilling requirements of a typical gas field would necessarily have a dramatic impact on overall field development time scales. Oil or gas fields usually go into production part way through the development drilling program, at a point where there are sufficient producing wells to render production viable, Craig said.

Wet gas

A key factor for gas production in northern Alaska is that most gas found in the region is likely to be what geologists term "wet gas," formed by the thermal cracking of hydrocarbon material deep underground. Wet gas contains condensates in addition to methane, the primary component of natural gas. Condensates are hydrocarbons that condense as liquids at surface temperatures and pressures.

Thermally generated gas also commonly contains incombustible impurities such as carbon dioxide, and perhaps hydrogen sulfide.

The presence of condensates and impurities will necessitate conditioning of the gas prior to delivering the gas through a long transmission pipeline, such as the proposed pipeline from the North Slope. By contrast, the "dry gas" typically found in the Cook Inlet region of Southcentral Alaska consists of almost pure methane and requires relatively little processing before transmission to market.

Proposals for a North Slope gas line envisage the construction of a massive gas treatment plant at the northern end of the line to remove the impurities from the gas, prior to gas transmission to markets outside of Alaska.

Two conditioning stages

Craig said that there would likely be two conditioning stages for the North Slope gas. The first stage, at the field facility, would involve the separation of condensates and the removal of water that comes to the surface as vapor. The gas would be pressurized for shipment by feeder pipeline to the main gas treatment plant; the condensates could be re-injected into a high-pressure (or "dense phase") gas pipeline for transport.

The second stage of conditioning, at the main treatment plant, would remove the major impurities such as carbon dioxide. Carbon dioxide would probably prove useful as an oilfield injectant for enhanced oil recovery. Other impurities would be more problematic and would probably have to be disposed of into a shallow reservoir.

"The conditioning plant would have to take all the different compositions of gas from all the different fields and condition it into one very narrow range of specs, to go through the long (export transmission) pipeline," Craig said.

Craig said that gas gathering lines from remote gas fields would probably be buried, as distinct from oil lines, which tend to run above ground on vertical supports. Gas flow is more efficiently regulated at lower temperatures: the ground in northern Alaska would form a natural refrigerator.

Treatment of foothills gas

The need for a gas treatment plant will likely raise an interesting question for a company developing a gas field in the

see **ANS FIELDS** page 6

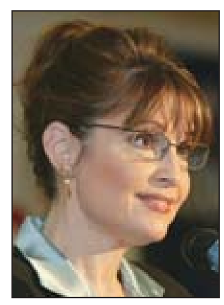
● GOVERNMENT

Palin signs PSIO administrative order

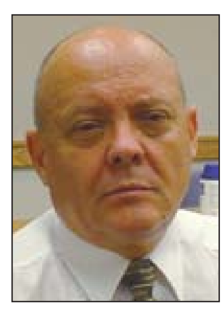
By **KRISTEN NELSON**
Petroleum News

Alaska Gov. Sarah Palin signed an administrative order April 18 creating the Petroleum Systems Integrity Office and repealing the administrative order signed by former Gov. Frank Murkowski in October which established the Lease Monitoring and Engineering Integrity Office modeled on the Joint Pipeline Office.

The governor said that the "signing of administrative order number 234 … creates an office that will ensure the integrity of oil and gas systems in Alaska."


JUDY PATRICK

Alaska Gov. Sarh Palin



DNR Commissioner Tom Irwin

"PSIO coordinates the state's permitting and compliance functions into an independent office within the Division of Oil and Gas, with specific responsibilities and authorities for inter-agency coordination," she said. PSIO doesn't replace existing authorities but "provides enhanced and more flexible oversight with the goal of ensuring the integrity of oil and gas systems and infrastructure," Palin said.

"The goal here is to search for any gaps in laws or regulations and agency or industry practices that threaten systems integrity. If existing authorities can't step up to the plate — won't step up to the plate — we'll exercise appropriate oversight using our authority" as landowner through our leases, the governor said.

The order names the commissioner of the Department of Natural Resources as coordinator "of oversight of facilities, equipment, infrastructure and activities" used to explore for, produce and transport oil and natural gas "from, across or within state oil and natural gas units or leases."

Both houses of the Legislature have already approved $1.5 million for the PSIO in the operating budget.

The order names the commissioner of the Department of Natural Resources as coordinator "of oversight of facilities, equipment, infrastructure and activities" used to explore for, produce and transport oil and natural gas "from, across or within state oil and natural gas units or leases."

Irwin: enlightened self interest didn't work

DNR Commissioner Tom Irwin said that in the past the state relied on the enlightened self interest of field operators to ensure prudent maintenance practices.

"History shows us that didn't work," Irwin said, and some watershed events have hurt the state with production reduction.

He said the LMEICO model under the previous administration included DNR doing consolidated budgeting and that isn't included in PSIO. Individual departments are much better at doing their own budgets, he said.

The PSIO is a more cost-effective way of establishing this oversight by ensuring that state agencies work together, he said.

Irwin said a gap analysis is already under way to make sure all areas of oversight are covered — and to make sure there is no overlap.

The next step, he said, is requirement for state approval of quality assurance programs at Prudhoe Bay; that will be followed by compliance inspections for the quality assurance programs.

Irwin said Alaska is "the only state in the nation that has taken it this far."

Department of Environmental Conservation Commissioner Larry Hartig said the state's oil and gas development and transportation systems are complex and events in one area affect others, "so a fragmented regulatory approach to oversight of these systems is not the way to go.

"PSIO fixes that problem," he said. There are two important elements: "a systematic, integrated and thorough approach to the agencies' oversight of a pipeline facility and it requires a mandate that the agencies talk with each other and that they share their information and that they do this through one entity, the PSIO." ●

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Kay Cashman	PUBLISHER & EXECUTIVE EDITOR
Mary Mack	CHIEF FINANCIAL OFFICER
Kristen Nelson	EDITOR-IN-CHIEF
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Tom Kearney	ADVERTISING DESIGN MANAGER
Dee Cashman	CIRCULATION REPRESENTATIVE

ADDRESS
P.O. Box 231651
Anchorage, AK 99523-1651

EDITORIAL
Anchorage telephone
907.522.9469
Editorial Email
Anchorage
publisher@petroleumnews.com
Canada
farnorth@petroleumnews.com

BOOKKEEPING & CIRCULATION
907.522.9469
Circulation Email
circulation@petroleumnews.com

ADVERTISING
907.770.5592
Advertising Email
scrane@petroleumnews.com

CLASSIFIEDS
907.644.4444

FAX FOR ALL DEPARTMENTS
907.522.9583

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● GOVERNMENT

Supreme Court upholds change in Rule 82

Alaska's highest court sides with state Legislature in lawmakers' quest to close costly loophole in public interest litigation

By ROSE RAGSDALE

For Petroleum News

The Alaska Supreme Court has upheld an attempt by the Alaska Legislature to fix a growing problem with public interest litigation in the state with an amendment to the Alaska Constitution.

In State of Alaska v. Native Village of Nunapitchuk, et al. and Gov. Frank Murkowski v. Alaska FFL-CIO, et al., issued April 20, the state high court overturned an Alaska Superior Court ruling that invalidated a law passed by the Legislature in 2003 because it "unduly" interfered with the public's access to the courts, and even if the law was constitutional, its passage would require a two-thirds majority of the Legislature instead of the simple majority that voted for the measure.

Sen. Gene Therriault, R-North Pole

In the 40-page decision, the Supreme Court also vacated a $150,000 award of attorney's fees and costs in the case and an award of $38,000 in fees and costs in a second Superior Court ruling based on the first judgment.

The Supreme Court justices unanimously concluded that the first superior court's ruling was inappropriate and premature and the subsequent decision was based on an invalid precedent.

The case arose following the Legislature's attempt to rectify what many observers considered to be a serious flaw in Alaska Rule of Civil Procedure 82 or Appellate Rule 508, also known as the public interest litigant exception or doctrine.

In 2003, state legislators passed House Bill 145, a measure aimed at correcting the problem.

To understand what the lawmakers tried to do, one must first understand Rule 82 and its impact on civil litigation in Alaska, especially in recent years.

Alaska only state with 'loser pays' rule

Alaska is the only state with a general "loser pays" rule for attorney's fees in most civil litigation. Alaska courts generally award partial attorney's fees to the prevailing party in a civil case or appeal, under the terms of Rule 82.

Alaska is the only state with a general "loser pays" rule for attorney's fees in most civil litigation. Alaska courts generally award partial attorney's fees to the prevailing party in a civil case or appeal, under the terms of Rule 82.

However, the rule has, since its adoption, allowed the trial court discretion to vary a fee award and Appellate Rule 508 gives the courts full discretionary powers to determine whether an award of fees should be ordered on appeal.

Further, the Alaska Supreme Court has interpreted the discretionary power granted in Rule 82 to deviate from the loser pays rule in fairly precise terms. Among them:

- Attorney's fees may not be assessed against a losing public interest litigant;
- A winning public interest litigant is entitled to full reasonable attorney's fees;
- A public interest litigant who prevails on some but not all issues is also generally entitled to full, reasonable attorney's fees; and
- The same considerations generally apply to awards of costs and attorney's fees on appeal.

Over time, the exception in Rule 82 has, in effect, served to promote and indeed subsidize litigation against the State of Alaska and private defendants such as oil and gas companies by providing generous awards of full attorney's fees and costs where public interest litigants prevailed on any issue in a case, no matter how marginal or insubstantial the issue may be, according to proponents of HB 145.

They also argued that the Rule 82 exception shielded public interest litigants from having to abide by the "loser pays" doctrine and not requiring them to pay awards of fees and costs when they lost, even if their entire case lacked merit.

Oil and gas industry has been particularly hard hit

The oil and gas industry and the State of Alaska has been particularly hard hit over the years by the public interest litigant exception in Rule 82.

Litigants, proclaiming to be suing in the "public interest" — but in practice primarily environmental groups challenging oil and gas industry activities — could recover all of their costs and fees for bringing the action, even if they were victorious on only a single issue in the challenge.

Sen. Gene Therriault, R-Fairbanks, sponsored HB 145, to reform the public interest litigant practices, and a simple majority of legislators voted it into law.

Shortly after its passage, HB 145 was challenged and the superior court ruled it invalid.

HB 145 essentially amends existing state law in a number of ways to prevent discrimination in the awarding of court costs, including attorney's fees. In effect it abolishes the judicially created public interest litigant exception entirely, but does not otherwise affect the authority and discretion of the courts to award costs and attorney's fees under existing court rules, Civil Rules 79 and 82, respectively. While the law builds back a similar rule for plaintiff's raising constitutional claims, the new statutory rule is far narrower than the previously existing rules by excluding claims based on state statutes or administrative regulations.

The vast majority of challenges brought against development projects in Alaska have not been based on the Alaska or United States Constitution but on state statutes or regulations. In the future, plaintiffs presenting such claims will not be entitled to any special treatment with respect to the awarding of costs and fees, according to a memorandum that state lawmakers circulated during debate on HB 145.

One issue super-majority vote

In response to the Superior Court rulings, attorneys for the State of Alaska argued that HB 145 did not require a super-majority vote of the Legislature for two reasons:

(1) The public interest litigant exception is not a court rule; rather it is a substantive rule of decisional law;

(2) Assuming that the act changes Rule 82, Rule 82 is substantive rather than a rule of practice and procedure and thus may be changed by a simple majority vote.

The state also argued that a facial judgment was inappropriate and that the superior court should have waited for a specific case to determine whether, as applied, access to the courts was effectively denied.

The Supreme Court agreed.

"We conclude that Rule 82 is a rule of practice and procedure authorized under article IV, section 15, of the Alaska Constitution. But we also conclude that the public interest litigant exception is a rule of substantive law that can be changed by the Legislature without a two-thirds vote. We conclude that HB 145 does not change Rule 82, but that courts, when considering the "other equitable factors" ground for varying awards, should be cognizant of the need to avoid using this ground as a means to encourage public interest litigation in violation of the policy underlying HB 145. We agree with the State that a declaratory judgment striking down HB 145 on the ground that it necessarily impedes access to the courts is inappropriate, and that any such determination must be made on a case-by-case basis," said Justice Warren W. Matthews, writing for the Supreme Court. ●

GOVERNMENT

BLM Advisory Council to meet May 16-17

Resource and land management planning, invasive species and shared facilities will be some of the topics addressed by the Bureau of Land Management's Alaska Resource Advisory Council on May 16-17 in Anchorage.

The meeting will be held at BLM's Campbell Creek Science Center and will begin at 8 a.m. both days. The meeting is open to the public. Public comments will be taken at 4 p.m. May 16.

The 15-person council meets quarterly and advises BLM on natural resource and land management issues.

—PETROLEUM NEWS

FINANCE & ECONOMY

House OKs railroad bonding for Agrium

The Alaska House passed a bill April 25 authorizing the Alaska Railroad Corp. to issue up to $2.9 billion in bonds to participate in the Agrium Kenai gasification project.

House Bill 229, sponsored by Rep. Mike Chenault, R-Nikiski, gives the railroad the authority to participate in the project by issuing tax-exempt bonds to finance all or a portion of the project proposed by Agrium U.S. Inc. to bring coal from Healy to Kenai for gasification and electrical generation for the Agrium fertilizer plant's operations and for Southcentral Alaska.

Chenault said that the Agrium plant is in danger of being permanently shut down due to lack of natural gas feedstock "and that would be a catastrophe for the Kenai Peninsula."

"Allowing the railroad to bond out the project helps its feasibility and enhances the project's economics, which enables the project to move forward," he said.

Bill now moves to Senate

HB 229 authorizes bond issuance for all or a portion of the project: facilities and equipment for the transportation from Healy to Kenai; and facilities and equipment for coal gasification and electrical power generation adjacent to the Agrium fertilizer plant.

The bill was amended on the House floor to include a Port MacKenzie rail link.

The Alaska Railroad Corp. and Agrium discussed the project with legislators in late February (see story in March 4 issue of Petroleum News). Alaska Railroad Corp. President and CEO Pat Gamble told legislators that building a spur line to Port MacKenzie "is a pricey project" but if that line were down there would be "a real opportunity to move goods to tidewater that would be hard to move all the way around to the Port of Anchorage," including products from the Interior.

HB 229 now goes to the Senate for consideration.

—KRISTEN NELSON

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ANS FIELDS

Brooks Range foothills, a region well to the south of the central North Slope. The foothills region, where companies such as Anadarko Petroleum own oil and gas leases, is thought to be gas prone. Would it be economic to pipe unconditioned foothills gas to the main treatment plant in the central North Slope? Or would it make more sense to treat the gas locally and then pipe the treated gas the shorter distance east to enter the North Slope gas line near pump station 2 of the trans-Alaska oil pipeline?

Assuming that the regulations for the operation of the North Slope line allow gas to be injected part way down the line, the answer to this question will in part depend on the relative cost of a foothills treatment plant vs. constructing a longer feeder pipeline. But one important issue for a foothills treatment plant would be the disposal of the gas impurities — there may be no ready market for carbon dioxide produced in the foothills area, Craig said. All of the scenarios developed so far have assumed that the untreated gas would go back to a central area near the trans-Alaska pipeline pump station 1, he said.

Offshore gas fields

What about a gas field offshore, say in the Beaufort Sea?

Gas does have one major advantage over oil in an offshore environment, in that it can be moved a long distance through a pipeline without first having to treat the production slurry. Shipping untreated oil, on the other hand, involves the flow of liquid (oil and water) and gaseous phases. And that raises pipeline corrosion issues and problems with flow efficiency.

Designs for new Norwegian offshore gas fields involve bringing untreated gas back perhaps 90 miles to onshore conditioning plants, Craig said.

"You can't take unconditioned oil more than 20 to 25 miles without some risk of flow problems," Craig said.

However, for distant offshore gas fields it would be necessary to use alcohol (or some other dehydrating agent) to stabilize water in gas from the wellheads. This would minimize problems of gas hydrates forming in the gas line and thus blocking the flow of gas. And, although the use of subsea well completions would be a likely design concept for an offshore gas field, a field very distant from shore (perhaps over 100 miles) might require a hub platform.

> *"So there may be a high gas resource potential in northern Alaska, but I think many people have lost sight of the higher costs to develop remote gas fields. … That's a real risk factor for the pipeline economics, when the last half of your production has to come from these remote expensive fields."* **—Jim Craig, U.S. Minerals Management Service geologist**

Associated gas

Because northern Alaska natural gas tends to be "thermogenic," the gas is often associated with oil. That association could raise issues for a company wanting to produce the gas — oil is a more valuable product than gas and, for resource conservation reasons, usually needs to be produced before the associated gas. Thus, even a relatively modest amount of oil found in conjunction with a gas pool could delay gas production for several years, until all of the viable oil has been produced, Craig said.

The relatively low value of gas compared to oil also raises questions about the viability of gas field development, especially given the fact that the cost of a gas field development may not be too different from the cost of an oil field. And that problem becomes compounded if a gas field lies a long way from the infrastructure for delivering the gas to market.

"So there may be a high gas resource potential in northern Alaska, but I think many people have lost sight of the higher costs to develop remote gas fields," Craig said. "… That's a real risk factor for the pipeline economics, when the last half of your production has to come from these remote expensive fields."

And the long lead time to construct a North Slope gas line seems to pose some issues in relation to the typical 10-year duration of North Slope oil and gas leases — it might be 10 years before a gas line is completed and another 10 years before capacity becomes available on the line, Craig said.

On the other hand natural gas is, on the whole, easier to produce than oil and does not involve any risk of an oil spill. But the question of whether a gas field in northern Alaska could be developed more quickly than an oil field remains to be seen. ●

● FINANCE & ECONOMY

Alaska oil revenues headed for a fall

Three downward revisions made since fall forecast: production estimates lowered; PPT returns lower, credits higher than estimated

By ANNE SUTTON

Associated Press Writer

The State of Alaska will have less money to spend than expected next year due to a revised estimate of North Slope oil production and fewer tax dollars coming in, state analysts said April 19.

The Department of Revenue spring forecast, which lawmakers use to craft the state budget, predicts the state will bring in $364 million less than expected over the next fiscal year, which starts July 1.

The larger-than-expected decline would slash next year's projected budget surplus, which was pegged at $500 million. It now looks to be closer to $200 million and that's only because the report says the state will bring in $68 million more than expected this fiscal year, which ends June 30. That surplus could be carried over to help offset the projected decline.

Lawmakers warn that trend also could mean the state will be spending more than it earns by fiscal year 2009 as oil production on the North Slope continues a steady decline.

"I thought the oil fairy would save us again in '09 but what we are finding is that it isn't," said Sen. Gary Wilken, R-Fairbanks. "And as we move up and down we are going to find we are in a deficit situation."

Galvin: three revisions since fall forecast

Revenue Commissioner Pat Galvin said estimated revenues from oil were revised in three ways since a forecast last fall:

• State economists opted for a more conservative estimate of oil production because of concerns arising over the Prudhoe Bay shutdown last fall due to leaks from corroded pipes.

"The likelihood of things occurring is greater given that we have a 30-year-old field," said chief economist Michael Williams. Williams also said the revised production estimate reflects problems in counting the barrels of oil from various fields after oil was rerouted to other lines in the wake of the spill.

• Expected revenues from the new oil tax were lowered when petroleum profits tax payments, which brought in an extra $1 billion over the old tax plan, came in earlier in April at about $90 million less than expected.

The state underestimated operating costs that oil companies would be deducting by about 50 percent while overestimating their capital costs by about 15 percent.

• State officials also underestimated the amount of credits oil companies would claim under the next tax

see REVENUE page 8

JUDY PATRICK

The trans-Alaska oil pipeline

● INTERNATIONAL

Canadians forging ahead in foreign fields

Oil and gas companies push the envelope in high-risk regions; 75 firms produce 835 barrels of oil, 2.1 bcf of gas on daily basis

By GARY PARK

For Petroleum News

They might have only an office, a mailing address and a telephone number, but they call Calgary home while they poke, probe and prod their way around some of the world's most remote, risky corners.

They also find favor with investors who are looking for action outside the sometimes mundane world of the Western Canada Sedimentary basin or have seen their investments in income trusts take a battering over the last six months.

Without operating like a drain on capital in Canada, they take a wide-ranging skill set — financial acumen and technical know-how — to potential high-reward regions, wrapping themselves in the Canadian flag, ensuring they give priority to local hiring and blending in with the culture of the host nation.

The results are consistently solid. Canadian Energy Ventures Abroad, compiled with Calgary analyst Ian Doig, showed 75 Canadian-based E&P companies had interests in 65 countries last year.

Of that total, 45 produced a combined 835,374 barrels of oil and liquids per day in 33 countries, while 28 companies produced 2.1 billion cubic feet per day of natural gas in 21 countries.

They also give investors the chance to mix a little spice into their more predictable domestic portfolios.

Niko Resources tops list

Topping the list of those on the verge of making a serious splash is Niko Resources which has made large strides since a successful bid for concession rights at India's first international open licensing round in 1999.

It is now in a joint venture with Reliance Industries, India's largest private sector company with turnover last year of US$20 billion and its only member of the Fortune 500.

In late 2006, state-owned Indian Oil said it was interested in acquiring Niko, but there's been no sign of an offer, although Niko Chief Executive Officer Edward Sampson is certain that the more big finds his company in involved in the more likely it will face a takeover bid.

The test of Niko's financial staying power could be looming as the joint venture moves closer to developing one of the world's largest recent gas discoveries, known as D6 — currently estimated at 12 trillion cubic feet and possible needing US$5.2 billion — $520 million from Niko.

The plan involves start-up production by mid-2008 of 2.8 billion cubic feet per day (double the initial proposal), ramping up to 4.2 bcf per day.

In March, Niko reported two new discoveries at D6 after drilling exploration wells to depths of 10,000-13,500 feet.

Reliance has also started work on a pipeline in India, easing some of the risk factor.

Niko is also involved in India's NEC-25 block, where it has a 10 percent working interest, claiming six discoveries to date and targeting production by late 2009.

As well, Niko is sticking with its participation in gas fields of neighboring Bangladesh, despite a blowout in 2005 that resulted in a lawsuit.

To date, although its losses for final three quarters of 2006 were C$28.5 million — reflecting a negative reserve assessment from an Indian asset — Niko has met

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REVENUE

scheme this year. They now expect companies to claim those credits next year.

Record $4.98 billion expected

The Revenue Department predicts the general fund will have earned a record $4.98 billion by June 30, the end of fiscal year 2007.

But it's not so rosy for next year, when earnings will only bring in $3.5 billion.

Analysts attribute the drop to declining oil prices and the rising cost of shipping oil to the West Coast. Royalties and taxes from North Slope crude make up about 85 percent of the state's revenues.

Meanwhile, the state's long-term forecast continues to look grim.

Though oil production this year is projected to be higher than last year, barring another major disruption, it is on the decline overall.

Revenue officials forecast that production will sink to 682,000 barrels per day by the year 2016 as compared to 764,000 bpd next year. That's compared to a peak of 2 million bpd in 1988.

Oil prices are also projected to fall over the long term, though prices have been notoriously volatile in recent years.

Gov. Sarah Palin's budget director, Karen Rehfeld, said the state's long-term prospects point to the need to bring Alaska's natural gas to market.

"We struggle because we have so many things that need to get done in this state and there's a lot of pressure on those revenues," Rehfeld said. "And until we get a long-term stable funding source, we are going to have some challenges." ●

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RISKY

its commitments, raising $187 million in a February equity issue.

The market confidence remains solid. It pushed above C$70 on the Toronto Stock Exchange last fall and has settled above C$80 in recent times. Over the last 52 weeks, the company has ranged from C$56 to C$90.

First Calgary Petroleums also on list

Also on the most-watched list is First Calgary Petroleums, which has been on a roller-coaster ride over recent times, but manages to keep itself upright.

In some sense it is a one-trick pony, with all of its assets and hopes concentrated in Algeria, where the geopolitical risks are constant.

Having claimed discoveries of 13 tcf of gas reserves, First Calgary put itself on the block in 2005, then dropped the strategy in the face of a poor response.

Around that time it also abandoned an exploration acreage after finding no commercial oil and gas deposits, while an initial joint gas development deal with Spain's Repsol fell through.

Undaunted, it resumed the hydrocarbon hunt under a 24-month extension of its exploration agreement with Algeria's state-owned Sonatrach and is now putting the final touches on a field development plan that will need an investment of C$1 billion by First Calgary.

First Calgary's plan is to drill seven wells this year at a cost of C$10 million each to delineate the size of its wells, then sign an exploration license deal with Sonatrach and start production by late 2009.

Pending formal ratification by Sonatrach of the commerciality of First Calgary's discoveries, the company's shares are stuck around C$7.

Investor interest remains solid, with a C$152 million bought-deal financing in March to fund exploration and appraisal work.

Further bolstering its profile, the company reported in February it struck oil at two wells, which flowed at a combined 13,161 barrels of oil equivalent per day and 48.9 million cubic feet of gas per day.

Chief executive officer Richard Anderson said that in one field complex alone First Calgary has cased and tested 13 wells with "cumulative normalized flow rates" greater than 176 million boe per day.

Other companies also on list

Others worth keeping tabs on include:

• Falcon Oil and Gas, which expects to start production shortly from test wells at the Mako Trough in Hungary. If economically recoverable, the field's massive resources could turn Hungary into a major exporter in central Europe. An independent assessment by Texas-based Scotia Group gives a 90 percent probability that Mako has recoverable resources of 21.8 tcf. At a 50 percent probability level, the resources rise to 54.9 tcf. But Falcon is keeping tight-lipped about anticipated initial flow rates. Falcon has a 37-year production license, with an option to add 18 years.

• Addax Petroleum is taking a 50 percent stake and operatorship of the Epaemeno Block onshore Gabon in West Africa, under an agreement with United Kingdom-based BowLeven. Addax has interests in two adjoining blocks, both of which contain discoveries. Addax also has a 45 percent interest in Turkish-based Taq Taq Operating Co., which has disclosed test results of 26,550 bpd of light oil from an acreage in Iraq's Kurish region.

• Verenex Energy reported test flows in late March of 5,172 bpd of crude and 6.7 million cubic feet per day of natural gas from its initial exploration well in Libya. It plans two more wells and aims to start production by early 2009.

• Rally Energy is pumping 7,000 bpd from its Egyptian properties and is chasing 12,000 bpd in 2008. It is operator of the Issaran heavy oil concession under a 20-year production services deal signed in 1999 with Egypt's General Petroleum Corp. It is able to pocket 70 percent of revenues without any royalties. About C$120 million will be spent over the next two years drilling 120 wells at the Issaran field. As well it has 20-year gas supply agreement with Cairo utility City Gas to meet demands of 10 million to 15 million cubic feet per day to fuel its operations, including a newly completed central production facility. The company has also negotiated a bought-deal financing with a syndicate of underwriters to raise gross proceeds of C$50 million. Earlier in April it claimed further exploration success from an exploration well drilled to a depth of 2,552 feet at the property, but wouldn't say more until testing is completed.

• Following a trail blazed by Nexen, which has a long and successful record in Yemen, Calvalley Petroleum has a six-year production agreement and now plans to spend C$200 million drilling new wells and constructing an oil export pipeline. Other Canadian firms have found Yemen to be less hospitable, with EnCana pulling out and TransGlobe farming out some of its stakes, although it is pressing ahead with exploration programs. ●

● LAND & LEASING

BIF out for 2008-17 North Slope lease sales

Two substantive changes in mitigation measures: bear interaction plans required; pipelines must be elevated minimum of seven feet

By KAY CASHMAN

Petroleum News

In order to hold areawide oil and gas lease sales the State of Alaska's Division of Oil and Gas director has to make a best interest finding every 10 years for each of the geographical areas in which the division holds sales — the North Slope, Cook Inlet, Alaska Peninsula, North Slope Foothills and Beaufort Sea. The division has just released for public comment the first of five preliminary BIFs; this one for the North Slope region. It includes an Alaska Coastal Management Program consistency analysis and can be found online at www.dog.dnr.state.ak.us/oil/products/publications/northslope/nsaw08-ff_toc.html.

The purpose of the finding, which is expected to be issued with the ACMP analysis in September, is to determine whether the sales are in the best interest of the state and should be conducted.

To facilitate this, the division collected agency comments and socio-economic and environmental information to consider the potential effects of lease sales in the North Slope region, which consists of all unleased, state-owned lands lying between the National Petroleum Reserve-Alaska on the west and the Arctic National Wildlife Refuge on the east, and from the Beaufort Sea on the north to the Umiat Meridian Baseline in the south.

Sale terms not yet determined

Allison Iversen, a natural resource specialist with the division, told Petroleum News April 25 that there were "no substantive changes" from the first areawide BIF in 1998, although bidding methods, minimum bid and sale terms have not yet been determined.

"Chapter 8 states that the sale terms will be determined annually, prior to issuing the notice of sale. Sale terms are always based on the pre-sale analysis of economic, engineering, geological and geophysical data, including the petroleum potential of available acreage," Iversen said.

The sale area boundaries have not changed, she said.

When asked if the Point Thomson leases would be included in the 2008 sale, Iversen deferred to Nan Thompson, petroleum manager in charge of units.

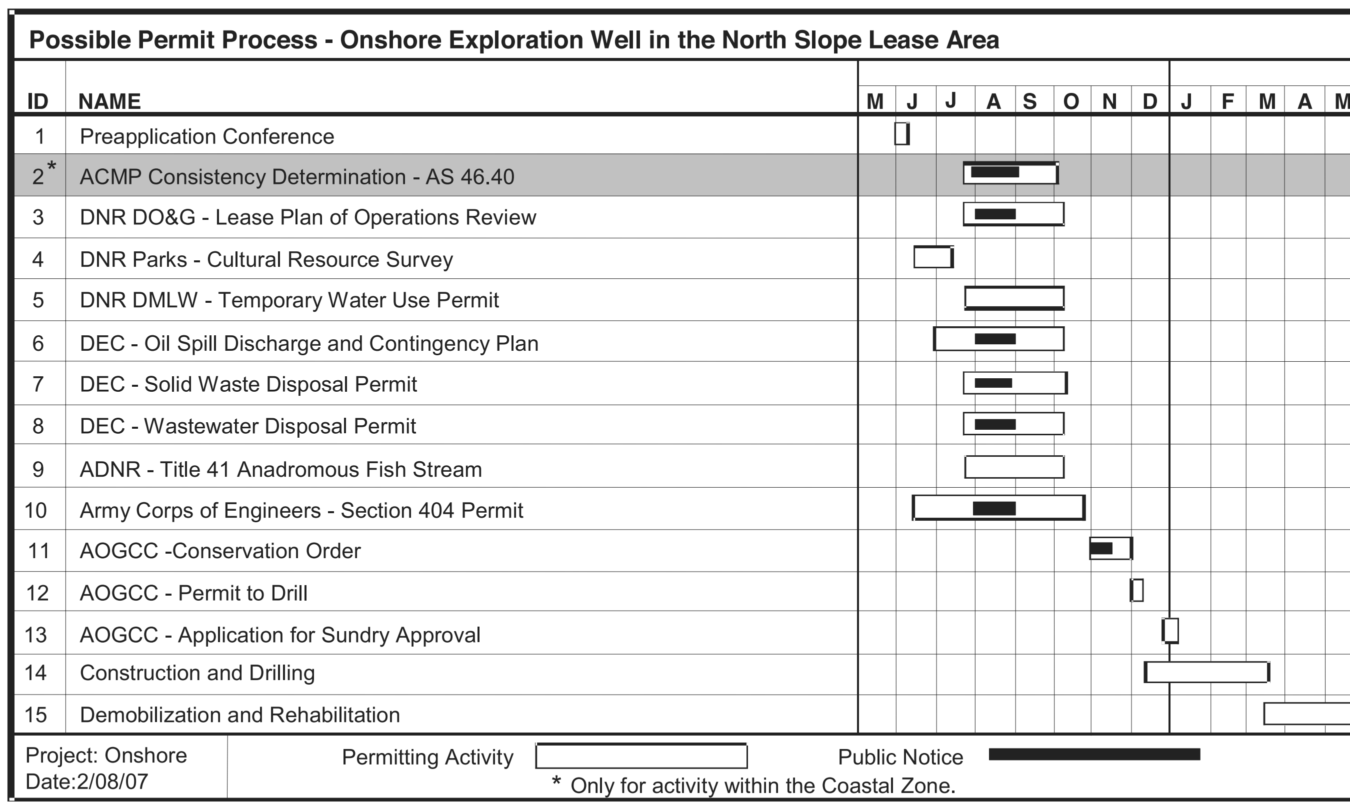
Thompson said, "Those leases have not currently been designated for the 2008 North Slope sale. DNR has not made a final decision about when or how that acreage will be sold."

The largest changes in the BIF, Iversen said, "are in the mitigation measures and lessee advisories," but "these changes are more in format than substance. The mitigation measures have been completely reformatted to make them easier to add — and/or delete — measures as necessary without re-numbering all of the measures."

In the new BIF, the mitigation measures are organized into seven major topics, identified by Iversen as: facilities and operations; fish and wildlife habitat; subsistence, commercial and sport harvest activities; fuel, hazardous substances and waste; access; prehistoric, historic and archeological sites; and local hire, communication and training.

"Because the division will be updating all of the areawide findings in the near future, we took the opportunity to standardize mitigation measures statewide, where appropriate," Iversen said.

Table 1.1 Possible Permit Process



ALASKA DIVISION OF OIL & GAS

"Obviously, some measures applicable in Cook Inlet or the Alaska Peninsula will not be applicable to the North Slope. Regardless, standardizing the mitigation measures will assist in permitting for both the state and industry."

Error in Chapter 5

That said, "at first blush" the mitigation measures appear to have undergone massive changes, but Iversen said only two major substantive changes have been made.

The first is, all pipelines "must now be elevated a minimum of seven feet — mitigation measure 1.h."

And, second, bear interaction plans are now required — mitigation measure 2.e.iii.

"The mitigation measure printed in the finding is in error — it states that the plans are recommended," but the division "does intend to require the bear interaction plans and will make this edit for the final finding," Iversen said.

The purpose of the finding, which is expected to be issued with the ACMP analysis in September, is to determine whether the sales are in the best interest of the state and should be conducted.

In Chapter 5, which discusses the potential impacts and mitigation measures, she said there are "several references to the plans as required, not recommended. I apologize for the error and any confusion. The bear interaction plans will be submitted at the plan of operation stage and will be reviewed by OHMP staff."

As for the rest of the finding, "new wildlife, habitat, subsistence, economic and other pertinent information has been incorporated," Iversen said.

Once a finding has been completed, the division can conduct lease sales in the area for 10 years. However, annually, before holding a sale, the agency, which is part of the Alaska Department of Natural Resources, "must determine whether a supplement to the finding is required by issuing a call for comments," Iversen said.

Based on the comments received, the division then issues either a finding of no new substantial information or a supplement to the finding. Additionally, the agency has to issue a notice of lease sale at least 45 days prior to the sale, detailing the sale terms.

The public comment period for the North Slope areawide lease sale to be held this fall just closed. Iversen said the comments the division receives will be compared to the 1998 finding and mitigation measures, not the new one.

"Similarly, comments submitted on this preliminary finding will be incorporated into the final finding, but will not necessarily impact the 2007 sale scheduled for October," she said. ●

GOVERNMENT

MMS explains its reasons for seismic PEIS

By ALAN BAILEY
Petroleum News

Observers of the Alaska oil and gas scene may be wondering why the U.S. Minerals Management Service has decided to prepare a programmatic environmental impact statement for proposed seismic surveys on the outer continental shelf of the Chukchi and Beaufort Seas.

For a number of years the agency had provided a categorical exclusion from environmental review for seismic work, based on a determination that this type of work did not have a significant environmental impact. But things have changed.

In 2006, amid concerns over the potential cumulative impact of multiple seismic programs during the summer open water season in the Chukchi and Beaufort seas, MMS prepared a comprehensive 300-page programmatic environmental assessment that encapsulated all of the seismic activity planned for that year.

Deborah Cranswick, chief of the environmental assessment unit for MMS Alaska OCS Region, explained to Petroleum News on April 24 some of the reasons for preparing a programmatic environmental impact statement in 2007. Preparing an EIS is generally a much more complex undertaking than preparing an environmental assessment.

More concern

"What's changed lately is more information and more concern about the noise impacts on marine mammals," Cranswick said. "So we were uncomfortable that our old information is still adequate to support a categorical exclusion."

Additionally, MMS was receiving indications that the level of offshore seismic survey activity was increasing, thus raising concerns about possible significant cumulative impacts. Also, new 3D seismic techniques have come into use in recent years and the impact of those techniques needs to be considered.

Another consideration was the fact that, whereas it seems likely that offshore seismic work will continue for several years, the 2006 programmatic environmental assessment focused on issues that related to that particular year: MMS would now prefer to prepare a multi-year EIS, rather than repeating the process of preparing a new environmental assessment every year.

Conservative 2006 mitigation

And the urgency of preparing an environmental assessment for the 2006 open water season led to very conservative impact mitigation requirements.

"The 2006 EA was very, very specific, just for that year," Cranswick said. "We were extremely conservative to make sure that we reached a level of impact below significance."

The EIS process is enabling MMS to consider a broader spectrum of mitigation stipulations, perhaps leading to less extreme

see MMS page 20

● NATURAL GAS

Cook Inlet gas market in transition for Enstar

Gas deliverability challenges require close management of load balancing and a new look at gas supply contracts and arrangements

By ALAN BAILEY

Petroleum News

Although the escalating price of natural gas in Southcentral Alaska is providing gas consumers with some obvious evidence of gas supply constraints in the region, the hour-by-hour, behind the scenes juggling of gas production and transmission to meet peak loads forms a less visible aspect of the gas supply situation. Long gone are the days when a gas producer could simply open the spigot a bit more when a cold winter day pushed up the burn rate on house heating systems.

In fact, the deliverability of the gas — the rate at which gas can be flowed through the gas transmission lines from production wells — causes more concern at the moment than the absolute amount of gas remaining in Southcentral's Cook Inlet basin, Tom East, regional vice president for Enstar Natural Gas Co., told Petroleum News April 10. Enstar is the major gas utility for Southcentral Alaska.

"I personally believe that there's a lot of gas still in the Cook Inlet. … What I'm more concerned about is deliverability," East said. "… — how much gas can be delivered in any one day or any one hour."

Deliverability issues have caused Agrium's Kenai Peninsula fertilizer plant to close down during the winter. And last year the Kenai Peninsula LNG plant had to change its operations to make additional gas available to Enstar through an exchange agreement, East said.

Contract changes

Tighter deliverability is driving a transition to tighter gas supply-demand management.

"The producers want us to manage our transmission system a lot tighter than we used to," East said.

In the days of abundant gas the producers would deliver however much gas Enstar needed, with the accounting of volume nominations and balancing of gas usage done on a monthly basis. Nowadays, the producers are asking for nominations of supply requirements at least daily, with daily balancing of the usage. Producers have to manage the swings in gas demand from one hour to the next.

And tight deliverability, emphasized by lessons learned from an exceptionally cold Southcentral winter in 2006-07, will likely lead to new forms of supply contract with relatively short durations of perhaps five years (traditional "full-service" contracts cover both base load and peak demand gas, and tend to run for long time periods).

"Things are shifting and probably this winter was the shifting point," said Curtis Thayer, Enstar's director, corporate and external affairs.

Some producers are indicating a preference for contracts that separately deal with base loads vs. the supply requirements to meet peak demand. Under that type of arrangement there would be three separately priced components of the gas supply: the relatively constant base load, the seasonal swing in demand between summer and winter and the needle peaking loads during the coldest days of the winter (the needle peaking doesn't represent particularly large volumes of gas but requires exceptionally high gas delivery rates).

"Right now those (supply components) are all bundled into one price that we pay," East said. "… We'll now probably end up with multiple contracts, where we'll have some suppliers provide base load, some provide peaking and some provide needle peaking, and each one of those components will be at a different price."

That type of contractual arrangement would also dovetail into the increasing use of gas storage in the Cook Inlet — both Marathon and Chevron now operate gas storage facilities to hold excess gas from the summer to meet peak winter demand.

"The costs associated with moving gas into storage and pulling it out … that's a cost component that 10 years ago didn't exist," Thayer said.

Enstar is also considering operating its own gas storage to meet peak demand.

"We'll probably end up doing a study and looking at developing our own storage or maybe purchasing storage capacity from a producer," East said. "If we start having multiple rates for base load, peaking and needle peaking we could take a look at what the differential is between the base load and the needle peaking, and with that differential we could possibly develop our own storage … and provide the needle peaks ourselves."

Need long-term supplies

A move towards shorter-term gas supply contracts could provide gas producers with new opportunities to enter the Southcentral gas market. On the other hand, Enstar needs assurance of long-term gas supplies for its customers and prefers long-term contracts — the company does not want the uncertainties of a spot market, for example. And, unlike in the Lower 48, there are few alternative sources of gas in Southcentral Alaska if one supplier fails to deliver.

"It's good for us and our customers to know that there's a long-term gas supply, and knowing what the price and terms are," Thayer said. "… It's not fair for us to be the spot market — we'd be the only utility in the box. … We can't shut off residential customers and tell them we didn't have the gas today."

Thayer also expressed concern about the practicalities of establishing several relatively short-term contracts, given the lengthy and expensive process for Regulatory Commission of Alaska contract approval.

Rejected Marathon contract

Enstar is disappointed that RCA rejected the company's proposed new Cook Inlet gas supply contract with Marathon, a traditional full-service contract that Enstar has said would have ensured adequate gas supplies for

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ENSTAR

Southcentral gas consumers through to 2016. RCA rejected the contract on the basis that its pricing formula, indexed to prices in the Lower 48 Henry Hub gas market, was too high.

"The Marathon contract took about two years to negotiate and 12 months to go through the regulatory process," Thayer said. "We (now) have 20 months until we have unmet contract requirements in 2009. … We need to do something in record speed."

Thayer said that, with the Marathon contract now defunct, Enstar has issued a request for proposals for gas supplies.

And, given the absence of a contract covering all of Enstar's supply needs from 2009 onwards, Enstar has expressed concern about Marathon and ConocoPhillips' application for an extension to the federal export license for the Kenai Peninsula LNG plant. Enstar says that utility gas must take precedence over gas for the LNG plant, despite the importance of the LNG plant to the Kenai Peninsula economy.

"We really support it (the LNG license extension) as long as we have long-term gas supply contracts," East said. "… We're tying our support to having at least a five-year gas supply contract."

Enstar also wants to see the regulatory process for the gas supply contracts speeded up, so that RCA can approve a contract in a timely manner.

"The time crunch is now to get all that done," Thayer said.

Realistic pricing

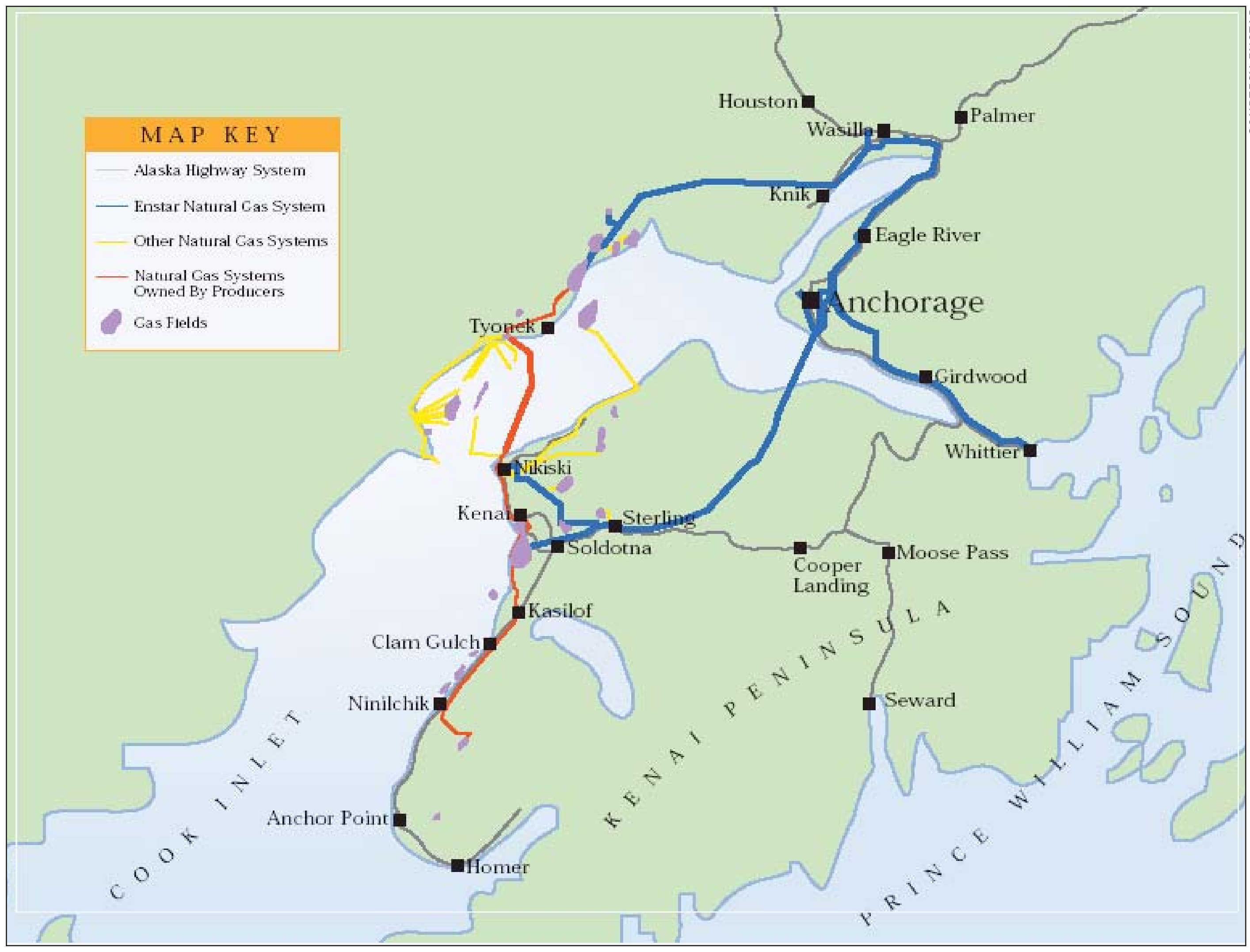
But what about the gas pricing issues that caused so much angst during the RCA hearings on the now-defunct Marathon contract?

Gas producers need to be able to spend money to develop deliverability in the Cook Inlet region, East said. The Cook Inlet is an expensive place to develop gas reserves, he said.

"We think that you have to pay a fair market price because, even although we're not physically connected with the Lower 48, economically we are (connected)," East said. "The producers compete within their own companies for projects. … They have to get a certain price to develop a (gas) infrastructure here."

And East said that Chevron's new Cook Inlet exploration and development plans demonstrate the incentives emanating from the robust pricing in that company's gas supply contract with Enstar.

On the other hand, the exceptionally large hike in Enstar's gas rates in the past



Gas pipelines in Southcentral Alaska (Enstar's pipeline are marked in blue). Potential extensions include a line from the North Slope into the northern end of the network, and a line south from Ninilchik to Homer.

year resulted from a "perfect storm" in 2006, Thayer said: high oil prices resulting from the problems at the Prudhoe Bay oil field coincided with the impact of hurricane Katrina on Lower 48 natural gas prices. One major Enstar gas supply contract was indexed to oil prices, while the other major contract was indexed to Lower 48 gas prices.

In 2006 Aurora Gas also stopped deliveries under its low-priced Moquawkie contract with Enstar — Enstar subsequently sued Aurora for breach of contract.

"The lawsuit is for the customers," Thayer said. "If there is any monetary worth from those lawsuits it will go back into rates."

Some people have accused Enstar of being indifferent to gas prices, because the company simply passes the prices on to its customers. But gas prices tend to push down demand volume, thus reducing Enstar's revenues, Thayer and East said. High prices also increase the levels of bad debt and can increase the amount of fraudulent gas use, they said.

"High prices are nothing but bad for us," East said.

And, despite the price hikes, Southcentral gas consumers still enjoy the lowest prices in the United States, Thayer said. In fact, the Enstar fees for transportation of the gas have dropped over the years, thanks to efficiency improvements such as automated meter reading and upgraded technology for handling customer calls, he said. Enstar's customer base has also grown, thus enabling the company's fixed costs to be spread across a larger number of customers.

"We've been growing by about 3,000 customers per year," Thayer said.

Enstar recovers its operations and equipment costs through a base rate prorated to the volume of gas that a consumer uses. But the company is considering moving to a flat-fee per gas meter base rate, East said.

Pipeline alternatives

What about alternative gas supplies through a pipeline connected to the North Slope?

Enstar has been involved in evaluating a potential gas pipeline following the Parks Highway route to the Nenana basin, southwest of Fairbanks — a group of companies has been exploring for gas in the Nenana basin. The Parks Highway pipeline could perhaps extend to Fairbanks, to form a spur line from a North Slope export gas line.

However, Enstar is also looking into the possibility of constructing a small-diameter, 600 million-cubic-feet-per-day gas line direct from the North Slope into Southcentral Alaska.

"We think we could do that in five years," East said "… We're waiting to see how the governor's (North Slope gas line) proposal comes out and how this (idea) could tie in with that."

The direct North Slope line might cost in excess of $2.7 billion to construct, compared with a U.S. Department of Energy estimate of $5 billion to find half of the gas that remains in the Cook Inlet basin, Thayer said.

"Do you put it all in Cook Inlet and hope for the best?" Thayer said.

On the other hand, the economics of building a pipeline from the North Slope would depend on demand from industrial consumers.

"I really think we need to have some big loads in order to justify the money that's spent for deliverability," East said.

And, although a gas spur line from Fairbanks would prove substantially cheaper than a direct line from the North

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EXPLORATION & PRODUCTION

API report says first quarter drilling, completions at 21-year high

The American Petroleum Institute said April 26 that U.S. first-quarter 2007 drilling estimates hit a 21-year high and were nearly twice the level of first-quarter drilling activity recorded during the 1990s.

API's 2007 Quarterly Well Completion Report: First Quarter estimated 11,771 oil wells, natural gas wells and dry holes were completed in the first quarter of 2007, up 1 percent from the first quarter of a year ago.

Natural gas continues to be the primary target for domestic drilling, with an estimated first-quarter record high of 7,085 natural gas wells completed in the first three months of 2007.

API's estimates show that the resurgence in oil well completion activity that began in 2000 is continuing into 2007. An estimated 3,674 oil wells were completed in the first quarter of 2007, second only to the first quarter last year when estimated first quarter oil well drilling was at 1988 levels.

Total estimated exploratory completions, accounting for just under 6 percent of total estimated completions, fell 21 percent in the first quarter compared to the same quarter last year, while total estimated development completions were up 3 percent.

API also reported total estimated footage of 65,747,000 feet drilled in the first quarter of 2007. This was down 3 percent from the first quarter of 2006 but the second highest first quarter estimated footage drilled in two decades, right behind last year's first quarter.

—PETROLEUM NEWS

PIPELINES & DOWNSTREAM

Gas from coal makes North American debut

Enmax, a City of Calgary-owned power utility, plans a large new gas-fired power station in southern Alberta that will be the first in North America to use gas from coal.

The 1,200 megawatt facility, estimated by industry sources to cost C$2 billion, will produce enough power to meet two-thirds of the demand in Calgary, with a population of just over 1 million.

In the process Enmax is taking a break from Alberta's ambitious push into wind power, which has reached the point where it is vulnerable to supply disruption.

The utility says the more Alberta relies on wind the more it risks loss of power when the wind dies.

Currently, more than 4 percent of southern Alberta's power comes from wind farms.

But the Alberta Electric System Operator, which controls the provincial electricity grid, imposed a ban a year ago on construction of new wind project until reliability concerns are resolved.

The typical wind farm in the region is currently able to convert wind to power only 35 percent of the time and there is no way of storing what is produced other than within a narrow range of voltage and frequency.

Emma's new facility will likely be built in the wind-power region, so that it can cover load factors when the wind dies.

Alberta is forecast to need an additional 3,800 megawatts of generating capacity over the next 10 years.

Converting coal into gas could blaze a trail to similar plants near major load centers, reducing the need for costly transmission lines.

—GARY PARK

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ENSTAR

Slope, the spur line option depends on timely decisions regarding a North Slope gas line to the Lower 48.

"We cannot run the business depending on that occurring in the next two years or five years," Thayer said.

Southern Kenai Peninsula

At the southern end of the Southcentral gas pipeline network Enstar is considering building a new pipeline extending south from the Kenai Kachemak pipeline that delivers gas from the Ninilchik and Happy Valley gas fields on the Kenai Peninsula. A new pipeline could deliver gas from prospective gas fields in the southern Kenai Peninsula and provide access to market for new gas discoveries, as well as hooking the town of Homer into the gas supply network.

Enstar is considering two possible pipeline routes — one due south from the Happy Valley field to connect with a Chevron gas discovery at the Red Well, and the other following the coastline to connect with Pioneer Natural Resources' Cosmopolitan prospect near Anchor Point. Enstar already has a certificate for supplying gas to Homer and will be applying in 2007 for a certificate for a pipeline to the Red Well. What happens next will depend in part on whether Cosmopolitan or the Red Well proves economic, and what volumes of gas they can deliver.

"The first thing is to bring it (the pipeline) north into the grid and then all of the customers can share in that cost," Thayer said. "But then you can still can go from either point (Cosmopolitan or the Red Well) … down into Homer. One or other will win out, depending on the volume."

But, whatever options the future holds, tight gas supply management in Southcentral Alaska appears to be here to stay.

"It's so much more complicated than it used to be and it's going to be even more complicated in the future," East said.

And Thayer emphasized that in more than 40 years of business serving Southcentral customers Enstar has always managed to keep the gas flowing.

"The one thing is we've always kept people warm," Thayer said. ●

● WORKFORCE DEVELOPMENT

Chevron pushes recruitment

Rodriguez says aging workforce, lack of entry-level talent are progressive problems, coupled with increase in Alaska E&P activity

By AMY SPITTLER

Petroleum News

Current exploration efforts, and successes, will determine what actions Chevron will take regarding workforce development in Alaska, says Patty Rodriguez. The company's human resources business partner for Alaska, Rodriguez recently talked to Petroleum News about potential problems and how Chevron plans to deal with them.

Assuming everything goes ahead as planned, "we may have the need for a significant increase in personnel over the next several years. Additionally, we have a large percentage of our workforce that is nearing retirement age, and we must plan for these departures," Rodriguez said.

In the immediate future Chevron will be offering positions for offshore projects, as well as health, environment, safety, law and permitting-related posts and a number of varied technical jobs.

And Chevron, like many companies in Alaska, is careful to cover all its bases when searching for new employees. Rodriguez said the company implements traditional recruiting techniques to fill slots, including using Chevron's external Web site, newspaper advertisements, recruitment agencies and college recruiting.

The company also relies on in-house employee referrals. This means the right kind of people are recommending more of the right kind of people. Chevron has learned that in a competitive marketplace for talent, employee referrals "are proving to be not only cost effective, but are internal morale builders," Rodriguez said.

Referrals are a win-win

"Everyone wins with referrals. Employees are rewarded for finding talented candidates and the company sees applicants that it knows in advance may be a strong fit," she said.

Rodriguez also said "employees hired through referrals tend to have a lower turnover rate." She explained that referral applicants have usually been given a realistic description of not only the job, but also the work environment, and they join the company already knowing someone, so the social support is there.

"We look for people with superior capabilities and commitment. They must share the company's values of integrity, trust, diversity, ingenuity, partnership, protection of people and the environment, and a commitment to high performance," Rodriguez said.

She also made it clear that the company values what each individual brings to the job. "We understand the strength of a diverse workforce. And we try to learn from the communities in which Chevron operates." The company is also committed to making its intentions clear, developing something called The Chevron Way for employees, clients and customers. "It outlines the vision, values and strategies the company adheres to," Rodriguez said.

Education seems to be the key, and Chevron needs employees at every level. "There are jobs for high school graduates and those we hire through college recruitment programs," Rodriguez said. "What we look for are people who have put a lot of time and energy into their education. Chevron will gladly give them a chance to translate that education into a meaningful career."

But even with such high standards, "Chevron always welcomes interest from those who are willing to work, can bring something to the job, and do it safely and efficiently."

Summer work programs

To get younger people involved Chevron offers summer work programs for high school and university students for field-and office-based internships. The program for the upcoming summer so far includes students from the University of Alaska Fairbanks, Texas A&M, University of Texas at Austin, Purdue and the University of Louisiana at Lafayette.

Education seems to be the key, and Chevron needs employees at every level. "There are jobs for high school graduates and those we hire through college recruitment programs," Rodriguez said. "What we look for are people who have put a lot of time and energy into their education. Chevron will gladly give them a chance to translate that education into a meaningful career."

Education should continue

Rodriguez emphasized the company's focus on the individual, and what each individual can do as part of its global mission. Chevron doesn't want an employee's education to stop after he or she signs on, she said.

She also stressed the high demand for trade school graduates. "Many of these individuals possess fundamental technical skills and knowledge that may take a few years to develop in the work place if they hadn't been through the summer work program. We certainly look for this type of educational background when recruiting for our field-based personnel."

More than just a place to work

So what makes Chevron stand out, and what does it offer Alaskans?

"More than just a place to work, Chevron represents a world of opportunity, challenge and fulfillment," Rodriguez said.

She believes employees will, and do, find a stimulating environment where they're continually challenged to go further. "We believe in cultivating skills and talents, fostering continual learning and helping people explore new pursuits and uncover opportunities within the organization."

Rodriguez thinks Chevron's approach to pay and benefits is a reflection of its commitment to employees' personal lives as well as their work. "We offer a comprehensive program designed to meet the needs of our global workforce including a salary that's competitive with other major employers in the marketplace seeking high-caliber talent, and incentive awards when Chevron meets established goals," she said.

Opportunities are also available on a global scale since the company is currently operating and developing projects in more than 180 countries. "For those who like to travel, our industry has work locations all around the globe that are open to those interested in international work assignments."

But Chevron like other companies in Alaska is faced with "an aging workforce, lack of entry-level personnel, in addition to the increase in activity." Rodriguez said these things have "put a challenge ahead of us for recruitment of talent."

She admitted the lack of entry-level personnel has been a building challenge over the past 20 years. "We must increase our focus on developing longer-range recruitment programs to build organizational capacity for the future."

But despite challenges ahead, Rodriguez still seemed optimistic. "There is tremendous opportunity for our youth entering into our industry today whether it's a field or office-based position."

Challenging, exciting work and competitive salaries and benefits should be major draws, she said. "We highly encourage young people to do the research and consider an opportunity in the petroleum industry". For more information about Chevron and the types of positions currently available visit www.chevron.com.●

● GOVERNMENT

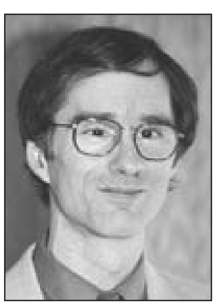
Beluga ESA listing prompts debate

Resource groups challenge National Marine Fisheries Service's data, proposal; question value of endangered species classification

By ALAN BAILEY
Petroleum News

The sparks are flying following the National Marine Fisheries Service's announcement that the agency proposes listing the Cook Inlet beluga whales as an endangered species. (See initial story in the April 22 issue of Petroleum News.)


JUDY PATRICK
MARILYN CROCKETT


CARL PORTMAN

Everyone in Southcentral Alaska wants to see the beluga whale population rebound but "we don't believe an Endangered Species Act listing will get you there," Marilyn Crockett, deputy director of the Alaska Oil and Gas Association told Petroleum News April 25.

"We believe a better course of action would be continued management under the Marine Mammal Protection Act," said Carl Portman, deputy director of the Resource Development Council on April 24.

"We applaud the National Marine Fisheries Service for recognizing the plight of the Cook Inlet beluga," said Karla Dutton, Alaska director with Defenders of Wildlife on April 19.

Both AOGA and RDC are concerned about the impact on economic activity of an Endangered Species Act listing. Under the terms of the act, NMFS would designate critical habitat areas for the whales. Any activity involving permitting or some other action by a federal government agency would require NMFS consultation, if a critical habitat might be impacted. This and other work associated with compliance with the act would add time and cost to projects, and could render some projects impractical or uneconomic.

> *NMFS should base its decisions on the results of scientific research "as opposed to mere speculation. … We feel that the science is really lacking."* **—Carl Portman, deputy director, Resource Development Council**

"It also greatly increases the prospect of third-party litigation," Portman said.

Distinct population

Although beluga whale populations exist in several regions around the coast of Alaska, the whale population in the Cook Inlet forms what NMFS terms a "distinct population segment," in effect a sub-species that is distinct and isolated from beluga populations elsewhere.

And, according to data presented by NMFS, the Cook Inlet beluga population has plunged in recent years. A 1979 survey estimated the population to be nearly 1,300. Systematic aerial surveys starting in 1993 estimated a population decline from 653 in 1994 to 347 in 1998. That rapid drop in population in the 1990s appeared to result from unsustainable levels of subsistence hunting. Regulation of the hunting began in 1998, and the most recent abundance estimate, from 2005, suggests a population of 278 whales, NMFS says.

In 2000 NMFS refused to list the Cook Inlet belugas under the Endangered Species Act, opting instead to classify the whales as "depleted" under the Marine Mammals Protection Act. NMFS based its 2000 decision on an assumption that the population decline had resulted from subsistence hunting and that reductions in the subsistence harvest would reverse the decline. The depleted status under the Marine Mammals Protection Act has afforded a level of protection to the belugas, including the development of a conservation plan.

NMFS said in its April 20 Federal Register announcement of the proposed listing that it had expected the beluga whale population to recover at a rate of 2

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LAND & LEASING

Potential Alaska state and federal oil and gas lease sales

Agency	Sale and Area	Proposed Date
DNR	Cook Inlet Areawide	May 23, 2007
DNR	Beaufort Sea Areawide	Oct. 24, 2007
DNR	North Slope Areawide	Oct. 24, 2007
BLM	NE NPR-A	2007
BLM	NW NPR-A	2007
MMS	Sale 193 Chukchi Sea	Feb. 6, 2008
DNR	Alaska Peninsula Areawide	February 2008
DNR	North Slope Foothills Areawide	February 2008
DNR	Cook Inlet Areawide	May 2008
DNR	Beaufort Sea Areawide	October 2008
DNR	North Slope Areawide	October 2008
DNR	Alaska Peninsula Areawide	February 2009
DNR	North Slope Foothills Areawide	February 2009
DNR	Cook Inlet Areawide	May 2009
DNR	Beaufort Sea Areawide	October 2009
DNR	North Slope Areawide	October 2009
MMS	Sale 209 Beaufort Sea	2009
MMS	Sale 211 Cook Inlet	2009
DNR	Alaska Peninsula Areawide	February 2010
DNR	North Slope Foothills Areawide	February 2010
DNR	Cook Inlet Areawide	May 2010
DNR	Beaufort Sea Areawide	October 2010
DNR	North Slope Areawide	October 2010
MMS	Sale 212 Chukchi Sea	2010
MMS	Sale 217 Beaufort Sea	2011
MMS	Sale 219 Cook Inlet	2011
MMS	Sale 221 Chukchi Sea	2012

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

NMFS critics say Cook Inlet beluga population recovering, more than 45% are juveniles

Critics of the NMFS proposal to list the Cook Inlet beluga whale as an endangered species say that the whale population is likely recovering, following regulation of subsistence hunting of the whales since 1998 — a dramatic population decline prior to 1998 appears to have related to unsustainable levels of subsistence beluga hunting.

Critics of the NMFS proposal to list the Cook Inlet beluga whale as an endangered species say that the whale population is likely recovering, following regulation of subsistence hunting of the whales since 1998 — a dramatic population decline prior to 1998 appears to have related to unsustainable levels of subsistence beluga hunting.

Industry-sponsored research provides reason for optimism about a population recovery, Jason Brune, executive director of the Resource Development Council, has told Petroleum News.

"A Chevron study has shown that over 45 percent of the individuals in Cook Inlet are juveniles, which indicates a growing population," Brune said.

And because the juveniles are the same grey color as the water of the Inlet, it is very difficult to see them from an aerial survey, he said. Brune also said that because the beluga whale gestation period is very long, NMFS hasn't allowed sufficient time to determine whether the population is recovering.

According to the National Oceanic and Atmospheric Administration, beluga whales have a gestation period of 14 to 15 months. It takes three to eight years for juvenile whales to develop the white adult coloration that is characteristic of adults. Females take four to seven years to reach sexual maturity, while males take seven to nine years to reach sexual maturity.

—ALAN BAILEY

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DEBATE

to 6 percent per year following regulation of subsistence hunting. But "abundance estimates from aerial surveys (1999-2006) indicate this level of growth did not occur," NMFS said.

2006 review

A status review published by NMFS in November 2006, using the most recent population estimates and a statistical model of the Cook Inlet beluga population, concluded that there is now more than a 65 percent probability that the population will continue to decline, despite tight limits on the subsistence hunting harvest. The review also estimated a 26 percent probability of extinction of the Cook Inlet belugas within 100 years.

That 26 percent probability of extinction greatly exceeds the NMFS criterion of a 1 percent probability to trigger an endangered species classification.

"We conclude that the Cook Inlet beluga whale is in danger of extinction throughout all of its range. … We also conclude that, at present, no protective or conservation measures are in place that will substantially mitigate the factors affecting the future viability and recovery of the Cook Inlet beluga whale distinct population segment," NMFS said in its federal registry entry.

Everyone in Southcentral Alaska wants to see the beluga whale population rebound but "we don't believe an Endangered Species Act listing will get you there."

—Marilyn Crockett, deputy director, Alaska Oil and Gas Association

And environmental groups have strongly endorsed the NMFS position.

"The Endangered Species Act listing will help protect and restore these rare whales and their habitat for future generations," Dutton said. "… We need to look at potential impacts from oil and gas development, sewage exposure, shipping, fishing and underwater seismic blasting to determine which are putting the most severe pressure on the beluga population. This endangered species designation will encourage this needed research and other actions to help recover this Cook Inlet icon."

Questioning the data

But AOGA and RDC question both the data and the assumptions upon which NMFS has based its beluga decision. The population estimates are based on just one aerial survey per year. And those surveys underestimate the population because the grey color of juvenile belugas blends with the color of the Inlet water, thus making some of the belugas extremely difficult to spot (beluga whales become white when they mature), Crockett said. The population data collection during the 1970s also used unreliable methods, she said.

Anecdotal evidence from land observations suggest that the beluga population is in fact recovering, Portman said.

Crockett said that the NMFS expectations for the rate of recovery following the reduction in subsistence hunting were unrealistic, and that the population is probably slowly recovering. What's really needed is more research into the beluga population and the reasons for population changes — NMFS only has funding for occasional overflights and for tagging, Crockett said.

"We feel that if they will wait perhaps five more years and do a lot of research in the meantime, that the surveys will start showing a significant rebound," Portman said. "… It is too fast … to jump to an ESA listing."

And Portman said that the limited research that has been done to date, including tissue sample analysis, has shown that the belugas have not been impacted by pollution. NMFS should base its decisions on the results of scientific research "as opposed to mere speculation," Portman said. "… We feel that the science is really lacking."

Crockett also commented that an endangered species listing for the belugas would affect many different entities around the Cook Inlet. In fact, the NMFS Federal Register entry lists potential Cook Inlet developments which may have adverse impacts on the Beluga whale habitat, including oil and gas exploration; Port of Anchorage and Port MacKenzie expansions; the Knik Arm Bridge and coal mining on the west side of Cook Inlet.

Crockett urges finding creative solutions to supporting the beluga whales, rather than the imposition of the consequences of an endangered species listing.

"We would like to see all the entities get round the table and find a better way to solve this problem," Crockett said. ●

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AGIA

early March, is now more than 30 pages.

The incorporation of some Senate changes in the House version reflects an interesting phenomenon.

Unlike last year's big oil and gas bill, the petroleum profits tax or PPT, this year's big bill has been somewhat a collaborative effort between House and Senate. Twice the dueling versions of PPT couldn't be resolved in conference committee to the satisfaction of one or the other and House and Senate took turns rejecting conference versions.

It took three tries and a third special session before PPT passed.

Unlike last year's big oil and gas bill, the petroleum profits tax or PPT, this year's big bill has been somewhat a collaborative effort between House and Senate.

This year's more collaborative attitude was reflected April 19 when Senate Judiciary Chair Hollis French, D-Anchorage, and Sen. Lesil McGuire, R-Anchorage, gave House Resources an update on the approach Judiciary took on constitutional issues in the bill.

The constitution prohibits the Legislature from giving away taxing power, but, recognized that it might be necessary for the state to entice new industry, the constitution's framers added "except as provided in this article," an exception primarily seen in property tax. But the constitution also provides that other exemptions of like or different kind may be granted by general law.

French said that it is his belief that "general law means statute … (and) statute … is subject to change anytime the Legislature says."

House Resources chose to go with the administration's interpretation that a tax-freeze would be constitutional as a contractual provision, and included the contractual description of the tax freeze from the House Oil and Gas version of the bill.

Voucher provision

Two notable changes from the House Special Committee on Oil and Gas version were deletion of the gas utility revolving loan fund added by amendment in Oil and Gas and addition of inducement vouchers.

The administration, represented by Revenue Commissioner Pat Galvin and Revenue Deputy Commissioner Marcia Davis, opposed the revolving gas utility loan fund added in Oil and Gas because it does not directly relate to the purpose of AGIA, which is getting a gas pipeline built from the North Slope.

Alaska Revenue Commissioner Pat Galvin

The gas utility revolving loan fund would have made loans to gas utilities for constructing or extending new gas service within the state; the interest rate was mandated at 2 percent.

The inducement vouchers apply to those — presumably utilities — acquiring firm transportation capacity in the first binding open season that do not hold oil and gas leases on the North Slope, and allow such purchasers access to the same inducements that would be available to a producer taking a firm transportation commitment in the initial open season.

The voucher, to be issued by the commissioners of Natural Resources and Revenue, entitle the recipient to the royalty and tax-freeze inducements in AGIA, "for gas shipped in the firm transportation capacity acquired by the person applying for the voucher during the first binding open season and described in the voucher."

While the voucher has no direct value to a utility, it would presumably figure in a gas purchase negotiation, as it may be "transferred to a gas producer that has a binding obligation to sell gas to the person transferring the voucher under a gas purchase agreement."

The producer may then claim the resource inducements for the gas shipped in the firm transportation capacity described in the voucher on gas produced and delivered to the purchaser on the North Slope.

The inducements are good until the expiration of the binding gas purchase agreement or the inducements — whichever occurs first.

Multiple design proposals

The committee accepted a conceptual version of an amendment proposed by Rep. Bob Roses, R-Anchorage, adding to the detailed description of the project that it "may include multiple design proposals, including different proposals for pipe diameter, wall thickness and transportation capacity."

Roses said he was concerned that if a proposal included multiple sizes of pipe, the bid might not be considered. Rose asked producers if they would submit a bid including more than one size and he said two of the three said if they were going to submit bids they probably would submit various sizes because they wouldn't know what the commitment would be for the gas.

"But my concern was, would it be considered a bid that would be noncompliant because it didn't specify one size pipe."

The inducement vouchers apply to those — presumably utilities — acquiring firm transportation capacity in the first binding open season that do not hold oil and gas leases on the North Slope, and allow such purchasers access to the same inducements that would be available to a producer taking a firm transportation commitment in the initial open season.

Galvin said an application would have to include an indication of which of multiple proposals was the primary project "and what are they going to use to determine which of … the designs is going to go forward." He said he imagined the scenario would be tied to the amount of gas committed at an open season, "and we would evaluate the project based upon our expectation of the likelihood of each of those scenarios."

Galvin said the applicants would be providing alternatives and also providing the state "with the conditions upon which they would be making that determination." The state would then be able to evaluate the ultimate value of the proposal to the state.

Concerns about multi-tiered proposals

David Guttenberg, D-Fairbanks, said he was concerned about multiple-proposal applications where, after selection and an open season, it becomes evident that one of the non-selected applicants had a better focus on the actual project, based on gas committed. Would that, he asked, provide grounds for a challenge?

Galvin noted that limitations on challenges are included in the bill.

"But we do recognize the need to provide a fair competition," he said, "so that we don't end up in a situation where the best liar wins." He said the administration is trying to strike a balance, "allowing the applicants to provide us with a complete picture of what they're considering as they move forward and as more information becomes available to all of us, so that we can maximize our opportunity to have the greatest value."

Guttenberg asked Galvin if he would prefer a single-tier or multi-tier project.

Galvin said if a multi-tiered application has "a legitimate possibility of coming in with a higher-value project," then applicants need to make provision for potential success. "If they come in with basically three options and two of them, of the high-value side, are really just pie-in-the-sky, little chance of it succeeding — it doesn't provide any value," and those higher-end, pie-in-the-sky options would not be viewed favorably. "It might even actually be detrimental because they might be diverting their attention to something that's not going to happen."

"We always considered the multi-tiered approach to be something that would likely be reflected back through the application process," Galvin said.

The state recognized from the beginning that there could be a problem if the gas wasn't there for the licensee's project, because, he said, the commissioners don't have the ability to accept a scaled-down revision since it would lessen the value to the state.

"And therefore we assumed from the get-go that there would be a step-down opportunity that would be presented in the proposal by the applicant so as to avoid that outcome of the license actually having to be withdrawn" after a significant amount of money had been spent because only a smaller design pipe would succeed. ●

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PPT

then has to get through House Finance, which is scheduled to begin hearing AGIA April 27.

SB 80 was referred to Senate Resources — where it got stuck behind AGIA — and also has a referral to Senate Finance, which has just begun hearing AGIA.

Shades of PPT past

Less than three weeks remain in this year's session, which ends May 16.

But — at least on the Senate side — there seems to be hope; Resources Chair Charlie Huggins, R-Wasilla, has said he plans to move the bill out of committee April 27 after a final hearing that day.

The concept in the bills isn't a new one.

Last year Wagoner proposed to amend the original PPT legislation in the same way; that proposal failed to pass.

2006 action on PPT has been reviewed in testimony in opposition to both bills.

April 20 testimony from Michael Hurley, director of state-government relations for ConocoPhillips Alaska, was typical of the view the companies have taken in opposing the bills. Hurley told Senate Resources that the PPT doubled ConocoPhillips' taxes and said the company is concerned the PPT tax level will not produce the investment "we need on the North Slope to keep the pipeline running."

He said ConocoPhillips opposes the change because the company believes it is premature, with regulations not even written defining expenditures under PPT. ConocoPhillips is also concerned with the process the bill puts in place. The bill "refers to improper maintenance, which in our view is a very, very poor standard" which lacks judicial history. The standard will be imposed, he noted, "by Department of Revenue auditors who have no real experience or expertise in evaluating the propriety of a maintenance program — especially if they only get to it in an audit cycle which can be a year to three years after the fact."

And, he said, ConocoPhillips believes "the existing statute already deals with the kind of specific circumstances that are being brought out here." Costs arising from fraud, willful misconduct and gross negligence, as well as costs associated with spill response and cleanup, are already excluded, Hurley said.

And there is a 30-cent-a-barrel disallowance "explicitly to cover these particular circumstances," Hurley said.

The 30-cent disallowance is discussed in two memos from Pedro van Meurs, both written in early August last year, he said.

The two-memo issue

Resource Chair Huggins asked Commissioner of Revenue Pat Galvin for information on the memos, particularly whether one of the two was a confidential document.

Galvin said the Aug. 8 document was an internal communication within the previous administration and "probably would not have been a public document at the time." A former member of the administration brought the document forward as part of the discussion on SB 80, Galvin said, but since the deliberative issue, the PPT, is over, the Department of Law said the document was no longer confidential.

Huggins said he called Pedro van Meurs about the memos, and said van Meurs told him he wrote the memos and meant what he said in both of them.

Hurley noted that in the Aug. 8 memo van Meurs recommended the 30-cent-per-Btu-equivalent-barrel disallowance of a deduction; that ended up in PPT, "so we are currently removing that 30 cents every month."

He noted that van Meurs concluded that he believed the 30-cent deduction would be a good answer to public criticism that under PPT the state would pay a percentage of the replacement costs of the Prudhoe Bay transit lines.

"Mr. Chairman, this memo leads me to believe that 30 cents was meant to cover the very stuff we've been talking about that is at issue under SB 80," Hurley said. You can disallow costs on a case-by-case basis, determining whether or not maintenance was done correctly, he said, or you can acknowledge that a case-by-base disallowance is administratively burdensome and put in a general disallowance.

"We believe that choice was made by the Legislature in adopting the 30-cent disallowance, which is doing it on a proxy if you will."

What was the discussion around the 30 cents?

Sen. Bert Stedman, R-Sitka, said he remembered the discussion around the 30 cents last year, "when we were struggling with how to deal with an older basin with a lot of maintenance issues and replacement issues … so we don't end up getting gamed. … And we worked through this issue and worked on 30 cents per barrel."

Wagoner disagreed.

"I was the one that brought about the 30-cent issue … and it had nothing to do with how much or how little maintenance was going to be done or anything else." Wagoner said what he asked van Meurs was to find a way to bring "the PPT bill that we had in front of us, that was based on net profits, closer to a gross bill (a bill on gross, rather than net, profits)."

"And he said one way to do it would be to calculate 30 cents a barrel. … At the time we were talking 80-some million dollars difference in the amount of maintenance that could be written off against the PPT on the net basis vs. the gross basis."

Wagoner also noted that the amendment for the 30 cent disallowance was drafted Aug. 5 (BP announced Aug. 6 that it planned to shut down the Prudhoe Bay field in response to the spill and the corrosion found in transit lines) and was offered Aug. 9.

There was a short discussion on the 30-cent issue and the amendment passed, he said.

"But my whole point in this thing is we're not talking about a large maintenance item. If that pipe is replaced, we're talking about a capital expenditure." The 30-cent amendment, Wagoner said, "was to take care of some maintenance costs which otherwise could be written off and which gave me more comfort getting us closer to a gross bill than a net bill."

Galvin looked at memos, meeting minutes

Galvin said he had been asked whether the 30-cent deduction was intended to cover a situation where there was negligence or improper maintenance standards in maintaining equipment.

He said he looked at both van Meurs' memos and at the committee minutes.

The first memo, on Aug. 5, was the day before the shutdown at Prudhoe. The second was dated Aug. 8.

Galvin said he believes the two are "consistent with each other in terms of their overall statement of the purpose of this deduction.

"As Sen. Wagoner stated, the intent of the Aug. 5 discussion had to do with moving the net aspect of the PPT to reflect something similar to a gross-type scenario." Van Meurs suggested different ways that could be done — among them the 30-cent deduction. "Within the discussion of the purpose of the 30-cent deduction, there's a discussion of the fact that equipment eventually ages and needs to be replaced and under PPT those replacement costs would be characterized as capital expenditures and would be subject to both the exemption of the 22.5 percent value and the credit."

The question was, "should those be allowable," and in the discussion, "the distinction between properly maintained equipment that needs to be replaced and improperly maintained equipment wasn't really made," Galvin said. "… It didn't come up."

The Aug. 8 memo came right after BP's major announcements on Prudhoe Bay, when it was "a matter of speculation as to whether or not this was due to the aging of the infrastructure or due to some improper level of maintenance."

The following day, Aug. 9, in the Senate Special Committee on Natural Gas Development, "Sen. Wagoner offered these amendments."

Galvin said he looked at the committee minutes and they "provide a fairly detailed picture of how the discussion went."

There was a good deal of discussion about how the 30-cent deduction would work and what its purpose was.

"At no place do they discuss negligence or properly maintained v. not properly maintained," Galvin said.

What was discussed was the fact that equipment eventually needs to be replaced, and whether there should be a separate accounting of those costs so the state wouldn't end up paying a portion.

The 30-cent amendment was withdrawn for language work.

Separate amendment on proper vs. improper maintenance

A separate amendment was introduced addressing the issue of whether there was proper maintenance and whether those costs should be deducted under PPT.

The discussion, Galvin said, was similar to the discussion now — "whether that standard can be actually implemented, whether or not that's something that should be considered or not."

He said that at no point in that discussion did anyone say anything about the 30 cents being intended to address the situation of improperly maintained equipment.

"They're not intermixed. The discussions are separate."

Later in the committee record a redraft of the 30-cent provision is introduced and passes.

Then there is an amendment by Sen. Gene Therriault, R-North Pole, which is a redraft of the improperly maintained standard, with determination to be made in consultation with the Department of Environmental Conservation and the Alaska Oil and Gas Conservation Commission. In that discussion there is no reference to the 30-cent provision, Galvin said.

"It's considered to be a completely different issue. … Basically this is setting the standard where the previous one just had to do with any replacement of any equipment."

Galvin said that earlier in the session he had a discussion with Revenue department personnel who participated in the 2006 PPT discussions "and they felt fairly clear-

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● FINANCE AND ECONOMY

Alaska's top producers report earnings

BP's profit fell 17%, analyst 'cautiously positive;' Conoco, Exxon up in first quarter despite low oil, gas prices

PETROLEUM NEWS

BP, Europe's second-largest oil company, reported a 17 percent drop in first-quarter earnings April 24 on lower oil prices and declining production.

Net profit for the three months ending March 31 fell to $4.66 billion from $5.62 billion in the first quarter last year. Revenue declined 3 percent to $62.04 billion.

BP was the first of the major European oil companies to report quarterly results, with most others also expected to record profit declines amid dwindling output and rising costs before a recovery in the second quarter. However, analysts said the results put BP at the bottom of the pack, particularly given its troubles in the United States following the 2005 Texas City refinery explosion that killed 15 workers and Prudhoe Bay transit line oil spills.

"Faced as it is with reduced production and higher costs, lower oil prices and the ongoing barrage resulting from its earlier failures, its challenges are not yet over," said Hargreaves Lansdown analyst Richard Hunter.

Hunter said the market was "cautiously positive" about BP's earnings and outlook. Its shares rose 0.5 percent to $11.59 on the London Stock Exchange

BP's replacement cost profit — which measures the amount it would cost to replace assets at current prices and is viewed by many analysts as the best measure of an oil company's underlying performance — came in at $4 billion, down 24 percent from last year but in line with analysts' expectations.

ConocoPhillips said April 25 that asset sales pushed its first-quarter profits up 7.7 percent, but the oil major's key exploration and production arm was hurt by lower commodity prices and the company warned of lower production.

ConocoPhillips profit rises 7.7%

ConocoPhillips said April 25 that asset sales pushed its first-quarter profits up 7.7 percent, but the oil major's key exploration and production arm was hurt by lower commodity prices and the company warned of lower production.

Net income for the Houston-based company rose to $3.55 billion for the January-March period from $3.29 billion in the year-ago quarter.

Revenue fell 12 percent to $41.3 billion from $46.9 billion a year ago.

Shares closed up $1.18 at $70.82 on the New York Stock Exchange, having traded in a 52-week range of $54.90 to $74.89.

Citigroup analyst Doug Leggate said ConocoPhillips' results came in below his own estimate, though he noted the stock continues to appear undervalued.

Lower year-over-year oil prices hurt results at the company's exploration and production arm, where income fell to $2.33 billion from $2.55 billion to start 2006. Besides lower commodity prices — the market price of oil was off more than $5 a barrel in the first quarter versus a year ago — the company cited higher operating costs and taxes as hindrances. The market price for natural gas also was down from a year ago.

ExxonMobil profit rises 10% despite lower oil prices

ExxonMobil, the world's largest publicly traded oil company, said April 26 that its net income grew 10 percent in the first quarter, as higher refining, marketing and chemical profit margins overcame lower crude oil and natural gas prices.

Net income rose to $9.3 billion, or $1.62 a share, for the January-March period from $8.4 billion, or $1.37 a share, a year ago. Analysts polled by Thomson Financial were looking for a higher profit of $1.52 per share.

Revenue fell to $87.2 billion from $88.9 billion a year earlier. Like other major oil companies, Exxon was hurt by lower oil and natural gas prices to start 2007 compared with a year ago.

Last year, the company posted the largest annual profit by a U.S. company — $39.5 billion.

In March, ExxonMobil said it will spend some of that money on more than 20 new global projects in the next three years, investments expected to add 1 million oil-equivalent barrels a day to the company's volumes at peak production.●

—The Associated Press contributed to this report

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PPT

ly that the 30-cent haircut as it was called was intended to deal with improperly maintained equipment." He said be believes that was the view held within the administration team. "Now that said, it was never discussed during the hearing process and I'm not sure when it actually became the position of the … previous administration" that the 30-cent provision "was meant to be all inclusive of both properly maintained and improperly maintained replacement provisions."

Galvin said that based on his reflection on the record "it seems to me that from the legislative perspective the two were not considered to be the same issue. And the 30 cents was not intended to cover improperly maintained equipment."

Galvin: issue ripe for discussion

Galvin said he thinks the issue is now ripe for discussion.

The standard of gross negligence is in PPT.

"And the question becomes, based upon what we have subsequently learned and what we can project out given the need for the PSIO (Petroleum Systems Integrity Office), given why we're putting all that into place … that's strictly a policy question from the state's perspective as to whether or not we're going to bear those costs associated with a particular standard of care.

Alaska Revenue Commissioner Pat Galvin

"And I think that the question of what that standard of care should be is one that this committee should pay close attention to," he said.

Revenue and the Department of Natural Resources are participating in discussions on the particular language that would be part of an amendment to the bill, he said.

"But in terms of the 30-cent question, I come away from the record at least with the understanding that it was not designed or intended to be something that covered improper maintenance." ●

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INSIDER

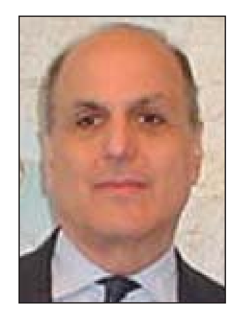
ANWR lobbying offensive by the state in our nation's capital?

"Every time I hear that someone said we are looking for a new ANWR lobbyist, I cringe," said Katz. "We want someone who can help us with other issues besides ANWR, as needed — issues such as energy and the Endangered Species Act."

The state's RFP actually calls for groups or at least two individuals with lobbying experience related to Alaska or other Western public lands state governments, and lobbying experience related to oil and gas development or resource development. The winning bidder also must have an office in Washington, D.C.

The state's new lobbyists will have big shoes to fill in replacing high-powered Wexler, Walker Public Policy Associates. This leading Washington, D.C., lobby firm has quietly worked on behalf of Alaska in Congress since 1979.

"Their contract expires at the end of May," Katz said, "and by law, we cannot renew it."



"Every time I hear that someone said we are looking for a new ANWR lobbyist, I cringe. We want someone who can help us with other issues besides ANWR, as needed — issues such as energy and the Endangered Species Act." –John Katz

So what else is Alaska seeking in its new congressional lobbyists?

Folks who can expertly promote any energy or resource issue that pops up on the state's radar, the state's oil and gas interests, be it ANWR, the Alaska natural gas pipeline or something entirely different.

Moreover, the winning bidder will get bonus points for having at least 5 years experience working both Democratic and Republican sides of the aisle on Capitol Hill.

—ROSE RAGSDALE

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MMS

requirements. For example, a requirement for a 120-decibel monitoring zone in the 2006 stipulations might perhaps be replaced by a requirement to move to different offshore areas at different times during the open water season.

And the draft PEIS that MMS has published includes some new alternatives for mitigating environmental and subsistence hunting impacts.

"We have also included (for example) an alternative that has exclusion windows, rather than having that be decided through the coordination with the whaling captains," Cranswick said.

The PEIS is also making use of lessons learned from the 2006 open water season. For example the passive acoustic monitoring implemented in 2006 proved ineffective, Cranswick said.

"It didn't give us the kind of results that we needed. … It wasn't detecting anything," Cranswick said.

Public involvement

A key feature of the PEIS process is public involvement beyond what is required for an environmental assessment. The public has been involved in scoping the PEIS — MMS is currently engaged in a program of public hearings. Written comments on the PEIS must be postmarked no later than May 14.

But, although the development of an EIS can often prove to be a multi-year process, the comprehensive nature of the 2006 seismic programmatic environmental assessment has given the PEIS development a head start — the PEA has provided 90 percent of the content of the draft PEIS, Cranswick said. MMS hopes for completion of the PEIS during the summer of 2007, but the timing will depend on the issues that the public raises during the public comment period, Cranswick said.

"It depends on how many comments we get and how complicated they are," she said. ●

continued from page 1

HUSKY

of the 10 contenders to buy the 160,000 bpd Ohio refinery owned by Valero Energy and valued at about US$1.5 billion.

It has also held talks with Marathon and other U.S. refiners as the U.S. refining sector embarks on retrofitting and expanding its operations to handle larger volumes of heavy crude from Western Canada. BP and Koch are seen as potential partners.

"We are looking at various alternatives and quantifying their economic returns to see which way will be better," said Husky Chief Executive Officer John Lau. "We will announce our solution before the end of the year."

Lau: acquisitions possible

Lau said acquisitions are well within Husky's grasp, given that the company has debts of only C$400 million and cash flow of C$1.3 billion.

He also let it be known that Husky is eager to expand its working interest in Terra Nova to 15 percent from 12.51 percent. The field operator is Petro-Canada at 34 percent. Other stakeholders are ExxonMobil, Norsk Hydro, Murphy Oil and Chevron.

Lau said an increase would help potential cost synergies between Terra Nova and the nearby White Rose field, which Husky operates with a 72.5 percent stake, the balance held by Petro-Canada.

He sidestepped questions on whether Husky sees itself as Terra Nova's eventual operator other than acknowledging that the company would be happy "if Petro-Canada offered it."

In its first-quarter report, Husky said it paid an average C$10.55 per barrel of oil equivalent to operate in the Western Canada Sedimentary basin, up from C$9.31 a year earlier, saying the increase stemmed mostly from production in maturing fields and "more extensive, but less prolific reservoirs."

It said the basin requires greater infrastructure, such as wells and extensive pipeline systems, crude and water trucking and enlarged gas compression systems.

That results in higher energy consumption, workovers and increased material costs.

Despite these negatives, Husky invested C$466 million on conventional E&P in the three months, trailing only EnCana on the list of operators in Western Canada.

A fast-rising power in the oil sands, the company is pushing ahead with new ventures at Caribou Lake in Alberta's Cold Lake region and the Saleski lease, where research is exploring different ways of extracting bitumen from carbonate formations.

At Caribou, Husky is testing a hybrid steam stimulation and steam-assisted gravity configuration which it hopes will reduce the time needed to drain a well to 5.5 years from 9 years.

It is working on a 10,000 bpd demonstration project, setting the stage for a second 20,000 bpd to recover 350 million barrels of bitumen.

Seismic has been completed at Saleski and a pilot is scheduled for the next two years to test various methods of developing a formation, leading to a startup phase of 20,000-50,000 bpd, growing to 200,000 bpd by 2015 from a lease estimated to have 24 billion barrels of bitumen in place. ●

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Diamond exploration and development firm sees exciting results in Nunavut

WAYNE LACHAPPELLE, A 24-YEAR EMPLOYEE AT USIBELLI COAL MINE, MONITORS THE CONVEYOR BELT AS COAL IS FED INTO THE WEST TIPPLE, A LARGE A-FRAME SHELTER AT UCM

PHOTO BY CHRIS AREND/COURTESY USIBELLI COAL MINE

A special supplement to Petroleum News
WEEK OF
April 29, 2007
Petroleum news

● BRITISH COLUMBIA

Orca quarry on course to make a killing

Polaris Minerals' project starts up successfully after construction workers battled through storms all winter on Vancouver Island

By SARAH HURST

For Mining News

When Polaris Minerals developed its plan for the Orca quarry on Vancouver Island, the company expected that the initial market for the sand and gravel would be California, where demand for concrete is apparently insatiable. But by the time the quarry began production in March of this year, Polaris had received a pleasant surprise: a five-year contract with a ready-mix concrete manufacturer in the Vancouver area, a customer that has asked Polaris to keep its identity confidential.

Polaris will ship 400,000 tons of sand and gravel per year by barge to the Vancouver customer, as well as loading up Panamax-class ships with the materials for delivery to California. Vancouver-based Polaris has a 20-year contract with Shamrock Materials that makes Shamrock the exclusive distributor of Polaris products in certain counties in northern California. A second customer in California is also remaining anonymous for now.

Orca's startup was doubly satisfying because it occurred only six weeks later than the original target date and was on budget, despite the 16 storms that battered British Columbia during construction last winter, four of which unleashed hurricane-force winds. Orca is designed to produce 6 million tons of sand and gravel per year and was built in partnership with local First Nations.

"Although 2006 was a very demanding year for all of us and we had to complete a gargantuan workload against strict deadlines and in the face of extreme weather conditions at the Orca quarry, it was a very successful transformation year for Polaris," Marco Romero, the company's president and CEO, said in a year-end results conference call April 11. "While we suffered some construction shutdowns, miraculously we sustained no damage and we were able to complete the job," he added.

COURTESY POLARIS MINERALS

The Orca sand and gravel deposit can be seen in the background of this view of the quarry.

Two barges left in March

Two barges destined for the Vancouver customer left Orca March 22, 2007. "The loading went extremely well, especially considering that the facility was not specifically designed for barges, but for the much larger oceangoing ships," Polaris COO Herb Wilson said in the conference call. The first Panamax ship was loaded with 79,000 tons of sand and gravel at the quarry in 27 hours, starting March 31, and it was unloaded in San Francisco on April 5. It will take about six months for the quarry to produce at its optimal rate and for the new workforce to become fully competent operators, according to Wilson.

The next steps for Polaris will be to develop the Eagle Rock granite quarry and to explore a new target, the Cougar sand and gravel deposit. Both projects are on Vancouver Island.

Once production began, samples of the sand and gravel were sent to laboratories for the process of California state approval for their use in concrete. The results were described by a technical inspector as "extraordinary," Wilson said, and the materials exceed both U.S. and Canadian concrete manufacturing standards. Polaris expects to sign long-term contracts with more customers in the near future, especially since the price of aggregates has been increasing and it is getting harder to find and develop new resources. Despite the high demand for the materials, opposition to quarrying has been intensifying in California recently.

At the Port of Richmond in San Francisco, Polaris owns an aggregates receiving, storage and distribution terminal that is currently under construction and is scheduled for completion in the third quarter of this year. "The complex ground stabilization and piling works were successfully completed early in 2007 and structural foundations are advancing well, with a significant section of the storage building's floor already cast," Wilson said. Mechanical and electrical contractors are set to begin work at Richmond on May 14, he added.

Additional port terminal capacity needed

"In a manner reminiscent of the quarry procurement challenges, we have also had to turn to China for fabrication of the large conveyor structures in order to achieve the required delivery date. The storage building is, however, being fabricated in Spokane, Washington," Wilson explained, in reference to the Richmond terminal. "Securing additional port terminal capacity remains our highest priority and we are making significant efforts in this regard. This represents our biggest challenge and yet our greatest opportunity," Romero said.

The next steps for Polaris will be to develop the Eagle Rock granite quarry and to explore a new target, the Cougar sand and gravel deposit. Both projects are on Vancouver Island. As the company's principal assets were under construction in 2006, there were no operating revenues last year and Polaris incurred a loss of $3.8 million, compared with $3.4 million in 2005.

"Once we repay our bridge debt facility on April 16 we will be entirely debt-free and we'll have very significant financial strength and flexibility to finance our growth," Romero told investors. Polaris did repay the US$31 million debt held by Ingalls and Snyder LLC April 16.

Also on April 16, British Columbia's Minister of State for Mining, Kevin Krueger, presented the 2006 Stewart O'Brian Safety Award to Polaris in Victoria. The award is given annually to operations with the lowest injury frequency rate in the province. The Orca quarry had zero lost-time accidents during its construction while accumulating more than 100,000 worker hours. ●

● GUEST COLUMN

Mining and the law: Rio Tinto and the Pebble project

By J.P. TANGEN

For Mining News

Mining & the law

J.P. TANGEN

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

Kenai Peninsula College Anthropology Professor Alan Boraas is a frequent op-ed contributor to the Anchorage Daily News. One of his regular targets for criticism is the Pebble copper project in southwest Alaska. Most recently, on April 14, the brunt of his criticism was the involvement of Rio Tinto in the project.

In Prof. Boraas' words, news of the Rio Tinto buy-in is "not good for those concerned with environmental and community impacts of the proposed mine." He notes that Rio Tinto is also involved in the Oyu Tolgoi copper project in Mongolia. He goes on to comment critically on other projects around the world in which Rio Tinto is or has been involved.

The Boraas commentary is worth noting, not because of its accuracy or lack thereof, but rather because it underscores a critical point. The Pebble project is so big that only the heftiest of the world's mining companies can contemplate taking it on. Of course, we are all concerned about the environment and the social contract that whoever undertakes to develop Pebble must implicitly enter into before it can get the go-ahead to begin construction and ultimate production, but the far greater point is that Pebble, like Oyu Tolgoi, is among the largest known copper deposits in the world. Some would classify them as the two largest.

Reality teaches, however, that we need copper and that we must mine it where it is found. We should celebrate the fact that we have such an opportunity within our state, and we should take pleasure in knowing that perhaps Rio Tinto will be willing to submit itself to our laws and regulations in order to bring this project to life.

Copper needed for essential purposes

Copper is not an insignificant commodity: We need it for wires to distribute electricity and for pipes to distribute water and for a long laundry list of other essential purposes. The major question that is clearly always before us is where to obtain the copper that allows us to embrace our standard of living.

Like the many other commodities that make our every day life possible, copper must be mined. Contrary to Prof. Boraas' implication, however, one does not wander into the nearest hole in the ground and start digging it up by the shovelful. The steps and stages of progression from a prospect such as Pebble to a producing mine are long, tortuous and expensive.

The permitting alone will undoubtedly cost hundreds of millions of dollars. Everything from baseline environmental studies to the preparation of socio-economic reports will have to be done and done again. Infrastructure will have to be constructed. An operation of the magnitude that the Pebble project may attain will need to engage perhaps 1,000 full-time workers, most of whom will be drawn from Southwest Alaska, and virtually all of whom will have to be trained. There are also a few small engineering problems that will have to be worked out.

Costs require strong company

The costs that will have to be incurred and the long-term commitments that will have to be made cannot be borne by a small group of prospectors sitting around a campfire on a summer night. Only the strongest companies, companies like Rio Tinto, need apply.

These hurdles that must be cleared prior to production are not necessarily bad things. If there is going to be a multi-billion pound copper mine constructed anywhere in the world, it is probably far better to have it here in Alaska than almost anywhere else.

First, we have a dedicated corps of volunteers standing at the ready to point their fingers — indeed, to fire off a lawsuit — at the first misstep. Next we have some of the most stringent environmental laws found anywhere in the world. Alaska and America are well prepared to regulate and oversee a project of this magnitude. Environmental laws are not the end of the story however: There are also the bevy of health and safety laws as well as wage and hour protections that must be observed. In brief, building a mine is a major chore and building a copper mine of this size and duration can only be done by the biggest and the best global companies.

Perhaps Prof. Boraas would join those who yearn for the day when we could put together an all-American mining project; or perhaps he just doesn't want mining to take place in Alaska. It is hard to tell where he stands by just looking at his comment. Reality teaches, however, that we need copper and that we must mine it where it is found. We should celebrate the fact that we have such an opportunity within our state, and we should take pleasure in knowing that perhaps Rio Tinto will be willing to submit itself to our laws and regulations in order to bring this project to life. ●

Contact North of 60 Mining News:

Editor: Sarah Hurst editor@MiningNewsNorth.com
Phone: 907.248.1150 • Fax: 907.522.9583
Address: P.O. Box 231651, Anchorage, AK 99523

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Kay Cashman	PUBLISHER
Mary Mack	CHIEF FINANCIAL OFFICER
Kristen Nelson	EDITOR-IN-CHIEF
Sarah Hurst	EDITOR (Contractor)
Susan Crane	ADVERTISING DIRECTOR
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Forrest Crane	CONTRACT PHOTOGRAPHER
Tom Kearney	ADVERTISING DESIGN MANAGER
Mapmakers Alaska	CARTOGRAPHY
Dee Cashman	CIRCULATION REPRESENTATIVE

ADDRESS
P.O. Box 231651
Anchorage, AK 99523-1651

EDITORIAL
Anchorage
907.522.9469
Canada
farnorth@petroleumnews.com

BOOKKEEPING & CIRCULATION
907.522.9469
Circulation Email
circulation@petroleumnews.com

ADVERTISING
907.770.5592
Advertising Email
scrane@petroleumnews.com

CLASSIFIEDS
907.644.4444

FAX FOR ALL DEPARTMENTS
907.522.9583

Several of the individuals listed above are independent contractors

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● GUEST COLUMN

Alaska mining news summary: Three new companies come to Alaska; exploration planned on two old producers

By CURT FREEMAN

For Mining News

The exploration season has started but not before a bevy of new corporate competitors have entered the Alaska mineral scene and not before a number of past producing mines have been dragged into the 21st century.

During the last month, three new companies have acquired properties in Alaska and two old Alaska producers have been brought out of mothballs to have new exploration done on them. This month's commodities of interest include gold, copper, lead, zinc, silver, uranium, nickel, palladium, niobium, tantalum, zirconium, beryllium and rare earth metals. How's that for a metals bouillabaisse!

The author

CURT FREEMAN

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column April 23. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his web site is www.avalonalaska.com.

Western Alaska

NOVAGOLD RESOURCES provided an update for its Rock Creek project near Nome. Following receipt of a modified wetlands permit on March 13, the company has cleared the mill and tailings facilities areas and indicated that plans are still on track for initial production in the third quarter of 2007.

The company has budgeted to expend $37 million, net of revenues, on Rock Creek construction in fiscal 2007, plus an additional $6 million on exploration and other costs. The company also initiated a preliminary economic assessment to evaluate restarting alluvial gold production at its Nome Gold project. Current business plans for Nome Gold include the potential to ultimately produce 25,000 ounces of gold annually, along with several million tonnes of sand-and-gravel co-product.

NovaGold Resources also announced that final drill assay results from the 92,000 meter 2006 Donlin Creek drill program were received at the end of March. Once the results have been evaluated, the company will release a resource update that is expected to significantly expand the measured and indicated resource base on the project. For 2007, JV operator Barrick Gold has budgeted $87 million including 70,000 meters of infill and in-pit exploration drilling, environmental baseline studies, studies of alternative power sources, permitting work and feasibility and engineering work.

Full Metal Minerals also said it had optioned the Inmachuck project to Alaska newcomer First Factor Development. To earn a 60 percent interest in the property, First Factor must incur $2.5 million in exploration expenditures, issue 600,000 shares and pay Full Metal $90,000 in cash.

FULL METAL MINERALS and joint venture partner **TRIEX MINERALS CORP.** reported plans to conduct a $1.5 million uranium exploration program at their Boulder Creek uranium project north of Elim. The program will include approximately 3,000 meters of core drilling, testing multiple targets on both the Boulder Creek and McCarthy Marsh prospects. Half of the drilling will be directed toward delineation of known mineralized zones including the Main Zone, 990 Hill and Carbon Creek zones.

The second component of the program will include drilling of regional targets on the McCarthy Marsh claims. This work is a follow up of 1,841 line-kilometers of airborne radiometrics flown in 2006 that resulted in identification of 53 high priority anomalies. A total of 300 rock, soil and biogeochemical samples also were collected and resulted in coincident uranium and molybdenum anomalies in five areas. Tertiary sediments at McCarthy Marsh occur adjacent to radioactive syenite intrusions on the western flank of the Darby Mountains. The McCarthy Marsh basin is approximately 35 kilometers across.

Alaska newcomer Gold Crest Mine plans to complete 10,000 feet of helicopter-supported diamond drilling on several targets within the Kisa project located 140 kilometers southeast of Bethel.

Full Metal Minerals also said it had optioned the Inmachuck project to Alaska newcomer First Factor Development. To earn a 60 percent interest in the property, First Factor must incur $2.5 million in exploration expenditures, issue 600,000 shares and pay Full Metal $90,000 in cash.

The companies are planning a mechanical trenching and 1,300 meter diamond drilling program that will commence in June. Work completed in 2006 included collection of 267 soil samples on a 100-by-300 meter grid, followed by infill soil sampling on a 100-by-150 meter grid. Soil results range from trace to 735 parts-per-billion gold with an average of 28 parts-per-billion gold. Of these, 22 samples assayed over 50 parts-per-billion gold and eight assayed over 100 parts-per-billion gold.

In additional to gold exploration, two significant base metal enriched carbonate-replacement zones have been identified at Hannum and Harry's Creek. The occurrences are 1,300 meters apart and appear to be at the same stratigraphic level. The Hannum Creek prospect is characterized by an extensive surface gossan. Previous channel samples collected from trenches completed by **BUNKER HILL MINING CO.** in the 1960s include 15 percent lead, 1.5 percent zinc, 2.2 ounces of silver per ton and 0.23 percent antimony over a 51-foot width.

The Bunker Hill soil program identified an anomalous area about 1,500 meters east-west by 500 meters north-south in which soils returned values greater than 250 parts-per-million lead and 500 parts-per-million zinc. In 1966, Bunker Hill completed 15 diamond core holes totaling 608 meters (the deepest hole was only 75 meters deep).

Work completed by Full Metal during 2006 identified a 1,100 meter by 400 meter, northwest trending silver-lead-zinc anomaly between Harry's Creek and Hannum Creek. Lead values ranged from trace to 4,220 parts per million with zinc values ranging from trace to 5,390 parts per million. Welcome to Alaska First Factor!

Alaska newcomer **GOLD CREST MINE** plans to complete 10,000 feet of helicopter-supported diamond drilling on several targets within the Kisa project located 140 kilometers southeast of Bethel. In 2006, 1,100 line-kilometers of aeromagnetic and electromagnetic surveys were completed over the project area and portions of the property were mapped and sampled at reconnaissance scale. The Kisa and Arnie prospects cover extensive intrusive-related gold showings.

Surface work on the Kisa property has outlined a 450-by-900 meter intrusive breccia body which is exposed over a vertical relief of 250 meters. The average value of all 27 chip and grab samples collected over the accessible extent of the intrusive body is 1.2 grams of gold per tonne. The highest grade grab sample assayed 8.6 grams of gold per tonne and the best chip sample ran 1.78 grams of gold per tonne over 4.6 meters.

The Kisa and Arnie prospects also cover extensive sheeted felsic dike swarms which contain widespread gold values ranging up to 10 grams of gold per tonne. Welcome to Alaska Gold Crest Mines!

Eastern Interior

KINROSS GOLD announced revised year-end 2006 mineral resource updates

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FREEMAN

for its Fort Knox mine in the Fairbanks District. Proven and probable reserves stood at 159,673,000 tonnes grading 0.53 grams of gold per tonne (2,705,000 ounces). Additional measured and indicated resources stood at 71,284,000 tonnes grading 0.69 grams of gold per tonne (1,573,000 ounces).

FREEGOLD VENTURES reported the results of a rotary air blast drilling program on its Golden Summit project in the Fairbanks District. This program has identified broad zones of gold mineralization over the entire 620-foot width of the drilled area. The width of this zone remains open to the north and south. The work consisted of 4,700 feet of drilling (93 holes) in three parallel lines, spaced 15 feet apart. Highlights of the three lines include a 260-foot wide zone averaging 0.82 grams of gold per tonne from holes 4 to hole 16 on line 1, a 340-foot wide zone averaging 0.74 grams of gold per tonne from holes 62 to 46 on line 2 and a 300-foot wide zone averaging 1.02 grams of gold per tonne from holes 63 to 77 on line 3.

Additional drilling is planned for 2007.

Alaska Range

NEVADA STAR RESOURCES has merged with Toronto-based Pure Nickel Inc. and changed its name to Pure Nickel Inc. The company said it has hired Larry Hulbert, Ph.D., as its chief exploration officer. Hulbert is a world-renowned expert on mafic and ultramafic rocks and their metallic mineral resources and will be directing exploration of the company's MAN nickel-copper-platinum group element project in the central Alaska Range this summer.

Landmark Minerals Inc. and Alaska newcomer UCore Uranium Inc. announced that they have formed a joint venture to explore the past producing Bokan Mountain uranium prospect on Prince of Wales Island in southeast Alaska. Ucore has the right to earn a 75 percent interest in the joint venture.

Northern Alaska

LITTLE SQUAW GOLD MINING has initiated its 2007 exploration program on its Chandalar gold property in the southern Brooks Range. The company says it intends to complete 17,500 feet of combined diamond core and reverse-circulation rotary drilling to define resources on lode and alluvial gold targets on the project. Of this total, 4,500 feet of diamond core drilling will be completed on seven or eight lode prospects and 90 rotary holes totaling 13,000 feet will be directed toward alluvial gold prospects.

Southeast Alaska

LANDMARK MINERALS INC. and Alaska newcomer **UCORE URANIUM INC.** have formed a joint venture to explore the past producing Bokan Mountain uranium prospect on Prince of Wales Island in southeast Alaska. Ucore has the right to earn a 75 percent interest in the joint venture.

Uranium mineralization at Bokan Mountain was discovered in 1955 by airborne radiometric surveys. Since then, more than 20 uranium and rare-metal prospects, some with substantial amounts of drill-defined mineralization, have been discovered. All of the prospects are located within, or proximal to, a Jurassic-aged, multi-phase, peralkaline intrusive complex.

During the 1980s the U.S. Bureau of Mines conducted an extensive evaluation of uranium and related strategic mineral resources at Bokan Mountain. Their report suggests that the property hosts in situ resources totaling 11 million pounds of U3O8, 96 million pounds of niobium oxide, 637 million pounds of zirconium oxide, 240 million pounds of rare earth oxides, 2 million pounds of tantalum oxide and 8 million pounds of beryllium oxide in multiple deposits.

Uranium production from the Ross-Adams mine at Bokan Mountain took place in three intervals between 1957 and 1971. **CLIMAX MOLYBDENUM** produced 15,000 tons grading 1.05 percent U308 in 1957. **STANDARD METALS** produced 15,000 tons grading 1.0 percent U308 in 1959-1964. **NEWMONT EXPLORATION** produced 55,600 tons grading 0.62 percent U308 in 1971.

Production was terminated each time when sales contracts with the U.S. Atomic Energy Commission were fulfilled. Uranium ore from the Ross-Adams deposit was mined from a steeply dipping pipe-like body with a combination of a small open pit and two underground levels. Previously mined and disturbed areas are being investigated under the Comprehensive Environmental Review, Compensation, and Liability Act of the U.S. Environmental Protection Agency.

Under the terms of the joint venture agreement between Ucore and Landmark, Ucore will fund the first $300,000 of acquisition and exploration costs, by Nov. 20, 2007, to vest its initial 50 percent interest in the joint venture. Ucore has the right to increase its interest from 50 percent to 75 percent by incurring an additional $1.7 million in property costs and paying to Landmark 50,000 Ucore common shares.

Pure Nickel Inc. reported the staking of 112 federal lode mining claims over the historic Salt Chuck copper-palladium mine on Prince of Wales Island.

The JV controls four separate option agreements with underlying claim owners. In order to earn a 100 percent interest in 84 claims in these four blocks, the JV must make total payments of $850,000 over one year from the date of signing formal option agreements. The vendors will retain net smelter returns production royalties ranging from 2 percent to 4 percent. A high resolution airborne radiometric and magnetic survey is being planned to guide the 2007 exploration program. Welcome to Alaska UCore Uranium!

PURE NICKEL INC. reported the staking of 112 federal lode mining claims over the historic Salt Chuck copper-palladium mine on Prince of Wales Island. The Salt Chuck mine was active between 1919 and 1941 and had a reported production of 300,000 tons of copper sulfide ore grading 0.95 percent copper, 2.0 grams of palladium per tonne, 1.1 grams of gold per tonne and 5.7 grams of silver per tonne. The Silurian age Salt Chuck mafic-ultramafic complex forms an elongated northwest trending body approximately 7.3 kilometers long and 1.6 kilometers wide. The company is formulating plans for exploration of the prospect. ●

● ALASKA

Northern Dynasty tops most juniors on market cap

Mining boom prompted accounting firm PricewaterhouseCoopers to analyze top 100 companies listed on Canada's TSX Venture Exchange

By SARAH HURST

For Mining News

Vancouver-based Northern Dynasty, whose sole asset is the Pebble project in southwest Alaska, is the only junior mining company to remain in the top five on the TSX Venture Exchange or TSX-V by market capitalization for two years straight. The company's market capitalization was C$326.5 million in 2005, making it the fourth-largest in its sector, and C$657.4 million in 2006, making it the third-largest. These and other achievements by Canadian companies are highlighted in a report called Junior Mine by PricewaterhouseCoopers.

Reflecting its success in expanding the resources at Pebble, Northern Dynasty's share price has hit an all-time high in recent weeks, and is now trading at around $12.70, compared with $8 a year ago. The two mining companies on the TSX-V that are larger than Northern Dynasty are Aurelian Resources (exploring in Ecuador), with a market cap of C$826.6 million in 2006 and UrAsia Energy (producing uranium in Kazakhstan) at C$1.23 billion. ECU Silver Mining is fourth at C$569.2 million and Seabridge Gold is fifth at C$474.9 million.

This is the first report by PricewaterhouseCoopers on Canada's junior mining sector, and it was motivated by "the recent success of junior mining companies in this prolonged boom cycle," according to the accounting firm. The report examines the financial position of the top 100 of the 967 junior mining companies on the TSX-V as of Sept. 30, 2006. These 100 companies represent over half of the TSX-V mining industry by market capitalization, with total revenues of C$256.2 billion from production and C$9.6 billion from exploration in 2006. This represents an increase of 224 percent on production revenues over the 2005 figure, and a decrease of 8 percent on exploration revenues.

Other Alaska companies in top 100

In addition to Northern Dynasty, other companies active in Alaska in the top 100 include Bravo Venture Group, Century Mining, Full Metal Minerals, International Tower Hill Mines and Quaterra Resources. Companies active in Canada's northern regions include Adanac Moly, Cash Minerals, North American Tungsten, Roca Mines, Seabridge Gold, Sherwood Copper, Starfield Resources and Yukon Zinc.

The total market capitalization of all the junior mining companies on the TSX-V rose to C$27.6 billion in 2006, up 86 percent from the total of C$14.8 billion in 2005. Gold was a key reason for the growth, according to the PricewaterhouseCoopers report. Companies that mine or explore for gold now account for approximately

COURTESY NORTHERN DYNASTY

Northern Dynasty's Pebble project keeps the company among the top five juniors on the TSX-V by market cap for a second year running.

60 percent of the market. Four of the five largest TSX-V mining companies list gold as their commodity of focus. The price of gold has risen from around $420 an ounce in April 2005 to around $660 today.

"Canada is the only country to offer flow-through shares for the juniors, which assist companies to get the external financing they need from investors to support their exploration activities in Canada," the report says. "Flow-through shares allow companies to pass exploration expenditures to investors where the deductions can be immediately used to reduce taxable income." Net financial losses for the top 100 companies rose from C$247 million in 2005 to C$395.7 million in 2006, which the report attributes to the dominance of exploration-stage companies in the sector.

Out of the top 100 companies, 86 are in the exploration stage. "This shows how the TSX-V can be a home to Canada's junior companies who graduate to the larger TSX when they become large-scale producers," the report says. "This often differs from exchanges such as

There were many new players in the TSX-V's top 100 in 2006, with 51 companies appearing in the list that were not there the previous year.

London's Alternative Investment Market (AIM), where not all mining companies move up to the FTSE when they mature into businesses with greater capitalization and resources." Aurelian Resources, the second-largest company on the 2006 list, did move to the TSX in early 2007.

Many new players in 2006 list

There were many new players in the TSX-V's top 100 in 2006, with 51 companies appearing in the list that were not there the previous year. The difference in the market capitalization between the number one and number 100 companies on the list more than tripled from C$397 million in 2005 to C$1.2 billion in 2006. The 100th company is Vancouver-based Starfield Resources (exploring in Nunavut), with a market cap of C$54.4 million and a share price of around 24 cents.

Just over one-third, 34 percent, of the top 100 companies are operating in Canada, with 14 percent in the United States, 12 percent in Mexico, 5 percent in South Africa, 4 percent in Argentina, 4 percent in Peru, 4 percent in China, 3 percent in Brazil, 3 percent in Chile, 3 percent in Ecuador and 15 percent in other jurisdictions.

During 2006, four companies earned mining revenues that didn't make any in 2005, including Vancouver-based North American Tungsten Corp. (mining in the Northwest Territories and exploring in the Yukon) with C$37 million. Century Mining led the way in revenues for production companies in 2006 — its mining revenues shot up from C$4.7 million in 2005 to C$42.6 million in 2006. Washington-based Century has operations in Quebec and Peru, as well as exploration properties in Alaska and British Columbia.

Stock compensation expenses for TSX-V mining companies went up noticeably in 2006 by C$79.6 million to C$135.2 million. Exploration companies bore most of this cost, spending C$59.7 million more than in 2005. "This is a reflection of the growing value of companies in this sustained boom and the need to attract and retain qualified people — and give them an incentive to stay with the company," the report says. "Higher levels of stock compensation are not uncommon in the higher-risk junior mining sector. People in leadership roles often accept stock options in place of a higher base salary so that more cash can be used for mining efforts," it adds. ●

● ALASKA

Niblack seeks peek under Southeast peak

Junior embarks on ambitious underground tunneling program; hires operations manager; and stakes more claims around core deposit

By ROSE RAGSDALE

For Mining News

COURTESY NIBLACK MINING CO.

Mineral-rich ore samples from the Niblack property on Prince of Wales Island in Southeast Alaska.

As summer approaches, Niblack Mining Co. is assembling everything it will need from people to permits to tunnel 6,000 feet into the heart of Lookout Mountain on Prince of Wales Island in Southeast Alaska. The Vancouver, B.C.-based junior wants to explore at depth zones believed to be rich in copper, gold, zinc, silver and other marketable minerals.

Niblack Mining hired Henry Bogert as operations manager for the project in March. Juneau resident Bogert is a longtime mining and civil engineer with degrees from Montana Tech and the University of Idaho.

To his credit, Bogert developed and managed the Golden Sunlight Underground Mine in Montana for Placer Dome Gold and later Barrick Gold Corp. His career also includes projects with TVX Gold, Noranda, Brimstone Gold, St. Andrew Goldfields, and Stillwater Mining, as well as five years service as an officer in the U.S. Navy Civil Engineer Corps, supervising construction in the Aleutian Islands. He also taught mining engineering at the University of Idaho and Montana Tech.

"Henry brings extensive experience and knowledge in underground mine feasibility studies, design, construction, operation, and closure. Now he's working a little closer to home," said Niblack Mining President Paddy Nicol in an interview April 17.

Nicol said the company is also reviewing bids from several contractors that will construct the tunnel.

Niblack is a volcano massive sulphide deposit that sits on 2,000 acres on the southern landward side of the island, near tidewater. Volcano massive sulphide, or VMS, deposits are rich in gold, silver, copper and zinc metals.

Niblack Mining believes the deposit is capable of hosting more than 40 million tons of ore.

Tests needed at depth

A historic property, Niblack was mined at the turn of the century, but production ceased at the mine in 1908 due to litigation. Between 1974 and 1994, several majors explored the area, drilling a total of 59 holes and discovering massive sulphides at the Lookout and Dama zones.

Between 1995 and 1997, Abacus Minerals spent $10 million on more drilling and significantly expanded the Lookout Zone, discovered massive sulphides elsewhere on the property and calculated an in-house estimated mineral resource.

In 2005, investors created Vancouver, B.C.-based Niblack Mining out of Abacus Minerals with a mission of advancing the Niblack property toward delineation of an economic ore deposit.

Two years later, Nicol said that goal is closer than ever. Prior drilling results indicate the presence of a significant zone of ore grade mineralization at the Lookout Zone.

"The main thrust of this underground program is to access the main Lookout Zone at depth and a previously unexplored limb of the syncline," he said in an interview April 17.

"In addition, the underground workings will crosscut through a narrow section of mineralization allowing a more detailed geological evaluation. The crosscut also will allow drill testing of the Mammoth zone which is very difficult to access from surface because of the dip of the mineralization and the topography," he said.

Because of significant costs associated with drilling the deeper mineralization from the surface, Niblack Mining decided the best way to continue exploration is from underground. In addition to providing better drill access to deeper mineralization, an adit will allow confirmation of continuity between existing drill hole intersections, and allow better characterization of mineralization and underground conditions, Nicol said.

The underground program also will give Niblack Mining the ability to have a year-round operation impervious to weather conditions.

"Now, we're confined to working with helicopters during the parts of the year when it is not too windy or rainy," Nicol explained. "But when you're underground, every day is a sunny day."

Permitting under way

In conjunction with its current surface exploration drill program, Niblack Mining has begun construction of a 3,000-foot road in preparation for the underground program. The road will provide equipment and supply access from tidewater to the proposed portal site.

Niblack Mining has been working with the Alaska Department of Natural Resources since last summer to streamline the process for obtaining state and federal permits for the project.

The permits will enable Niblack Mining to not only explore the area but also to operate a self-contained floating crew camp on a barge just offshore at Prince of Wales Island.

DNR will act at the lead agency for permits from various agencies, including the Alaska Department of Environmental Conservation and the U.S. Army Corps of Engineers.

Nicol said the public comment period for some of the required permits starts April 23, and the agencies have scheduled a meeting in Ketchikan in early May. A public hearing will be held shortly afterward, he added.

Niblack Mining's proposal to operate the temporary floating camp also underwent a consistency review with the Alaska Coastal Management Program. A final ACMP determination was expected April 27.

More funds for project

The Southeast Alaska project is Niblack Mining's only asset, and it is an advanced stage 1 capital-intensive project, Nicol said.

In addition to applying for permits, the company has been busy raising capital to finance its 2007 program. Niblack Mining announced successful placement of more than $15 million in securities in March, giving the junior enough capital to perhaps fully fund the underground program.

Nicol said the cost of the underground exploration plan is still being determined, but it will probably range between $15 million and $16 million and take 18-24 months to complete.

The junior also staked 45 additional federal lode mining claims surrounding the core Niblack claim block and the nearby Ruby Tuesday property, which consists of 120 claims totaling 2,300 acres, company officials announced April 18.

Staking both sets of claims was designed to secure highly prospective ground around and to achieve a strategic focus on VMS targets in southeast Alaska, they said.

Previous work at Ruby Tuesday includes 13 drill holes (3,200 meters), with all but one of the holes intersecting significant zinc, gold, copper, lead and silver mineralization.

The target at Ruby Tuesday is a 10 million to 20 million ton precious metal rich copper-zinc massive sulphide deposit, Niblack Mining said.

Exploration plans for 2007 include reconnaissance field work such as mapping and prospecting to further advance drill targets, the company added. ●

● NWT, B.C.

Junior chases 'fortune' in minerals?

Ontario-based company forges ahead with cobalt-gold-bismuth, anthracite projects in Northwest Territories, British Columbia

By ROSE RAGSDALE
For Mining News

More junior mining companies than ever appear to be seeking their fortunes in precious metals and gems in the wilds of northwestern Canada these days and more seem to be joining the throng every day.

Still, few of these modern-day explorers are drawn to the Far North by the allure of high-rank coal and metallurgical minerals such as cobalt and bismuth.

But Fortune Minerals of London, Ontario, is one such firm.

Founded in 1988, Fortune Minerals went public a year later. In the 18 years since, the company has gotten lucky more than once. In 1995, it discovered a promising area of mineralization near Yellowknife in the Northwest Territories that with further exploration became the NICO project.

NICO, situated on 12,701 acres (5,140 hectares) about 96 miles northwest of Yellowknife, contains one of the world's largest deposits of bismuth (reserves estimated at 77 million pounds) and reserves of gold estimated at 760,000 ounces and cobalt estimated at 61 million pounds, in an even larger resource.

NICO is 90 percent owned by Fortune Minerals, but the company hopes to acquire the project's remaining 10 percent ownership interest from Fortune's chairman, George Doumet, according to President Robin Goad.

Mount Klappan purchased in 2002

The junior's lucky streak continued in 2002 when it purchased the Mount Klappan anthracite coal deposits in northern British Columbia from a Canadian subsidiary of ConocoPhillips, following the oil major's takeover of Gulf Canada Resources Ltd., which held the coal claims. Fortune now owns 100 percent of the Mount Klappan project, but ConocoPhillips retained a production royalty of C$1 per tonne of product sold.

Today, the junior mining company is rapidly advancing both projects in response to strong world markets for all of the minerals. The projects are currently in permitting on similar tracks to development, with production targeted for 2010, said Goad in an interview April 19.

Fortune also owns a handful of other mineral deposits and a few other exploration projects, in Canada, including the Sue-Dianne copper-silver deposit near the NICO project. Fortune is also managing partner and 30 percent owner of Formosa Environmental Aggregates Ltd., an industrial mineral company that is developing the Greenock high-calcium limestone quarry in Ontario.

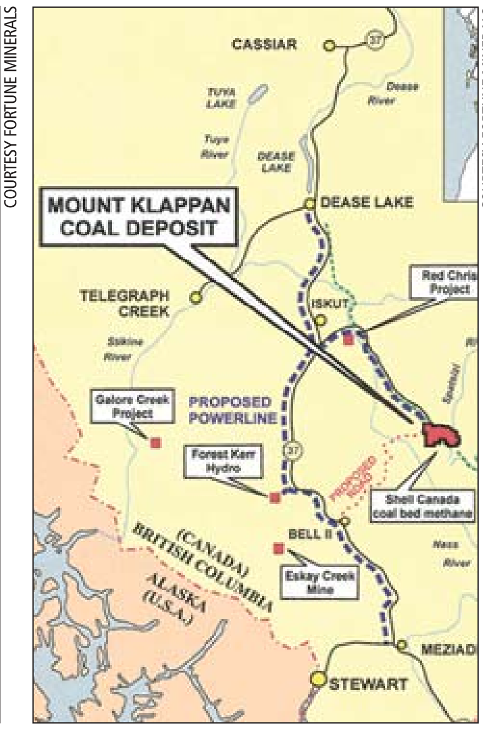
About 20 percent of the company's stock is held by management and the remainder primarily by institutional investors in Toronto, Goad said.

Analysts predict big things in Fortune's future, and tout the company's stock as being significantly undervalued.

"Our stock is trading at $100 million (valuation), and results of our bankable feasibility studies suggest valuations of $300 million using base case metal price assumptions to $1 billion at current prices," acknowledged Goad.


COURTESY FORTUNE MINERALS

loaded scoop tram exiting the portal for the underground workings at the NICO project site.



COURTESY FORTUNE MINERALS


COURTESY FORTUNE MINERALS

Chiefs and elders of the Tlicho First Nation tour the NICO site

NICO's rising star

At the NICO project, Fortune is pursuing development of a combination underground and open pit mine and construction of a process plant to produce gold doré, cobalt cathode and bismuth concentrate.

While gold is arguably the most sought-after commodity in the world, cobalt and bismuth are also highly desirable metals.

Cobalt is a high-strength, magnetic metal increasingly sought for a variety of chemical and metallurgical applications. Currently, the market consumes about 60,000 tonnes a year of cobalt, up roughly 20 percent in the past two years while nearly pure concentrations of the metal sell for about $32 a pound.

Bismuth has very high density and a low melting temperature. It expands upon solidification and is quite inert. Scientifically recognized as one of the safest metals, bismuth is used in pharmaceuticals and medicines and as a lead substitute in solders for plumbing and electronics, brasses, alloys used in hot-dip galvanizing, paint pigments, ammunition, ceramic glazes, radiation shielding and free-cutting steel.

Current yearly global consumption of bismuth is about 12,500 tonnes, and the market, which is constrained by supply, has been growing at about 10-15 percent annually. Bismuth sells for about $15 a pound.

With three such marketable products, NICO is a good bet for achieving production.

Fortune Minerals recently completed a feasibility study for the project and has begun the process of obtaining regulatory permits for the mine's construction and operation. The study was based on the assessment of a combined open pit and underground mine processing 4,000 tonnes of ore per day (1,460,000 tonnes per annum).

Fortune Minerals is busy with a second round of underground bulk sampling and is acquiring the existing Golden Giant Mine (Hemlo) processing facility mill from Ontario.

The company plans to spend $14 million on bulk sampling and pilot test processing this year and another $2 million on permitting and environmental work, Goad said.

Fortune Minerals is also working with a joint effort of the Northwest Territories, Canadian and Tlicho First Nations governments to build a year-round road to three isolated communities and the mining project. The road also will provide easier access for NICO to the Snare hydroelectric complex about 13 miles to the west.

Until now, the three local communities used a winter road to get supplies and to travel to the territories' permanent road system. But milder weather in recent years made the winter road unreliable, Goad said.

Partner needed for B.C. coal project

At Mount Klappan, Fortune has estimated reserves of just over 100 million tonnes with a 2.8 billion tonne resource, making it the largest anthracite coal deposit in North America. The deposit covers nearly 36,000 acres (15,000 hectares) of contiguous coal licenses straddling the B.C. Rail right-of-way and roadbed, 90 miles northeast of the port of Stewart and 200 miles northeast of the port of Prince Rupert. The railway right-of-way currently provides road access to the site from Highway 37.

Goad said that it is noteworthy that Mount Klappan straddles the Dease Lake rail line, which is currently subject to a feasibility study commissioned by the Alaska, Yukon Territory and U.S. federal governments for an extension from northern British Columbia, and extending into the Yukon and Alaska to connect with the Alaska Railroad at Fairbanks.

"This feasibility study is being driven in part by the anticipated announcement of the Alaska gas pipeline and the Yukon's desire

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● BRITISH COLUMBIA

Infrastructure ideal for New Afton project

Costs will be kept low and labor force is available for New Gold's proposed copper-gold mine in south-central British Columbia

By SARAH HURST
For Mining News

Vancouver-based New Gold plans to develop its New Afton copper-gold project into an underground block cave mine, based on a feasibility study the company released April 2. New Afton is located six miles west of Kamloops in south-central British Columbia, at the site of the former Afton open pit mine. That mine operated from 1978 to 1987, producing approximately 500 million pounds of copper, 500,000 ounces of gold and 3 million ounces of silver.

New Afton's reserves contain almost 1 billion pounds of copper, more than 1 million ounces of gold and more than 3 million ounces of silver. The feasibility study envisages an initial 12-year mine life, with a maximum mining rate of 11,000 metric tons per day. Initial capital expenditures would amount to US$268 million, with additional life of mine expenditures of $215 million. If New Gold keeps to its intended schedule, the mine could start production in 2009.

The project's location is "very, very unique," New Gold's president and CEO, Chris Bradbrook, said at the BMO Capital Markets Global Resources Conference in Tampa, Fla., Feb. 26. "The power is right there, the road is right there, the location is really quite something," he explained. "We've got an available labor force. … If you can't get people to work at this site, at this location, I don't know where you can get them to work at mines around the world."

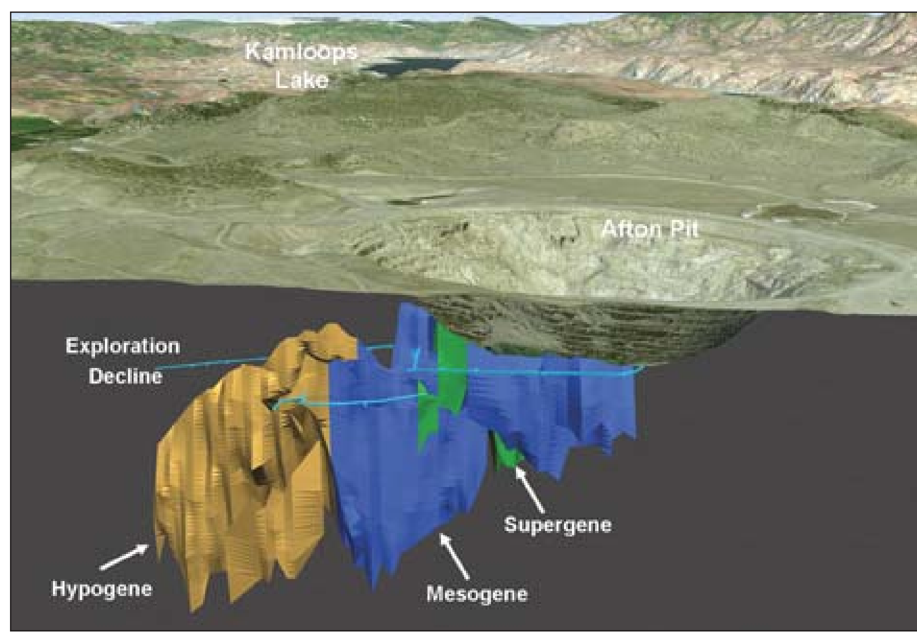
New Afton is one of the world's highest-grade copper porphyries and block caving is the lowest-cost underground mining method, according to Bradbrook. "Think of the ore body as a high-rise, and you go in and blast out the lobby," he said. This method is also being considered by Northern Dynasty for use at the Pebble project in Alaska. New Afton's mine plan is based around three cave blocks. Mining will commence from block 2, the central block, allowing time to remove water from the Afton pit and stabilize accumulated rock debris at the bottom of it. The eastern and western blocks 1 and 3 will be mined simultaneously.

For the first two years of New Afton's operations, ore will be trucked to the surface and processed on site to produce a concentrate, which will be transported by rail to smelters in eastern Canada or to Vancouver and then by ship to smelters in Asia. Once the ramp-up period is completed, ore will be crushed underground before being transported to surface by conveyor. For the entire mine life, tailings will be deposited in a new facility. Water will be supplied initially from the Afton open pit, and subsequently from Kamloops Lake to the north.

The underground mining contractor, Cementation Canada, was scheduled to begin work at the beginning of April. Power to the site will be supplied by a 300-meter connection to the British Columbia Hydro 138kV grid located to the north of the Trans-Canada Highway. New Gold submitted the formal Mine Permit application in January and the application is currently being reviewed by British Columbia agencies. ●

COURTESY NEW GOLD

New Gold's underground mining crew prepares to widen the exploration decline at the New Afton project.



COURTESY NEW GOLD

● ALASKA

Technology enhances Red Dog processing

Operating for 17 years, Arctic lead-zinc mine shows no sign of slowing down, and finding space for new equipment is a challenge

By SARAH HURST

For Mining News

As production steadily increases, investment in mill upgrades is making a big difference in the quality of lead and zinc concentrates at Teck Cominco's Red Dog mine in northwest Alaska. Bringing in new equipment and enhancing systems is always a challenge because the facility is already a labyrinth of massive SAG mills, ball mills and flotation columns, mill engineer Curtiss Ehrsam said at a meeting of the Alaska Miners Association and Society of Mining Engineers in Anchorage April 11.

Recent improvements have included the installation of three Microcel columns at a capital cost of somewhere between $110,000 and $220,000, for a net present value of $4.1 million. "What we found during surveys of our plant was that our column cells weren't really doing the work they needed to be doing, and it was because the bubble size wasn't right," Ehrsam said. "We needed finer bubbles that were able to carry more material out. ... It was getting a lot more free zinc in it than it should be getting."

Red Dog mill engineer Curtiss Ehrsam described recent technology upgrades.

The Microcels take slurry from the bottom of the column and run it through a manifold, where air is injected into it. The slurry then goes through a static mixer that mixes the air and slurry together, injecting fine gas bubbles. "This has made a significant impact on the ability of the columns to recover material, where in the past we stuck with whatever grade they'd give us and we didn't really have a lot of opportunity to improve the recovery, because when you started adding more air, the bubbles would just get bigger and it wouldn't necessarily mean that they could attach as many particles on it," Ehrsam said.

COURTESY TECK COMINCO

The new Jameson cell recycles material at a rate of 3,000-4,000 gallons per minute.

'Expert system' control equipment introduced

Another improvement has been the introduction of "expert system" control equipment on the grinding and flotation circuits and cameras to control flotation reagent additions, at a capital cost of $550,000 for a net present value of $2.4 million. The cameras were installed in both the lead and the zinc rougher circuits. "They measure the froth velocity as the material is going over the edge of the cell, it also looks at the bubbles as well, and with that we added automatic air control so we can actually control these cells to optimize the pull rate on the cells," Ehrsam said.

Lead circuit modifications were also introduced at a capital cost of $1.5 million, for a net present value of $6.8 million. "This was needed in order to deal with the higher-grade material that we had," Ehrsam said. "We added another column into the circuit, we did a bunch of pumping improvements, and then with that we're planning additional Microcel installations in order to help it out." Before this work was done, too much zinc was getting into the lead concentrate, Ehrsam added.

COURTESY TECK COMINCO

Red Dog's third water treatment plant was built at a capital cost of $4 million with the goal of reducing the total dissolved solids in the tailings pond. A high-density sludge process takes water at 10,000-12,000 TDS, treats it with lime and aerates it. The sludge then goes to the tailings impoundment with water that is lower in total dissolved solids or TDS and combines with the other water in the impoundment. "Then feeding back to the other water treatment plants we have a lower overall TDS coming in there, so the plants will treat stuff that's around 3,900 TDS and prepare it for discharge, which we like to be under 2,900 TDS by the time it leaves our sand filter," Ehrsam said.

COURTESY TECK COMINCO

Red Dog's third water treatment plant is reducing total dissolved solids in the mine wastewater.

"We're changing and growing, we've got new ore bodies to move into, and so we're also doing geo-metallurgi-

see RED DOG page 11

● ALASKA

Alaska aims to change coal mining rules

State regulations must be consistent with federal rules administered by the U.S. Department of Interior Office of Surface Mining

By ROSE RAGSDALE
For Mining News

After several years of revision, Alaska is closing in on the goal of bringing its surface coal mining regulations in line with federal rules governing the same activities.

The Alaska Department of Natural Resources says changes are necessary to the Alaska Surface Coal Mining and Reclamation Act to make it consistent with corresponding federal regulations administered by the U.S. Department of the Interior under the Surface Mining Control and Reclamation Act of 1977.

DNR proposes revisions and additions to Alaska regulations, which have been in place since 1983. The rules govern all activities related to surface coal mining, including the protection of water, topsoil, fish and wildlife as well as all aspects of surface coal mining activities.

"With very few exceptions, we are adopting the federal regulations verbatim," said Joseph Joyner, a spokesman for DNR's Division of Mining, Land and Water.

Joyner said the division had to "tweak" some of the language in the rules regarding some materials such as sand and gravel, and craft wording that reflected Alaska's established appeals process. Interior's Office of Surface Mining had no appeals process and Interior's regulations call for creating one.

"Basically, these are the only two changes that differ from the federal regulations," Joyner added.

Bruce Busby, a division geologist, said his office has been working on the proposed revisions since 2003 and have cleared all but one hurdle necessary before adopting the changes.

DNR sought public comment on the proposal this spring and recently extended the comment period to June 1 at the request of a coal industry trade group and Usibelli Coal Mine, according to division officials.

Busby said he does not expect any objections to the changes from industry because notice of the proposed amendments have appeared in the Federal Register twice and attracted no comments.

"Usibelli said they just wanted time to read through the proposed regulations," he said.

Usibelli owns Alaska's only operating coal mine. The company did not return a telephone call by press time.

Others in Alaska's coal mining industry say they have not followed the proposed rule changes closely.

"I don't know what the changes are. I haven't read them, but I will know by June 1," said Bob Stiles, whose company DRven Corp. is project development manager for PacRim Coal Resources. PacRim is pursuing the Chuitna Coal Project, a venture aimed at extracting up to 300 million metric tons of coal from the Beluga Field southwest of Anchorage.

Rob McLeod, vice president of Vancouver, B.C.-based Full Metal Minerals (USA) Inc., said the company will not be commenting in the proposed changes.

Full Metal recently leased 35 square miles of coal claims near Chickaloon.

"At a time when Alaska and America, as a whole, is taking a close look at coal and how they want to deal with their plentiful coal resources in both a negative and positive way, we're certainly paying attention to what Alaskans want to do with coal, not only now but in the future," McLeod said. ●

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FORTUNE

to improve infrastructure for resource development," he said. "The study is complete, and is expected to be announced shortly."

Anthracite ranks in the top 1 percent of world coal reserves, making it suitable for premium metallurgical, thermal, water purification and composite materials applications.

The most important new market for Mount Klappan anthracite is pulverized coal injection, a product used to lower costs in the steel industry. Anthracite also can help reduce consumption of coke in steel industry blast furnaces and as charge carbon in electric arc furnaces at mini-steel mills. Other uses include carbon filters for water purification, fuels for space heating, chemicals and composite materials and clean coal electricity generation. Prices currently range between $50 and $250 per tonne.

ConocoPhillips and Gulf spent a total of $65 million on exploration of the Mount Klappan deposit and Fortune another $15 million on extensive test mining and other work. Fortune Minerals would like to attract a major company to assist in bringing the huge coal resource to market.

The company recently augmented an earlier feasibility study for exporting Mount Klappan coal with a second study of using the coal for electricity generation on site. Potential users in northern British Columbia include power-hungry mine projects such as Red Chris, Galore Creek and Kemess North, which are under development.

But recent changes in B.C. regulations for power plants will make such a use for Mount Klappan coal unlikely in the short term, Goad said.

Extracting the coal for export, however, remains a very attractive option, he added. ●

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RED DOG

cal mapping to examine the variability of the Aqqaluk deposit and improve prediction for the block model," Ehrsam continued. "There's big variations in this ore body, so it's important to do testing for this." Aqqaluk contains very fine sphalerite (the mineral that hosts the zinc) and coarse sphalerite, and a good block model will enable Red Dog's processing team to blend it properly and optimize performance in the plant. "We also want to look at the grain size for the ability to grind it, and then our ability to recover it as well, too, once we do liberate it," Ehrsam said.

Upgrade improves quality of lead concentrate

Current upgrade projects at Red Dog include using the carbohydrate dextrin to improve the quality of the lead concentrate. "Without dextrin on, as the TOC (total organic carbon) in the feed climbs, the silica in the lead concentrate climbs," Ehrsam said. "Once we put on the dextrin that changes. We find that even with the TOC going up in the feed we're quite a bit lower in our silica content in the lead. Staying below 4 percent is extremely important for us because quite a few lead smelters don't want anything above 4 percent."

A relocation of the mill's tertiary cyclones, which was under way in mid-April, will eliminate two process pumps and provide safer access for operators and mechanics when they need to climb up to them. "The current location gets really hot in the summer time and it's really hard to access the cyclones for maintenance," Ehrsam said. "We're also incorporating a better design for the cyclones as well, so that they work better for us," he added.

Red Dog has also installed a Jameson cell, which is a high-intensity, high-efficiency flotation device that recycles material at a rate of 3,000 or 4,000 gallons per minute. "Out of those six conventional cells we entrain a lot of zinc and lead minerals that really we'd like to return to the circuit in order to improve our overall recovery," Ehrsam said. "So we found that we could get better performance, less entrainment, if we did another stage of cleaning and used the Jameson cell for this purpose." The Jameson cell makes a finer bubble than a conventional flotation cell and the tailings that come out of it return to the rougher circuit so that more lead and zinc can be recovered.

The timing of future projects will depend on their economics and how well tests work out, Ehrsam said. Teck Cominco hopes to purchase Xstrata's IsaMill technology for finer regrinding, which again should improve grade and recovery of both lead and zinc. The company is also looking at options for improved air control in the zinc cleaning and at using soda ash to reduce the amount of lead in the zinc concentrate and vice versa. In the plant services area, improvements in lime handling are planned. In water treatment, Red Dog's management would like to increase the mine's capacity for water discharge. ●

● NUNAVUT

Jericho foundations looking unsteady

Nunavut's first diamond mine suffers teething trouble with winter road closing early, processing hiccups and lower grade than expected

By SARAH HURST
For Mining News

After years of exploration, permitting and construction, the day when a junior company brings its first mine into production should be a cause for celebration. Many juniors never even see such a day. But it is also the moment of truth, when all the wealth that has been promised must start to show itself. Some investors are already starting to wonder when Toronto-based Tahera Diamond Corp.'s Jericho mine in Nunavut will bring them a return.

Jericho commenced operations in August 2006 and immediately experienced start-up difficulties. A new crusher had to be brought in and was operational by late September. Shorter than expected winter road access resulted in a fuel and explosives shortage, which negatively impacted the mine's production rate. Perhaps most worryingly, the average grade of the kimberlite was lower than forecast.

According to Tahera's year-end report published March 27, the average recovered grade in 2006 was only 0.55 carats per ton. The company's management still believes that the life-of-mine expected average grade at Jericho will be the expected 0.85 carats per ton. The mine produced a total of 296,000 diamond carats in 2006, which sold at an average of US$93 per carat, resulting in a total production value of C$31 million.

A 59-carat gemstone that sold for US$450,000 was the most valuable diamond recovered last year and three other low-quality stones were in excess of 100 carats each. But the continuing negative cash flow from Jericho has spurred Tahera to seek additional financing. Jericho's mine plan envisages that it will eventually produce 375,000 carats a year to yield 2.6 million carats over the initial eight-year life of the mine.

COURTESY TAHERA DIAMOND CORP.

Jericho commenced operations in August 2006 and Tahera still expects it to produce an average grade of 0.85 carats per ton over an eight-year mine life.

Teck Cominco has purchased 16 percent of Tahera

Last December Vancouver-based Teck Cominco purchased 30 million units of Tahera at a price of $1 per unit, making the larger company the owner of 16 percent of Tahera's shares. Tahera will be trying to improve Jericho's operations in consultation with Teck Cominco's technical team, Peter Gillin, Tahera's chairman and CEO, told investors in a conference call March 27. Meanwhile, Tahera's share price has fallen steadily from a high of $4 a year ago to around 91 cents currently.

Tahera hopes to boost its prospects by succeeding in exploration projects close to Jericho, including the Polar project, where the company is in a joint venture with De Beers Canada.

Tahera hopes to boost its prospects by succeeding in exploration projects close to Jericho, including the Polar project, where the company is in a joint venture with De Beers Canada. Last year Tahera completed a 900-ton bulk sampling program at Polar's Muskox kimberlite, which earned it a 50 percent interest in the project, since the company had spent the required $11 million. "As we announced in the past, the grade results from that program were a little bit disappointing, however we have not lost faith in it," Gillin said.

Tahera also conducted a bulk sampling program at the JD-3 kimberlite, four miles west of Jericho, and results are pending. In addition, the company is drilling at the Anuri kimberlite on its Rockinghorse property, 56 miles northwest of Jericho.

On April 16 Tahera announced that its vice president for operations, Daniel Johnson, was stepping down "to pursue other business interests". Johnson was hired by Tahera in 2004 to lead the development and construction of Jericho. Previously he worked for BHP Billiton for 16 years, and he was president and CEO of Diamond Fields International for four years. ●

● ALASKA, B.C.

Barrick still a thorn in NovaGold's side

Dispute could continue to be costly and time-consuming for NovaGold as it fights to regain control of Donlin Creek project

By SARAH HURST

For Mining News

The problem of bringing power to NovaGold's remote Donlin Creek project in southwest Alaska is one of the main bones of contention in the Vancouver-based junior's never-ending battle with its joint venture partner, Barrick Gold. Toronto-based Barrick, the operator at Donlin Creek, envisions a combination of diesel and wind power for the proposed gold mine. NovaGold's management believes the logistics of transporting huge quantities of diesel fuel upriver are too challenging and expensive, and wants to put in a power line from the existing Railbelt infrastructure at a cost of around $400 million.

NovaGold's president and CEO, Rick Van Nieuwenhuyse, reiterated his dissatisfaction with Barrick during a first-quarter results conference call April 25. Barrick, the world's largest gold producer, failed in a takeover bid for NovaGold last year. Within the past few weeks Barrick divested itself of the NovaGold shares it had purchased. Partly due to that, NovaGold's share price dipped, Nieuwenhuyse said, with at least one institutional investor concerned that Barrick might launch another takeover bid in the near future.

Project progress has been rapid

Meanwhile, progress on NovaGold's Rock Creek and Galore Creek projects has been rapid, with Rock Creek (near Nome) set to begin production of gold in the third quarter of this year and permits for Galore Creek (in northwest British Columbia) likely to be issued very soon. NovaGold expects Rock Creek to generate about $100 million in cash flow during its first five years of operations, which will coincide with the construction period for Galore Creek and help to finance that massive project.

A citizens group in Nome has just refiled a lawsuit against the U.S. Army Corps of Engineers, disputing the permit issued for Rock Creek's construction, but NovaGold expects this to be a "nuisance suit" that won't affect development of the mine, according to the company's chief operating officer, Peter Harris.

NovaGold reported a net loss of C$4.9 million for the quarter ended Feb. 28, 2007, compared with a net income of C$0.1 million for the same quarter in 2006. Revenues from the company's land and gravel sales and gold royalties decreased by C$0.7 million compared with the same period last year, mainly due to a large land sale near Nome that occurred in the first quarter of 2006. NovaGold's corporate development and communication costs increased by C$0.8 million, and its administrative fees and salaries increased by C$1.6 million due to the company's increased activities and expanded staff. ●

NovaGold has eye on Alaska's copper

All that glistens is not gold, but that isn't a problem for Vancouver-based NovaGold Resources, which will be expanding its search for base metals in Alaska this summer. The company staked claims last summer that now form its Baird Mountain project in the northwest Arctic on the southern edge of the Brooks Range. The target is polymetallic — primarily copper, lead and zinc — NovaGold's vice president for exploration, Joe Piekenbrock, told Mining News.

NovaGold is already exploring about 60 miles away from Baird Mountain at the Ambler property, also a base metals target. The lack of infrastructure is a major issue in this remote area and the company has been considering the possibility of using hydroelectric power or wind power if Ambler is developed. Baird Mountain itself is at the earliest, grassroots stage of exploration. NovaGold plans to drill a few holes there this year, starting in June, and a team of about 16-18 people will also do mapping and sampling. The budget for Baird Mountain will be just over $500,000, Piekenbrock estimates.

Baird Mountain's mineral potential is well known from the small amount of exploration that was done in the 1960s, including some drilling by Kennecott. "It's an area that I'd been interested in for a long time," Piekenbrock said. "There are good exposures with good grades on the surface that have never been drilled," he added. The copper in particular at Baird Mountain could be very high-grade, Piekenbrock believes.

The closest community to Baird Mountain is the village of Kivalina, population 377. That community shouldn't be much affected by the exploration, however, as Baird Mountain will be an entirely helicopter-supported project and NovaGold intends to construct a temporary camp on Bureau of Land Management land for its crew. Water for the camp will be pumped from the Squirrel River. All of the 15 structures that the company brings in will be removed at the end of the season (estimated to be Sept. 30) and the area will be cleaned and reclaimed. If topsoil or vegetation is removed, that material will be redistributed over any reclaimed and re-contoured ground.

NovaGold is continuing to stake claims in Alaska, according to Piekenbrock, but won't reveal the details yet because they are in a "very competitive area," he said. The company is currently constructing Rock Creek gold mine near Nome and is in a joint venture with Barrick Gold at the Donlin Creek exploration project in southwest Alaska.

—SARAH HURST

see next page

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● CANADIAN ARCTIC

Stornoway sets sights higher after merger

Diamond exploration and development company sees exciting results in Nunavut and banks on strengthened management team

By SARAH HURST

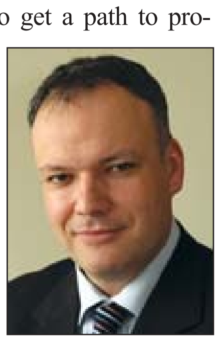
For Mining News

Stornoway Diamond Corp. is aiming to become one of the few successful middle-tier diamond exploration and development companies, following its amalgamation with Ashton Mining and Contact Diamond Corp., which concluded in mid-January. The Vancouver-based company now has three advanced exploration projects in the eastern Arctic, one on the border of Quebec and Ontario, and another in northern Alberta, as well as a 50 percent interest in the Renard property in Quebec.

Stornoway's CEO, Eira Thomas, was part of the Aber team that discovered Diavik.

Middle-tier companies are much more common in the gold sector than in the diamond sector, Stornoway's CEO, Eira Thomas, said at the BMO Capital Markets Global Resources Conference in Tampa, Fla., Feb. 26. Aber Diamond Corp. and Shore Gold are the big players in the Canadian diamond industry and there are lots of juniors, but the only middle-tier companies are Mountain Province and Tahera Diamond Corp., according to Thomas, and they are single-asset companies.

Stornoway intends to join that exclusive crowd. "We wanted to get a path to production with a strong project pipeline, with some good upside discovery potential," Thomas explained. "We wanted to put together a strong and experienced management team with operating credibility and then increase our financial capacity and our market profile," she added.



Stornoway President Matt Manson's experience is at the more advanced stages of diamond mine development.

Since the three-way merger, Matt Manson has joined Stornoway as president of the company. Manson is a geologist who worked for Aber from 1999 to 2005 during the period when that company transitioned through feasibility and raised the capital to build Diavik, Canada's second diamond mine, in the Northwest Territories. "Matt was ultimately responsible for setting up their marketing division, so his experience in the diamond pipeline is at the more advanced stages," Thomas said.

Thomas herself also started her career as a geologist with Aber in 1990 and was part of the team that discovered Diavik. She joined Aber's board of directors in 1998 and remained with the company for a total of 16 years.

Vision: success at mining, selling rough diamonds

"Our vision, basically, is to become successful in the practical business of mining and selling rough diamonds, and at the same time we intend to continue with a very aggressive exploration strategy to find and seek out world-class diamond mining opportunities in a market which has become increasingly undersupplied," Thomas said. "Essentially this new company will have a much larger, diversified asset base," she added. Stornoway will be assisted by expertise from one of its large shareholders, Toronto-based Agnico-Eagle Mines, which operates a gold mine in Quebec and is purchasing Cumberland Resources, owner of the Meadowbank gold project in Nunavut.

COURTESY STORNOWAY DIAMOND CORP.

The camp at Stornoway's most northerly project, Aviat in Nunavut, which has shown encouraging drill results recently.

"This past summer was an important year for us, because we actually learned that we had a series of stacked sheets on the Aviat project that together could comprise significant tonnage."
—Eira Thomas, Stornoway Diamond Corp. CEO

The expanded Stornoway will have a market cap of about $200 million, which should be sufficient to make the company attractive to a broader spectrum of institutional shareholders, Thomas believes. "We also feel that it is exactly the right time to be pursuing this type of strategy. The diamond market is currently strong and it's predicted to get stronger over the coming years," she said. Demand for diamonds is increasing not only in emerging Asian markets, such as India, but also in the United States, because the baby boomers are coming into their prime spending years, Thomas noted.

Aviat most northerly project

Stornoway's most northerly project is Aviat in eastern Nunavut, one of six joint ventures that the company is involved with on the Melville Peninsula. Stornoway has a 70 percent interest in Aviat, with BHP Billiton holding 20 percent and Hunter Exploration Group the remaining 10 percent. Since Stornoway began exploring Aviat in 2002, the company has made 11 kimberlite discoveries there, and the property was its principal exploration focus in 2006.

"This past summer was an important year for us, because we actually learned that we had a series of stacked sheets on the Aviat project that together could comprise significant tonnage," Thomas said. "We're quite excited about this. We've got eight stacked sheets up to four meters thick; they've been drilled now over an area of about 1.5 by 3 km and represent potentially more than 40 to 50 million tons in one sheet," she added. The grade of these kimberlites is around 0.86 carats per metric ton (86 carats per 100 tons), and the next step for the project is to better understand the diamond value, Thomas said. Stornoway will undertake further delineation drilling on the property this year and a larger bulk sampling program next year.

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Eira Thomas with Stornoway employees from Igloolik, Nunavut.

Qilalugaq optioned

Stornoway has optioned the Qilalugaq project, also on the Melville Peninsula, from BHP Billiton. The mining giant has found one of the largest kimberlites in Canada here, almost 14 hectares in size. "The grade is somewhat lower than the other bodies in the eastern Arctic, it's about 30 carats per 100 tons, it's not a BHP-size target, but we do feel that this project has the potential to fit in nicely into our project portfolio as we start to develop our asset base in this middle-tier company, so we'll be continuing to do more work on this project," Thomas said. Stornoway discovered two new kimberlites within three weeks of acquiring the project last summer, and the company is optimistic that Qilalugaq has potential for further discoveries.

At the Churchill project near the community of Rankin Inlet in Nunavut, Stornoway is partnering with Edmonton-based Shear Minerals. "We've found a large number of kimberlites in this region, however, very few of those actually return diamonds," Thomas said. "That all changed in the summer of 2006. We actually have identified a number of high-grade, sheet-like deposits, or dikes, on the project," she added. A drill hole from the Kahuna, the thickest kimberlite dike intercepted so far, graded 109 carats per 100 tons, and there was also a high-grade intercept from another dike, PST003, at 200 carats per 100 tons.

"We're excited about this because these bodies themselves are vertically in place, which means they're quite easy to tackle from a mining perspective," Thomas said. "They're also located within about 20 km of tidewater, and infrastructure overall in this area is improving," she added. Churchill will be one of Stornoway's priorities for 2007, and the company plans to collect a much larger sample from the kimberlite dikes, as well as delineating additional targets in the area. ●