

Vol. 13, No. 17 • www.PetroleumNews.com

A weekly oil & gas newspaper based in Anchorage, Alaska

**page** Prudhoe field in mid-life transition, 5 looking forward to gas sales

Week of April 27, 2008 • \$1.50

### This month's Mining News inside



See second section of this edition for copy of the April 2008 edition of North of 60 Mining News

### Whales in the B.C. shales

EnCana Chief Executive Officer Randy Eresman is not given to superlatives.

So when he talks about British Columbia's fast-emerging shale and tight gas resources as a "very hot topic," it's time to listen.

Even more than that Eresman and some of his senior executives provided insights - a rare commodity from the big independent, which generally confines itself to hard facts — into what they clearly perceive to be the high-potential plays in the EnCana CEO Randy Eresman northeastern region of British Columbia.



### LAND & LEASING

### **Point Thomson nixed**

Irwin not convinced ExxonMobil will carry through on field development

### **By KRISTEN NELSON**

Petroleum News

oint Thomson is no more. Alaska Department of Natural Resources Commissioner Tom Irwin said in an April 22 decision that after reviewing the history of the Point Thomson Unit, testimony from the working interest owners and a proposed 23rd

plan of development he does not have confidence that unit operator ExxonMobil and the other major owners — BP, Chevron, ConocoPhillips - would carry through on commitments to develop the unit.

Irwin turned down the latest development proposal for the eastern North Slope field and has ter-



minated the unit.

The April 22 decision was on an appropriate remedy for failure to submit an acceptable 22nd plan of development.

In rejecting the proposed 23rd plan of development, Irwin cited a unit history he characterized as rife with failure to perform on promises made to the state. He said in a statement that the 23rd plan of development "is not an appropriate remedy" for ExxonMobil's failure to

submit an acceptable 22nd POD. Irwin said the 23rd POD "does not serve the state's best interests or meet the legal standards in DNR's regulations."

Alaska Superior Court Judge Sharon Gleason found in the state's favor in an appeal by the Point

see POINT THOMSON page 30

### LAND & LEASING

### **Tapping ANWR from PTU**

Rejection of Point Thomson unit plan confirms state's interest in Sourdough

### **By KAY CASHMAN**

Petroleum News

lthough ExxonMobil's most recent plan of development for the eastern North Slope Point Thomson unit did not include a com-

gists think Sourdough's reservoir stretches under

ANWR. Since the 100-million-barrel Sourdough

discovery announcement in 1997, state officials

have said developing the prospect could be the first

mitment to produce the Sourdough oil discovery, a settlement with the State of Alaska — or a new leaseholder's plan of development — will almost certainly do so because geolo-

NATURAL GAS



step to opening ANWR to oil and gas exploration and development.

Oil produced from Sourdough would, in fact, be the first oil drained from the 1002 area of the Arctic National Wildlife Refuge, and possibly prompt Congress to permit a subsurface lease sale that would, at the very least, allow access to western ANWR reservoirs by drainage, and possibly directional drilling, from adjacent state lands. Most of those reservoirs, including Sourdough, are in the defunct Point Thomson unit, although the Sourdough wells were drilled and paid for by BP and Chevron, not Exxon and other unit owners.

If, for example, Sourdough were developed and produced on the state side and the feds don't hold

"We have built sizeable land positions in

various emerging shales plays (in both B.C. and the United States) and believe that over time they have the potential to add significant depth to our very strong portfolio of natural gas assets

see WHALES page 31

#### REAKING EW S B Ν

3 Tapping new fuel source: Canadian Arctic research team achieves first sustained flow of gas from Mackenzie Delta hydrates

14 Five inlet wells for Conoco in '08: Looking to fulfill contract with state, company sets busiest CI drilling season in 40 years

22 'Great Game' on for the Arctic: Petroleum News introduces section to track news, technology in Norway, Russia, Greenland

### Study tackles gas costs

Cost of delivery from far north to NA 'very high,' must be compared to LNG

### **By GARY PARK**

#### For Petroleum News

atural gas prices are readily accessible at North America's trading centers, notably Henry Hub, AECO, Dawn, WAHA and Opal. But the full-cycle costs covering exploration, drilling, completion and production are not available.

To bridge that gap, Calgary-based consultant Ziff Energy Group has released a trail-blazing study that analyzes the total costs from 20 major North American gas areas (some of them divided into sub-basins), including Alaska and the Mackenzie Delta, whose costs including transportation tolls have been included in the study even though they are years away from production.

Two months ago, Ziff released a report examin-



### See larger graphic on page 28.

ing Arctic gas developments and their impact on the continental supply outlook over the next decade.

see STUDY page 28

### contents

### **ON THE COVER**

### **Point Thomson nixed**

Irwin not convinced ExxonMobil will carry through on field development

### **Tapping ANWR from PTU**

Rejection of Point Thomson unit plan confirms Alaska's interest in Sourdough

### Study tackles gas costs



Cost of delivery from far north 'very high,' must be compared to LNG

### Whales in the B.C. shales

### ASSOCIATIONS

**30** Liddy to host radio show from Alaska

### **EXPLORATION & PRODUCTION**

#### Mid-life transition for a giant 5

40 years after discovery the Prudhoe Bay field continues to produce oil while looking forward to future gas sales

- **12** Liberty seismic targets drilling corridor
- Five Cook Inlet wells for Conoco in '08 14
- **23** Manitoba outpaces big neighbors
- **25** Industry tackles Highway 63 interchange

### FINANCE & ECONOMY

#### Wood Mac: Gas price to re-link with oil 4

Historic ration one-to-seven; study says current natural gas price lag temporary, predicts gas will be \$13 to \$14 by 2012

#### Saudi Arabia drops bombshell 8

Reversal of pledges to expand daily oil production beyond 12.5 million barrels has far reaching world oil supply implications

**16** Utilities chase Canada assets

### A weekly oil & gas newspaper based in Anchorage, Alaska

### GOVERNMENT

- 6 State weighs conflicts of interest
- **18** Alberta gets muted response to fixes

### INTERNATIONAL

- 4 BG to start LNG shipments to Singapore
- **24** Eni: Government take cuts into profits

### **LAND & LEASING**

**24** State approves Kasilof PA for Marathon

### **NATURAL GAS**

#### Tapping a whole new fuel source 3

Canadian Arctic research team achieves first sustained flow of gas from Mackenzie Delta hydrates

- 3 Alaska gas hydrate research moving slowly
- 9 Formal transmission not until June 3

### **OIL PATCH BITS**

- **27** Carlile receives national recognition
- **27** Ace Air Cargo names Hawthorne marketing director
- 27 American Tire looking to buy Topeka Goodyear plant
- 27 Schlumberger worked on Mackenzie hydrates project
- 27 CH2M Hill pilot program for Southwest Alaska a success
- 27 Wally Niles back at Northern Air Cargo

### **OUR ARCTIC NEIGHBORS**

### 22 'Great Game' on for the Arctic

Petroleum News introduces 'Our Arctic Neighbors' to keep tabs on news and



technology advances in Norway, Russia and Greenland

- **22** Russian president an unknown quantity
- 22 Russia keen to establish Arctic dominion
- Snøhvit LNG plant suffers teething troubles 22
- **25** Gazprom, partners to invest big in Shtokman

Petroleum News



For information about PRA including background material and a complete listing of our consultant staff, please visit our web site at www.petroak.com.

3601 C Street, Suite 822 Ph: (907) 272-1232 Fx: (907) 272-1344

Anchorage, Alaska 99503 info@petroak.com www.petroak.com

### Alaska's Premier Oil and Gas Consultants

We can provide clients with individuals to fill specific needs, or with integrated teams to manage exploration and development projects.

### <u>Skills</u>

- Project Management
- Geophysics
- Geology
- Petrophysics
- Engineering

### <u>Data</u>

- Digital Well Logs
- Well History
- Directional Surveys Formation Tops
- Seismic
- GIS

### Areas of Expertise

- North Slope
- Cook Inlet
- Interior Basins
- · Bristol Bay
- · Gulf of Alaska

### <u>Tools</u>

- Subsurface Mapping
- Seismic Interpretation
- Petrophysical Interpretation
- ArcView/GIS
- Commercial analysis
- Risk Analysis

### NATURAL GAS

### **Tapping whole new fuel source**

Canadian Arctic research team achieves first sustained flow of gas from Mackenzie Delta hydrates

### **By GARY PARK**

For Petroleum News

t took Alan Greenspan, the former chairman of the U.S. Federal Reserve Board, to inject credibility into what

has often been treated as pure science fiction.

"In the more distant future, perhaps a generation or more, there is the potential to develop productive capacity from natural gas hydrates," he told a Texas conference three years ago, pointing out that the United States alone has an estimated 200 quadrillion — or 200 million billion - cubic feet of hydrates, dwarfing all known global reserves of conventional gas.

But whether the exotic resource can ever become the ultimate answer to world energy needs has been likened to a dream worthy of ancient alchemists.

Known as "ice that burns," hydrates have grabbed the attention of researchers and industry around the world, with countries such as China, Japan, Korea and India showing special interest as they look for ways to reduce their reliance on energy imports.

#### **Research in Canada**

Some of the longest, most detailed research is occurring on Canada's Mackenzie Delta and Beaufort Sea, a region believed to hold one of the world's largest concentrations of hydrates.

Serious work has been under way for a decade, culminating in 2002 with the Mallik program, an international joint effort involving scientists from Canada, the U.S., Japan and India, government agencies and industry partners.

The operators drilled one production well and two observation wells into a gas hydrate field on Richards Island which was originally discovered by Imperial Oil in 1970.

The production well recovered about 500 feet of gas hydrate cores, yielding a bundle of detailed information.

The researchers also combined their scientific work on the core samples with production experiments.

Natural Resources Canada, a federal department, noted that "little was known before this project about the technology necessary to produce gas hydrates."

The experiments included depressurization techniques and thermal heating procedures, resulting in a conclusion that gas hydrates could potentially be pro-

### Alaska gas hydrate research moving slowly

Since 2001 a joint industry, government and university team has been investigating the potential production of natural gas from gas hydrates under Alaska's central North Slope. These hydrate deposits occur in two major zones known as the Tarn and Eileen trends that lie over parts of the Prudhoe Bay, Milne Point and Kuparuk River oil fields.

BP, ASRC Energy Services, Ryder Scott Co., the U.S. Geological Survey, the U.S Department of Energy, the University of Alaska Fairbanks and the University of Arizona all collaborated in the North Slope project.

Initial phases of the project included an assessment of gas hydrate prospects in the Milne Point area; the modeling of gas hydrate reservoir characteristics and production potential; and the confirmation of the resource potential of the Eileen trend.

see **RESEARCH** page 4

prospects in the offshore," which has yet to show the same highly-concentrated deposits as the Delta.

### Industry commitment key

Jocelyn Grozic, a hydrate researcher and engineering professor at the University of Calgary, is among those who believe commercial production could come a lot sooner if there was an industry commitment.

"If we can recover methane from hydrates, it's been calculated that this source of energy could provide energy to North America for the next 64,000 years," she said.

Grozic's particular interest is learning what happens to surrounding soil and rock formations when hydrate deposits melt and turn into gas, providing better understanding of conditions that may pose problems to offshore drilling rigs.

She said researchers are attempting to develop technology that "can capture this energy in a safe and affordable way. ... Before we do anything, we need to know that the gas won't escape and blow up the side of a well when we try to extract it."

### Sustained flow reported

The Mallik researchers have just reported another breakthrough, claiming to have produced the first constant stream of natural gas from hydrates.

"We were able to sustain flow. ... It worked," Dallimore said.

He said the project demonstrated that "hydrates are responsive enough that you can sustain flow."

Applying conventional technologies, modifying them, and achieving production is a "big step forward," Dallimore said

He said the Mallik well produced for about six days at a lower rate than conventional gas, but roughly equivalent to a coalbed methane well. He is also encouraged by the prospect of hydrates emitting less greenhouse gas than oil or coal.

Dallimore said the next phase is a fullscale pilot project that will embrace commercial production, safety and environmental concerns and issues of how much water and sediment are produced per unit of gas.

But, to date, no Canadian agency has the financial backing to launch the pilot.

### Japan tackling deepwater drilling

Meanwhile, a Japanese consortium, motivated by the methane hydrates in the seas around Japan, is tackling the challenges of drilling in deep waters and strong ocean currents as well as figuring out ways to prevent the hydrate samples from melting on the way up, which is a key to commercial production.

The Japanese project is now evaluating resources in selected hydrate fields and is scheduled in the 2012-16 period to develop technologies for commercial production that also mitigate environmental impact.



### **ENGINEERING EXCELLENCE**

**Complete Multi-Discipline Engineering Services** & Project Management Concept and Feasibility Studies Project Scope and Development Cost Estimating and Scheduling Engineering and Detailed Design Procurement Services Field Engineering Inspection and Quality Control Environmental Engineering

Serving Alaska Industry Since 1974



509 W. 3rd Ave. Anchorage, AK 99501-2237 (907) 276-2747 FAX: (907) 279-4088 50720 Kenai Spur Hwy. Kenai, AK 99611 (907) 776-5870 FAX: (907) 776-5871

Allows for timing of activity outside of regular seasonal restraints and can be a key component of Environmental Best Management Practices

3

duced using either method.

### **Production technically feasible**

The Mallik team said its project established for the first time that "gas production from gas hydrates is technically feasible."

NRCan also determined that gas hydrate-bearing formations are more permeable than earlier thought, meaning it might be possible to fracture them artificially.

Scott Dallimore, the Geological Survey of Canada scientist in charge of the Mallik program, told reporters three years ago it is "realistic to think that if the market is there along with infrastructure or a local use for gas, hydrates could come on line in 15 years. They have the potential to be a simple add-on to conventional resources."

But he conceded it will likely be later than 2020 "before we have economic



#### FINANCE & ECONOMY

### Wood Mac: Gas price to re-link with oil

Historic ratio one-to-seven; study says current natural gas price lag temporary, predicts gas will be \$13 to \$14 by 2012

### **By KAY CASHMAN**

Petroleum News

S elling natural gas at a discount to oil in terms of relative heat content is about to end, Wood Mackenzie said.

In a study released at the annual American Association of Petroleum Geologists convention in San Antonio, the world-renowned energy consulting firm predicted natural gas would return to its historic one-to-seven price relationship with oil in North America by about 2012, a shift the firm calls "price re-linkage."

As of April 22, natural gas was selling for about one-eleventh the price of oil in the United States, even though a million Btu of gas has about one-seventh of the Btu of oil.

"Under current market conditions, with oil pricing over \$100 a barrel, a re-linkage would mean gas prices of as much as \$13 or \$14," Ed Kelly, Wood Mackenzie's vice president of North American gas and power, said in an April 21 press release.

Soaring oil prices, combined with pressure on natural gas prices from increased



Providing project management professionals for major projects throughout Alaska and the world.

www.hawkpros.com • 907.278.1877

670 Fireweed Lane, Suite 201 Anchorage, Alaska 99503

### Petroleum

Kay Cashman Mary Mack Kristen Nelson Susan Crane Amy Spittler Bonnie Yonker Heather Yates Shane Lasley Clint Lasley Steven Merritt Tim Kikta Alan Bailey Eric Lidji Gary Park

PUBLISHER & EXECUTIVE EDITOR
CHIEF FINANCIAL OFFICER
EDITOR-IN-CHIEF
ADVERTISING DIRECTOR
ASSOCIATE PUBLISHER
ALASKA/NATIONAL REPRESENTATIVE
BOOKKEEPER
IT CHIEF
GM & CIRCULATION DIRECTOR
PRODUCTION DIRECTOR
COPY EDITOR
SENIOR STAFF WRITER
STAFF WRITER
CONTRIBUTING WRITER (CANADA)

ww.Petrole	umNews.com

ADDRESS P.O. Box 231647 Anchorage, AK 99523-1647

NEWS 907.229.7057 or 770.3505 publisher@petroleumnews.com or Elidji@petroleumnews.com

CIRCULATION 907.522.9469 circulation@petroleumnews.com

ADVERTISING Susan Crane • 907.770.5592 scrane@petroleumnews.com

Bonnie Yonker • 425.483.9705 byonker@petroleumnews.com

FAX FOR ALL DEPARTMENTS 907.522.9583 North America supplies, has disrupted the historical relationship between oil and gas, Wood Mackenzie said, crediting recent shale gas plays as a major factor.

When re-linkage occurs will depend on the long-term race between U.S. domestic supply growth and the growing reliance on gas for power generation, the firm reported.

"Domestic supplies could insulate North America gas prices from rising oil prices over the next 3-4 years, but our analysis concludes that around 2012, there will be a re-linkage to the oil price," Kelly said, adding that there would be clear indicators before a re-linkage occurs, one of which could be a temporary seasonal link to the United Kingdom.

"High prices and technical drilling advances have spurred record drilling levels and revived domestic U.S. supplies and this will be enough to stave off the re-linkage for the next 3 to 4 years," he said.

Wood Mackenzie's report said that most of the domestic supply growth will come from unconventional gas supplies, including tight gas, coalbed methane and shale gas. In fact, Kelly's presentation shows that the majority of new supply will come from shale gas — as much as 3 billion cubic feet per day, or between 50-60 percent of all net U.S. production growth expected between 2007 and 2011. Other key factors that have a part to play on North America's natural gas demand and supply balance include the impact of rising coal prices, power sector demand and the influence of carbon legislation, the shifting Canada supply-demand balance and an associated reduction in gas exports to the United States, and the building and cancellation of coal plants.

### LNG ties gas more closely to oil

"The picture beyond 2011 remains uncertain due to the lack of viable alternatives" to natural gas for power load growth, Kelly said.

Gas supplies are growing "and will do so in the midterm but beyond 2012 these level off," he said.

"This leveling combined with a quick growth rate from the power sector," could mean an increased reliance on liquefied natural gas. However "relying on LNG will tie gas prices more tightly to oil. Hence in the long term, if oil prices remain high, we could see gas prices following suit," Kelly said.

Editor's note Btu stands for British thermal unit, a unit of energy. In North America Btu is used, among other things, to describe the heat value (energy content) of fuels.

### **INTERNATIONAL**

### BG to start LNG shipments to Singapore

A major player in the world of Alaska gas exploration plans to ship large amounts of liquefied natural gas to Singapore for as long as 20 years.

Through a memorandum of understanding signed with the Energy Market Authority of Singapore on April 18, London-based BG Group will supply the East Asian island nation with more than 3 million tons of LNG each year.

The deliveries are expected to begin in 2012, timed to coincide with the completion of a new LNG terminal in Singapore. One of the world's largest natural gas companies, BG Group is a partner in several exploration ventures across the North Slope of Alaska and foothills of the Brooks Range.

As deliberations on a gas pipeline continue, the company has expressed support for an in-state line to export Alaska North Slope gas to East Asian markets as LNG. —PETROLEUM NEWS

### continued from page 3

### RESEARCH

### Seismic used in locating hydrates

And, in conjunction with a parallel USGS gas hydrate study, the project team developed some techniques for locating subsurface hydrate denosite using saismin data resulted in the recovery of the first significant gas hydrate core on the North Slope.

Since drilling the well, the project team has been analyzing data and samples from the drilling. The team is using the drilling results and other information to plan what a gas hydrate production test might look like, Rick Baker, methane hydrate team lead in the DOE National Energy Technology Laboratory, told Petroleum News April 24. The team plans to meet with BP in August to seek agreement to move to the next phase of the study, Baker said. That phase might involve some form of production test, depending on the outcome of necessary engineering work.

Rose Ragsdale	CONTRIBUTING WRITER
Ray Tyson	CONTRIBUTING WRITER
John Lasley	STAFF WRITER
Allen Baker	CONTRIBUTING WRITER
Sarah Hurst	CONTRIBUTING WRITER
Paula Easley	DIRECTORY PROFILES/SPOTLIGHTS
Judy Patrick Photography	CONTRACT PHOTOGRAPHER
Mapmakers Alaska	CARTOGRAPHY
Forrest Crane	CONTRACT PHOTOGRAPHER
Tom Kearney	ADVERTISING DESIGN MANAGER
Dee Cashman	CIRCUI ATION REPRESENTATIVE

Petroleum News and its supplement, Petroleum Directory, are owned by Petroleum Newspapers of Alaska LLC. The newspaper is published weekly. Several of the individuals listed above work for independent companies that contract services to Petroleum Newspapers of Alaska LLC or are freelance writers. surface hydrate deposits using seismic data.

In 2005 the project sponsors sanctioned the drilling of a stratigraphic test well. That decision culminated in the 2007 drilling of the Mount Elbert well to a depth of 3,000 feet at Milne Point. BP operated the well, with DOE providing \$4.6 million in funding.

The Mount Elbert well proved the effectiveness of the seismic techniques used to locate the gas hydrate deposits and also "It's at a stage where we're developing the information for a decision support package," Baker said.

-ALAN BAILEY



### Alaska's Underwater Professionals... "Where Safety is The First Step"

- Production platform and sub sea pipeline inspections and repairs.
- Deep water mooring system maintenance & installation.
- · Offshore Oil & Gas exploration diving support.

### 907-563-9070

OWNER: Petroleum Newspapers of Alaska LLC (PNA) Petroleum News (ISSN 1544-3612) • Vol. 13, No. 17 • Week of April 27, 2008 Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518 (Please mail ALL correspondence to: P.O. Box 231647 Anchorage, AK 99523-1647) Subscription prices in U.S. — \$78.00 for 1 year, \$144.00 for 2 years, \$209.00 for 3 years. Canada / Mexico — \$165.95 for 1 year, \$323.95 for 2 years, \$465.95 for 3 years. Overseas (sent air mail) — \$200.00 for 1 year, \$380.00 for 2 years, \$545.95 for 3 years. "Periodicals postage paid at Anchorage, AK 99502-9986." POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

# Mid-life transition for a giant

40 years after discovery the Prudhoe Bay field continues to produce oil while looking forward to future natural gas sales

### **By ALAN BAILEY**

Petroleum News

t a time when daily oil production from the giant Prudhoe Bay on Alaska's North Slope has declined from a peak of about 1.5 million barrels to the current figure of about 400,000 barrels it is tempting to think of the field as being in terminal decline.

Not so, BP's Greater Prudhoe Bay Waterflood Resource Manager Scott Digert told the 2008 Alaska Geological Society Technical Conference on April 17. The AGS conference was celebrating the 40th anniversary of the discovery of Prudhoe Bay.

"This is a very exciting time to be working on Prudhoe," Digert said.

Digert also reminded the audience that, despite major discoveries in places like the Gulf of Mexico, Prudhoe Bay remains the top producing oil field in the United States.

And the field has exceeded all expectations for oil production — originally, estimated recoverable oil reserves were 9.6 billion barrels.

"As we stand today we're at 11.7 (billion barrels) and counting," Digert said.

Moreover, Prudhoe Bay and the associated trans-Alaska oil pipeline have proved to be the anchor for about 25 producing North Slope fields.

"If it weren't for Prudhoe and TAPS none of those fields would be in production either," Digert said.

### lvishak reservoir

The Prudhoe Bay reservoir occupies an area of about 254 square miles. The main section of the reservoir lies in the Permo-Triassic Ivishak formation, consisting of sandstone and coarse pebbly rocks called conglomerates, laid down by an ancient river and river delta system, Digert said. In fact, information about the subsurface rocks obtained from the 2,500 or so well penetrations in the reservoir has



A cross-section of the Prudhoe Bay reservoir set to scale against a picture of BP's Anchorage office building. The massive thickness of the reservoir that extends under a wide area of the central North Slope accounts for the vast quantities of oil and gas that were found in the Prudhoe Bay field.

enabled a detailed reconstruction of the geography of the ancient landscape.

The Ivishak is a massive 450-foot thick rock unit. And a separate 35-foot shallow marine sandstone layer known as the Sag River formation creates a second, much smaller reservoir above the main reservoir. The reservoir strata have been bent into an arch-shaped fold known as an anticline, cut off at the top by a major geologic discontinuity termed the lower Cretaceous unconformity — the oil and gas lie trapped against that unconformity.

To plan field development, petroleum engineers subdivide the Ivishak reservoir into four stratified zones, Digert

see **TRANSITION** page 19



Doold Civil Technologies

One drilling rig. 2,000 tons of cement. A complete drill camp. A barge full of pipe.

To move this much freight

it takes a lot of

### **Peak Civil lechnologies** "Imagineering Brought to Earth"

Providing creative solutions to non-traditional construction problems. Currently, Peak Civil Technologies offers the following services to its clients:

Specialty Coatings | Deep Injection Chemical Grouting Concrete / Foundation Lifting & Repair | Slab Jacking Helical Piers / Push Piers / Micro-Piles | Dust Suppression Soil Stabilization

Dave Brangan, General Manager 2525 C Street, Suite 201, Anchorage, AK 99503 (907) 263-7071 Fax (907) 263-7070 Cell (907) 317-6709 www.peakalaska.com









With 11 tugs, a large fleet of barges, and our well-experienced crews, we have what it takes to meet your northern marine shipping needs. Just ask us.

### EVERYTHING WE MOVE MATTERS

HEAD OFFICE 42003 Mackenzie Highway Hay River, NT X0E 0R9 Tel: (867) 874-5100 Fax: (867) 874-5103 Toll Free: 1-877-770-NTCL (6825)

ALASKA REGIONAL OFFICE 3015 Madison Way Anchorage, Alaska 99508 Tel: (907) 279-3131 Fax: (907) 272-3963 www.ntcl.com



### GOVERNMENT

### State weighs conflicts of interest

Upcoming infrastructure review presents situation where experience also brings legitimate concerns about conflicts of interest

### **By ERIC LIDJI**

Petroleum News

s the state looks for a company to check out the oil and gas infrastructure in Alaska, it is facing the inevitable complications arising from the simple fact that the Alaska oil world can sometimes be a small one.

Perhaps the most inevitable among those is how best to define conflicts of interest.

Based on feedback from an April 7 meeting with potential applicants for the \$4.1 million contract, the state recently amended its request for proposals on the infrastructure review, adding language to try to flesh out the boundaries of what might constitute a conflict of interest on the project.

The contract is to conduct a comprehensive assessment of all oil and gas infrastructure in the state, from the North Slope, to Valdez, to Cook Inlet. This assessment involves looking at both the risks facing each piece of the interconnected grid, as well as the effectiveness of the measures currently in place to prevent any failures from happening.

The oil field support industry is filled with companies that have plenty of experience doing exactly this type of work, and doing it in Alaska to boot.

But they got that experience working for the major oil and pipeline companies, the ones that built and operate the majority of the infrastructure under review. It even stands to reason that some of these support service companies might have helped craft the existing mitigation measures also under evaluation.

### **Confusion about conflicts**

According to a transcript of the April 7



The \$4.1 million contract is to conduct a comprehensive assessment of all oil and gas infrastructure in the state, from the North Slope, to Valdez, to Cook Inlet. Above picture taken at the Kuparuk River oil field on Alaska's North Slope.



See previous Petroleum News coverage:

"Alaska to conduct risk assessment," in March 23, 2008, issue at www.petroleumnews.com/pnads/868 838097.shtml

meeting, several potential applicants wondered how the state might view those prior and on-going relationships when it awards the contract.

"How about if a bidder has one of the oil producers of Alaska as a client? Does that put the bidder in a conflict of interest?" asked Jack Colonell, with the environmental consulting firm Entrix Inc.

Colonell noted how "in the past with some State agencies, any relationship at all has been regarded as a conflict of interest."

TEEL CO.

Deb Pock, a procurement officer with the Alaska Department of Environmental Conservation, told Colonell the state would have to consider "what kind of relationship you have to the oil industry, what kind of work you've done with them and what kind of products you've ended up producing for them."

"It is going to be pretty difficult to sort that out, and I think that we'll probably end up being somewhat subjective instead of objective when we're looking at that."

Betty Schorr, manager of the Industry Preparedness Program within DEC, told applicants that the state would consider the issue of conflicts of interest "in a very pragmatic way."

"Obviously, we know that all of you work for the oil companies, and that's a fact of life," Schorr said. "But I have to defer to our procurement rules and General Services. ... I don't think we'd have any bidders if we excluded oil and gas company consultants. We'd have a pretty limited pool."

One potential applicant asked about work done outside Alaska for companies that maintain a major presence in the state. Another asked for a weeklong extension to resolve conflict of interest issues. (The state denied that request.)

From an industry perspective, part of the concern involves going to unnecessary expense and time to prepare an application that might be automatically turned down.

Wesley Patrick with the nonprofit

Southwest Research Institute, a San Antonio-based research and development company, asked for some guidance. How would the state consider "things like percentage of business" conducted with the majors in Alaska, or how recently the work took place, or "business that deals with exploration or distribution" arms of the companies, as opposed to infrastructure departments?

Several potential applicants brought up the same inherent contradiction: Companies needed to prove "relevant past experience" to get the contract, but the more relevant the experience, the more likely it is that the company has a conflict of interest.

#### New guidelines for conflicts

In the original request for proposals, the state asked applicants to simply detail any possible conflicts of interest. But the amended request, issued on April 18, sets out four rough guidelines for "a possible conflict of interest:"

• The statutory rules governing current or recent employment by the state;

• "A significant financial or economic incentive or business relationship" that would impact objectivity;

• "An unfair competitive advantage" caused by access to nonpublic information gathered through a previous government contract; and

• A case where the applicant would have to evaluate itself under the scope of the risk assessment.

All of these guidelines allow for some interpretation. The only specific example came at the April 7 meeting, when state procurement officer Sonja Love-Hestnes said, "An example of conflict of interest would be someone who participated in preparation of the RFP itself. They would be disqualified to bid on this."

### Complex project from the start

After announcing the project in March, the state sent the request for proposals to companies in Alaska and more than 20 other companies around the world "identified as having relevant experience."

But from the start, the state knew the project would require some agility.

In describing the risk assessment in its request for proposals, the state encouraged potential applicants "to recommend alternatives based on their experience." Even the

Specializing in low temperature steel 1200 W. Dowling Rd. Anchorage, AK 99518 (800) 72 (907) 561-1188

ALA(KA

**Full Line Steel and Aluminum Distributor** 

**(800) 770-0969** Kenai • Fairbanks

*Since* 1982

### **QUALITY** IS OUR CULTURE

Quality is a key part of our company culture. Our quality program is integrated into every step of every project. It is second nature to us and part of how we do business. <image>

700 G Street, 5th Floor Anchorage, Alaska 99501 P: (907) 273-3900 F: (907) 273-3990 www.nana-colt.com

Our people make the difference.

### No roads? No problem.



### Only Crowley has the equipment and know-how to support your remote transportation needs on the North Slope.

Setting up an oil exploration platform and camp in the National Petroleum Reserve - where the average winter temperature is -63°F - is no small feat. Just ask our CATCO all-terrain vehicle team. Using our skills and heavy-hauling vehicles, we recently helped one company transport 638 loads of cargo over 75 miles of rough terrain and frozen tundra. We also assisted them in building ice pads and ice roads in and around their camp. Once the drilling platform was in place, we served as their main support system, taking care of everything from bringing in supplies and locating parts for the rig, to handling crew rotation.





No one knows the North Slope like Crowley. After all, we've been working here for over 40 years, and we know exactly how to operate in this harsh environment. Plus, our CATCO vehicles are the only heavy-haulers certified by the state to travel over the delicate tundra during summer months. And they're the only off-road vehicles that can carry a payload of up to 85,000 lbs. No one knows how to handle remote transportation

like Crowley. For your next project, call our Anchorage office at 907-777-5440. Or visit www.crowley.com.



Liner Shipping • Worldwide Logistics • Petroleum & Chemical Transportation • Alaska Fuel Sales & Distribution • Energy Support • Project Management • Ship Assist & Escort • Ship Management • Ocean Towing & Transportation • Salvage & Emergency Response

www.crowley.com

### FINANCE & ECONOMY

### Saudi Arabia drops bombshell

Reversal of pledges to expand daily oil production beyond 12.5 million barrels has far reaching world oil supply implications

### **By KAY CASHMAN**

Petroleum News

n April 20, Reuters reported that Saudi Arabia, the world's biggest oil producer and exporter, had put its plans to increase long-term oil production on hold.

In a series of statements top Saudi officials, including Saudi King Abdullah, warned consumers it will not expand oil field development beyond 12.5 million barrels per day, reversing recent pledges to U.S. President George W. Bush.

Current Saudi production capacity is about 11.3 million bpd, and is scheduled to rise to 12.5 million bpd next year.

Peak Oil Review said April 21 that the King's remarks seemed to confirm a statement made last year by Saudi Oil Minister Ali al-Naimi who, when asked "How high can your production go?" replied, "We'll get to 12.5 million barrels a day and then we'll see."

If the Saudi announcement was a bombshell, American newspapers nearly ignored it, the publication said.

Steve Andrews and Randy Udall canvassed experts to see what they thought about the Saudi statements. Andrews and Udall are two of the five cofounders of the Association for the Study of Peak Oil & Gas USA, or ASPO-USA, which publishes Peak Oil Review.

Following are some of the excerpts they provided their readers:

• Tom Petrie, vice president, Merrill

"There is now a broad-based move by energy exporters, including Russia, Angola, Azerbaijan, and Norway, to restrict expansion to maximize plateau flows. If this takes hold, then global supplies will reach a peak rather earlier than analysis of future projects would indicate." — Chris Skrebowski, editor of Petroleum Review

Lynch: "King Abdullah's quote speaks to the fast-emerging reality of what I call 'practical peak oil.' The Saudis and other exporters are placing a new emphasis on elongating the petroleum exploitation and depletion cycle. This stems from a growing awareness of the challenges of conventional resource maturity, as well as rising resource nationalism. This is likely to result in an earlier occurrence of global peak oil output than many consumers yet recognize."

• Charles T. Maxwell, senior energy analyst, Weeden & Co: "If Saudi Arabia's oil reserves are not going to be made available to the world in future years, beyond the expansion they have already signaled (to 12.5 million barrels per day), then the geologic oil supply constraints that we are feeling in many other parts of the world are going to close in on us earlier and more severely than we previously thought. It's a major change in policy. It's a powerful message. It makes the geologic message that



much more decisive."

• Chris Skrebowski, editor of Petroleum Review: "King Abdullah's statement represents the final seal of approval on an emerging Saudi policy of restricting output to save oil for future generations. In recent years the Saudis have been managing expectations of future capacity steadily downwards. No one now talks of their reaching 15m/bpd. If they reach 12.5m/bpd, while maintaining 1-25m/bpd of 'spare' capacity, we should plan for Saudi production to be 9-115m/bpd for the foreseeable future.

"High oil prices and bulging treasuries are giving producing countries the option of maximizing plateau production. We may never know if these decisions are being dictated by geology or driven by a political imperative of 'saving oil for later generations.' I suspect it's a mixture of the two.

"In any case, there is now a broadbased move by energy exporters, including Russia, Angola, Azerbaijan, and Norway, to restrict expansion to maximize plateau flows. If this takes hold, then global supplies will reach a peak rather earlier than analysis of future projects would indicate."

• Matt Simmons, chairman of Simmons & Co. International: "This statement by the Supreme Ruler of Saudi Arabia has far-reaching implications. That King Abdullah would now instruct his servants to conserve the oil they pump and save some for the kids and grandkids of today's Saudi citizens is most profound.

"King Abdullah has exhibited a sense of wisdom not seen since his brother, King Faisal ruled the Kingdom until his tragic assassination. Assuming his health continues, he might lead Saudi Arabia successfully into a post-peak world and create sustainable middle class wealth for the 90 percent of Saudi Arabia who had accidentally been left behind."

• Jeffrey Rubin, chief economist, CIBC World markets: "A far more plau-

### continued from page 6 **CONFLICTS**

evaluation process leaves room for interpretation: the winning contractor will conduct the assessment based on a methodology of its own design.

At the April 7 meeting, Schorr told

"A far more plausible explanation for faltering growth in Saudi production and exports is that they are rapidly approaching maximum production. Given soaring rates of internal consumption for oil, they will soon be exporting less not more crude to world oil markets." — Jeffrey Rubin, chief economist, CIBC World markets

sible explanation for faltering growth in Saudi production and exports is that they are rapidly approaching maximum production. Given soaring rates of internal consumption for oil, they will soon be exporting less not more crude to world oil markets.

"Russian Natural Resource Minister Yuri Trutnev has said that Russian production and exports will fall this year, for the first time in a decade. We forecast that exports from OPEC, Russia and Mexico will actually decline by 2.5 million barrels per day between now and 2012. It's far from obvious who is going to fill this supply gap, let alone meet the need of future global crude demand growth."

• Jeremy Gilbert, BP's retired chief petroleum engineer: "I have no idea whether there was a real choice for the Saudis to make. Perhaps it's all 'spin'; perhaps there were discoveries, but there was some property of the reservoirs which made them very difficult to develop, and it made sense to delay development until improved technology or much higher prices arrived; perhaps it's the plain basic truth — a very rare commodity.

"What I do know is that several countries in the Gulf have long chosen to operate their fields with depletion rates far below those that a Western company would consider optimal, or even sensible. Depletion rates of between 1 and 2

see **BOMBSHELL** page 9

The winning company will face the challenge of working on the state's behalf without having all the rights afforded to state inspectors, such as access to infrastructure and certain company documents and records.

The state has said it will provide "information under the purview of state agencies" and "will work with the companies to gain access, as feasible, to information to which the agencies do not already have access." The deadline for applications is April 28. The contract begins on June 4 and runs through June 2010, with public workshops during that time to highlight the progress of the evaluation. ●

### I ransportation Zen

Carlile is a proven leader in multimodal transportation and logistics solutions. Whether it's a pallet of tools headed to Tacoma or a 100-ton module destined for Alaska's North Slope, Carlile has the expertise, equipment and connections to deliver peace of mind, every time.



Herein ConstraintsWww.carlile.bizI1.800.478.1853ROAD - RAIL - SEA - AIRALASKA | HAWAII | UNITED STATES | CANADA

potential applicants, "Basically, we are looking to the experts in the field to propose the best way to assess overall system integrity in the time and budget we have available."

The project will also require applicants to be agile.



#### NATURAL GAS

### Formal transmission not until June 3

If AGIA license recommended, 60-day review would begin with special session; admin says AGIA doesn't affect sovereign rights

### **By KRISTEN NELSON**

Petroleum News

he administration of Gov. Sarah Palin and the Alaska Legislature are continuing to work out details of how review of an AGIA license - if one is granted to TransCanada — would be scheduled. The governor said April 18 that it is still the goal of

the commissioners of the departments of Revenue and Natural Resources to complete the findings and determination for the TransCanada Alaska Gasline Inducement

Act application the week of May 19. But based on feedback from legislators — if the commissioners decide to pursue an AGIA license - formal transmission of any findings materials to the Legislature won't occur until June 3 when the special session convenes.

"This action will allow the special session to begin on the same day that the 60-day review period begins for the Legislature under Rep. Ralph Samuels, R-Anchorage begins for the Legislature under AGIA," the governor said.

The administration will proceed with the previously announced three-day presentation of information May 28-30 in Anchorage. The governor said these sessions are intended as "a public presentation to the members of the Senate and House in preparation for deliberation in Juneau, and provide an enhanced opportunity for interaction between legislators and AGIA team members and our consultants." The presentation will be at the Sheraton Hotel.

### What would state be committed to do?

As the Legislature prepares to review a possible administration award of an AGIA license to TransCanada, legislators are looking at questions arising from the company's application.

Among the issues raised during legislative hearings and in public comments on the application is what would a license commit the state to do?

"Would the State of Alaska have a right to represent what it considers to be in its best interests" in hearings for certificates for the project before the Federal Energy Regulatory Commission and the National Energy Board of Canada, Rep. Ralph Samuels, R-Anchorage, chair of the Legislative Budget and Audit Committee, asked Gov. Sarah Palin in a March 26 letter.

How many of the "terms and conditions" in TransCanada's proposal would the state be committed to support, he asked, listing the company's return on equity, debt-equity ratios and cost overrun financing proposals. These are "critical questions" raised in the Legislature and in public comments on TransCanada's AGIA application, Samuels said.

### State would protect its interests

The response came April 18, in a letter from Deputy Commissioner of Natural Resources Marty Rutherford, who heads the administration gas line team.

Rutherford said that if the administration recommends a license and the Legislature approves that license it is reasonable to assume that the state and TransCanada "would be allied in pursuit of a project on mutually beneficial terms."

But that does not mean, she said, that the state would be required to support the license before any agency if it was not in the state's best interest to do so.

The state didn't limit its sovereignty in AGIA or in the request for applications. The licensee and the state are likely to have similar interests in many cases, but "the state would not be required to advocate for the same terms and conditions proposed by the licensee before FERC, NEB or any other agency with regard to an ANS natural gas pipeline project."

What TransCanada would get in a license would be the terms enacted by the Legislature under AGIA, Rutherford said: "primarily the project construction inducement under AS 43.90.110 and expedited review and action by state agencies under AS 43.90.260."

TransCanada would also, she said, "be subject to all other **DNR Deputy** requirements, terms and conditions Commissioner Marty that AGIA has set forth for the licensee."

### Not MidAmerican

Samuels has requested information for legislators from TransCanada, LB&A's consultants and from companies formerly involved in efforts to build the Alaska portion of a North Slope to market gas pipeline.

At the end of February he asked the withdrawn partners of the Alaska Northwest Natural Gas Transportation Co. or ANNGTC (the partnership formed to build the Alaska portion of the original 1970s-early 1980s project to move Alaska North Slope natural gas to market) whether they would be willing to waive their rights under the ANNGTC partnership agreement. He also asked whether they believe the corporate structure used by TransCanada in its AGIA application violates any obligation to their companies under ANNGTC.

The withdrawn partners issue has been much discussed because it is the source of a potential \$9 billion liability.

There were 11 original partners in ANNGTC; all withdrew except two, both of which are currently TransCanada subsidiaries. The original partnership agreement provided that partners who withdrew forfeit-

### see AGIA page 10

### continued from page 8 BOMBSHELL

percent per year are not uncommon in the United Arab Emirates. Local leaders have repeatedly said that they feel an obligation to preserve some of their natural resources. These feelings must be intensified when their recent production has been sold for U.S. dollars which have depreciated by 25 percent or more against other strong world currencies over the last four years.

"The countries around the Gulf, which would once have come to the aid of a faltering U.S., now are either delighted about the U.S. plight or just don't care. They are not going to do anything to reduce world oil prices. Instead, they are going to maximize their economic take while minimizing depletion of their sole natural resource."

· Herman Franssen, president of International Energy Associates: "King Abdullah's remarks reflect the new thinking in the Middle East, where the Kuwaiti parliament has also expressed a need to stabilize oil exports. Higher oil prices enable producers to focus more on domestic investments than on increasing exports. All Gulf countries have seen huge growth in domestic demand for power and fuel. By 2015, Iran may consume as much of its crude oil as they export. The King's remarks mean that we in the industrialized countries better start looking for other solutions.

"The world should bless this intelligent pronouncement. It is a reflection that Twilight set in on the oil fields of Arabia a few years ago."









Rutherford

# Petroleum Equipment & Services Inc.

*is proud to represent* Weatherford/Gemoco Ĉasing Accessories

Anchorage: (907) 248-0066 Prudhoe Bay: (907) 659-9206 fax: (907) 248-4429 5631 Silverado Way, Suite G Anchorage, AK 99518 www.pesiak.com

Weatherford



100

#### NORTH STAR EQUIPMENT SERVICES A Division of North Star Terminal & Stevedore Co., LLC

### **Did you know:**

- We have been serving Alaska for over 60 years
- We handled nearly all the pipe used for TAPS
- The Northstar oil field modules were built at our Anchorage Terminal
- Our President likes things that go fast
- For a good time call Bryan 907 263-0120

www.northstarak.com

907-272-7537

ducers receive.

Costs a factor

in royalties, taxes

But there are differences in

Pulliam attributed those dif-

what the State of Alaska, the

federal government and the pro-

ferences to key assumption dif-

ferences including: costs of gas

production; how royalties are

calculated; and the level and

application of production taxes.

based on no expansions, so the

volume would be 4.5 billion

cubic feet per day for 25 years.

The stakeholder values are

The value to producers is cal-

culated after royalties and taxes

but before upstream costs,

### continued from page 9

### AGIA

ed all of their rights as partners but, because it was expected that the line would be built soon, they had the right to receive their original contribution, about \$24 million per partner, with interest, if ANNGTC built the Alaska segment of the line. With interest those cumulative obligations are some \$9 billion.

TransCanada has said it does not intend to build the Alaska segment of the gas pipeline under ANNGTC, nor will it use anything belonging to ANNGTC: The Alaska portion of its AGIA application proposal starts from scratch.

But there has been concern that the current owners of the withdrawn partners could sue, so Samuels wrote to the six

The licensee and the state are likely to have similar interests in many cases. but "the state would not be required to advocate for the

same terms and conditions proposed by the licensee before FERC, NEB or any other agency with regard to an ANS natural gas pipeline project." - Marty Rutherford, deputy commissioner, Department of Natural Resources

current non-TransCanada owners. Two have responded.

Sempra Energy said that to the extent it has "certain continuing rights under the ANNGTC agreements ... (it) is not willing to waive any of its rights as a withdrawn partner."



### Welcome to productive drilling

Productive drilling can help you position wells in the best place in the reservoir. And evaluate formations in less time. Our real-time imaging technology can detect sand-shale contacts and fluid boundaries while drilling. You can stay in the reservoir, access attic oil, and delay water cut.

On Alaska's North Slope, an operator placed 6,172 ft of drainhole in thin, undulating, target sands with subseismic faults. Using our unique PeriScope\* deep imaging, they navigated this 6- to 10-ft target.

Our technology can help your team maximize reservoir contact and production. From planning to landing to formation evaluation, productive drilling can put your wells in the best place-in less time.

www.slb.com/drilling



\* Mark of Schlumberger "Welcome to productive drilling" is a mark of Schlumberger. © 2008 Schlumberger 08-DR-133

But it also said that based on the corporate structure used by TransCanada in its AGIA application, "we are not aware of any obligation under the ANNGTC General Partnership Agreement that is being violated by TransCanada."

The other response came from MidAmerican Energy TransCanada told the Holdings Co.

TransCanada told the state it believed MidAmerican was the parent" of Northern "current ultimate parent" of Northern Arctic Gas Co.

MidAmerican Chairman and CEO David Sokol said that was was not that case not the case — that Northern Arctic Gas Co. "is not, and never has been, a subsidiary or subsidiary or affiliaffiliate" of MidAmerican.

Sokol said when MidAmerican Energy Holdings Co. purchased all of the capital stock of Northern Natural Gas Co. in 2002, Northern Natural Gas had no subsidiaries. He told Samuels that it is MidAmerican's understanding that Northern Arctic Gas Co. was a subsidiary of InterNorth Inc., which merged with Houston Natural Gas Co. around 1986.

The company name was changed to Enron Corp.

### Econ One looked at TransCanada's values to stakeholders

Samuels has also requested work from consultants, asking Econ One for a review of project economics figures provided by TransCanada, as well as figures presented by ExxonMobil in its comments on the TransCanada AGIA application.

Econ One used the same destination prices for natural gas and natural gas liquids as TransCanada — Energy Information Administration forecast prices and TransCanada's estimates of a basis differential between Henry Hub and Alberta for natural gas and TransCanada estimates of NGL prices at Alberta -Barry Pulliam of Econ One said in an April 10 memo.

Pulliam said Econ One calculated "virtually the same" tariffs and per-million British thermal unit netback values as TransCanada, but "revenue flows to stakeholders differ" from those presented by TransCanada "in several areas."

The Econ One analysis shows revenues to TransCanada as almost exactly the same as TransCanada's numbers: total 25-year revenues of \$16 billion; first year revenues of \$1.3 billion (TransCanada) and \$1.2 billion (Econ One); and annual average revenues over 25 years of \$700 million.



state it believed MidAmerican was the "current ultimate Arctic Gas Co. MidAmerican Chairman and CEO David Sokol said that

that Northern Arctic Gas Co. "is not, and never has been, a ate" of MidAmerican.

which TransCanada estimated at \$1.50 per million Btu, in 2007 dollars, for all gas production. Econ One, by comparison, estimated "production costs based on the incremental (or additional) costs that would be incurred to produce gas," Pulliam said.

Since Prudhoe Bay is already in production, "those additional costs are minimal," he said. Costs would be higher for fields not yet developed. "For gas-only fields, incremental costs will be equal to the total costs to develop and operate the field," he said.

TransCanada estimated producer revenue over 25 years would total \$183 billion, less \$109 billion in upstream costs, for a total of \$74 billion — \$1.3 billion in the first year and an average of \$3 billion a year over 25 years.

Econ One, using a much smaller upstream cost of \$37 billion, estimated total return to producers of \$95 billion. Econ One also estimated less revenue to producers before upstream costs (only \$132 billion) because it "estimated that production taxes at forecast prices and costs would be higher" than TransCanada estimated.

TransCanada estimated revenues to the State of Alaska of \$115 billion over 25 years; \$2.5 billion in the first year; and an average of \$4.6 billion per year over the life of the project. Econ One estimated the state would earn \$152 billion from the project, \$3.3 billion in the first year and an average of \$6.1 billion over 25 years.

TransCanada projected the U.S. government would garner a total of \$46 billion, \$1.2 billion in the first year and an average of \$1.9 billion a year. Econ One estimated U.S. government take at \$61 billion over 25 years, \$1.4 billion in year one and an average of \$2.4 billion a year.



### our Total Protection Team The One Complete Source for Design, Installation & Service

### INTEGRATED FIRE & GAS DETECTION SYSTEMS

Letter from FM Approvals:

A Controller (PLC, fire alarm panel, or other control devices) must not be used to process gas detection signals unless FM Approvals has verified its performance for use as a gas detection controller. In addition the use of non-FM Approved performance verified controller render the system invalid.

Let Engineered Fire & Safety provide you with an Approved solution

Anchorage, Alaska ph: 800 478-7973 | fx: 907-274-6265



### continued from page 10

### AGIA

### Econ One on royalties, taxes

Pulliam said that while TransCanada used a 12.5 percent rate for royalties to the state, it used 12.6 percent to reflect higher royalty rates at Point Thomson. He also said TransCanada's figures reflect a deduction of \$1.50 per million Btu for upstream costs. "Royalties should be calculated based on netback values, less 'field' costs, per settlement agreement with the State," he said, with field costs totaling about 24 cents per million Btu in 2007 dollars. Pulliam said Econ One assumed those field costs would be deductable against royalties on Prudhoe Bay production.

Sempra Energy said ... based on the corporate structure used by TransCanada in its AGIA application, "we are not aware of any obligation under the **ANNGTC General Partnership** Agreement that is being violated by TransCanada."

The total is \$17 billion more to the state over 25 years than estimated by TransCanada.

Pulliam said TransCanada used a production tax rate of 25 percent, but did not deduct royalty payments from production tax obligations. Production taxes, he said, are based on net proceeds --- "after deduction of royalties and upstream costs."

TransCanada also did not calculate the progressivity rate in Alaska's tax that increases the rate above 25 percent when prices are higher.

Pulliam said Econ One's "analysis estimates incremental production tax revenues that would flow from gas production," and estimates production taxes at forecast prices and costs would be higher by some \$25 billion than those used by TransCanada in its analysis.

The state gets more money under the Econ One analysis, \$37 billion, Pulliam said, "largely due to higher estimates of royalties (\$17 billion) and production taxes (\$25 billion) but offset by lower estimates of income taxes (minus \$5 billion)."



The federal government gets more in revenue under the Econ One analysis. TransCanada does not include royalties on federal lands -- "and \$11 billion in additional income tax generation associated with lower production costs," Pulliam said.

### ExxonMobil figures closer

Econ One said its results, under the same scenarios as presented by ExxonMobil, "are largely (and directionally) consistent with the figures it presents, though there are some minor differences."

In figuring the total equity return for TransCanada under its base case, Econ One said it used the \$16.4 billion TransCanada used in its Jan. 15, 2008, submission, while ExxonMobil started with the \$17.1 billion TransCanada used in its original application. TransCanada later corrected the inflation factors in the application, Pulliam said in an April 9 memo to Legislative Budget and Audit.

He said Econ One also found "a somewhat higher impact" on TransCanada's equity return for cost penalty scenarios under two of ExxonMobil's scenarios. (TransCanada proposed penalties for cost overruns in its AGIA application.)

Econ One estimated that in a 40 percent cost overrun scenario TransCanada's equity return would increase by \$5.4 billion under its proposed equity penalty formula and by \$3.3 billion under an alternative in which the equity penalty would apply for 25 years rather than five years. ExxonMobil's numbers in the same cases were increased returns to TransCanada of \$3.8 billion and \$2.2 billion, respectively.



A. an industry institution B. quality, accurate reporting C. attractive, readable design

To advertise in Petroleum News call Susan Crane, advertising director, at 907-770-5592. To subscribe visit PetroleumNews.com, call 907-522-9469, or email:

circulation@PetroleumNews.com



### No one has a longer or more successful history in Alaska than Nabors.

From the first drill rig at Prudhoe Bay in 1963, we've grown along with Alaska's oil and gas industry.

Call us when you need a partner who helped shape the past and is ready for the challenges of the future.



NABORS ALASKA DRILLING, INC. Always Moving Forward

nabors.com

### Liberty seismic targets drilling corridor

### **By ALAN BAILEY**

12

Petroleum News

D uring the National Marine Fisheries Service's Arctic Open Water Peer Review Meeting on April 16, Bill Streever, environmental studies leader for BP Exploration (Alaska) Inc., talked about BP's planned 2008 seismic program in the Beaufort Sea. Streever was explaining to the meeting the measures that BP is taking to avoid disturbing wildlife during the seismic shoot.

The purpose of the seismic program is the investigation of subsurface rock formations along the route of proposed drilling for the Liberty oil field, Streever said. Only a small component of the seismic surveying will target the oil field itself, he said.

The development plan for Liberty entails the drilling of six ultra-extended reach development wells from the Endicott satellite island under the "You've got a whole lot of rock between you and that reservoir and we've got to get the drill string through that rock. And right now we don't have information about that rock." —Bill Streever, environmental studies leader for BP Exploration (Alaska) Inc.

Beaufort Sea to the Liberty reservoir. The drilling would involve horizontal departures of 34,000 to 44,000 feet, requiring the use of a purpose-built rig that will be the largest land rig in the world, BP has said.

But successful drilling of those recordbreaking extended-reach wells will require a detailed knowledge of the nature of the rocks in the intended drilling corridor, all the way along the several miles between Endicott and the Liberty reservoir. And seismic data will be critical to that knowledge.

"You've got a whole lot of rock between you and that reservoir and we've got to get the drill string through that rock. And right now we don't have information about that rock," Streever said.

### Water-bottom cable

BP is planning a 40- to 50-day seismic program in July and August, using a water-bottom cable technique in the shallow Beaufort Sea water that lies inside the offshore barrier islands. The plan is to complete the seismic work before subsistence whale hunting starts in late August, Streever said.

Unlike a deepwater offshore seismic survey that involves a large seismic vessel towing both air guns and long streamers of surface hydrophones, a bottomwater cable survey in shallow water uses cables with geophones strung out along the seafloor to detect the reflected sound from air guns towed by one or more small

Bridging the world to Alaska

### TOTE vesse and A With 1

### Totem Ocean Trailer Express, Inc.

TOTE has operated unique roll-on/roll-off vessels between the ports of Tacoma, Washington and Anchorage, Alaska for over 32 years!

With TOTE's fleet of equipment of varying types and sizes, freight and machinery from points throughout the Lower 48 and Canada can be safely delivered to Alaska ... and back.

### On the Web

See previous Petroleum News coverage:

"BP plans shallow water seismic at Liberty," in Feb. 17, 2008, issue at www.petroleumnews.com/pnads/235 33497.shtml

boats.

The Liberty survey will use two sound-source boats to individually tow air guns, while four bowpicker fishing boats will lay the cabling that carries the geophones. Another boat will house the equipment that records the signals from the geophones, while two other boats will provide general support for the operations, Streever said.

All but one of the boats will be trucked up the Haul Road to the North Slope before the start of seismic operation, he said.

The surveying will involve laying three cables at a time, parallel to each other across part of the survey area. The sound-source boats will traverse backward and forward across the cables, shooting the air guns at intervals along paths at right angles to the cable runs. By progressively moving the cables from one location to the next after each shooting sequence, the survey team will hopscotch its way across the survey area.

The surveying will involve laying three cables at a time, parallel to each other across part of the survey area. The sound-source boats will traverse backward and forward across the cables, shooting the air guns at intervals along paths at right angles to the cable runs.

### **Critical areas first**

The project design envisages collecting data from the most geologically critical areas first, to ensure that the most important data are obtained, Streever said. However, the timing of the shoot at each location within the survey area will also be predicated on the need to avoid disturbing nesting birds, he explained.

And, to avoid the harassment of marine mammals, the seismic operations will include a standard protocol for powering down or suspending activities if an animal comes too close to an active air gun. However, although the operations may encounter some seals, walrus or beluga whales, mammals are likely to be less in evidence than outside the barrier islands, Streever said.

### Ť E

If you can move it over the road, it can be rolled aboard a TOTE ship.

Alaska: 800-234-8683 
 www.totemocean.com 
 Washington: 800-426-0074 
 ISO 9001:2000 and ISO 14001:2004 certified

"It's shallow water inside the barrier islands," he said.

Streever said that some people have asked why BP is not conducting the seismic survey on sea ice during the winter, to minimize any interaction with marine wildlife. Unfortunately, winter sea ice in the survey area is solid to the seafloor near the coastline but floats over the shallow water further offshore, Streever said. That combination of ice conditions makes the acquisition of usable seismic data extremely difficult: BP decided that the ocean-bottom cable technique presents the best approach from both a technical and an environmental perspective, Streever said.

CGGVeritas will conduct the survey for BP.  $\bullet$ 



### Wear yellow. Work safe.

5

O

0







\_ 205

### Fixed, stand-alone and the GasAlert family of portable gas detectors

ø P

bd

With a full range of simple, reliable and cost effective products, BW Technologies is a world leader in gas detection safety. Monitoring an extensive range of gases, our easy to use single and multi-gas portable detectors are small and lightweight, making them comfortable to wear. The solution to your gas detection needs is simple. Wear yellow. Work safe.



bwt@gasmonitors.com

1.888.749.8878

0

0

www.gasmonitors.com

Visit BW at the Offshore Technology Conference 2008, Booth #4981, May 5-8 in Houston, TX

### EXPLORATION & PRODUCTION

### **Five Cook Inlet wells for Conoco in '08**

Looking to fulfill contract with state, company plans its busiest drilling season in 40 years at two legacy Cook Inlet gas units

### **By ERIC LIDJI**

Petroleum News

f ConocoPhillips follows through on early permitting requests, the company will drill more wells in Cook Inlet this year than in any year in 15 years.

The Houston-based major, the leading gas producer in Alaska, is currently asking the state for permits to drill five wells in Cook Inlet this year.

The company hasn't been that active in Cook Inlet since 1993, when ARCO permitted and drilled five wells. Phillips Petroleum bought ARCO's Alaska assets from BP-Amoco in 2000, before merging with Conoco in 2002.

Not counting those ARCO wells, though, ConocoPhillips hasn't been this active in Cook Inlet since 1969.

Back then, Alaska was only 10 years into statehood, Cook Inlet production had only been around for a decade as well and North Slope oil production was just an idea based around a great new discovery.

Today, the Cook Inlet region is facing production declines that have already led to the closure of a long-time area fertilizer plant, and threaten the future stability of gas supplies in Southcentral Alaska.

The five wells come directly out of state and industry attempts earlier in the year to maintain Cook Inlet production levels high enough to keep the doors open at the liquefied natural gas plant on the Kenai Peninsula.

### Wells planned for well-traveled areas

Those wells are planned for familiar territory.

Of the five wells ConocoPhillips is currently working through the permitting process, three would be in the North Cook Inlet Unit and the other two would be in the Beluga River Unit.

With a combined cumulative production of nearly 3 trillion cubic feet of natural gas, North Cook Inlet and Beluga River are the two most productive gas units in Cook Inlet.

They are also among the oldest fields in Cook Inlet, both discovered in 1962 during an exploration boom that fol-



lowed the discovery of the Swanson River oil field in 1957. While companies went looking for oil, they mostly found large gas fields, like North Cook Inlet and Beluga River.

The decades of historic production since then mean both of those units have been well-drilled in the past.

Now the Alaska Oil and Gas Conservation Commission

plans to hold three public hearings in May to decide whether or not to issue spacing exceptions for the five wells. These exceptions would allow ConocoPhillips to bypass regulations requiring new gas wells to sit more than 3,000 feet

see CONOCO page 15



### 24 Hour Emergency Response

- Marine & Industrial Field Support
   Waste Disposal & Recycling
- Remediation & Construction Services
- Lagoon Dredging & Dewatering



- Vacuum Trucks
- Portable Tank Cleaning



- Oil Field Support
- Hydroblasting

### Local offices in Anchorage, Kenai, Fairbanks & Palmer

### Toll Free1.877.375.5040

### www.emeraldnw.com

#### continued from page 14

### CONOCO

away from existing wells capable of tapping the same gas pool.

According to filings with the state, all five wells would seek to drain the Beluga channel belt sands. ConocoPhillips said geologic analysis suggests these belts are "too narrow to yield efficient drainage based on the current spacing for gas wells."

### NCIU: the most productive Cook Inlet gas unit

The North Cook Inlet Unit is the most productive gas unit in Cook Inlet, responsible for nearly 1.75 tcf of natural gas from the time it went into production in 1970 until the end of 2006, the most recent data available from the state.

ConocoPhillips is the operator and sole interest owner of the offshore Unit, which is located in the waters due east of the village of Tyonek.

Although the unit is prolific, production has risen and fallen over the years.

Natural gas production peaked at nearly 56 billion cubic feet in 1996, and hit a near peak of 55.5 bcf again in 2001. But those figures have been in steady decline ever since and the field produced just 38.1 bcf in 2006, according to state figures.

All three wells planned for North Cook Inlet — NCIU A-14, NCIU A-15 and NICU A-16 — start in section 6 of township 11N and range 9W of the Seward Meridian, but fan out to bottom-hole locations to the northeast, northwest and southeast.

### **BRU: number two in Cook Inlet**

Second only to North Cook Inlet, the Beluga River Unit has produced more than 1 tcf of natural gas between the time it went into production in 1968 and the end of 2006. Production peaked in 2004 with 57.6 bcf, according to state figures.

ConocoPhillips operates Beluga River, but shares ownership equally with Chevron and the Anchorage electric utility Municipal Light and Power.

The onshore unit sits on the western banks of Cook Inlet, north of the village of Tyonek and northwest of the North Cook Inlet Unit.

The two wells planned for the unit target the Beluga formation from different locations.

BRU 243-34 would be in section 34, T13N, R10W SM, and target the top of the Beluga interval at an estimated total depth of 3,553 feet. BRU 211-26 would be in section 23, T13N, R10W SM and move to the southwest to target the top of the Beluga interval at an estimated total depth of 3,588 feet.

### Five wells satisfy settlement agreement with state

The five wells stem directly from an agreement signed in January by ConocoPhillips, Marathon Oil and the state, designed as a step toward getting the federal government to extend the export license of the liquefied natural gas facility on the Kenai Peninsula.

Under the agreement, ConocoPhillips must prepare to drill two wells in the Beluga River Unit this year as well as "additional wells in the North Cook Inlet Unit" if ConocoPhillips "determines that market conditions warrant."

The agreement also requires Marathon to prepare to drill five wells this year: two in the Ninilchik Unit and three in the Kenai gas field. Marathon announced plans for those wells earlier in the year.

ConocoPhillips and Marathon are both awaiting regulatory approval for separate five-year gas supply contracts with the Enstar Natural Gas Co.  $\bullet$ 



Your mind is on more. More jobs. More profit. And if you are not thinking Hyundai, think again. Power. Precision. Quality. Value. Industry-leading service. You get it all and more in each model. That is today's Hyundai.

For those of you that saw for yourself at CONEXPO-CON/AGG 2008, thank you for Thinking Hyundai.

Get the best warranty in the industry: Hyundai's 2-year / 2,000-hour warranty

Totem Equipment & Supply is now the authorized dealer for Hyundai heavy equipment in the state of Alaska.





Delivering global energy projects with safe and innovative solutions



**New Equipment in stock!** 



From the Arctic to the desert, on land and on sea, we provide safe and innovative solutions to help you manage global programs and deliver projects in all major energy segments—including:

- Upstream Oil & Gas
  Pipelines & Terminals
  Gasification
  Oil Refining
- Oil Shale
- Oil Sands
   Renewables

• Mining

CH2M HILL enables you to meet the world's demand for energy by safely delivering your most challenging programs and complex projects globally and locally.

With more than 24,000 professionals in over 300 global locations, we deliver full-service consulting, environmental, program management, engineering, procurement, construction, and operations & maintenance solutions that span the entire energy value chain.

The Team That Delivers<sup>®</sup> ch2mhill.com/energy

EY032008013MKT © 2008 CH2M HILL

FINANCE & ECONOMY

# A mining shutdown will cost Alaska



Alaskans may be asked to vote on two anti-mining ballot initiatives later this year. If passed, the effects on Alaska will be devastating.

A state superior court judge wrote that if these initiatives become law ... *any new mines will be completely banned.* 

And one of Alaska's top mining regulators warned that ... *the continuation of existing large-scale mining will be impossible.* 

**Thousands of good-paying jobs**, many in rural, Native Alaskan communities, **will be lost.** Native corporations, local governments and the state will be robbed of millions of dollars in revenues.

A growing part of our economy that invests hundreds of millions of dollars every year across the state will be sacrificed.

Our citizens group, Alaskans Against the Mining Shutdown, has come together to oppose these measures. To learn more, or to find out how you can help, go to **www.againsttheshutdown.com**.





### Utilities chase Canada assets

**By GARY PARK** 

For Petroleum News

D irect Energy Marketing, a natural gas retailer, believes the Western Canada Sedimentary basin is ripe for the picking as it continues to build on its asset base.

Following its latest acquisition, Direct Energy's senior vice president of upstream gas, Wes Morningstar, said there is a current opportunity to acquire assets in Western Canada "at a price that allows us to return a nice value on the capital we are employing."

When the TransGlobe deal closes on or about April 30, Direct Energy will boost its production by 20 percent to 112 million cubic feet equivalent per day and put it on the path to becoming "much bigger," Morningstar said.

The agreement involves the Canadian properties of TransGlobe Energy, including production of 1,450 barrels of oil equivalent per day (and a production base of 8.7 million boe, 75 percent of it natural gas), plus 50,000 acres with development potential, for C\$56.7 million.

Direct Energy, a subsidiary of United Kingdom-based Centrica, operates in 10 Canadian provinces and 21 U.S. states.

When the TransGlobe deal closes on or about April 30, Direct Energy will boost its production by 20 percent to 112 million cubic feet equivalent per day and put it on the path to becoming "much bigger," Morningstar said.

Since Centrica bought closely held Avalanche Energy for C\$253.5 million in 2000, the company has added Rockyview Energy for C\$113.3 million, gaining production of 2,700 barrels of oil equivalent per day, 97 percent natural gas.

TransGlobe said the selling price of C\$39,100 per daily barrel of oil equivalent produced and C\$14.87 per barrel of proven and probable reserves is "well in line with similar transactions in Western Canada over the past nine months." Direct Energy owns and operates about 3,600 natural gas wells in Alberta, three gas-fired electrical power plants in Texas and has renewable power purchase agreements totaling 813 megawatts in Texas.



# Alaskans Against the **MINING SHUTDOWN**

www.AgainstTheShutdown.com • (907) 868-3202 Paid for by Alaskans Against the Mining Shutdown, 207 E. Northern Lights, Suite 200, Anchorage, Alaska 99503 The competition for gas-producing assets among utilities in Western Canada is stepping up, with Enmax, owned by the City of Calgary, buying Cordero Energy for C\$218 million.

That package included production of almost 4,000 barrels of oil equivalent per day (more than 90 percent gas), 100,000 net undeveloped acres, 15.4 billion cubic feet of conventional gas reserves and 40.3 billion cubic feet of coalbed methane.

Enmax said the Cordero deal would be just one of several planned takeovers of gas producers.  $\bullet$ 



### the alaska gas pipeline<sup>m</sup>

### Moving the Alaska natural gas pipeline forward

On Tuesday, April 8, BP and ConocoPhillips announced they would start North America's largest project, Denali – The Alaska Gas Pipeline<sup>™</sup>. This landmark project will bring many benefits to Alaska including a source of clean natural gas, and oil and gas jobs for generations to come.

### **Jobs for Alaskans**

Already, the project team is in the process of making key decisions. A new project headquarters will be opened in Anchorage, and staff have already been assigned to begin work on the project. During the initial permitting phase, 500 jobs and thousands of contractor positions will be created.

### Estimated Spend of \$600 Million

There will be a positive impact in Alaska from estimated expenditures of \$600 million during the first 36 months to conduct an open season. Significant field work will begin this summer. Alaskans and Alaska companies will be involved with the project.

### BP, ConocoPhillips – the strength to get the job done

The natural gas pipeline combines the financial strength, environmental knowhow and technical resources of two of the most capable and experienced companies in the world – and a rich history in Alaska.

We will continue to keep Alaskans updated on key milestones as this landmark project moves forward.

### TOGETHER. moving. energy.





### denali-thealaskagaspipeline.com

© 2008 BP and ConocoPhillips. All rights reserved.

#### • GOVERNMENT

### Alberta gets muted response to fixes

Government proclaims 'good news' for all; disappoints as it closes debate on 'unintended consequences' of new royalty regime

### **By GARY PARK**

For Petroleum News

n trying to fix the "unintended consequences" of the royalty overhaul it cobbled together in haste last year and unveiled in October, the Alberta government said it was not bowing to pressure from any sector of the industry.

That much it may have got right.

No one is offering an unqualified endorsement of revisions announced April 10, including two royalty programs to stimulate development of deep oil and natural gas wells which the industry said were uneconomic under the government's original royalty framework.

"These new programs will help generate hundreds of millions of dollars in royalties and countless new jobs for decades," trumpeted Energy Minister Mel Knight. "I believe this is good news for most of the industry."

But he didn't get the ringing endorsement he might have anticipated, even from the large producers who were tagged as the only winners.

### Industry response mixed

Greg Stringham, vice president of markets and fiscal policy for the Canadian Association of Petroleum Producers, told reporters the government is "moving in the right direction" to deal with the highest-priority concerns, but he is "worried (that the response) is too narrow in its application."

He said the first impression is that only 80 to 90 exploration wells will benefit from the modifications and, if that is the case, then the "unintended consequences" on the oil side will remain, but if the impact is broader then it should work.

Stringham said CAPP would have preferred to see the formula for gas also apply to oil, taking into account well depth along with productivity and price.

At the other end of the scale, the Small Explorers and

"These new programs will help generate hundreds of millions of dollars in royalties and countless new jobs for decades," trumpeted Energy Minister Mel Knight. "I believe this is good news for most of the industry." But he didn't get the ringing endorsement he might have anticipated, even from the large producers who were tagged as the only winners.

Producers Association of Canada — whose member companies account for about 60 percent of exploration drilling in Alberta — said the beneficiaries are the big producers.

Executive director Gary Leach predicted the current slump in Alberta's exploration will just get worse as companies cut their capital budgets or transfer their spending to British Columbia, Saskatchewan and the United States.

"The changes fall far short of what we were hoping for," he said, adding he was told by the Energy Department that only about 85 oil wells a year will qualify for the new incentives.

Leach said companies that are able to will concentrate their efforts on Saskatchewan and British Columbia plays.

The new incentives will affect a "very small number of wells drilled by a very small number of large companies," he said.

### Junior drilling at 15-year low

With exploration wells by junior companies at a 15year low, there is no sign of an early recovery, with the latest Alberta government land sale offering only 79 parcels, the lowest posting in years.

The five-year program of changes is expected to return C\$200 million a year to companies drilling deep gas wells

and C\$37 million a year to those chasing deep oil targets. Without the revisions, Alberta would have lost about C\$830 million in royalties over 10 years, Knight said.

He said the new structure will enable the government to "meet or exceed" its goal of C\$1.4 billion in royalty increases once the regime takes effect in 2009.

Knight said the latest announcement will put the issue of "unintended consequences" to rest, adding there will be no further concessions.

#### List of changes

The changes include:

Deep Natural Gas — The program will provide greater benefits for wells deeper than 8,200 feet, which represent 5 percent of all gas wells drilled in Alberta and 27 percent of gas production between 2002 and 2007; there will be a sliding scale of royalty credits up to C\$3,750 per meter drilled; the expected cost will be C\$200 million a year over five years, with the incentives forecast to generate C\$1.51 billion in royalties over the next 10 years, for a net gain of C\$510 million.

Deep Oil Wells — Royalty adjustments will be available for wells more than 6,560 feet deep which represented 20 percent of wells drilled and 26 percent of new conventional production between 2002 and 2007; wells will qualify for up to C\$1 million or 12 months of royalty offsets, whichever comes first; the expected cost over five years will be C\$37 million a year in return for C\$505 million in royalties over 10 years for a net benefit of C\$320 million in royalties.

Other Changes — Four par prices instead of two will be used to calculate royalties on oil, allowing royalties to be charged at a price closer to that received by the producer; natural gas royalties will be calculated based on the sum of vertical drill depth and all laterals, encouraging greater development of coalbed methane, while sig-

see ALBERTA page 19

# We provide prov

We can get you there, whether it's constructing ice roads to access remote locations, moving drill rigs, providing support services for your drilling operations, or all of the above.

site can be virtually anywhere.

With more than 20 years of working in Alaska's Oil and Gas industry, we have the experience and equipment to provide the solutions to your needs.



**Oilfield Service Co.** peakalaska.com



### Alaska 2D reprocessing



WesternGeco has completed reprocessing 30,000 miles of Alaska 2D seismic, including 20,000 miles in the Chukchi Sea and 10,000 in the Beaufort Sea. Data processing technology has advanced significantly and is enhancing this valuable legacy data. This new reprocessing incorporates advanced true amplitude and prestack time migration processing flows to generate a far superior image compared to existing data.

- Phase and amplitude match by survey vintage
- Improved noise attenuation
- Improved signal pre-processing
- Full isotropic curved ray Kirchhoff prestack time migration
- True amplitude (AVO compatible)

Beaufort Sea and Chukchi Sea data available now.

### For more information contact 713-689-1000

www.westerngeco.com

WesternGeco

© 2007 Schlumberger

### continued from page 5 **TRANSITION**

explained. Differences in the grain sizes between the rocks in the different zones cause major differences in the permeability, or ability to flow fluids, within the zones. Zone 3, for example, consists of massively coarse conglomerates formed when the ancient delta was at its maximum extent. The conglomerates allow fluids to flow particularly easily — Digert recalled seeing 50,000 barrels of water per day being injected into just one foot of these rocks.

Layers of impervious rocks known as shales are interstratified with the sandstones and conglomerates. The shales inhibit the vertical movement of fluids within the reservoir, but can be used to support the transmission of pressure across the reservoir to enhance oil recovery, Digert said.

#### Gas cap and oil rim

When discovered 40 years ago, the Prudhoe Bay field contained a huge gas cap sitting in the reservoir on top of an equally huge oil rim. A thin tarry zone of heavy, impermeable oil marked the base of the oil rim and separated the oil from underlying water, Digert said.

At field startup in 1977, pressure in the gas cap forced oil up through the producing oil wells. Gas produced through the wells was injected back into the gas cap to maintain reservoir pressure. And in the part of the oil pool where the pressure from the gas cap transmits into the oil, gravity also causes the oil to flow down the gently sloping reservoir rock layer towards the production wells. This gravity flow effect gave rise to the term "gravity drainage area" to describe this part of the oil pool.

The lower section of the oil pool is too distant from the gas cap to be in significant pressure communication with the gas.

"We don't see that same gas-cap

drive — the gas can't expand directly into those areas," Digert said.

Consequently, massive volumes of water have been injected into the periphery of the oil pool to maintain reservoir pressure in this waterflood area of the reservoir. Waterflood started in 1981, Digert said.

So, the basic mechanism for production at Prudhoe Bay involves the driving of oil under pressure up productions wells by continuously cycling vast quantities of gas from the reservoir back into the top of the gas cap, while simultaneously pumping equally vast quantities of water into the peripheral part of the reservoir.

Between 1990 and 1995 the gas cycling process necessitated a progressive expansion of the gas injection capabilities in the field, with gas production starting at around 4 billion standard cubic feet per day and eventually topping out at 8.5 billion standard cubic feet per day. The central gas facility at Prudhoe Bay is now the largest plant of its kind in the world and compresses the gas to about 4,000 pounds per square inch for injection into the reservoir.

#### Waterflood

Water for the waterflood operations consists in part of water separated from the produced oil. However, a major component of the injected water consists of seawater that has been processed through a seawater treatment plant. Initially, water was injected at the rate of about 500,000 barrels per day, but that rate has now increased to about 1 million barrels per day, Digert said.

Fluids flowing from the production wells pass through six flow stations and are separated into water, crude oil and gas, Digert said. The separated water is used in the waterflood operation, while the crude oil transits through pipelines to the trans-Alaska oil pipeline for export from the field.

The gas is piped to a major facility that chills the gas to minus 40 degrees Fahrenheit. The chilling causes the heavier hydrocarbons such as propane, butane and pentane to drop out of the gas as natural gas liquids. Some of the natural gas liquids are mixed with the crude oil for export, while much of the natural gas liquid is used for enhanced recovery operations both at Prudhoe Bay and in the Kuparuk River field.

All but about 500 million cubic feet per day of the dry natural gas from which the natural gas liquids have been extracted goes to the compressors in the gas plant, for reinjection into the reservoir, Digert said. The gas that is not

see **TRANSITION** page 21

continued from page 18

### ALBERTA

nificantly lessening land use and the environmental footprint of coalbed methane development.

### First wave of reaction

The first wave of reaction from analysts included:

FirstEnergy Capital — A report by the investment dealer was headlined: "Today is only slightly different than yesterday." It said that "we envision zero to barely perceptible increases in exploration and development activity in Alberta as a result of this clarification. Any increases in activity would almost exclusively be related to strengthening commodity prices."

UBS Securities Canada — Although generally expected in the investment community, the modifications are a "slight positive" for most producers, with the leading beneficiaries being EnCana, Canadian Natural Resources, Talisman Energy and Nexen (whose Mannville coalbed methane play was in danger of being rendered uneconomic by the October framework). Junior winners include Duvernay Oil, Galleon Energy and Compton Petroleum.

Tristone Capital - The deep oil program is a shift "closer to middle ground," but will not be sufficient to promote new activity at the "higher impact end of the oil exploration spectrum." The deep gas plan will be a boon to the handful of companies drilling below 13,000 feet, enhancing the attractiveness of Foothills drilling in western Alberta. Deep well drillers among the conventional producers include Petro-Canada, Royal Dutch Shell, Talisman, ConocoPhillips, Canadian Natural, Fairborne Energy, Duvernay, Paramount Resources, Compton, Crew Energy, Rock Energy and Vero Energy. Peters & Co. — Any drilling increase in Alberta's Deep Basin area will be a lift for the troubled oilfield services sector. Wells drilled deeper than 8,200 feet, although accounting for only 10 percent of the total well count, consumed about one-third of the total capital spent. Services companies with large exposure to deeper drilling are Iroc Energy Services Partnership, Stoneham Drilling Trust, Precision Drilling Trust, Trinidad Drilling and Ensign Energy Services.









### High-octane connections for your laptop from Prudhoe Bay to the Gulf of Mexico.

ACS Mobile Internet keeps you connected wherever your cell phone works. Just insert the ACS Mobile Internet Key into your PC or Mac USB port and download large files or stream video in real time from virtually anyplace in Alaska

(including the North Slope), the U.S. and Canada. ACS Mobile Internet is as much as six times faster<sup>\*</sup> than the competition so you don't sacrifice speed for mobility. And, the rates are affordable for unlimited data on Alaska's best network. When you need the latest information at your fingertips, count on ACS Mobile Internet.

Explore the new world of Mobile Internet – only from ACS.



### It's your little key for a big world.

\*Based on comparisons of ACS EVDO and 1xRTT to at&t EDGE and GPRS, respectively. Actual speeds and coverage may vary.

Call 888.336.EVDO or email wrls.bus.sales@acsalaska.com

WIRELESS INTERNET LOCAL LONG DISTANCE ENTERTAINMENT



### continued from page 19 **TRANSITION**

compressed is used as the primary fuel source for the North Slope operations, with the bulk of this fuel gas being used to drive the gas compressors.

But because of factors such as the use of gas for fuel, more material leaves the Prudhoe Bay reservoir than is pumped back in, Digert explained. As a consequence, the gas pressure declined significantly over the years after the field went into production. In 2002, to stem this pressure decline, BP started injecting water as well as gas into the gas cap.

### Further enhanced recovery

In addition to upping the gas and water injection capacity to maximize field production, several state-of-the-art enhanced oil recovery techniques have come into play to extend oil recovery from the field way beyond the initial recovery estimate of 9.6 billion barrels.

In what is known as tertiary extended oil recovery, a solvent known as miscible injectant removes some of the residual oil left behind after a waterflood operation. Miscible injectant consists of a mixture of natural gas and some of the natural gas liquids obtained from the gas chilling plant.

When the miscible injectant is swept through a waterflood area of the reservoir, lighter elements of the residual oil left behind from the waterflood operation tend to adhere to elements of the miscible injectant, Digert explained. As a consequence the fluid recovered from the reservoir becomes richer in oil components than the miscible injectant fluid that is injected into the reservoir, he said.

In 1999 the massive \$80 million MIX module was barged to the North Slope to expand the field's miscible injectant usage.



After many years of production, the originally neatly layered Prudhoe Bay oil rim and gas cap have become fragmented. State-of-the-art drilling and enhanced oil recovery techniques now target isolated oil pools where, for example, gas from the gas cap has flowed under layers of shale.

The use of 400 million cubic feet to 500 million cubic feet per day of miscible injectant is increasing oil production by about 50,000 barrels per day, Digert said.

Meantime the multi-year use of gas injection and waterflood has resulted in some fragmentation of the oil, gas and water pools within the Prudhoe Bay reservoir. For example, the relatively gentle slope of just two to three degrees of the reservoir strata has allowed gas from the gas cap to flow under the impervious shale layers to leave small, disconnected pools of oil above the shales, Digert said.

"The gas tends to run under some of these continuous shales," Digert said.

State-of-the-art, high-tech drilling techniques have proved critical in extending field life by enabling access to these small, disconnected pools.

"So these are the targets that we're still

drilling for today," Digert said.

One technique involves the use of sidetrack drilling, the drilling of new low-angle or horizontal well bores out from an existing steep well bore, to thread well bores directly through the isolated pockets of oil.

And in what people refer to as quaternary extended oil recovery, a technique called miscible injectant sidetrack, or MIST, uses miscible injectant in combination with a specially shaped sidetrack well to target remnant oil pools in worked-out waterflood zones. Essentially, a sidetrack well is designed to wrap horizontally around an existing injector well at a distance of about 1,000 feet. Bubbles of miscible injectant released into the reservoir at different points on the horizontal sidetrack then expand and herd the residual oil towards production wells.

### ≥ Future gas sales

Despite all of these ingenious ways of producing yet more oil from Prudhoe Bay, the field continues along a slow path of declining production. However, the really big prize in the future is gas production from the field — the field originally contained equal volumes of oil and gas, Digert said. There is probably about another 2 billion barrels of viable oil production left in the field, but the field could produce gas equivalent in energy to about another 4 billion barrels of oil, he said.

The gas treatment plant for gas export would be sited next to the existing central gas facility, Digert said. Exporting gas from the field rather than reinjecting it would reduce the potential ultimate oil production because of a loss of gas pressure. However, the volume of the resulting gas sales would more than offset the loss of oil, Digert said.

"Our game now is going to be continued reservoir management strategies. ... We have an enormous opportunity to optimize (oil) production and maximize that production ahead of gas sales," Digert said.

And there is also the prospect of continued future oil production in the Prudhoe Bay unit from horizons above the Prudhoe Bay field, such as viscous oil from West Sak (also known by BP as Schrader Bluff).

Meantime, the production of Prudhoe Bay oil is already accompanied by the production of huge volumes of gas for fuel use and recycling.

"In our gravity drainage area they're starting to look like gas wells with a little bit of oil, more than oil wells with a little bit of gas. It's mostly gas coming out," Digert said.

But Digert feels optimistic about Prudhoe's future.

"We've had massive development of a massive field," Digert said. "We think we're very well positioned for the next 40 years ... both in oil and then the gas sales that will follow."





### A Driving Force in the Foundation Equipment Industry

A BAUER subsidiary and the exclusive distributor of BAUER products in the western hemisphere, Pileco Inc. has provided foundation solutions to the foundation construction and oil and gas industries for over 40 years.

**Conductor Pipe Installation Platform Pile Installation** Land Rig Foundation Piles Dock & Harbor Works

**Diesel Hammers Twelve Models ranging from** 9,480 to 394,250 ft. lbs.

New and Reconditioned: **Pileco Diesel Hammers Pileco Vibratory Hammers IHC Hydrohammers** 

### www.pileco.com



Pileco Inc. Corporate Office: 111 Berry Rd. Houston, TX 77022 USA

Mailing Address: P.O. Box 16099 Houston, TX 77222 USA

toll free: 800 4 PILECO (800-474-5326) phone: 713-691-3000 fax: 713-691-0089 email: pileco@pileco.com

Contact: Mike Heinz, Region Manager (253) 249-8792 web: www.pileco.com

### MESSAGE TO READERS

### 'Great Game' on for the Arctic

Petroleum News introduces 'Our Arctic Neighbors' to keep tabs on news and technology advances in Norway, Russia and Greenland

### **By KAY CASHMAN**

Petroleum News

21st-century "Great Game" is being played by the biggest countries in the northern hemisphere – a race to control, discover and produce the Arctic's vast resources. The world's last, great exploration frontier, the region is believed to hold huge deposits of oil and gas that will pose formidable economic, technical and environmental challenges to produce.

With the "Our Arctic Neighbors" news section, Alaska-based Petroleum News is stepping up its coverage of the far north from its core areas of Alaska and northern Canada to include two other major Arctic players, Norway and Russia, and a fledgling oil and gas province, Greenland.

Petroleum News' home base, the state of Alaska, boasts more than 30 years' experience producing oil in the Arctic, starting with the world's first commercial onshore Arctic production at Prudhoe Bay, and followed by the first Arctic offshore projects, Endicott and Northstar.

Alaska, Canada, Greenland, Norway and Russia may appear distant from each other on a conventional map, but on a circumpolar map it is clear they are neighbors, with expertise they have already begun to share.

Complicating the situation is the debate over which country has the rights to which sectors of the offshore Arctic.

Petroleum News will keep its readers



and advertisers updated on all major events in the Arctic oil and gas industry, with a special eye on regions or projects that could use the expertise that has evolved in Alaska.

Sarah Hurst is in charge of "Our Arctic Neighbors." She can be reached by email at shurst@petroleumnews.com.

Primary writers will include Hurst, Petroleum News senior reporter Alan Bailey, and Petroleum News Canada writer Gary Park.

### **Russian president an** unknown quantity

At first glance Russia's government appears hostile to the participation of foreign companies in its petroleum industry, but the reality isn't so straightforward. Take a closer look at many of Russia's projects and you will find that foreign companies are very much involved as partners, just not with a controlling interest.

Outgoing President Vladimir Putin has led the charge to regain state ownership over Russia's natural resources, and he will undoubtedly continue to exert a strong influence in his new role as prime

### **Snøhvit LNG plant suffers teething troubles**



Only seven shipments of LNG have left Norway's Melkøya plant on the Barents Sea coast since the Snøhvit field went online in September, Dagens Næringsliv reported in early April. Shipments should have left every six days. Technical problems have led to losses of almost \$1 billion, the newspaper reported. According to a late April report by the BarentsObserver.com, StatoilHydro's head of information for the Snøhvit project, Sverre Kojedal, said it was always difficult to implement new systems, and that the company was learning new things about working in Arctic conditions from its problems at Melkøya.

minister. President-elect Dmitry Medvedev, who takes office in May, is the chairman of Gazprom's board of directors and something of an unknown. If he can assert his own authority and not act as a subordinate to Putin, he may opt to take a more pragmatic approach towards dealings with the international community.

-Sarah Hurst

### Russia keen to establish **Arctic dominion**

Russian state-owned oil company Rosneft hosted a meeting of the government's Marine Board in mid-April. The top item on the agenda was to establish the outer limits of Russia's disputed continental shelf zone, in the Arctic and elsewhere.

#### see **NEIGHBORS** page 25



### continued from page 1

### INTEREST

a lease sale for their side of the reservoir, legal experts say the federal government probably wouldn't be able to claim any revenue from federal oil drained from Sourdough's state leases.

In his April 22 rejection of Exxon's plan of development, Alaska's commissioner of natural resources, Tom Irwin, made it clear that the Palin administration, like those that preceded it wants a commitment to produce Point Thomson's "considerable oil reserves," including the Brookian discoveries at Sourdough and Flaxman (see map with this article) adjacent to ANWR. (Other wells along the border in the Point Thomson unit might also hold oil, but not all well results have been made public.)

BP and Chevron received permission to drill

Sourdough from Point Thomson operator Exxon in the early 1990s. BP subsequently drilled two wells in the prospect, which lies in the southeast corner of the Point Thomson unit, adjacent to the Staines River that runs along the border between ANWR and Point Thomson (it's not on the map but it runs along the red line that is ANWR's western border).

ANWR's 1002 area is roughly a half mile from the Sourdough discovery well.

### **Rule of capture prevails**

In 1997, Petroleum News asked David Johnston, then chairman of the Alaska Oil and Gas Conservation Commission, if the federal government would be able to claim correlative rights if Sourdough was developed correlative rights would give the feds taxes and royalties on ANWR oil pumped from Sourdough.

Johnston said no. Correlative rights, which AOGCC enforces, do "not protect against drainage," he said. The rule of capture would prevail.

What correlative rights do is ensure adjacent landowners have "the opportunity to extract their fair share of the resource," Johnston said. If a landowner does not wish to drill on his side of the property line, that's his choice.

"The federal government does not have to lease this land. Nobody is compelling them to lease it." But if the feds do not lease the 1002 acreage that is adjacent to Sourdough, then the "rule of capture applies," he said.

The rule of capture is the same federal law that applies to the ownership of a wild horse that roams across several property lines - whoever captures it, owns it, Johnston said.

see INTEREST page 25

# Manitoba outpaces big neighbors

Paying the price for royalty increases, the province of Alberta is, for first time ever, lagging behind British Columbia and Saskatchewan in the value of oil and gas exploration rights

#### **By GARY PARK**

For Petroleum News

anitoba is at the most remote eastern end of the Western Canada Sedimentary basin, which also embraces the Northwest Territories, British Columbia, Alberta and Saskatchewan, and has traditionally been relegated to the bottom of the pile.

But it's quietly grabbing a share of the spotlight.

For now, the numbers are modest, with production last year totaling 21,500 barrels per day from 2,588 producing wells.

What is significant is the inclusion of such leading producers as Canadian Natural Resources, EOG Resources Canada and Penn West Energy Trust among its participants; although the lead operator is privately held Tundra Oil and Gas which accounts for 62 percent of output.

To keep its wagon rolling, the Manitoba government offers a drilling incentive program that has seen the sale of oil and gas rights rise 179 percent over the past four years to more than 300,000 acres last year.

The province has also totaled 1,310 well completions over the same period, with a 94 percent success rate, boosting the number of producing oil wells by 59 percent and the volumes by 95 percent from 2004's 11,000 bpd.

The government has raked in C\$62.6 million in lease sales, production taxes and royalties.

The industry drilled 324 wells last year, the fourth best tally on record, and could surpass that count this year.

Although the government is forecasting 250 to 300 wells in 2008 — a significant accomplishment when measured against a base of just 2,500 wells — the Petroleum Services Association of Canada is predicting 350 wells.

Of last year's wells, 210 were in the Sinclair field of southwest Manitoba, which has 718 producing wells and accounts for 47 percent of production.

The province ended the first quarter on track to meet the targets, with 104 wells completed, 11 more than the same period of 2007, making Manitoba the only province to record an increase.

For the January-March period, the

To keep its wagon rolling, the Manitoba government offers a drilling incentive program that has seen the sale of oil and gas rights rise 179 percent over the past four years to more than 300,000 acres last year.

provincial regulator approved 95 well licenses, 12 more than last year and the highest total in 20 years.

### **Dismal results elsewhere**

Otherwise, Western Canada had a generally dismal first quarter, held back by some of the worst drilling and lease sales statistics of the past decade in Alberta.

Well completions for the Western Canada Sedimentary basin were down 15 percent from a year earlier and wells spudded were off 14 percent.

Paying the price for its planned royalty increases, Alberta is, for the first time, lagging behind British Columbia and Saskatchewan in the value of oil and gas exploration rights.

Its two April auctions have generated C\$61.9 million and C\$12.8 million, its lowest single-auction return in more than six years.

The Energy Department reported that so far this year Alberta has raised C276.4 million, compared with C532million at the same time last year and C1.92 billion in the benchmark year of 2006, when the final count was C3.43billion.

Companies nominated 50,000 acres for the latest auction, a 10-year low, lifting the year-to-date total to 1.87 million acres, compared with 2.72 million acres for the same period of 2006 and 3.73 million acres in 2006.

Oil sands leases have gone into sharp decline, with no postings at the April 16 sale for the first time in almost two years.

To date this year, oil sands leases have totaled 696,000 acres, compared with 988,000 acres last year and 1.18 million acres in 2006.

### Knight suggests results blips

Alberta Energy Minister Mel Knight, reflecting some industry thinking that

land postings will recover in the second half, has taken issue with those who suggest Alberta is losing out to its neighboring provinces in the competition for oil patch investment.

The latest comparable figures put Saskatchewan at C\$462 million and British Columbia at C\$277.6 million, but Knight suggests those were blips caused by the scramble to accumulate rights in British Columbia's Montney tight gas and Horn River shale gas plays and Saskatchewan's two hot oil plays in Bakken and Lower Shaunavon.

He said that once longer-term trends were taken into account, Alberta held an edge over its immediate neighbors because of its lower corporate and income taxes, the absence of a provincial sales tax and its overall royalty structure.

For the opening quarter, regulators and the industry reported 5,113 well completions in the four Western Canadian provinces, 15 percent below the 2007 winter count of 6,013, with Alberta sliding 24 percent to 3,923.

But the total depth drilled in the Western Canada Sedimentary basin declined only 9.4 percent to 22 million feet, reflecting an increase in horizontal drilling and a drop in shallow gas drilling. Horizontal wells exceeding 10,000 feet rose to 105 wells from 44 in 2007. ●

### www.pdcharrisgroup.com



# Putting it all **together**

### for the successful commercialization of your project

- > Project Controls & Management
- > Upstream Production Systems
- > Midstream Processing Systems
- > Gas Compression & Conditioning> Module Design
- > Power Generation/Cogeneration
- > Infrastructure Systems
- > Cold Regions Design Expertise

Contact Mike Moora, 1.907.644.4716, mike.moora@pdcharrisgroup.com





Over 40 years of experience in manufacturing and installing both permanent and temporary workforce housing and modular buildings for Alaska's harsh environment. Supply and erect pre-engineered metal buildings. Contact our knowledgeable sales staff to discuss your upcoming projects.



"Manufactured in Alaska for Alaska by Alaskans since 1963"

### Worldwide leadership, innovation, and experience...



Ground Stabilization Permafrost Foundations Frozen Barrier Containment Thermopiles & Thermoprobes Pressure Vessels and Corrosion Protection

### www.ArcticFoundations.com

5621 Arctic Boulevard Anchorage, Alaska 99518-1667 (907) 562-2741









### **INTERNATIONAL**

### Eni: Government take cuts into profits

Eni SpA Chief Executive Paolo Scaroni said April 20 that the share of profits taken by governments of oil-rich countries is cutting international oil companies' profits, in some cases below their capital costs.

"The average government take is now moving to overcome the critical barrier of 90 percent, which means that oil companies' profitability is decreasing," the CEO of Italy's biggest oil and gas company by revenue said in a speech at the International Energy Forum.

Western oil majors have had to face a spate of renegotiations of their contracts as hydrocarbon-rich countries aim for a bigger slice of profits on the back of surging crude prices.

International oil companies need to "profoundly rethink their business model in order to survive and prosper," Scaroni added.

Government ministers from oil-rich nations and international oil company executives were meeting in Rome for a three-day energy conference that ends April 22. While the energy ministers of most OPEC states will be present, the group was not expected to announce any policy shifts during the International Energy Forum, which was being as crude oil prices have reached a new high of US\$117 a barrel.

Italy's outgoing Development Minister Pier Luigi Bersani told the conference in his opening remarks April 20 that the high price of oil will have an impact on inflation for all of 2008.

"The price of oil has had an impact on the inflation dynamic in many countries and it is reflected in part also on food stuffs in general," Bersani said. "This dynamic will persist for all of 2008."

On the sidelines of the conference, Eni signed a memorandum of understanding with Qatar Petroleum International to pursue key joint projects in Africa and the Mediterranean focusing on natural gas and crude oil. It also envisions cooperation in the petrochemical industry and power generation.

-THE ASSOCIATED PRESS

#### LAND & LEASING

### **State approves Kasilof PA for Marathon**

PA boundaries match newly shrunken Kasilof Unit; seasonal production at the gas field currently yields around 1 bcf each year

#### By ERIC LIDJI

#### Petroleum News

he state on April 21 approved a request from the Marathon Oil Co. to create a Kasilof Participating Area in the coastal waters of southern Cook Inlet.

The approval completes a process from earlier in the year, when the state approved Marathon's request to significantly shrink the size of the offshore Kasilof Unit, located six miles north of Clam Gulch. However, state officials at the time delayed making a decision on creating a Kasilof PA matching the new boundaries of the shrunken unit.

Both the shrunken unit and new participating area cover around 380 acres over two state leases - ADL 384534 and ADL 384529.

A participating area in Alaska creates an outline on the surface to represent the

**DECADES PROUD** 

ECADES AHEAD

Oil & Gas Exploration ALTA/ACSM Surveys

3-D Laser Scanning

Planning & Permitting

**Utility & Drainage Projects** 

**Residential Development** 

Highway Design

Traffic Engineering

**Statewide Service** 

Commercial Site Development



According to state regulations, a participating area can only include land "reasonably known" to contain oil or gas in paying quantities, something Marathon proved to the state through structure maps, well logs, seismic data and well test results.

Marathon is the operator and sole working interest owner of the Kasilof Unit and PA.

### **Kasilof production** small, but promising

Exploration in the area now called Kasilof began in the early 1960s and continued with varying levels of success into the mid-1970s. Marathon returned to the area in recent years, bringing decades of new technology to bear on the reservoir.

The state formed the Kasilof Unit in 2002, and Marathon began production in November 2006. That year, the company also built production facilities and a connection to the Kenai-Kachemak Pipeline to support the Unit.

Marathon sells the gas from Kasilof to in-state markets.

Historically, the Kasilof Unit has been one of the least productive in Cook Inlet, with somewhere in the vicinity of 2 billion cubic feet of natural gas since production began.

Although Marathon has drilled several exploration and development wells in the area since forming the Unit, the current production comes entirely from the seasonal operation of one well, KS-01RD, which Marathon temporarily shuts-in every summer.

While it will most likely never rival the giant fields of Cook Inlet like Swanson River, Beluga River or North Cook Inlet, the Kasilof Unit could become a stable source of natural gas supplies; the state in 2007 estimated reserves at the Unit to be 23.3 bcf.

The current plan of development expires at the end of the year. Marathon is required to file a second plan of development by Oct. 3, 2008.

www.lounsburyinc.com

<u>experience you can use</u> ESTABLISHED 1949



When you hire Aurora Geosciences, you're hiring from the neck up.

Whether you need geophysical, geological or exploration support services, our ideas, experience and northern expertise mean you'll have the best thinking on your project.

Go ahead-pick our brains.





www.aurorageosciences.com yellowknife • whitehorse • Juneau

### continued from page 22 **ARCTIC NEIGHBORS**

In August 2007 a Russian expedition planted the national flag on the seabed under the North Pole in an effort to claim that area and its mineral resources. Canada disputes the claim.

Rosneft CEO Sergei Bogdanchikov, a member of the Marine Board, estimated the resource potential of Russia's part of the Barents Sea at 7 billion tons of oil equivalent (approximately 51.3 billion boe), and the resource potential of Russia's part of the Bering Sea at 300 million tons of oil equivalent (about 2.2 billion boe).

Russia's minister of natural resources, Yuri Trutnev, recently told the newspaper Kommersant that Rosneft would get monopoly rights to all oil reserves in the Arctic shelf, and state-owned Gazprom would get monopoly rights to all the region's natural gas. Gazprom already holds the license to the Prirazlomonoye oil field in the Pechora Sea, which is scheduled to enter production next year. It is unclear whether Gazprom will have to give that license to Rosneft. Kommersant said foreign partners will almost certainly be needed for the projects.

The Marine Board endorsed a second North Pole expedition planned for this year which would attempt to bolster Russia's claim in accordance with the U.N. Convention on the Law of the Sea. Russia needs soil samples, which can be obtained only by drilling, but the country has no drilling vessels, RIA Novosti reported.

First Deputy Prime Minister Sergei Ivanov, who chairs the Marine Board, insisted that Russia's Arctic claim is in compliance with international law, which currently grants the United States, Canada, Norway, Russia and Denmark each a 200-mile economic zone in the Arctic Ocean. (Greenland is a self-governing province of Denmark.)

-Sarah Hurst

### Gazprom, partners to invest big in Shtokman

Gazprom and its partners Total and StatoilHydro plan to invest about \$40 billion by 2020 in the development of the Shtokman natural gas field in the Barents Sea, Rosbaltnord.ru reported in April. Shtokman's reserves are estimated at 3.8 trillion cubic meters of natural gas and more than 37 million tons of gas condensate. The license for Shtokman is held by Gazprom subsidiary Sevmorneftegaz.

Sevmorneftegaz officials briefed residents of the village of Teriberka in Murmansk Oblast recently about how the Shtokman project would affect them. Three platforms will be placed 560 kilometers off the coast of the Kola Peninsula, and a subsea gas extracting complex will be installed at a depth of 340 meters, from which three pipelines will be connected with Teriberka. The fishing village has a population of about 1,400 and is located on the Bering Sea coast. Meanwhile, management of the Kola nuclear power plant in Murmansk Oblast is negotiating with Gazprom over the possible construction of reactors that would produce energy for the Shtokman project. Gazprom has also been considering the use of floating nuclear power stations for the project.

### "It is equipped with the world's first ice resistant offloading terminal 22 kilometers away from the coastline." –Lukoil President Vagit Alekperov

that suffered a massive blow-out in November 1980. The Soviet government detonated a nuclear device underground at the Kumzha field in 1981 after other attempts to halt the flow of gas and condensate from one of its wells had failed. Now SN Invest plans to spend 77.5 billion rubles (\$3.3 billion) to bring Kumzha back on-line.

Located in the Nenets Autonomous Okrug, the Kumzha field is estimated to hold about 353 billion cubic feet of gas and 25 million barrels of gas condensate. A total of 23 new wells are planned, and there will also be a large-scale environmental recovery program.

-Sarah Hurst

### Lukoil, Conoco bringing Nenets field on-line

Russia's largest oil company, Lukoil, and partner ConocoPhillips are progressing with plans to bring the Yuzhno-Khylchuyuskoye oil field in the Nenets Autonomous Okrug on-line later this year under their Naryanmarneftegaz joint venture. The companies have invested over \$3 billion in the project since 2004, Lukoil's president, Vagit Alekperov, recently told the Financial Times.

"Oil from this field is to be supplied to Europe and the United States via a unique marine terminal situated in Varandey settlement on the Barents Sea coast," Alekperov said. "It is equipped with the world's first ice resistant offloading terminal 22 kilometers (13.7 miles) away from the coastline. Despite severe ice conditions this solution will ensure offloading of oil via Varandey on a year-round basis."

Lukoil owns 70 percent of Naryanmarneftegaz, ConocoPhillips 30 percent. Each company has a 50 percent voting interest in the venture.

Naryanmarneftegaz is expected to produce and market approximately 200 million barrels of oil equivalent per day at peak, according to ConocoPhillips.

-Sarah Hurst

### **EXPLORATION & PRODUCTION**

### **Industry tackles Highway 63 interchange**

Here's a new twist for one of Canada's largest oil producers.

Suncor Energy, the pioneering oil sands developer, will build a C\$55 million interchange on a busy northeast Alberta highway, then hand ownership to the provincial government — no strings attached.

The interchange will be constructed on Highway 63, about 15 miles north of Fort McMurray, where traffic averages about 17,000 vehicles per day, more than triple the volume of 10 years ago, reflecting the rapid development expansion in the area.

A spokeswoman for Alberta Transportation said direct industry investment in infrastructure allows oil sands developments to move ahead earlier than if the interchange had been forced to compete with all other projects across the province.

She said Canadian Natural Resources is also working to improve an intersection in the same general region.

By seizing the initiative, these companies are easing the burden on the Alberta government, which has faced growing criticism for its failure to plan properly for the industrial development it has permitted.

In opening a new session of the Alberta legislature April 15, the government of Premier Ed Stelmach indirectly acknowledged the problems it has created by promising to unveil later this year a long-term strategy for the oil sands.

As well as dealing with the pressures on public services and infrastructure, that plan will examine alternative energy sources and the "importance of responsible energy use, efficiency and conservation."

-GARY PARK

### continued from page 22 **INTEREST**

Attorneys interviewed by Petroleum News agreed, as did a 2003 article in Duke University School of Law's Alaska Law Review, which said, "The owner of the drained land has no legal remedy, but may protect his rights by drilling a well of his own in order to capture the same resource."

But Johnston and Robert Corbisier, author of the law review article, said there was also a possibility of AOGCC forcing unitization of Sourdough, and including ANWR acreage in the unit something the agency might have to do under its legal mandate to prevent the waste of oil and gas resources.

That issue, and others, will be explored in part two of this series.●



Do you want your company's ad to appear in the next issue of Petroleum News?

Your ad can reach Alaska and northern Canada's oil & gas industry each week. It's just a phone call away! Call now for advertising rates and information.

Call Susan Crane at 907.770.5592



-Sarah Hurst

### Field at nuclear blast site might go back on-line

A Russia company wants to restart production at a gas and condensate field

### AIGLIG LIKE WE UU;





### **Evergreen Helicopters** of Alaska

Evergreen Helicopters began Alaska operations in 1961 and has grown into a large, diverse organization (747, DC-9 fleet, three helicopter companies, orchard, winery, museum, nursery, etc.). The company operates CASA 212s, Lear 35s, BE 200s, Bell 212s, (205, 206 series), and Eurocopter BK 117s, (105 and AS 350 series) for a variety of state and federal government contracts. It also provides rotary and fixed wing service.Pete Jensen joined Evergreen Helicopters of Alaska in 2007 after retiring from the Alaska Army National Guard. He worked in recruiting for Evergreen International Aviation and now works in sales and marketing for

Pete Jensen, Sales Representative

the helicopter operation. Off-times find him cruising the seven seas with his wife of 27 short years, Jaimie. The Jensens have three grown children, ages 21 to 26, who all attended school in Eagle River, Alaska. The best part of Pete's day? Waking up every morning and rediscovering "Life is great!" - PAULA EASLEY

### **Business Spotlight**

### **Marketing Solutions**

Marketing Solutions is a full-service advertising and marketing firm offering strategic planning, creative advertising services, media negotiations and issue management for a broad range of customers and industries. Alaska owned and operated, Marketing Solutions prides itself on its ability to assign a smaller core team to projects, allowing clients to work face-to-face with some of Alaska's most recognized marketing professionals.

Mariajose Echeverria is responsible for inhouse creative and art production. Born in Ecuador, she graduated with honors from the Art Institute of Fort Lauderdale and went on to work

at Sanchez and Levitan, an agency based in Miami, then spent four years with Warner Brothers Television. She brings a fresh style of design not currently found in Alaska and has been a terrific complement to the agency.

- AMY SPITTLER

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

#### ADVERTISER

### Α Acuren USA (formerly Canspec Group) Aeromed Agrium Air Liquide Air Logistics of Alaska Alaska Air Cargo Alaska Analytical Laboratory Alaska Coverall Alaska Dreams Alaska Frontier Constructors ......19 Alaska Railroad Corp. Alaska Regional Council of Carpenters (ARCC) Alaska Rubber & Supply Alaska Telecom Alaska Tent & Tarp Alaska Textiles American Marine ......11 American Tire Co. Arctic Controls Arctic Slope Telephone Assoc. Co-op. Arctic Wire Rope & Supply ASRC Energy Services Alaska ASRC Energy Services Houston Contracting (HCC)

PAGE AD APPEARS ADVERTISER PAGE AD APPEARS ADVERTISER Doyon LTD **Doyon Universal Services EEIS Consulting Engineers** Egli Air Haul Engineered Fire and Safety .....10 **ENSR** Alaska **Epoch Well Services** Equipment Source Inc. ESS Support Services Worldwide F. Robert Bell and Associates Fairweather Companies, The Flowline Alaska Foundex Friends of Pets **Frontier Flying Service** 

### G-M

**GBR Equipment** GCI **Great Northern Engineering GPS Environmental GX** Technology Hawk Consultants ......4 H.C. Price Heating & Ventilation Sales Holaday-Parks Horizon Well Logging Hotel Captain Cook Hunter 3-D Industrial Project Services Inspirations Jackovich Industrial & Construction Supply Judy Patrick Photography Kenai Aviation Kenworth Alaska King Street Storage

	COURTESY MARKETING SOLUTIONS
Mariajose Echeverria, Art Director	
Television She brings a fresh style of	

PAGE AD APPEARS

NANA/Colt Engineering
Natco Canada         Nature Conservancy, The         NEI Fluid Technology         NMS Employee Leasing         Nordic Calista         North Slope Telecom         North Star Equipment Services (NSES)         9         North Star Terminal & Stevedore (NSTS)         9         Northern Air Cargo         Northern Transportation Co.         5         Northwest Technical Services         Offshore Divers         4         Oilfield Improvements         Opti Staffing Group         P.A. Lawrence         Davatories
Nature Conservancy, The         NEI Fluid Technology         NMS Employee Leasing         Nordic Calista         North Slope Telecom         North Star Equipment Services (NSES)         9         North Star Terminal & Stevedore (NSTS)         9         Northern Air Cargo         Northern Transportation Co.         5         Northwest Technical Services         Offshore Divers         4         Oilfield Improvements         Opti Staffing Group         P.A. Lawrence         Development
NEI Fluid Technology         NMS Employee Leasing         Nordic Calista         North Slope Telecom         North Star Equipment Services (NSES)         9         North Star Terminal & Stevedore (NSTS)         9         Northern Air Cargo         Northern Transportation Co.         5         Northwest Technical Services         Offshore Divers         4         Oilfield Improvements         Opti Staffing Group         P.A. Lawrence         Development
NMS Employee Leasing         Nordic Calista         North Slope Telecom       .8         North Star Equipment Services (NSES)       .9         North Star Terminal & Stevedore (NSTS)       .9         Northern Air Cargo
Nordic Calista         North Slope Telecom       .8         North Star Equipment Services (NSES)       .9         North Star Terminal & Stevedore (NSTS)       .9         Northern Air Cargo
North Slope Telecom       .8         North Star Equipment Services (NSES)       .9         North Star Terminal & Stevedore (NSTS)       .9         Northern Air Cargo
North Star Equipment Services (NSES)       .9         North Star Terminal & Stevedore (NSTS)       .9         Northern Air Cargo
North Star Terminal & Stevedore (NSTS)
Northern Air Cargo Northern Transportation Co
Northern Transportation Co
Northland Wood Products Northwest Technical Services Offshore Divers
Northwest Technical Services Offshore Divers
Offshore Divers
Oilfield Improvements Opti Staffing Group P.A. Lawrence
Opti Staffing Group P.A. Lawrence
P.A. Lawrence
Deve a las las a
Panaipina
PDC Harris Group
Peak Civil Technologies5
Peak Oilfield Service Co
Penco
Petroleum Equipment & Services9
Petrotechnical Resources of Alaska
PGS Onshore
Prudhoe Bay Shop & Storage
PTI Group

### Q-Z

QUADCO
Rain for Rent
Salt + Light Creative
Schlumberger10
Seekins Ford
Shaw Alaska
Conserved Devilled and Conserved



### B-F

Avalon Development

Badger Productions
Baker Hughes
Bombay Deluxe Restaurant
BP Exploration (Alaska)
Brooks Range Supply
Calista Corp.
Canadian Mat Systems (Alaska)
Capital Office Systems
Carlile Transportation Services
CGG Veritas
CH2M HILL
Computing Alternatives
Colville
CONAM Construction
ConocoPhillips Alaska
Construction Machinery Industrial
Crowley Alaska7
Cruz Construction
Dowland-Bach Corp.
Doyon Drilling

Lynden Logistics	
Lynden Transport	
Mapmakers of Alaska	
MADDA Testleh	
MAPPA Testlab	
MAPPA Testlab	
Marathon Oil	
Marathon UI	
Marketing Solutions	
MI Swaco	
IVII SWaco	
MPO Salos	

Nabors Alaska Drilling ......11

STEELFAB 3M Alaska **Taiga Ventures** Tire Distribution Systems (TDS) Total Safety U.S. Inc. Totem Equipment & Supply ......15 Tutka **Udelhoven Oilfield Systems Services Unique Machine** Univar USA URS Corp. Usibelli **U.S. Bearings and Drives** Welding Services Weston Solutions **XTO Energy** 

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

### Petroleum

### **Carlile receives national recognition**

Anchorage-based Carlile Transportation Systems said April 14 that it has received two first-place awards from the Transportation Sales and Marketing Association of America, a national organization founded in 1940 and dedicated to improving knowledge and communication skills through sales and marketing in the transportation industry.

Presented at TSMA's annual national convention in Phoenix, Ariz., on April 8, Carlile received awards for its 2007 "Zen" print ad campaign and the development of services marketing materials. Both were created with the assistance of Carlile's marketing and advertising agency, Anchorage-based Marketing Solutions and graphic artist Mariajose Echeverria, and can be viewed at Web sites www.carlile.biz or http://marketingsol.net/.

### Ace Air Cargo names Hawthorne marketing director

Ace Air Cargo said April 18 that it has named Greg Hawthorne as its new director of sales and marketing. Based in Anchorage, Hawthorne, 47, has been with Ace Air Services for four years as director of operations in Unalaska. In his new role, he will divide his time between the firm's Anchorage headquarters and the Dutch Harbor-Unalaska station. Ace has 57 employees and has freight and passenger charter operations that serve locations in Western Alaska, Southcentral Alaska, the Aleutians, the Pribilofs and Southeast Alaska.



**GREG HAWTHORNE** 

### American Tire looking to buy Topeka Goodyear plant

In an April 21 letter to Goodyear Tire & Rubber Co.'s board of directors, American Tire Corp. offered to buy Goodyear's OTR tire plant in Topeka, Kan., at "any reasonable price." The Topeka operation is Goodyear's largest OTR tire plant in the world and its only one in North America. If it's successful in purchasing the plant, ATC plans to spend \$200 million to modernize it, increase by at least 20 percent its production capacity for all sizes of OTR tires, and create more and better paying job opportunities. According to ATC, the acquisition would not affect its manufacturing activities in Washington. Already a well-established OTR tire manufacturer, ATC's objective is to become the largest and best manufacturer for 63-inch and 57-inch tires. For more information, visit its Web site www.americantire.us.

### Schlumberger worked on Mackenzie hydrates project

In Canada's Arctic, Schlumberger recently worked with the Japan Oil, Gas and Metals National Corp., Natural Resources Canada and the Aurora Research Institute to conduct the world's first de-pressurization test of gas hydrates in the Mackenzie Delta. (See article on this project in this issue of Petroleum News.) The project used services and technologies from Schlumberger IPM and Artificial Lift, in addition to Well Testing Vx multiphase meters, Completions MeshRite sand screens, and Well Services ARCTICSET cementing blends. Reservoir parameters were monitored in real time by the Schlumberger technology center in Fuchinobe, Japan.

### CH2M Hill pilot program for Southwest Alaska a success

Fifteen students recently completed a pilot program offered by CH2M Hill to promote career advancement for residents of southwest Alaska. Graduation was held at the Southwest Alaska Vocational & Education Center in King Salmon on April 12. Under the direction of certified instructors from CH2M Hill, students completed a three-week course in sheet metal and scaffolding. Those finishing the program, which emphasized safety, will be offered employment on the North Slope, CH2M Hill said,



### Alaskan Owned. Alaskan Operated.

Great people providing quality services.



ASRC Energy Services, Inc. has been providing reliable oil and gas services in Alaska for more than 20 years.

Regulatory and Technical Services • Exploration, Drilling Support, and Geosciences • Project Management • Engineering • Fabrication • Construction • Pipeline Construction • Operations and Maintenance



www.asrcenergy.com

SIGN UP TODAY FOR THE Alaska Support Industry Alliance Anchorage Golf Tournament

When • Friday, June 13 Where • Moose Run Golf Course

Registration now open at



Oil Patch Bits

noting that the company focused on Southwest Alaska because it was "essentially an untapped resource for workers." In May, CH2M Hill will conduct another training program for electrical apprenticeship in King Salmon. Call Trevor O'Hara for details (907-246-4608).

### Wally Niles back at Northern Air Cargo

Northern Air Cargo said in mid-April that Wally Niles has been appointed the company's director of operations, effective May 3. Niles is returning to NAC where he previously spent 21 years. Recently he has spent more than six year with the Federal Aviation Administration as an aviation safety inspector. An Alaska resident for 36 years, Niles has a degree in Professional Piloting from the University of Alaska Anchorage. In his new position he will be responsible for all aspects of Northern Air Cargo's flight operations.

— KAY CASHMAN

#### www.alaskaalliance.com



### Go online to find out more about:

Sponsoring the tourney

Volunteering

**Donating prizes** 

Contact the Alliance with questions at 907.563.2226

### continued from page 1

### STUDY

It said at the time that given the increasing demand for gas and declining conventional supplies gas from Alaska and the Mackenzie Delta "will be required to balance markets and supply."

### Frontier costs comparable to LNG

Ziff senior associate Dave Vetsch said the cost of delivering incremental supply from northern frontier regions is "very high and must be compared with the cost of delivering liquefied natural gas to North America."

The latest research covers about 90 percent of all gas produced in North America.

Ziff is not making its detailed estimates publicly available, but has offered some wide-range conclusions.

For instance, the Western Canada Sedimentary basin — by far North America's largest producing region at 16.6 billion cubic feet per day — earns a bleak ranking.

Five of the basin's six plays are listed

Air Monitors

Gas Monitors

· PiDs

Dräger

SUBSCRIBE to Petroleum News

Don't miss another issue, call: 907 522.9469

TTT Environmental - Instruments and Supplies

Alaska's preferred source for instrument Rentals, Sales, Service and Supp

Water Sampling

Bailers

Tubing

Pumps

Filters

www.tttenviro.com

PPE

Tyvek

Gloves

SALA

Respirators

**Field Screening** 

DEXSIL

Dexsil

Niton

907-770-9041

Water Meters

YSI

Horiba

Oakton

YSI



among the least economic on the continent, creating what Ziff Chief Executive Officer Paul Ziff concedes will be a controversial finding.

He said "another energy consulting firm that conducted a continental analysis last year found that all Canadian plays ranked economically in the most plays, and the Canadian Foothills gas play was the lowest cost of the Canadian plays." But the Ziff study concluded that the

Canadian Foothills "ranks dead last" of the 24 gas supply sources.

### Industry moves support estimate

Ziff said that estimate is supported by industry moves which have seen Marathon, Anadarko and Samson selling off their Canadian assets, while leading Canadian producers, such as EnCana, Talisman Energy and Petro-Canada along with a number of trusts, "have invested in U.S. gas plays in the last five years."

The Western Canada Sedimentary basin is divided into six areas: Deep, Foothills, tight gas, conventional medium depth, shallow and coalbed methane.

For tight gas in the Green River basin in the U.S. Rockies, the costs details cover Jonah, Pinedale, Washakie, Sandwash, Mesaverde, Wamsutter, Frontier and Moxa Arch plays.

In a news release, the firm said:

• Operating cost estimates represent

PETROLEUM NEWS • WEEK OF APRIL 27, 2008

Simon Mauger, Ziff's project director, believes the study will help producers prioritize "which gas basins to increase their activity in," drastically cutting the time taken up making their own analysis of the full-cycle cost structure.

actual field operating expenses to the point of gas sale.

• Royalties vary, but typically range from 12.5 percent to 20 percent.

• Production taxes (especially in the U.S.) typically range from 4 percent to 15 percent.

• Finding and development costs cover drilling, facilities, land and seismic.

• The target rate of return on invested capital varies among producers, but the study has used a 15 percent (before income tax) rate.

For competitive analysis, the report includes cost scenarios for the Middle East, Pacific Basin and Atlantic Basin LNG supplies delivered to North American shores.

The report also provides a cross comparison of similar gas strategies, comparing tight gas for Greater Green River, Uinta-Piceance, East Texas-North Louisiana, South Texas, Western Canada and Arkoma; for coalbed methane there are comparisons of Powder River, San Juan, Raton and Alberta's Horseshoe Canyon; and shale gas embraces Barnett, Woodford and Fayetteville.

For some U.S. plays, the report provides four to 12 individual results in each area, rather than just a single average cost.

Simon Mauger, Ziff's project director, believes the study will help producers prioritize "which gas basins to increase their activity in," drastically cutting the time taken up making their own analysis of the full-cycle cost structure. ●

0



minutes from shopping, fine dining, and class A office space

each unit is distinctly appointed with luxurious contemporary finishes with a rooftop deck to soak up the midnight sun

### www.5thandM.com

sarada, llc

Anchorage, Alaska from the 700's to 1.47 mil

the final phase to be complete Summer 2008 907.854.2118



# Now shipping to the North Slope: Northern Lights

AMERI-TECH BUILDING SYSTEMS and STALLION OILFIELD SERVICES have raised the standard for Arctic workforce housing with the Northern Lights system. The eight-person pods can be configured with as many or as few units as needed. The three-piece modular unit has two sections that house the sleep quarters for eight people and a self-contained wet unit with the connecting hallway as well as the sink, toilet, shower and the mechanical rooms.

### FEATURES:

- STEEL SKIDS
- RADIANT FLOOR HEATING SYSTEM

- INDIVIDUAL SLEEP QUARTERS
- STORAGE SPACE
- DESK AREA
- FLAT-SCREEN TELEVISION
- PERSONAL THERMOSTAT
- FRESH-AIR MAKE UP SYSTEM (MUA)
- DUAL-POSITION WINDOW
- KEY-CARD ENTRY SYSTEM
- BOILER ROOM/MECHANICAL ROOM
- DOUBLE-TANK WATER MAKER
- SEWER LIFT STATIONS
- ALASKAN STATE SEALED CODE COMPLIANT



### **Global Building &** Workforce Housing Solutions

### www.ameritechbuildings.com



www.stallionoilfield.com

### NEED THE CAMP? CALL NOW! 713.528.5544

sales.info@ameritechbuildings.com • 936.598.6689

© 2008 ACP Ameri-Tech Acquisition, LLC / Stallion Oilfield Services Ltd.

### continued from page 1

POINT THOMSON

Thomson Unit working interest owners of a 2006 decision by then DNR Commissioner Mike Menge rejecting the 22nd POD and terminating the unit, but said in a Dec. 26, 2007, decision that the working interest owners were due an opportunity to suggest alternatives other than unit termination.

In February the Point Thomson owners proposed a 23rd POD as an alternative to unit termination and DNR held a hearing in early March at which the working interest owners testified on the proposed plan.

Reconsideration of the commissioner's decision may be requested within 20 calendar days; the commissioner said he would look at such a request and issue a decision on reconsideration.

DNR has until June 15 to have its final decision back to Judge Gleason.

### Irwin not confident in 23rd POD

Thirty years of Point Thomson history between the state and its lessees at the unit played a significant role in Irwin's decision.

"Despite the fact that the plan (the proposed 23rd POD) may present a technically reasonable first step for developing these lands from a conservation perspective, it is an inappropriate remedy because I find no basis in the record to conclude that I can be assured that it will be completed as promised; or that if the 23rd

ASSOCIATIONS Liddy to host radio show from Alaska

Talk-show host G. Gordon Liddy will be heading north this summer to broadcast a series of radio shows on issues of domestic resource production in Alaska.

Organized in part by the lobbying group Arctic Power, the "Alaska Resource Tour" will take Liddy to various locations across the state, from the 1002 area of the Arctic National Wildlife Refuge to the Red Dog Mine, culminating in a series of radio broadcasts, most likely out of Anchorage during the week of July 14-18.

The G. Gordon Liddy Show is a nationally syndicated show produced by Radio America and broadcast over satellite and terrestrial radio. The series of shows in Alaska will focus on the benefits of domestic energy production.

Liddy spent nearly five years in prison for his role in the 1972 break-in at Democratic National Committee headquarters at the Watergate building and the subsequent cover-up. In the years since he has become a successful lecturer and author.

Arctic Power is a firm responsible for lobbying members of Congress to open the coastal plain of ANWR to oil and gas drilling.

Liddy's trip across Alaska is being funded through in-kind and private donations, not state funds, Arctic Power spokesman Adrian Herrera told Petroleum News.

-PETROLEUM NEWS

Irwin said he is "very troubled by testimony that Appellants believed they had always followed through with commitments made in prior PODs and with commitments made in the course of convincing DNR to accept those prior PODs."

POD is completed, that Appellants will continue to expand production as promised. ... I cannot risk the continued delays in development of this valuable state resource by these WIOs with this history of unfulfilled commitments," Irwin said in his decision.

He noted that in the hearing he warned the companies "that it was absolutely critical to convince me that they would follow through on the 23rd POD." He said that in reviewing the unit history "a clear pattern emerges" of commitments to the state not being met and told the companies they would have to "convince me that the pattern has been changed."

Irwin said he is "very troubled by testimony that Appellants believed they had always followed through with commitments made in prior PODs and with commitments made in the course of convincing DNR to accept those prior PODs."

He said the major working interest owners "apparently believe that they have lived up to their obligations to DNR."

Irwin cited in his decision commitments made to DNR in PODs or in expansion applications that were not met — or cases in which the companies chose to pay rather than drill. The companies characterized this as an option; Irwin said it wasn't a drill-or-pay option, but a commitment to drill accompanied by a penalty if that drilling commitment was not met.

"Overall, the refusal or inability of the

witnesses to acknowledge the Appellants' past failures and the manner in which they betrayed DNR's trust weighed very heavily against them and significantly compromised their credibility."

As far as enforcement, he said: "The history of this unit demonstrates that ... there is no effective way to ensure the WIO's performance."

### The issue of performance

There were no penalties proposed in the 23rd POD. ExxonMobil said that allowed no "off ramps" — the working interest owners had to go straight through to production.

Irwin talked about penalties which the owners might have proposed in the decision, and noted that the owners argued DNR "could impose benchmarks only with their consent."

Whether that position is correct in law, he said, "it suggests another issue that Appellants may litigate."

He said "specific, meaningful performance benchmarks" in the 23rd POD might have resolved the issue. He said the owners "could have offered to voluntarily dissolve the unit and relinquish the leases if they failed to complete the promised activities in the 23rd POD. They could have made their commitment to put all of the unit's resources into production more credible by offering to contract the unit to the boundaries of the existing participating areas at the end of this POD, or to contract the unit now to the area included in this POD. They could have offered financial penalties to compensate the State for delayed production and lost lease sales revenue. Appellants argue that I have no authority to impose these penalties, that only they have the ability to offer them, yet they do

see **POINT THOMSON** page 31

### EVERGREEN HELICOPTERS OF ALASKA

Alaska Medallion Association Member DOD Approved CAMTS Approved Search and Rescue Mining Seismic Exploration Construction

### Demanding Game Plan? Dynamic Line-up.

Alaska Office: 1936 Merrill Field Drive • Anchorage, Alaska 99501 • Phone: 907.257.1500

Corporate Office: 3650 Three Mile Lane • McMinnville, Oregon 97128 • Phone: 503.472.9361

Fax: 907.279.6816 • Toll Free: 800.958.2454 • info@evergreenak.com • www.evergreenhelicopters.com

### continued from page 30

### **POINT THOMSON**

not."

### ExxonMobil to appeal

The Point Thomson working interest owners have a different view than the state, with a focus on planned drilling and a belief that they have provided assurances that commitments in the 23rd POD will be met. This includes judicially supervised benchmarks in the proposed ruling the companies submitted a proposal Irwin rejected because he said it would give DNR authority to the court.

ExxonMobil said it intends to protect its rights at Point Thomson, where the owners have spent \$800 million over the years.

ExxonMobil does not believe Irwin has the "legal basis to terminate the unit and doing so will lead to further court appeals, which will take an indeterminate number of years to resolve and delay PTU development to the detriment of the State of Alaska and the project participants," Greg Pulliam, the company's Alaska spokesman, told Petroleum News in an e-mail April 22.

"We're surprised and extremely disappointed by the DNR's decision," he said. "This plan is responsive to all of the DNR's requirements, including a commitment to bring Point Thomson on production. Thus, we plan to appeal this action and will pursue all alternatives to protect our rights to develop these resources," Pulliam said.

ExxonMobil said that prior to 2005 DNR had approved Point Thomson plans of development. "Consistent with the guidance that the court provided, the owners believe the updated plan is an appropriate remedy for DNR rejection of plans of development that were submitted in 2005 and 2006."

### **BP** concerned about gas

BP, which earlier in April joined ConocoPhillips in a joint venture project to move Alaska North Slope natural gas to market, is also disappointed to have a "good plan" turned down, Steve Rinehart told Petroleum News April 22. Rinehart, BP's Alaska spokesman, said: "We offered a robust development plan. It had firm commitments to produce Point Thomson resources and we were fully committed to it."

The state said it wanted production, Rinehart said: "Production is what we offered here." The \$1.3 billion drilling and production program "would have



"Thomson gas cycling gets lots of study," in April 6, 2008, issue at www.petroleumnews.com/pnads/7533 93422.shtml

"Point Thomson settlement offered," in March 30, 2008, issue at www.petroleumnews.com/pnads/1523 05962.shtml

"A matter of trust: Companies testify on why DNR should accept a new Point Thomson plan," in March 16, 2008, issue at www.petroleumnews.com/pnads/2207 71379.shtml

"No off ramps: Exxon insists it will take Point Thomson to small-scale production by 2014," in March 9, 2008, issue at www.petroleumnews.com/pnads/3209 39019.shtml

"Exxon submits PTU plan: New development plan calls for condensate, oil to be produced before natural gas," in Feb. 24, 2008, issue at www.petroleumnews.com/pnads/369341493.shtml

"State wins lawsuit: Judge agrees with Alaska on 22nd Point Thomson plan; requires hearing on remedy," in Jan. 6, 2008, issue at www.petroleumnews.com/pnads/485989934.shtml

brought Point Thomson into production and it would have enabled full-field development."

On the gas side, Point Thomson gas is "vital for a successful North Slope gas project," he said. BP remains committed to moving the Denali gas pipeline project forward to open season, "and to doing everything we can to make sure it's a successful open season."

Rinehart said the decision cast doubt on whether Point Thomson gas will be available, "and if there's doubt about the availability of the gas that could result in an unsuccessful open season."

An unsuccessful open season "could delay the project; it could even cause the project to fail," he said.

Rinehart said BP hopes the Point Thomson issue "can be resolved in a way that enables a successful open season."

BP wants an Alaska North Slope gas pipeline project to go forward.

"This decision makes it harder."

BP is the second-largest Point Thomson interest holder, with 32 percent. ExxonMobil has 36 percent, Chevron 25 percent and ConocoPhillips 5 percent. There are also a number of small interest holders at Point Thomson. ●

### continued from page 1 WHALES

across the North American unconventional fairway," Eresman said.

Executive Vice President Mike Graham, while conceding the Horn River play, involving a joint venture with Apache, "is a large, virtually untapped natural gas resource that is still in the very early stages of development," said EnCana, which has been assembling its land holdings since 2000, believes it has access to the "thickest, most prospective part of the play."

### 50-100 well completions a year possible

Graham said it is possible 50 to 100 well completions can be made every year over an area of 216,000 acres.

He also said that techniques EnCana has developed at its prolific Barnett shale operation in Texas will be applicable at Horn River, with the use of up to 20 wells per horizontal drilling pad reducing costs by 20-30 percent.

He said EnCana is currently drilling and completing four wells in Horn River, following the success of Apache's three operated wells during the winter.

Graham said that will allow EnCana to develop a more detailed sense of Horn River's commercial potential for release later this year.

### Horn River discoveries

EnCana's enthusiasm for Horn River comes on the heels of the stunning announcements in recent weeks of discoveries in the Horn River shale basin, EnCana's enthusiasm for Horn River comes on the heels of the stunning announcements in recent weeks of discoveries in the Horn River shale basin, with Apache hiking its forecast to 9-16 trillion cubic feet from 3.6 tcf just five months ago and EOG Resources disclosure that it may have struck a 6 tcf play.

with Apache hiking its forecast to 9-16 trillion cubic feet from 3.6 tcf just five months ago and EOG Resources disclosure that it may have struck a 6 tcf play.

Further fueling the interest, Nexen said April 22 its drilling programs over the past two winters point to recoverable contingent resources on the Dilly Creek lands of Horn River of 3-6 tcf, assuming a 20 percent recovery factor and based on analysis by third-party consultants.

"There has been a lot of excitement over this play and we are very pleased to be a large part of it," said Chief Executive Officer Charlie Fischer.

Nexen has accumulated 123,000 net acres of Devonian shale gas play in the past 18 months and holds a 100 percent working interest.

The Dilly Creek area covers about 85,000 net acres and, according to Nexen, has been compared to the Barnett Shale by other operators.

It said the average gross shale thickness at Dilly Creek is about 570 feet, which is almost 50 percent thicker than Barnett.

-GARY PARK



310 K Street, Suite 402, Anchorage, AK 99501 | 907-770-8700 | tsaoctgsales@tsalaska.com



### GLOBAL INNOVATION OIL & GAS

alC

AIC has built a solid reputation by taking an impossible idea and making it an accomplished reality. With more than 20 years of experience, we specialize in providing innovative concepts and technical solutions to our global clients. AIC has successfully completed large-scale oil and gas projects at remote sites on Alaska's North Slope and has the expertise, experience, equipment and skilled personnel to tackle the challenging needs of the oil and gas industry – with unmatched commitment to excellence.

AICLLC.CON



When you need to talk to a freight...

### **Expert!**



When you need assistance with your shipping, call a freight expert at Lynden. Whether you need to find the fastest or

the least expensive way to move a shipment, a Lynden freight expert can assist you with finding out all your options."

www.shiplynden.com

1-888-596-3361

The Lynden Family of Companies



Innovative Transportation Solutions

# 

- 6 Pebble offers owners opportunity to excel New CEO Shively discusses challenges facing copper-gold-molybdenum project
- 12 Millrock casts a wide net across Alaska Junior explores four more properties; signs new pact with Bering Straits Corp.
- **19 Chinese invest in Yukon mining companies** Territory's economic development officials encourage infusion of Asian capital

A view from the portal of an access tunnel completed at Galore Creek in 2007 during the first construction season at the copper-gold-silver project in northern British Columbia. Construction was suspended last fall while the project's owners NovaGold Resources Inc. and Teck Cominco Ltd. review costs in hopes of identifying a more economic development plan.

PHOTO COURTESY NOVAGOLD RESOURCES INC.

### A special supplement to Petroleum News

Petroleum

WEEK OF April 27, 2008

# 

(USB Modem Key)

Keep projects on-track. Take your laptop just about anyplace and stay connected 24/7.

ACS Mobile Internet keeps you connected wherever your cell phone works. Just plug the ACS Mobile Internet key into your PC or Mac USB port and you can make real-time updates to schedules, materials lists and change orders just about anyplace in Alaska, Canada and across the U.S. ACS Mobile Internet is up to six times faster<sup>\*</sup> than the competition so you don't sacrifice speed for mobility. And, the rates are affordable for unlimited data on Alaska's best wireless network. When you need to have the latest information at your fingertips, count on ACS Mobile Internet.



### It's your little key for a big world.

\*Based on comparisons of ACS EVDO and 1xRTT to at&t EDGE and GPRS, respectively. Actual speeds and coverage may vary.

### Call 888.336.EVDO or email wrls.bus.sales@acsalaska.com

WIRELESS INTERNET LOCAL LONG DISTANCE ENTERTAINMENT



### ALASKA

### **NovaGold focuses on Alaska properties**

2008 strategy targets commercial gold production at Rock Creek, exploration and problem-solving at Donlin Creek, Ambler properties

### **By SHANE LASLEY**

Mining News

ancouver-based NovaGold Resources Inc. April 14 assured investors that it has a "clearly defined strategy" to rebuild shareholder value from the setbacks suffered in the market last fall when the company and partner Teck Cominco Ltd. elected to delay development of the Galore Creek Project in northern British Columbia.

NovaGold's new strategy is a focus on Rock Creek and Donlin Creek, the junior's gold projects in Alaska.

NovaGold also reported earnings of \$28 million, or 27 cents per share, for the first quarter of its fiscal year, which ended Feb. 29. That compared with a year-ago net loss of \$4.9 million, or 5 cents a share, for the first three months of fiscal 2008. The increase in earnings for the quarter was primarily related to a \$15.3 million gain on disposal of shares in US Gold Corp. and a \$15.2 million suspension cost recovery at Galore Creek, net of related non-controlling interest, the company said.

Revenues for the quarter ended Feb. 29, totaled \$1.7 million, up 55 percent from \$1.1 million in the same period in 2007.

NovaGold said it had about \$13.8 million in cash on hand as of Feb. 29, of which about \$10.2 million was committed to the Galore Creek Project. The company also completed a \$100 million offering of convertible notes in March.

"This continues to be a challenging time to build mines, with strong inflationary pressures and intense industry competition for staff, contractors and equipment," said NovaGold President Rick van Nieuwenhuyse. "Despite the challenges, we are on target to achieve commercial production in mid-2008. The setback at Galore in late November had a significant impact on shareholder value, which we are determined to rebuild."

### **Rock Creek nears** commercial production

NovaGold said commercial production at the Rock Creek gold mine near Nome and progress in advancing toward feasibility and permitting at the Donlin Creek project in western Alaska "should be a significant catalyst to add shareholder value this year."

Two options are currently under review, on-site generation using diesel generators with co-wind generation and possibly tying into the Alaska railbelt power grid. The second option would involve building more than 200 miles of transmission line to connect Donlin to the existing power grid.

The company said Rock Creek's processing facilities have been both wet and dry commissioned, and a test gold pour has been completed in an on-site refinery.

To bring the Rock Creek mill up to full operation, crews must finish building a tailings storage facility. High snowfalls and severe winter conditions have slowed construction progress, but the work should be finished in time to allow for commercial production by mid-2008.

"Due to engineering considerations, the tailings storage area construction has weather condition restraints, and once the construction phase is complete, similar weather delays will not be an issue at Rock Creek," said Peter Harris, NovaGold's chief operating officer.

Harris said the delay in construction of the tailings storage facility has allowed the company to spend more time testing the mill circuit and once the tailings storage is finished, the ramp-up to full production should take less time than it would have had there been less time with the mill. The company expects Rock Creek to produce C\$25 million in cash flow in 2008.

NovaGold has set aside C\$7 million of about C\$42 million in planned spending at Rock Creek in 2008 to continue exploration around the mine and the nearby Saddle deposit. Van Nieuwenhuyse said that the company plans to upgrade the 250,000-ounce gold resource at Saddle into the measured and indicated categories and transition Saddle into the Rock Creek mine plan.

The company also hopes to include the Big Hurrah property, about 40 kilometers to the east of Rock Creek, in the mine plan in 2009.

Some C\$29.2 million had been spent as of Feb. 29, the company said.

### 2008 exploration is focused on Donlin

NovaGold said its primary exploration





NovaGold crews are drilling the east side of Arctic prospect looking over the Kogoluktuk River. A 3,000 meter drill campaign is scheduled for the Ambler property in 2008.



### **Contact North of 60 Mining News:**

fifth week of every month.

Publisher: Shane Lasley • e-mail: publisher@MiningNewsNorth.com Phone: 907.229.6289 • Fax: 907.522.9583

Detr	٥l	ρ	111	n
100	<u>u</u>	Å	ų,	II s

Shane Lasley
Rose Ragsdale
Mary Mack
Susan Crane
Amy Spittler
Heather Yates
Bonnie Yonker
Clint Lasley
Steven Merritt

(

PUBLISHER & NEWS EDITOR EDITOR-IN-CHIEF (contractor) CHIEF FINANCIAL OFFICER ADVERTISING DIRECTOR ASSOCIATE PUBLISHER BOOKKEEPER ALASKA/NATIONAL REPRESENTATIVE **GM & CIRCULATION DIRECTOR** 

PRODUCTION DIRECTOR

ADDRESS P.O. Box 231647 Anchorage, AK 99523-1647

North of 60 Mining News is a monthly supplement of the weekly

newspaper, Petroleum News. It will be published in the fourth or

NEWS 907.229.7057 or 770.3505 publisher@petroleumnews.com or Elidji@petroleumnews.com

CIRCULATION 907.522.9469 circulation@petroleumnews.com

**ADVERTISING** Susan Crane • 907.770.5592 crane@petroleumnews.com



Northern Air Cargo announces NAC Can - a new program to improve customer service and make shipping with NAC easier than ever.

- Faster drop-offs and streamlined pickups.
- Individual kiosks for small packages, oversize, and general freight.
- Dedicated service agents for custom shipping solutions.





Curt Freeman	COLUMNIST		
Sarah Hurst	CONTRIBUTING WRITER	S	
Allen Baker	CONTRIBUTING WRITER	E	
Tim Kikta	COPY EDITOR	b	
Judy Patrick Photography	CONTRACT PHOTOGRAPHER	F	
Forrest Crane	CONTRACT PHOTOGRAPHER		
Tom Kearney	ADVERTISING DESIGN MANAGER		
Mapmakers Alaska	nakers Alaska CARTOGRAPHY		
Dee Cashman	CIRCULATION REPRESENTATIVE		

Bonnie Yonker • 425.483.9705 ovonker@petroleumnews.com

FAX FOR ALL DEPARTMENTS 907.522.9583

Several of the individuals listed above are independent contractors

NORTH OF 60 MINING NEWS is a monthly supplement of Petroleum News, a weekly newspaper. To subscribe to Petroleum News and receive the monthly mining supplement, call (907) 522-9469 or sign-up online at www.PetroleumNews.com. The price in the U.S. is \$78 per year, which includes online access to past stories and early access to Petroleum News every week. (Canada/Mexico subscriptions are \$165.95; overseas subscriptions are \$200) Or, just purchase the online edition of Petroleum News, which also includes the mining supplement and online access to past stories, for \$49 per year.

continued from page 3 NOVAGOLD

focus in 2008 will be on the Donlin Creek gold property in southwest Alaska.

Donlin Creek LLC, a 50-50 partnership between NovaGold and Barrick Gold Corp., began its 21,000-meter drill program for 2008 in mid-February at Donlin.

NovaGold spokeswoman Rhylin Bailie told Mining News that the 2008 campaign is about half finished and an additional campaign at Donlin is being considered.

The current drill program under way in the East Acma area is located outside areas included in the company's resource estimate for Donlin Creek and is designed to rapidly determine the limits of mineralization for that region. Assay results are expected by the middle of 2008 and will be used to update Donlin's resource estimate.

The next drill target at Donlin Creek will be the Dome prospect about five kilometers, or three miles, north of the main Donlin Creek pit area.

Van Nieuwenhuyse said early indications are that the mineralization grades at Dome are similar to those found at Acma. The company plans to move drills to Dome in May.

### Processing rates and power options

The partnership is also studying power, logistics, processing and other details of project design. One of its key objectives is finding the optimal production rate for the mine. Under study are production rates from 50,000 metric tons per day up to 100,000 metric tons per day which would produce between 1.5 million and 2.5 million ounces of gold annually.

Another key issue for the Donlin Creek project is power supply. Two options are currently under review, on-site generation

using diesel generators with co-wind generation and possibly tying into the Alaska railbelt power grid. The second option would involve building more than 200 miles of transmission line to connect Donlin to the existing power grid.

Van Nieuwenhuyese said one advantage of bringing power from the grid is that it would bring sustainability to the region.

When asked about this possibility, Rhylin Bailie told Mining News that one of NovaGold's goals at each of its projects





Excellence. **Discipline**.



The 21,000-meter drill program at Donlin Creek is focused on the East Acma area and has returned some of the most significant intercepts to date.

is to bring long-term sustainable benefits to the region. "We offer training opportunities and local employment, providing the opportunity for people to build skills and service-related businesses that can then be transferred to other projects when our mine eventually closes," she said. "Likewise, building a power line as opposed to relying on diesel generation means we leave behind the legacy of a long-term renewable power source. It's good for us, good for the region and much better for the environment than diesel power!"

When asked if NovaGold is working with the State of Alaska or other agencies on a power transmission project, Van Nieuwenhuyse said, "Power discussions are at a very early stage, but there is certainly a great deal of interest from local communities and state energy and ruraldevelopment authorities."

A mine plan for the project is targeted for completion in the second half of 2008, which will allow time to move forward to feasibility and permitting, NovaGold said.

### **Partners explore Galore Creek options**

NovaGold said one of the challenges that Galore Creek developers face is how to manage water produced from the high amounts of precipitation at the coppergold-silver project. Engineers are weighing alternative methods for diverting the water, such as using an underground tunnel.

The engineers are also studying the possibility of transporting ore to a much drier location on the opposite side of the mountain via either a conveyor system or a slurry line.

"We are committed to building this mine. We think this is a high-quality asset, we certainly have huge support from the Tahltan First Nations and the provincial government of British Columbia," Van Nieuwenhuyse said

### Next generation gold prospects

In addition, NovaGold will work on scoping studies and drilling at its Ambler high-grade zinc-copper-gold project in Northwest Alaska this summer. The company has scheduled a 3,000-meter drill program to start in mid-June on the property.

NovaGold also said it will advance other current early stage exploration projects in Alaska and British Colombia as well as seek out new properties to "identify our next generation of gold projects." •



### Teamwork. Innovation.

It's how we manage operations at the Pogo Gold Mine, 85 miles southeast of Fairbanks. This underground mine provides more than 200 quality jobs in the region and revenues for state and local government, creating long-term

Teck Cominco Limited in Alaska. A *tradition* of mining excellence

www.teckcominco.com



Core samples from drilling at NovaGold's Donlin Creek project are being prepared to be flown out to the assay lab.

#### • GUEST COLUMN

### Drizzle follows perfect storm of news as 2008 mining season gets under way

### **By CURT FREEMAN**

For Mining News

ast month's perfect storm of news from around the state has blown itself out so that this month we are getting only a drizzle or two. Why? Seems straightforward to me. If you have a budget, you already have started working on it, and you are too busy working to have anything much to report. If you don't have a budget yet, it is unlikely that you will be getting one at this late date so you have even less to say. Time to put boots on the outcrops!

### Western Alaska

NOVAGOLD RESOURCES INC. and partner Barrick Gold Corp. have announced that drilling in 2007 identified high-grade gold mineralization in the East Acma area of the Donlin Creek deposit. This discovery has the potential to improve the average grade of the deposit and increase the net present value of the Donlin Creek Project. An initial 21,000-meter drill program in the East Acma area is under way and a report of preliminary results is expected in mid-2008. The partners also are incorporating the remaining 20,000 meters of 2007 drilling into the resource model and will update the deposit resource estimate in the first half of 2008.

NovaGold Resources announced an update on the Rock Creek gold project outside of Nome. In the mill, both dry and wet process facilities have been commissioned. As part of the commissioning process, the operations crew has operated the mill and circulated slurry through key concentrator, flotation, gravity and leach circuits, with a test gold pour completed during commissioning of the refinery. No material issues were identified through the commissioning process that could potentially impact commercial start up activities. As a result of high snowfalls and ongoing severe winter storms, external earthworks activity and tailings storage facility construction has been slower than expected, but should be finished to allow for commercial production in mid-2008.

MILLROCK RESOURCES announced analytical results from the 2007 drilling program at its Inmachuk polymetallic project on the Seward Peninsula. The company drilled five holes totaling 644.1 meters to test the Hannum Zone where oxidized lead-zincsilver mineralization had been discovered by previous workers. Oxidized sulfide mineralization was intersected in three of the five holes drilled. The mineralization is approximately stratiform and stratabound, and occurs in carbonate schist, dipping shallowly northeast. The zones are generally narrow and low grade with the best intercept returning 6.61 meters grading 2.06 percent zinc in hole 1004IM. The company has terminated its option on the project and returned it to its joint venture partner, Full Metal Minerals. LIBERTY STAR URANIUM AND **METALS** announced that it is seeking to joint venture its Big Chunk porphyry copper-gold project near Iliamna. The company also reported that expressions of interest in the project have been

### The author The author

Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He pre-

pared this column **CURT FREEMAN** April 20. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his web site is www.avalonalaska.com.

received from more than one global mining company.

Millrock Resources announced that it has signed an agreement with **INTERNATIONAL TOWER HILL** 

MINES LTD. to acquire its rights to the South Estelle gold property in the Rainy Pass district. The deal between Tower Hill and Millrock is an outright purchase of Tower Hill's rights in an underlying agreement. Consideration is 650,000 Millrock shares. Tower Hill will retain a 1 percent net smelter returns production royalty. By virtue of the purchase, Millrock will have the option to earn up to an 80 percent interest in the property from underlying property owners HIDEFIELD GOLD PLC and MINES TRUST. Millrock can earn a 51 percent interest by expending US\$2 million by the end of 2009, a 70 percent interest by expending a cumulative US\$5 million by the end of 2011, and 80 percent by tabling a positive feasibility study. A further 2.5 percent net smelter returns production royalty may become payable to Hidefield/Mines Trust under certain conditions. Two of the most interesting prospects on the property are the Shoeshine and Train prospects which have produced numerous high-grade gold values ranging up to 238 grams of



gold per metric ton and 56.9 grams of gold per metric ton, respectively. The property also has potential to host bulktonnage copper-gold porphyry mineralization.

International Tower Hill Mines Ltd. announced that it has acquired additional lands around its BMP polymetallic project from Alaska native corporation COOK INLET REGION INC. Two holes drilled by Anaconda intersected a shale hosted massive sulfide body which returned grades of 4.0 percent copper, 0.3 percent lead, 1.0 percent zinc and 370 grams of silver per metric ton over a true thickness of 3.5 meters and 0.9 percent copper, 1.0 percent lead, 6.0 percent zinc and 177 grams of silver per metric ton over a true width of 5.5 meters. Sampling by the company on the 6120 target returned average grades of 2.3 percent copper, 3.4 grams of gold per metric ton, 33 grams of silver per metric ton, 0.16 percent nickel and 0.07 percent cobalt from 20 samples of an outcropping skarn zone 5 kilometers south of the Anaconda drilling. Under terms of

the acquisition, during the 5-year exploration portion of the agreement Tower Hill must make annual rental payments of \$20,000 per year for the first 2 years, increasing to \$40,000 per year for years 3 through 5. At the end of year 2, the company will be required to reduce the lands subject to the agreement by 50 percent unless otherwise justifiable geologically, in which case a bonus of \$5 per acre is payable upon the renewal for all lands retained in excess of 3,100 hectares. Tower Hill must expend \$275,000 in year 1, escalating to \$500,000 in year 5. Once Tower Hill has expended a minimum of \$800,000, drilled 2,500 feet of core and produced a positive pre-feasibility study over an area within the Cook Inlet Region lands, Tower Hill may elect to enter into a mining lease over the ground that is the subject of the positive pre-feasibility study.

### **Eastern Interior**

FREEGOLD VENTURES LTD.

see FREEMAN page 6



**PEOPLE.** *Caring for people; an asset more precious than gold.* 

### **ENVIRONMENT.**

Leading in environmental stewardship.

### **PRODUCTION.**

Producing gold 24-hours a day, 365 days a year.

### WE'VE GOT OUR PRIORITIES STRAIGHT.

907.488.4653 • WWW.KINROSS.COM ORTKNOX A Subsidiary of Kinross Gold Corp.

### ALASKA

### Pebble seen as opportunity, not problem

Partnership's new CEO shares views on challenges that giant copper-gold-moly deposit likely will face on road to development

ohn Shively, the new chief executive officer of Pebble Limited Partnership, told Mining News in an April 11 interview that the Pebble Project in Southwest Alaska is a huge opportunity for both the people who live in the area and for all Alaskans. Shively said it is inappropriate for Pebble's opponents to try to stop the project before it reaches the permitting process, and irresponsible of them to be willing to take down Alaska's entire mining industry in their efforts to stop a copper-gold-molybdenum mine in southwest Alaska.

Shively, commissioner of the Alaska Department of Natural Resources under former Gov. Tony Knowles, offered the following answers to questions from Mining News.

MN: In Pebble Partnership's announcement about your accepting the position of CEO you said, "Our challenge now is to see if we can find a way to work together to develop the resource that's

consistent with the values and priorities of local communities, of Alaska Natives and the citizens of the state." What steps do you plan to take to meet this challenge?

Shively: I don't think the project is getting a fair hearing. People are trying to stop Pebble before we have a project to explain. Our first step is to get a project that meets the high criteria that we have set for ourselves and that we can explain to the public.

We can't just sit around while that is happening. We will expand our staff as well as our business development efforts. We will do a variety of things to increase the presence up here.

One of the problems for the project is that it was run primarily out of Vancouver, B.C., and hiring me was the beginning of setting up a fairly significant presence here in Alaska.

MN: How do you plan to keep the public informed of the partnership's plans as the Pebble Project moves forward?

Shively: We will do some of the standard public information things: We will do some television ads; we will speak publicly in the region itself: we continue to have ongoing public meetings. I am sure we will be involved in debates where the Renewable Resources Coalition is on one side and we are on the

> other. I plan to expand the public relations staff here in the office to help us with our public education program.

> > MN: While you were commis-

sioner of DNR vou set up discus-

Compiled by Shane Lasley North of 60 Mining News

sion groups around sensitive subjects, bringing all stakeholders to the table. According to my sources, these meetings were very successful. Do you plan to conduct similar meetings for Pebble?

Shively: Yes. A commitment had actually been made before I came on to bring on a national group called the Kevstone Center. They are in the process of doing their analysis of what that (stakeholder engagement) might look like. We expect a report from them sometime in May.

There is an option here for them to say—it is hopeless; we don't think there is anything we can do to bring people together. I don't think that's likely but it's possible. If that were the case, I would have to use some other mechanism for the stakeholder process.

MN: Art Hackney, spokesman for the Renewable Resources Coalition, recently spoke positively about your



The Pebble Partnership

announced on April 2 the appointment of John Shively as CEO of the project seeking to develop a globally significant copper deposit in the Bristol Bay region of southwest Alaska.

"There is a due process for these types of things in our state, and we should be able to get there if we think we have a project that meets the criteria. We have a commitment not to just meet the criteria; we have a commitment to exceed the criteria because we think we have to do that to persuade people it won't be a problem with the fish."

appointment as CEO at Pebble. Do you have any meetings scheduled with the coalition?

Shively: I don't have any scheduled. I intend to meet with the environmental community, and if the Renewable Resources Coalition wants to be part of that, I am happy to meet with them.

In my role as (DNR) commissioner, I was in a number of situations where we had very diverse opinions about projects and lease programs and things like that so I am used to it. There are certain people who have already made up their minds on the project. The odds of changing that I don't know.

One of the things that does concern me is that if the situation were reversed and the state government took a look at this project and said—this is a huge project; it is on state land we are going to basically avoid the permitting process; we are just going to go to the Legislature and get this thing going because it is so important-the people in the environmental community would be rightfully out of their mind for avoiding the process that we have to go through. That wouldn't be an appropriate approach. To my mind it is not any more of an inappro-

see Q&A page 7

#### continued from page 5

### FREEMAN

announced rotary air blast drilling results at its Golden Summit project. The initial results from the planned 40,000-foot exploration program included intervals of 39 feet grading 8.9 grams of gold per metric ton, including 6 feet of 31.5 grams of gold per metric ton, and 6 feet grading 13.9 grams of gold per metric ton. The company indicated that the structures within this particular swarm of veins exhibit good continuity over a 550-foot strike length and a uniform width of about 150 feet. Individual mineralized structures within this 150-foot-wide shear zone can also be traced from fence to fence.

MILLROCK RESOURCES announced that it has acquired the Ketchem gold property in the Circle District from SPECTRUM RESOURCES. Under terms of the agreement, Millrock has an option to purchase a 100 percent interest in the property in exchange for \$3 million of exploration work over a four-year term. Cash payments totaling \$200,000, including \$20,000 on signing, and \$30,000 at the first anniversary are scheduled. Spectrum will be issued 160,000 Millrock shares with 15,000 issued upon receipt of approval of the transaction, and 25,000 at the first anniversary. The option may be exercised at any time while the agreement is in effect for the purchase price of \$1.5 million. The owner would retain a 2.5 percent overriding royalty that may be

reduced to 0.5 percent by payment of an additional \$3 million. Gold mineralization on the property occurs in quartz veins and stockworks both in granitic intrusions and in surrounding sedimentary rocks. At the 88 Prospect, three structurally controlled zones of gold bearing quartz veins and stockworks have been identified by prior workers, which include PLACER DOME in 1990 and AMAX GOLD in 1992. Widths of the zones range between 3 and 25 meters. One of the zones is reported to average 8.92 grams of gold per metric ton over a width of 4.6 meters in altered granite. A grab sample from the zone is reported to contain over 36 grams of gold per metric ton. Three reverse circulation drill holes were drilled in 1995, but appear not to have fully intersected the mineralized

structures observed at surface. Gold mineralization at the Silver Chalice prospect occurs in quartz-sulfide veinlets in altered sedimentary rocks. Grab samples collected by the property owner are reported to have returned values up to 32.0 grams of gold per metric ton.

### Southeast Alaska

UCORE URANIUM INC. reported that it has received its drilling permits for its planned \$5.2 million exploration program at its Bokan Mountain uranium project on Prince of Wales Island. The company expects to commence drilling in May where it will focus on expanding the high grade uranium mineralization identified at the I&L prospect during the 2007 drill program.



### Colorado OTR Tires: Our U.S. Pride

The 1<sup>st</sup> 100% U.S. tire manufacturer producing 63" OTR tires. Situated on the U.S. west coast foreign trade zone. Situated on the U.S. west coast foreign trade zone. Supported by the U.S. federal, state and local government. Producing both radial and bias ply OTR tires up to 59/80R63. Guaranteeing work hours of all OTR sizes. Providing lifetime liability insurance worldwide. Customizing all OTR tires according to using conditions of any type of mi Supplying global users and equipment manufacturers through distributors Delivering all tires directly to any mine site throughout USA and Canada. Shin directly from USA to all major compacts worldwide. Ship directly from USA to all major seaports worldwide.

### Manufactured by American Tire Corporation

Email: 5980R63@gmail.com lebsite: www.americantire

### continued from page 6

### Q&A

priate approach than to say—stop this thing before it even gets into the permitting process.

There is a due process for these types of things in our state and we should be able to get there if we think we have a project that meets the criteria. We have a commitment not to just meet the criteria; we have a commitment to exceed the criteria because we think we have to do that to persuade people it won't be a problem with the fish.

MN: Hackney was also quoted as saying, "support would only be given (by the Renewable Resources Coalition) if it can be developed without harming fish or clean water." Will it be possible through dialogue to move forward a project that the coalition would support?

Shively: If the coalition supported it I don't think there would be any question! That is a very high hurdle at this point. If we got there, I think we would be home free. For a project this large and this controversial, I would never expect 100 percent support. I think that is a nice offer on their behalf and I hope that we can persuade them.

MN: During your time with the NANA Regional Native Corp. you were involved with the Red Dog Mine. The most recent ad campaign against the Pebble Mine claims that if the Red Dog Mine were operating in Bristol Bay it would be an environmental disaster. Is this a fair assessment of Red Dog's environmental track record?

Shively: Absolutely not. The ad that shows dead fish is just wrong. The little cutline they have underneath that says "the biggest polluter in the country"—that is all because of the way EPA forces mines to report. All of the waste rock, all of the tailings are reported as pollutants as part of the toxic release inventory, except they are not released.

As a matter of fact I was on Red Dog Creek before anyone had turned a shovel of dirt for the Red Dog Mine, and there were no fish in Red Dog Creek because of the natural (acid) runoff from that deposit. Today, there are fish in that creek, so I think that it is just wrong.

I think that if you look at what the mine has done for the NANA region in terms of jobs for shareholders and what it has done statewide for Native corporations because of revenue sharing, and when you look at their environmental record, I am very proud of my relationship with Red Dog.

### "Everybody recognizes what the challenge is here. No matter what size or type of mine it is, you have to ensure clean water and fish protection. Our challenge is how to accomplish that, not really the size of the mine."

and state water quality standards. And thirdly, we have to ensure adequate water flows in nearby streams to maintain fish productivity.

There are scientific ways of doing that. There are a variety of different things we are looking at. There is also the long-term issue of the tailings disposal area and how that will be monitored in the long term after the mine is shut down. We have to address all those, and we are not there yet.

MN: I understand that the Pebble Partnership is stepping back and taking a fresh look at how to develop the project. What are some possible changes in strategy?

Shively: I don't know if we are necessarily stepping back. This is part of an ongoing process. Our understanding of the mineral resource keeps changing.

When Northern Dynasty started, most people did not think that there was much of a resource there. Then they found more and that looked good, and then they started to drill deeper and found an even more significant resource. We are now assessing how those pieces fit together and what it might look like. That is part of an ongoing process. It is not necessarily stepping back.

Everybody recognizes what the challenge is here. No matter what size or type of mine it is, you have to ensure clean water and fish protection. Our challenge is how to accomplish that, not really the size of the mine.

MN: Rio Tinto CEO Tom Albanese said he has suggested to both Northern Dynasty and Anglo American that the underground higher-grade resources of Pebble East be developed first. What does the Pebble partnership think of this approach?

Shively: We are looking at that as one of the possibilities. That is one of the options, but it is not the only option.

MN: The proposed Pebble Mine Project has become a subject of public debate in Alaska. Many of the residents I talk to envision a huge open-pit mine that will forever leave a scar on Alaska with 700-foot-tall earthen dams holding back toxic waste. Is this a realistic vision of what the developers have in mind? If not, how is reality different from this picture?

Shively: We don't have the reality. It is going to be a big mine. It is a big resource. I don't believe we will ever get all of the resource out. Part of it will be open-pit. Part of it will be underground.

You don't leave a scar! When you are done you have to reclaim.

Another issue is the management of the tailings area—what that looks like and how that is managed over time is an issue we are still dealing with.

We do not yet have a plan established as to how big the mine is going to be, how

"A lot of my career in this state has been how to make things better in rural Alaska. The biggest attraction to me is: How can we do this in a way that has a significant and positive impact on rural Alaska and the entire state?"

much of it is open-pit, how much of it is underground, how big and where the tailings area is going to be. Then you have issues like roads and power. All those are pieces of a mine and will have to be addressed.

MN: The campaign against the proposed mine at Pebble is being conducted in the Alaska Legislature, the judicial system and the court of public opinion. The net result of all these actions will not only have an effect on the Pebble project but could affect the entire mining industry. It also could affect investment in other resource development projects in the state. Will this have any bearing on how the partnership moves forward with the Pebble Project?

Shively: It would be unfortunate if we let that aspect of it drive our decision-making.

I think it irresponsible of those who oppose Pebble to try to bring down the whole industry. I understand there are people who don't like Pebble, and I understand some of the reasons why. Whether you are the owner of a big sports lodge or a commercial fisherman— those are legitimate reasons to have big concerns, but to go out and try to bring down a whole industry is harming the state. It is harming people in rural areas where some of these other mines might go. I find it irresponsible.

I can't understand how anybody who considers themselves an Alaskan and understands how our economy runs would think that is an appropriate thing to do. If you are against Pebble, I am willing to tolerate that, but what they have done beyond that is irresponsible.

*MN. At what point will the partnership be ready to propose a mine plan for Pebble?* 

Shively: We don't know that yet. We have spent a fair amount of money. We recently announced that this year we will be spending between \$130 million and \$140 million. When you spend that amount of money up front, you want to get to the permitting process relatively soon. We still have unanswered questions. When you have unanswered questions, you have to keep working until you get answers.

*MN: What motivated you to accept the responsibilities of the CEO position and all of the challenges that go with it?* 

Shively: If you come right down to it, this is a huge opportunity. It is an opportunity for the people who live in the area. Not only will it bring jobs where we don't have very many jobs, we have the issue of power. If we bring in power, what will it do for the region and the high cost of living to the people who live out there? The power used at Pebble will probably be generated in Southcentral Alaska and could be part of many of the solutions that Southcentral Alaska is looking at for future power generation given the current situation with declining gas reserves in Cook Inlet. This could include both renewable resources and new gas supplies from the North Slope or imported LNG. The volume of our project could help make new options economic.

see **Q&A** page 8



-0.

MN: The primary concern that has been raised by those opposed to the Pebble Mine is that it could have an effect on the water and as a result affect the Bristol Bay fishery. What measures will the partnership take to ensure a mine developed at Pebble does not affect the fishery?

Shively: That is what we are doing right now. In general, there are three types of issues we have to manage to ensure that the Pebble Project does not affect the water and fisheries resources of Bristol Bay. First, we have to ensure that project facilities are sited properly, away from environmentally sensitive areas or those with high habitat values. Secondly, we have to ensure that any water that leaves the mine site during operations or after closure meets the extremely strict federal



### **Partners In Power**

Alaska Diesel Electric is your authorized dealer for Magnum and Northern Lights products. Tier III Northern Lights land-based generator sets are the state of the art power production solution for mines, camps and construction projects. For reliable, durable and simple to use power, ADE is your one-stop shop.



### ALASKA

### State seeks comment on coal rules

The Alaska Department of Natural Resources is seeking public comment on recent revisions to the state's surface coal mining regulations.

DNR made substantial revisions to its proposed changes to the Alaska Surface Coal Mining Program based on public comments received in response to a public notice the department issued in March 2007.

The proposed changes involve amending existing sections and adopting new sections in Title 11, Chapter 90 in at least 23 areas of the coal mining regulations.

The revisions are designed to make the department's coal mining rules consistent with the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA) regulations as well as improve and clarify the state rules.

Comments on the proposed regulation changes, including potential costs to private persons of complying with them, should be submitted in writing to the Alaska Division of Mining, Land and Water, 550 W. 7th Avenue, Suite 1070, Anchorage, AK 99501-3579; or by e-mail to dnrmlw@dnr.state.ak.us; or by fax to 907-269-8904.

The comments must be received no later than 5:00 p.m. Friday, May 23.

-MINING NEWS

### Lawmakers earmark funds to educate public on possible ballot proposals

The Alaska Legislature has included \$25,000 in its fiscal 2009 capital budget to fund a public education campaign on Alaska mining and regulations.

Rep. John Coghill, R-North Pole, and House Majority Leader Ralph Samuels, R-Anchorage, added the budget item to enable state officials to talk about the impact initiatives 07WATR and 07WTR might have on Alaska's mining industry. The initiatives appear to be headed for the ballot in August.

The first draft of the budget item read "to influence the outcome of an election on initiatives affecting those mining activities." On April 12 the Alaska House of Representatives amended the language to say "may" influence the election.

Gov. Sarah Palin, whose office will direct the educational outreach, said the funds will be used to allow state officials to inform the public about Alaska mining, the stringent permitting process already in place to govern mining, and to provide data on initiatives affecting those mining activities.

"This budget item did not originate from my office, and it would not be our intention to influence a ballot initiative. If lawmakers decide to allocate public money for this, we will ensure the Department of Natural Resources provides objective, factual information about the impacts of mining-related initiatives for voters to consider. Alaskans deserve to hear the facts from their government," Palin said.

Ed Fogels, director of the Alaska Department of Natural Resources Office of Project Management & Permitting, said DNR has been nervous about educating the public on the effects of the proposed ballot initiatives because that could be perceived as an attempt to influence the election.

Two judges have ruled on the initiatives, saying that if the initiatives were passed into law, they would shut down mining in Alaska. From a regulatory standpoint, Fogels said, "it is perfectly clear that if the initiatives were passed that the state would not be able to permit mines." Both Palin and DNR said the budget request originated in the Legislature and that neither of their offices was involved in its creation.

-SHANE LASLEY

### Pebble CEO gets \$140 million budget

Venture's partners set spending for '08 to advance giant copper-goldmolybdenum deposit in Southwest Alaska toward development

### **By SHANE LASLEY**

#### Mining News

ALASKA

he Pebble Limited Partnership— an Alaska-based 50-50 partnership formed between a wholly owned subsidiary of Northern Dynasty Minerals

Ltd. and a wholly owned U.S. subsidiary of Anglo American plc to engineer, permit, construct and operate a modern, long-life mine at the Pebble Project—has set a 2008 budget of \$140.1 million to advance the Pebble copper-gold-molybdenum project in southwest Alaska.

In early April the partners appointed John Shively as the partnership's first CEO.

Shively brings vast experience working in both Alaska's public and private sectors. His resume includes: serving as commissioner of the Alaska Department of Natural Resources under former Gov. Tony Knowles, chief of staff for former Gov. Bill Sheffield and currently, president of the Resource Development Council for Alaska, Inc.

Shively also played a key role with NANA Inc., the Native regional corporation of Northwest Alaska, in its efforts to acquire and develop Alaska's Red Dog zinc mine in partnership with Teck Cominco Ltd. He was awarded the prestigious Denali Award by the Alaska Federation of Natives in 1992 for his contributions to the Native community.

The first order of business for Shively is to appoint a senior management team for the Pebble Partnership. He also will manage the \$140.1 million to be spent this year on programs approved by the Pebble Partnership Board.

The approved budget includes \$61.6

The approved budget includes \$61.6 million to drill about 157,000 feet at Pebble, focusing on upgrading resources at Pebble East to the indicated category, which will help with completing a prefeasibility study now under way.

million to drill about 157,000 feet at Pebble, focusing on upgrading resources at Pebble East to the indicated category, which will help with completing a pre-feasibility study now under way. Step-out drilling also will be conducted to determine the extent of the deposit. Six rigs have already drilled 22,500 feet since the 2008 site program began in February.

The board also approved \$30.2 million to be spent on engineering work to support completion of the pre-feasibility study. The money will be spent on detailed metallurgical testing and infrastructure studies.

Another \$24.9 million is earmarked for an environmental study program for the Pebble project. This is in addition to \$87 million previously spent on environmental and socio-economic studies at Pebble and will be used to complete the Environmental Baseline Document for the project. This document is expected to be completed in the first quarter of 2009 and will be used to evaluate various mine design alternatives in advance of the development of the final mine plan for Pebble, the partnership said.

The remaining \$14.8 million will be spent on a community engagement and public affairs program. Shively will use these funds to continue stakeholder relationships, educate the public and gain project support, the partnership said.  $\bullet$ 

continued from page 7

Q&A

There are also the effects the project will have on the Alaska Permanent Fund. Pebble is located on state land so there will be royalties. So not only will it impact the local economy, but it also will impact the state's economy. Those are all positives. Even getting the project to the development stage is having a positive impact. The money we are spending on exploration and environmental studies, there are a lot of people in rural Alaska who would not otherwise have jobs who have them now.

A lot of my career in this state has been how to make things better in rural Alaska. The biggest attraction to me is: How can we do this in a way that has a significant and positive impact on rural Alaska and the entire state?

The second thing is, as I said earlier, I don't think this project has been given a fair hearing. There is a way to address these types of projects, and it is not to kill them before they ever get started; I think it is wrong for the project, and I think it is wrong for Alaska. So, I am willing to take some of my declining years and put them into that effort.  $\bullet$ 

# On location.

Creative photography for Alaska's resource development industry.

907-258-4704 JUDY **PATRICK** PHOTOGRAPHY judypatrickphotography.com



### Miner seeks mineral riches on ocean floor

Nautilus Minerals, backed by majors with huge Alaska investments, posts first resource estimate in subsea exploration

### **By ROSE RAGSDALE**

For Mining News

f Alaska is the "Last Frontier," then Nautilus Minerals Ltd. surely must be exploring what can only be described as the ultimate frontier on earth – the bottom of the ocean.

The Vancouver, B.C.-based junior exploration company earlier this year reported the first resource estimate for an undersea mineral deposit, ushering in what many call a new era in hardrock mining. The junior said it plans to develop substantial high-grade polymetallic (copper, gold, zinc and silver) massive sulphide deposits in 1,600 meters of water in the Bismarck Sea off the coast of Papua New Guinea within the western Pacific Ocean's "Rim of Fire."

Nautilus, one of only two marine mining companies in the world, is focused on the exploration, mine planning and development activities associated with its Solwara 1 Project, located about 50 kilometers, or 35 nautical miles, north of Rabaul township, the main port of East New Britain Province. The other junior is Neptune Minerals Ltd., which is exploring deposits in territorial waters off the north coast of New Zealand's North Island.

In February, Nautilus reported a Canadian NI43-101 compliant resource estimate for Solwara I prepared by Golder Associates. Golder said Solwara I contains a substantial resource of massive base metal sulfides, gold and silver, and calculated an indicated massive sulfide resource, using a 4 percent copper cut-off, of 870 metric tons, with an average grade of 6.8 percent copper, 4.8 grams per metric ton gold, 23 g/t silver and 0.4 percent zinc. Golder also estimated a total inferred resource of 1,300 metric tons, averaging 7.5 percent copper, 7.2 g/t gold, 37 g/t silver and 0.8 percent zinc.

Subject to government permitting and approvals, Nautilus and its joint venture partner Placer Dome (now a part of by Barrick Gold Corp.), hopes to begin develop-



ment activities at Solwara 1 in 2009 and first concentrate sales in 2010 from an onshore processing facility.

Nautilus is also exploring other prospects in the area, notably Solwara 2-8, in which it holds 100 percent mining rights. However, the plucky junior is actually backed by some of mining's industry heavyweights, including three with substantial interests in Alaska projects - Anglo American plc, Teck Cominco Ltd. and Barrick. A major Russian miner, Epion Holding Ltd. also holds 22.4 percent of Nautilus' common shares.

Moreover, Teck Cominco, which owns the Red Dog and Pogo mines in Alaska, also owns warrants for the purchase of a bigger stake and an option to fund joint venture exploration with Nautilus on a number of its other Papua New Guinea holdings.

### Can undersea mining earn a profit?

**NORTH OF 60 MINING** 

The big question for all of these companies is whether undersea deposits of polymetallic sulphide like those in Solwara I will yield the economic potential that they promise. The sulfur-rich ore bodies are produced on the ocean floor around the world. They occur in underwater

#### see NAUTILUS page 10





No matter how large your workforce or how remote your location, we can design, manufacture, transport and install any size of camp for any type of project. Permanent or temporary, our modular facilities are designed with quality of life for your people in mind. We offer the comforts of home providing delicious, professionally prepared meals, housekeeping services and laundry. A one-stop turnkey solution for any size of operation. PTI. Performance. Timing. Integrity. Three reasons why we're one of North America's largest and most respected suppliers of integrated remote site services, and have been for over 30 years. We're proud to be working with the oil and gas industry, helping to turn your remote possibilities, into a reality.



3790 - 98 St. Edmonton, AB T6E 6B4 CANADA Tel: 1.780.463.8872 Fax: 1.780.462.6784 Toll Free: 1.800.314.2695 Email: ptigroup@ptigroup.com

For more information, please visit us online at www.ptigroup.com.

Turning remote possibilities, into reality.

### NORTH OF 60 MINING





Nautilus Minerals Inc. employed this sophisticated drillship to explore undersea mineral deposits off the coast of Papua New Guinea. The company announced the first-ever mineral resource estimate for an ocean floor prospect earlier this year.



Launch of Remote Operated Vehicle.





Remote Operated Vehicle (ROV) arm takes a sample from outcropping on the ocean floor. The U.S. research vessel RV Moana Wave first discovered submarine hydrothermal sulfide deposits and black smokers in the southern Pacific Ocean at the Solwara 2 prospect in 1985.



Workers apply precision drilling techniques to ocean floor mining exploration in the Bismarck Sea off the coast of Papua New Guinea.

continued from page 9 **NAUTILUS** 

volcanic regions and are formed when seawater seeps into the porous sea bottom, is heated and re-emerges through vents carrying dissolved minerals. When the hot water hits the cold sea floor water, the minerals precipitate, creating chimney-like towers called "black smokers." Over time, these towers collapse and accumulate to form ore deposits, some of which are rich in gold, silver, copper, lead and zinc. Scientists and mining engineers believe the potential for marine mining is vast, considering the earth's surface is 71 percent ocean, and likely to be economic with the right technology. Though deep-sea mining exploration began less than 25 years ago, they point to the success of offshore oil and gas exploration which provides one-third of the world's petroleum production some 50 years after explorers first moved offshore. Proponents also point to the success of marine diamond mining, a \$6 billion-ayear industry - dominated by mining giant De Beers - in Southern and Western Africa. Other marine mining ventures include offshore tin mining in Thailand and Indonesia in the 1950s and 1960s, gold mining in Alaska for a few years in the 1970s, numerous sand and gravel mining campaigns since World War II in various

countries, and a United States-led push to find and develop phosphorite (used in fertilizer and soft drinks) and manganese (used in steel), in the 1950s.

### A commitment to frontier mining

Teck Cominco spokesman Greg Waller told Mining News that his company invested in Nautilus Minerals because the major believes undersea mining, like other frontier mining ventures, has great promise and a great future. Other projects where Teck is pushing the envelope include hardrock mining at high altitudes (15,000 feet above sea level) in the Andes Mountains of South America and developing oil sands in Alberta. "If we can find a way to work economically on the ocean floor, and we think we can, then we think the people who have the sea beds where good mineral deposits are located tied up will do very well," Waller said.

NAUTILUS MINERALS INC

О

COURTESY



### **Personal Protection Equipment Environmental Safety** • Electrical Maintenance & Repair • Fire Protection

Helping protect your workers & facilities. Increasing productivity & profitability. Protecting the environment.

Ph: 907.522.5200 • Web: www.3M.com

One reason for this optimism is that undersea mining requires very little disturbance of the environment because deposits are already exposed on the ocean floor and little, if any, digging will be required.

Moreover, mineral vents like those in the South Pacific Ocean occur all over the world, including off the coast of British Columbia, he said.

"We suspect the potential is there for sub-sea mining in the Arctic," Waller said. "The trick is to find vents that are emitting these minerals." •

### We're awash in political skullduggery

Alaska's initiatives process perennially disappoints as democratic lawmaking; system should be stripped from state constitution

#### By J. P. TANGEN

For Mining News

t is axiomatic that democracy as a form of government doesn't work very well. If you doubt me, you

should consider watching the television program "Survivor" sometime. In that show, a group of people are marooned in a desert location (along with a couple of hundred medical support staff, television producers, and aircraft pilots) for 39 days to decide who among them should be given \$1,000,000.

One-by-one the players are voted out of the group until only two or three remain; then those who have been thrown off get to choose who of the remainder gets the prize.

Despite the contrived shenanigans, the underlying dynamic is that the group gets to make a decision and the TV-watchers of America get to cheer from the sidelines. Obviously, because the money does not go to the person watchers think deserves it, the democratic nature of the selection process is severely flawed.

We in Alaska are about to engage in our own version of Survivor, or perhaps it should better be called ballotbox roulette, because we will probably be called upon in August to vote on one or more initiatives relating to the future of the Pebble Copper deposit in southwest Alaska.

I have previously expressed my views on the content of the initiatives; therefore, I won't try to pile Pelion on Ossa. But I do invite readers to look, not at the substance of the proposals, but at the procedure by which we attempt to make law in this state.

Procedurally, an individual or group that cannot persuade the best Legislature money can buy to lay a proposed law before the governor can recruit college kids and other unemployables to stand at random locations to gather signatures.

Those endorsing the petition don't have to support it, or understand it, or even read it. Those soliciting the signatures don't have to be able to defend it or even tell the truth about it. In fact, the process distills to the number of signatures the solicitor can gather, irrespective of the means. Payday is based on the number of autographs or



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.

in off-elections such as primaries. If the PR campaign is good enough, many of the same folks who didn't know what they were signing when they walked into a local bookstore will remember to vote come the election.

With the pending initiatives, for

No matter how the current exercise is resolved, we now have good and sufficient reasons to ask the governor and Legislature to take a long hard look at whether the initiative process has any identifiable redeeming value.

**NORTH OF 60 MINING** 

instance, we have seen the signatures collected, frequently on false premises; the language of the proposed initiative challenged in the courts, not once but twice; and a cascade of mock Captain Kirks explain how the people of the state of Alaska should deal with an indolent Legislature and administration.

Anyone who believes this is a sound procedure for refining the Alaska social contract surely needs to give the process a second look.

The anti-Pebble proposals do not stand alone as the sole illustrations of bad law-making, but surely they have brought the system to a new depth of depravity. No matter how the current exercise is resolved, we now have good and sufficient reasons to ask the governor and Legislature to take a long hard look at whether the initiative process has any identifiable redeeming value.

Not for the substance of these initiatives, but because of the lack of need for this tool and the unending abuses it has engendered, I propose that the initiative process be stripped from the Alaska Constitution or outlawed. We simply don't need it and are unlikely to need it in any conceivable scenario.





I would like to introduce you to North of 60 Mining News, a monthly supplement to Anchorage-based Petroleum News. North of 60 Mining News covers the mining industry in the Arctic, focusing on Alaska and northern Canada. It is inserted in Petroleum News the fourth week of every month.

Mining News carries the latest news in the industry, as well as features on the most important projects and issues, such as new technology, environmental policy, aboriginal rights and mining legislation. It is the only newspaper that covers this far northern region in such depth, and our reporters frequently travel to see mining projects for themselves and to attend major mining conferences.

In addition to news and features, we publish regular columns by Fairbanks geologist Curt Freeman and Anchorage attorney J.P. Tangen, a specialist in mineral law. A subscription to the paper includes access to the online archive of thousands of mining and petroleum articles from past years.

pseudo autographs collected. An ambitious solicitor will have five or more different petitions to maximize his (or her) per-encounter take.

Given that the collection process is inarguably fraught with deception, the next stage requires the signatures to be filtered to ensure that the minimum requisite number of actual voters participated in the process.

Proponents of the initiatives then get to have their proposal certified by the lieutenant governor and have it placed on the ballot for a public vote.

Prudence dictates that for any initiative process to be successful, it must be accompanied by an extensive publicity campaign explaining why the Legislature and the administration are doing their jobs so poorly that the entire process has to be turned over to the 20 percent or 30 percent of the general population that bothers to vote The most recent addition to North of 60 Mining News is the weekly online newsletter, keeping you up to date on the most important news affecting the industry.

North of 60 Mining News is a newspaper that no company involved in this region's mining industry should be without. It's your paper, for your industry. We would like to hear from you!

If you have any questions about advertising, subscribing or if would like additional information please contact Shane at (907) 522-9469 or publisher@miningnewsnorth.com.

Shane Lasley

### Available now at the low price of \$58.00 per year. Order now!

12

### ALASKA

### Millrock widens Alaska exploration focus

Junior adds four substantial properties across state; inks new pact with Bering Straits Corp. and gears up for busy 2008 season

### **By SHANE LASLEY** Mining News

illrock Resources Inc. has added four significant Alaska gold properties to its portfolio in preparation for substantial exploration in 2008.

Millrock is currently working on its 2008 exploration budget, but early estimates are that the company will spend between \$3 million and \$4 million on its Alaska properties this year. The bulk of the budget will be applied to exploration at the Ketchem, Estelle and Divide properties, Millrock President Greg Beischer told Mining News April 22.

In late March the Vancouver, B.C.-based junior announced that it acquired the Ketchem gold property located about 190 kilometers or, 120 miles, north of Fairbanks. The company also entered an agreement with International Tower Hill Mines Ltd. on that company's Estelle highgrade gold property in Alaska's Rainy Pass district about 160 kilometers, or 100 miles, northwest of Anchorage.

The most recent addition to the Millrock portfolio is a 395-square-kilometer, or 153square-mile, land package on Alaska's Seward Peninsula east of Nome.

Millrock April 23 said it signed an exploration agreement with Golden Glacier Inc., a subsidiary of Alaska Native regional corporation Bering Straits Native Corp. on lands located along the southern shore of the Seward Peninsula. The company said the lands are "highly prospective for intru-



Though high-grade gold veins can be found throughout most of the 160 Alaska state mining claims, Millrock says it is targeting bulk tonnage intrusive-related gold deposits at Estelle.

sive-related and metamorphogenic, structurally controlled gold deposits."

There are three areas - Council, Bluff and Ungalik - in which Millrock is primarily interested.

The Council district has historically produced more than 1 million ounces of placer



gold, and is readily accessible by road from Nome. The Council property that is under the exploration agreement has known gold vein occurrences, but limited exploration has been conducted there since the late 1980s. Millrock said it will use geological, geophysical and geochemical methods to target sites that have the potential to host large stockwork vein systems.

The Bluff prospect is located about 24 kilometers, or 15 miles, east of the Big Hurrah deposit, which NovaGold is exploring for additional gold ore to process at its new Rock Creek Mine.

Millrock said the gold mineralization at Bluff occurs within an anticline and stretches over a distance of 6.4 kilometers.

During its exploration of the Bluff property in the late 1980s, BHP Billiton intersected 5.48 grams per metric ton of gold over 10.9 meters; 4.19 g/t gold over 4.5 meters; and 1.93 g/t gold over 16.3 meters. The downstream placer deposit has historically produced more than 100,000 ounces of gold.

The Ungalik land package is centered on the source rocks of a placer deposit that has

A

produced more than 300,000 ounces of gold. No lode exploration has occurred on this property since Bering Straits acquired the property 36 years ago.

Millrock said the property has the potential for large scale, intrusive hosted gold deposits.

Millrock has a five-year exploration agreement with Golden Glacier that calls for a total of \$4 million in spending by the junior. The expenditures include work commitments, cash payments and shares of Millrock stock. The company also agreed to grant preference to Bering Straits' subsidiaries and hiring preference to the corporation's shareholders. Bering Straits also has the option to become a 10 percent participating partner in any mine development related to the agreement. Millrock also has the option to lease the land at any time during the agreement.

"When Native land claims were settled in Alaska 36 years ago, BSNC wisely selected lands in the source areas of some of Alaska's largest and richest placer gold deposits," Beischer said.

see MILLROCK page 13



Tutka, LLC is a service-driven company specializing in environmental and technical monitoring systems and service for Alaska's resource development industries.



6250 Tuttle Place, Suite 5 Anchorage, Alaska 99507 [866] 822-8010 Toll-free [907] 272-8010 Anchorage [907] 452-7100 Fairbanks

tutkallc.com



Hidefield discovered two interesting prospects, Shoeshine and Train, during its 2006 and 2007 exploration seasons. Further drilling is required to determine if these prospects are two parts of the same mineralized trend.

### **NORTH OF 60 MINING**

13



continued from page 12

### MILLROCK

### Millrock takes first look at Circle Mining District

Millrock's newly acquired Ketchem gold property is located in Alaska's Circle Mining District, an area with a placer mining history that spans more than a century. The Circle district has produced more than 1 million ounces of gold but has seen limited exploration for its hard rock potential.

The 5,000-plus acre Ketchem gold property is subject to an option agreement with Spectrum Resources Inc. In its agreement with Spectrum, Millrock has the option to purchase a 100 percent interest in the property for \$1.5 million. To keep the option open, Millrock will expend \$3 million in exploration over four years, and make cash payment of \$200,000. Spectrum will receive 160,000 shares of Millrock's common shares during the term of the option. Spectrum also will retain a 2.5 percent royalty, but Millrock can reduce the royalty to 0.5 percent by paying Spectrum \$3 million. Significant widths of gold mineralization indicate potential for a bulk mineable target, and the prospect is virtually untested," Beischer observed.

Gold mineralization at the Silver Chalice prospect occurs in quartz - sulfide veinlets in altered sedimentary rocks. Grab samples have returned values up to 32.0 g/t gold.

Millrock said the property is a bulk mineable target with excellent logistics, and that it plans an aggressive exploration campaign on the property in 2008.

Two nearby communities have airstrips in the area. Arctic Circle Hot Springs is about 10 kilometers, or six miles, away, and Central is about 29 kilometers, or 18 miles, away. Fairbanks is about 225 kilometers, or 140 miles, to the southwest and can be reached via the state-maintained Steese Highway.

### Millrock adds Estelle to portfolio

The Estelle high-grade gold property is another recent addition to Millrock's portfolio. The company announced on April 9 that it had reached an agreement with International Tower Hill Mines Ltd. on the 25,000-plus-acre property.

Though high-grade gold veins can be found throughout most of the property's 160 Alaska state mining claims, Millrock said it is targeting bulk tonnage intrusiverelated gold deposits at Estelle. The highgrade gold veins at Shoeshine are associated with porphyritic intrusives rocks, quartz stockworks and hydrothermal breccias, which make it an excellent bulk-mineable target. The company interprets the vein systems as symptoms of a larger deposit.

Millrock's exploration plan for 2008 includes detailed mapping, soil sampling and drilling. The drill program will target the Shoeshine and Train prospects.

### Millrock benefits from ITH rationalization

International Tower Hill said that it remains encouraged by its findings at Estelle and that the agreement with Millrock will allow the company to benefit from Millrock's future success on the property.

BMP projects, and continue to explore its Bullfrog property in Nevada. Meanwhile, International Tower Hill will be looking to option out the remaining properties in its portfolio, the company said.

"International Tower Hill's portfolio rationalization has resulted in a great opportunity for Millrock. We plan to begin drilling the property in July," Beischer said.

### Mid-May drilling planned for Divide

Millrock also will join its 50-50 partner Alix Resources Corp. in a \$1.5 million exploration program at the 3,519-acre Divide gold property, located about 45 kilometers, or 28 miles, north of Nome, in 2008. The aggressive program, which is scheduled to begin in mid-May, will include mapping, 1,800 meters of core drilling, 3,600 meters of reverse circulation drilling, as well as trenching and sampling.

The partners had originally planned to complete a ground magnetic survey of the property, but found that records from past airborne magnetic surveys performed by the State of Alaska supplied sufficient data to identify prospective structures on the property, Beischer said.

### Silver Chalice and 88 prospects

The Ketchem property hosts several prospects, including 88 and Silver Chalice two prospects that stand out and will be a focus of early exploration, Millrock said. Previous surface exploration on the property identified three structurally controlled zones of gold-bearing quartz, and stockworks have been identified at the 88 Prospect. These zones range between three and 25 meters in width. One zone is reported to grade as high as 8.92 g/t gold over a width of 4.6 meters. Grab samples up to 36 g/t gold have been reported from the prospect.

Under terms of the agreement, Millrock will assume all of the obligations of International Tower Hill's subsidiary, Talon Gold, under a May 29, 2007 option agreement with Hidefield/Mines Trust on the Estelle property. This gives Millrock the opportunity to earn an 80 percent interest in the property. In exchange Millrock issued Talon Gold 650,000 common shares on April 21; the shares are on hold and cannot be traded until August 15. Talon Gold will retain a 1 percent net smelter return royalty on production from the property.

### Shoeshine and Train prospects

Hidefield discovered two interesting prospects, Shoeshine and Train, during its 2006 and 2007 exploration seasons at Estelle. Beischer said these prospects could be two parts of the same mineralized trend. Shoeshine averaged 5.29 g/t gold out of 58 samples and Train averaged 7.61 g/t gold out of 83 samples, he said.

International Tower Hill's decision to sell Estelle is part of the company's portfolio rationalization plan for 2008. This plan calls for the company to concentrate on its major resources expansion drill program at the Livengood project, carry out aggressive exploration programs on its Chisna and

The initial target for exploration this year

### see MILLROCK page 14

### The Innovative & Intelligent Choice for **Risk Capital Investors**

- Unique business model maximizes discovery opportunities, while reducing shareholder risk
- Ten active projects Over \$5 million in exploration projected for 2008





# COURTESY MILLROCK RESOURCES INC.

### ALASKA High-grade assays continue at Freegold's Golden Summit project

Vancouver, B.C.-based Freegold Ventures Ltd. April 24 posted results from drilling in Fence 6 North at its Golden Summit Project about 20 miles north of Fairbanks. The work is a continuation of a 40,000-foot phase 2 drill program with close-spaced shallow holes.

Freegold said Fence 6 North, the westernmost fence drilled on the property, intersected gold mineralization similar to that encountered in fences drilled to the east. The

assay results showed three-foot intervals of gold grading 14.4 grams per metric ton, 21.8 g/t, and 24.2 g/t. The most impressive intersect was in hole 757, where drillers encountered a sixfoot interval of 54.4 g/t gold, which includes a three-foot interval of 60.3 g/t gold.

The most impressive intersect was in hole 757, where drillers encountered a six-foot interval of 54.4 g/t gold, which includes a three-foot interval of 60.3 g/t gold.

Drill fences are a series of drill-holes

across a mineralized zone, designed to intersect and define the trend of mineralization.

The 46 holes drilled in Fence 6 North are a 2,300-foot step-out to the west of Fence 5, which was the limit of the previously identified package of multiple, parallel-vein swarms and shear zones tested in the Cleary Hill area last fall. Fence 6 North runs about 850 feet in a north-south direction. The average spacing of the holes is 20 feet and has been reduced to 10 feet in areas of extreme alteration, which has been indicative of higher-grade gold mineralization, Freegold said.

Fence 6 North drilling has now extended this broad area of gold mineralization in the Cleary Hill area to more than 5,000 feet in length, and mineralization continues to remain open along strike in both directions and at depth. Average assay results from all 1,154 three-foot intervals over the 850-foot width of holes in Fence 6 North is 0.52 g/t gold, which compares favorably with the current, reported reserve grade of the nearby Fort Knox mine of 0.53 g/t gold.

Fences 17 North and 20 have been drilled in the 2,300-foot gap between Fence 5 and Fence 6 North and Freegold said assay results are pending. The company said it has completed 26 holes of a deeper core drilling program at Golden Summit. Three of the deeper holes drilled are in the Fence 6 North area. The remaining 23 holes were drilled in the Fence 1 and Beistline areas.

"Through our combination of trenching, shallow and deep drilling, and bulk sampling, we are starting to develop an excellent understanding of the gold mineralization in this broad area, and are very encouraged at the successful results and the continuity that our step-out work continues to demonstrate," Freegold President and CEO Steve Manz, said in a statement.

— SHANE LASLEY



CARPENTERS CARPENTERS CARPENTERS LOCAL 1243 LOCAL 1281 LOCAL 2247 ALASKA ALASKA MILLWRIGHTS & PILEDRIVERS MACHINE ERECTORS & DIVERS LOCAL 1501 LOCAL 2520

#### WWW.UBCALASKA.ORG



Geologists grab rock samples at the Estelle property that Millrock recently acquired from International Tower Hill.

continued from page 13 **MILLROCK** 

will be the Stoneman prospect. At this location, visible gold is observed at surface in talus and weathered, broken bedrock. Further along strike, previous trench sampling returned values of 16.21 g/t gold over 16.76 meters. However, drill holes immediately undercutting the trench did not provide results of similar magnitude.

To resolve the discrepancy and to expose the mineralization for thorough observation and evaluation, Millrock will excavate a large trench or open cut. The partners will follow up with a close-spaced RC drill program to determine if a high-grade chute is present in the vein system.

"The Divide Project offers an excellent opportunity to develop a high-grade, nearsurface gold resource, said Philip St. George, Millrock's vice president of exploration.

### Three claim blocks in Fortymile District

drilling late in the season. During its earlier limited exploration, Millrock geologists uncovered a gold and arsenic stream sediment anomaly and that area also will be targeted for grid sampling this year.

### Millrock will not pursue Inmachuk

Millrock announced on March 28 that after reviewing the assay results from 644 meters of drilling during 2007 exploration at the Inmachuk property, it has decided not to renew its joint venture agreement with Full Metal Minerals on the property.

Immachuk lies about 120 kilometers, or 75 miles, south of Kotzebue.

According to Full Metal, the 10,700acre property also hosts an early stage lode gold target, which has been outlined by a 1.8-kilometer-, or 1.5-mile-, long goldarsenic-antimony soil anomaly that is associated with placer gold producing tributaries in addition to carbonate-replacement style silver-zinc-lead mineralization.

Millrock's exploration concentrated on zinc-lead-silver targets. "Based on the results to date, it would appear that there is relatively low potential for discovery of a base metal deposit that would have sufficient grade and tonnage to warrant mine development," the junior said in a statement.



 Environmental Assessment and NEPA Permitting

REGIONAL COUN

**OF CARPENTER** 

- Natural Gas Pipeline
   Permitting
- Worldwide Technology-Based Pipe Fabrication Facilities
- Environmental Data Quality Management Services
- Contaminated Sites
   Closure—Innovative,
   Technical Solutions
- Homeland Security
- Engineering, Design, and Construction Services
- Natural Gas Pipelines and LNG Facilities
- Hydroelectric and Fossil Fuel Power Plants
- Refining and Petrochemical Facilities

#### www.shawgrp.com

2000 W. INTERNATIONAL • AIRPORT RD. SUITE C-1 • ANCHORAGE, AK 99502 PHONE: 907.243.6300 • FAX: 907.243.6301 Millrock also acquired mineral rights to nearly 20,000 acres in the Fortymile Mining District about 100 kilometers, or 60 miles, north of Tok.

The Fortymile gold properties are divided into three claim blocks: The 11,200-acre Steele Dome property, the 7,360-acre Chicken property, and the 1,120-acre Napoleon property. All three blocks are composed of state mining claims.

Millrock, which announced the acquisition of the claims in February 2008, has only completed limited reconnaissance stream sediment and rock sampling on the road accessible portions of the claims so far. Of rocks the geologists picked up, one quartz monzonite sample contained 3.54 g/t gold and 14 g/t silver, and a quartz vein sample revealed 2.04 g/t gold and 232 g/t silver.

During the 2008 exploration season, the company plans to carry out an extensive biogeochemical survey; mapping, and trenching where it is feasible; and depending on the results, the junior may begin

### Pipeline projects target of future drilling

Millrock said it also will complete reconnaissance work at its Iliamna porphyry copper-gold property located about 50 kilometers, or 31 miles, northeast of the huge Pebble deposit.

The junior said Iliamna, Fortymile, and the Bering Straits properties are all considered 2008 pipeline projects. While the bulk of its drilling will take place at Estelle, Ketchem and Divide; the exploration conducted this year on the three pipeline projects will determine whether they will warrant expanded exploration in the latter part of 2008 and/or 2009, Millrock added. ●

### • **ALASKA**

### Zazu Metals explores Red Dog's neighbor

Vancouver junior takes advantage of extensive historic testing in working toward feasibility at Lik property in Northwest Alaska

### **By SHANE LASLEY**

Mining News

fter purchasing a 50 percent interest in the Lik in Northwest Alaska last year, Zazu Metals Corp. has begun to explore the zinc-lead-silver-rich property. In 2007, the Vancouver, B.C.-based junior drilled 1,400 meters in 11 holes with the intention of confirming 26,200 meters of historic drilling completed on the property.

Lik is located about 22 kilometers, or 14 miles, northeast of the Red Dog Mine, the world's largest zinc mine. Teck Cominco Ltd., operator of the Red Dog Mine, holds the remaining 50 percent interest in the Lik property.

The 296 claims that make up the Lik property were originally staked as federal mining claims. The State of Alaska later selected the property and as a result State of Alaska mining claims were also staked over the entire claim block. As long as the JV partners maintain federal claims on the property the federal government holds surface right ownership while the state owns the mineral rights. Surface right ownership would transfer to the state if the partners choose to relinquish the federal claims.

Testing performed by previous owners of the property indicates that the Lik deposit is divided into two areas by an east-west running fault.

Lik South, according to historic records, is about 600 meters wide and about 1,100 meters long, shallow and considered suitable for open-pit mining. The deposit continues south beyond the Lik property about 800 meters onto the Su property held by Teck Cominco.

At the point the Lik deposit continues onto the Su property, the deposit is known as the Su deposit. Teck Cominco has never released a resource estimate for the Su deposit, but a 1998 article that discussed the company's acquisition of 50 percent of the



Lik property indicated that the Su deposit contained 17 metric tons of ore grading 10 percent combined zinc and lead.

Historic testing revealed Lik North to be a relatively deep deposit that is about 700 meters long and 350 meters wide.

#### Extensive historic exploration at Lik

Rick Fredericksen, who currently works for the Department of Natural Resources, told Mining News that the discovery of the Lik deposit was made on the heels of the discovery of the now famous Red Dog



Creek deposit. Fredericksen was a geologist for WGM Inc. and a member of the team that explored the Lik deposit in the late 1970s. The Lik property was staked in 1976

when GCO, along with joint venture partners New Jersey Zinc Co. and WGM, discovered a stream geochemical anomaly at

see LIK page 16

### 63 Years New Coal - the energy of the future





### YUKON TERRITORY

### Yukon budgets funds to support mining

Incentives program, secretariat to receive C\$1 million-plus to spur prospecting, balance fisheries conservation with placer needs

### By ROSE RAGSDALE

For Mining News

he Yukon Government has earmarked more than \$1 million in its fiscal 2008-2009 budget for programs aimed at supporting both hardrock and placer mining in the territory.

The government budgeted \$700,000 for the Yukon Mining Incentives Program, subject to legislative approval. The program is designed to promote and enhance mineral prospecting, exploration and development activities in Yukon by providing a portion of the risk capital required to locate and explore mineral deposits.

"We are proud to support the independent prospectors who take on the risk-intensive work of exploring for new mineral deposits," said Energy, Mines and Resources Minister Archie Lang in announcing the funding. "Their hard work attracts investors and creates mineral resource development opportunities that benefit all Yukoners."

The Yukon government also will provide \$329,000 for the operations of the Yukon Placer Secretariat during fiscal 2008-09, subject to legislative approval. The secretariat was established in 2005 by the Yukon government, Fisheries and Oceans Canada and the Council of Yukon First Nations to finalize and implement a new Yukon placer regime.

"The funding for the coming year will allow the secretariat to continue its important work," Lang said in a statement March 18. "The end result will be a made-in-Yukon solution that will support a sustainable placer mining industry in the territory, and conserve and protect fish and fish habitat."

### Mining incentives support exploration

In 2007, 45 successful applicants received \$719,850 under the Yukon Mining Incentives Program. Ten option deals were signed on projects advanced with the assistance of the funding, and a number of new discoveries funded by the incentives program in 2007 are generating significant interest from junior companies.

"The Yukon Mining Incentives Program really is the backbone of grassroots exploration in Yukon," said Shawn Ryan, a spokesman for Ryanwood Exploration. "Without grassroots exploration, new mining projects aren't possible. We are happy to see the continued support of this necessary program."

Mineral exploration spending in the Yukon in 2007 reached an estimated \$140 million, up from \$8 million in 2000. Projects previously discovered or advanced with the assistance of YMIP accounted for \$6.4 million of exploration work in 2007.

The Yukon Mining Incentives Program is administered by the Yukon Geological Survey.

The secretariat was established to coordinate the completion and implementation of a proposed new regime for the management of placer mining in Yukon under Canada's Fisheries Act.

The regime is designed to balance the objectives of conservation of fish and fish habitat supporting fisheries and a sustainable placer mining industry in the Yukon.

The secretariat is currently revising regime components. They are expected to be complete and published in final form within the next month, so that the regime may be implemented for the 2008 mining season. A consultation report also will be published in the coming weeks, Lang said. The final phase of the process will then begin, during which the secretariat will hold meetings to report back to communities on the comments received and changes to the regime.

"The placer mining industry is an important sector in the economy of both the Klondike riding and Yukon as a whole," said Steve Nordick, a Klondike lawmaker. "Many of my constituents have participated in the secretariat's consultation process and were appreciative of the opportunity to make comments on how the industry will be managed."

After the regime is finalized, the secretariat will guide ongoing implementation efforts and facilitate the participation of stakeholders, First Nations and other interested parties in decision-making related to the regime. It also will coordinate monitoring programs and ensure the adaptive management process operates effectively, the government said.

### continued from page 15

### LIK

Lik Creek.

The JV partners, with New Jersey Zinc's interest replaced by Houston Oil and Minerals Exploration Co., began drilling the prospect in 1977. Targeting an electromagnetic anomaly, the first hole drilled at Lik intersected massive zinc-lead-silver sulfides. In 1979 the companies prepared a resource estimate based on 17,214 meters of drilling completed over the previous three years.

Additional drilling on the prospect was limited until Noranda Exploration Inc. took interest in the Lik property in 1984. The majority of the drilling performed by Noranda was concentrated in the Lik North area where the company drilled 4,180 meters in 10 holes. Noranda also drilled Lik South to help define "mineable high grade reserves," but dropped its interest in Lik as a Zazu is currently in the process of updating its database using results of its 2007 drilling and historic data available on the Lik property. This effort will include digitizing drill logs and other historic records as well as comparing its own drill results with historic drill logs and cores.

result of reorganizing its U.S. holdings.

### Earlier exploration led to resource estimates

In 1984 GCO prepared a resource estimate for the LIK South deposit based on about 100 drill holes. GCO, using a 5 percent cutoff of combined zinc and lead, estimated that Lik South contained 22.04 million metric tons of ore averaging 8.88 percent zinc, 3.08 percent lead and 49 grams per metric ton silver.

The following year Noranda completed its own estimate for Lik South. Using a 7 percent cutoff, Noranda estimated that the deposit contains 10.85 million metric tons of ore averaging 10.51 percent zinc and 3.42 percent lead. Silver was not included in this estimate.

Using the same cutoffs, Noranda estimated that Lik North contained an additional 4.73 metric tons of ore averaging 10.59 percent zinc, 3.5 percent lead and 53 g/t silver.

Several resource estimates have been prepared for the property but the 1984 GCO estimate and 1985 Noranda estimate are considered to be the most reliable.

Though Zazu considers these estimates historical, they believe that these estimates give a good representation of the size of the two portions of the deposit as delineated by the drill density.

Since Noranda's activity in 1985, explo-



ration on the property has been limited to three holes drilled in 1990 and two more in 1992 until Zazu began its 2007 drill program.

The previous explorers of the property left behind a 1,300-meter airstrip and an historic camp at the 5,500-acre Lik property. A core shack at the Lik camp holds all of the cores from 26,000 meters historic drilling on the property with the exception of the first ten holes which are stored in Anchorage.

#### Zazu advances towards feasibility

Zazu is currently in the process of updating its database using results of its 2007 drilling and historic data available on the Lik property. This effort will include digitizing drill logs and other historic records as well as comparing its own drill results with historic drill logs and cores.

According to an August 2007 prospectus on the property, the company proposes a 20,000-meter phase-2 drill program at Lik. The company also intends to spend \$60,000 on additional geophysical studies, \$65,000 on environmental studies, and \$600,000 on feasibility studies at Lik.

The prospectus suggested that ore concentrates from the property could potentially be moved along the 84-kilometer, or 52mile, De Long Mountain Transportation System from the Red Dog Mine to the port used by Teck Cominco to transport Red Dog's concentrates. Both the road and port are owned by the Alaska Industrial Development and Export Authority. Zazu also said it plans to complete up to 10,000 meters of additional diamond drilling and complete geophysical surveys and intensive environmental studies that it began in 2007. The 296 claims that make up the Lik property were originally staked as federal mining claims. The State of Alaska later selected the property and as a result State of Alaska mining claims were also staked over the entire claim block. As long as the JV partners maintain federal claims on the property, the federal government holds surface right ownership while the state owns the mineral rights. Surface right ownership would transfer to the state if the partners choose to relinquish the federal claims.

# Companies involved in Alaska and northwestern Canada's mining industry NEWS DIRECTORY



### **Mining Companies**

#### Fairbanks Gold Mining/Fort Knox Gold Mine Fairbanks, AK 99707

Contact: Lorna Shaw, community affairs director Phone: (907) 488-4653 • Fax: (907) 490-2250 Email: Ishaw@kinross.com • Web site: www.kinross.com Located 25 miles northeast of Fairbanks, Fort Knox is Alaska's largest operating gold mine, producing 340,000 ounces of gold in 2004.

#### Niblack Mining Corp.

Suite 615-800 W. Pender St. Vancouver, BC V6C 2V6 Contact person: Paddy Nicol Phone: (604) 682-0301 ext. 106 Fax: (604) 682-0307 E-mail: pnicol@niblackmining.com Website: www.niblackmining.com

#### NovaGold Resources Inc.

2300 – 200 Granville Street Vancouver, BC V6C 1S4 Contact person: Ariadna Peretz Phone: 1 (866) 669-6227 Fax: (604) 669-6272 E-mail: ariadna.peretz@novagold.net Other office: Alaska Gold Company P.O. Box 640 115 6th Avenue West Nome, AK 99762-0640 Website: www.novagold.net NovaGold Resources Inc. is a gold and copper company engaged in the exploration and development of mineral properties in Alaska and Western Canada. Email: info@usibelli.com • Web site: www.usibelli.com Other Office P. O. Box 1000 • Healy, AK 99743

Phone: (907) 683-2226 Usibelli Coal Mine is headquartered in Healy, Alaska and has 200 million tons of proven coal reserves. Usibelli produced one million tons of sub-bituminous coal this year.

#### Service, Supply & Equipment

#### 3M Alaska

11151 Calaska Circle Anchorage, AK 99515 Contact: Paul Sander, manager Phone: (907) 522-5200 Fax: (907) 522-1645 Email: innovation.3malaska@mmm.com Website: www.3m.com Serving Alaska for over 34 years, 3M Alaska offers total solutions from the wellhead to the retail pump with a broad range of products and services – designed to improve safety, productivity and profitability.

Aeromed International

Systems. Steel framed, fully engineered, LDPE fabric covered, portable buildings in 18 to 270 foot widths and any length.

#### **Alaska Earth Sciences**

Anchorage, AK 99515 Contact: Bill Ellis and Rob Retherford, owners Phone: (907) 522-4664 • Fax: (907) 349-3557 E-mail: wte@aes.alaska.com A full service exploration group that applies earth sciences for the mining and petroleum industries providing prospect generation, evaluation and valuation, exploration concepts, project management, geographic information systems and data management. We also provide camp support and logistics, geologic, geochemical and geophysical surveys.

#### **Alaska Frontier Constructors**

P.O. Box 224889 Anchorage, AK 99522-4889 Contact: John Ellsworth, President Phone: (907) 562-5303 Fax: (907) 562-5309 Email: afcinfo@ak.net Alaskan heavy civil construction company specializing in Arctic and remote site development with the experi-

### **Rimfire Minerals Corp.**

Vancover, BC V6C 1G8 Canada Contact: Ahnna Pildysh, Mkt. Coordinator Phone: (604) 669-6660 Fax: (604) 669-0898 Email: ahnnap@rimfire.bc.ca • Web site: www.rimfire.bc.ca Gold and silver projects in Alaska, Yukon, BC and Nevada. Preferred partner of senior mining firms. Partnered with the world's three largest gold producers.

#### **Usibelli Coal Mine**

Fairbanks, AK 99701 Contact: Bill Brophy, vp cust. relations Phone: (907) 452-2625 • Fax: (907) 451-6543 Anchorage, AK 99503 Contact: Brooks Wall, director Phone: (907) 677-7501 • Fax: (907) 677-7502 Email: brooks\_wall@ykhc.org • Web site: www.ykhc.org Aeromed International is an all jet critical care air ambulance fleet based in Anchorage. Medical crews are certified Flight Nurses and certified Flight Paramedics.

#### **Air Liquide**

Anchorage, AK 99518 Contact: Brian Benson Phone: (907) 273-9762 • Fax: (907) 561-8364 Email: brian.benson@airliquide.com Air Liquide sells, rents, and is the warranty station for Lincoln, Miller, Milwaukee, Victor and most other welding equipment and tool manufacturers.

#### Alaska Cover-All

6740 Jollipan Crt. Anchorage, AK 99507 Contact: Paul Nelson, mgr. Phone: (907) 346-1319 • Fax: (907) 346-4400 E-mail: paul@alaskacoverall.com Contact: Scott Coon Phone: (907) 646-1219 • Fax: (907) 646-1253 Email: scott@alaskacoverall.com National Call Center: 1-800-268-3768 We are the Alaska dealers for Cover-All Building ence, equipment and personnel to safely and efficiently complete your project.

#### **Alaska Regional Council of Carpenters**

410 Denali St, #100 Anchorage, AK 99501 Contact: Kathleen Bugbee, business development Phone: (907) 274-2722 Fax: (907) 274-2727 Email: kathy1281@alaska.net Website: www.ubcalaska.org Training and representing skilled labor for quality contractors.

#### Alaska Steel Co.

1200 W. Dowling Anchorage, AK 99518 Contact: Joe Lombardo, vice president Phone: (907) 561-1188 • Toll free: (800) 770-0969 (AK only) Fax: (907) 561-2935 Email: j.lombardo@alaskasteel.com Fairbanks Office: 2800 South Cushman Contact: Dan Socha, branch mgr. Phone: (907) 456-2719 • Fax: (907) 451-0449

see next page

### NORTH OF 60 MINING

Kenai Office: 205 Trading Bay Rd. Contact: Will Bolz, branch mgr. Phone: (907) 283-3880 • Fax: (907) 283-3759 Full-line steel and aluminum distributor. Complete processing capabilities, statewide service. Specializing in low temperature steel and wear plate.

#### **Arctic Foundations**

Anchorage, AK 99518-1667 Contact: Ed Yarmak Phone: (907) 562-2741 • Fax: (907) 562-0153 Email: info@arcticfoundations.com Website: www.arcticfoundations.com Soil stabilization – frozen barrier and frozen core dams to control hazardous waste and water movement. Foundations – maintain permafrost for durable high capacity foundations.

#### **Austin Powder Company**

P.O. Box 8236 Ketchikan, AK 99901 Contact: Tony Barajas, alaska manager Phone: (907) 225-8236 Fax: (907) 225-8237 E-mail: tony.barajas@austinpowder.com Web site: www.austinpowder.com In business since 1833, Austin Powder provides statewide prepackaged and onsite manufactured explosives and drilling supplies with a commitment to safety and unmatched customer service.

### Calista Corp.

301 Calista Court Suite A Anchorage, AK 99518 Phone: (907) 279-5516 Fax: (907) 272-5060 Web site: www.calistacorp.com

#### CH2M HILL

949 E. 36th Ave., Ste. 500 Anchorage, AK 99508 Contact: Emily Cross Phone: (907) 762-1510 • Fax: (907) 762-1001 Email: emily.cross@ch2m.com • Web site: www.ch2m.com *CH2M HILL is a multi-national corporation that provides* services, project management, engineering, procurement, construction, operations and maintenance – to the energy, resource and process industries and the public sector.

#### **Construction Machinery**

5400 Homer Dr. Anchorage, AK 99518 Contact: Ron Allen, Sales Manager Phone: (907) 563-3822 • Fax: (907) 563-1381 Email: r.allen@cmiak.com • Web site: www.cmiak.com Other Offices: Fairbanks office Phone: 907-455-9600 • Fax: 907-455-9700 Juneau office Phone: 907-780-4030 • Fax: 907-780-4800 Ketchican office Phone: 907-247-2228 • Fax: 907-780-4800 Ketchican office Phone: 907-247-2228 • Fax: 907-247-2228 Wasilla Office Phone: 907-376-7991 • Fax: 907-376-7971

#### Equipment Source, Inc.

1919 Van Horn Fairbanks, AK 99701 Contact: Jennifer Wormath, marketing and sales Phone: (907) 458-9049 Fax: (907) 458-7180 E-mail: jennifer@equipmentsourceinc.com Web site: www.equipmentsourceinc.com Alaskan distributor for Kubota Engine, Kubota Generators, Carlin Burners, Engineered Performance Ducting, ABC Mine and Tunnel Ventilation. Manufacturer of portable heaters, EnviroVacs,

### **Advertiser Index**

3M Alaska10 Aeromed International
Air Liquide
Alaska Cover-All
Alaska Diesel Electric
Alaska Dreams
Alaska Earth Sciences
Alaska Frontier Constructors
Alaska Interstate Construction (AIC)
Alaska Regional Council of Carpenters 14
Alaska Steel Co.
Arctic Foundations
Aurora Geosciences
Austin Powder Co
Bombay Deluxe Restaurant
Calista Corp
CH2M HILL
Construction Machinery 24
Equipment Source Inc.
Fairbanks Gold Mining/Fort Knox Gold Mine5
Foundex
GPS Environmental 22
Jackovich Industrial & Construction Supply 10
Judy Patrick Photography8
Lynden
MRO Sales
Nature Conservancy, The
Northern Air Cargo
Northern Transportation Co.
NovaGold Resources
Pacific Rim Geological Consulting 14
Panalpina
PTI Group
Rimfire Minerals 13
Salt+Lite Creative
Shaw Alaska14
Taiga Ventures         20
Teck Cominco
Tutka Solutions
Usibelli Coal Mine 15
U.S. Bearings & Drives

facturer water treatment, wastewater treatment, mining equipment and modular camps.

#### Jackovich Industrial & Construction Supply Fairbanks, AK 99707

Contact: Buz Jackovich Phone: (907) 456-4414 • Fax: (907) 452-4846 Anchorage office Phone: (907) 277-1406 • Fax: (907) 258-1700 24- hour emergency service. With 30 years of experience, we're experts on arctic conditions and extreme weather.

#### **Judy Patrick Photography**

Anchorage, AK 99501 Contact: Judy Patrick Phone: (907) 258-4704 • Fax: (907) 258-4706 Email: jpphoto@mtaonline.net Website: JudyPatrickPhotography.com *Creative images for the resource development industry.* 

#### Lynden

Alaska Marine Lines • Alaska Railbelt Marine Alaska West Express • Lynden Air Cargo Lynden Air Freight • Lynden International Lynden Logistics • Lynden Transport Anchorage, AK 99502 Contact: Jeanine St. John Phone: (907) 245-1544 • Fax: (907) 245-1744 Email: custsvc@lynden.com The combined scope of the Lynden companies includes truckload and less-than-truckload highway connections, scheduled barges, intermodal bulk chemical hauls, scheduled and chartered air freighters, domestic and international air forwarding and international sea forwarding services.

#### Northern Transportation Co.

Alaska: 3015 Madison Way Anchorage, AK 99508 Contact: Laurie Gray, agent Phone: (907) 279-3131 Cell: (907) 229-0656 Phone: (800) 999-0541 E-mail: lag@alaska.net Canada: 42003 McKenzie Hwy. Hay River, NWT X0E0R9 Contact: John Marshall Phone: (867) 874-5167 Cell: (867) 875-7600 Fax: (867) 874-5179 E-mail: jmarshall@ntcl.com Contact: Sunny Munroe Phone: (867) 874-5134 Cell: (867) 444-2441; (403) 829-9707 E-mail: smunroe@ntcl.com Web site: www.ntcl.com NTCL, Canada's largest and oldest northern marine transportation company, ships dry cargo and fuel to communities and resource exploration projects along the Mackenzie River, the Beaufort Sea coast and Alaska's North Slope.

### **Pacific Rim Geological Consulting**

Fairbanks, AK 99708 Contact: Thomas Bundtzen, president Phone: (907) 458-8951 • Fax: (907) 458-8511 Email: bundtzen@mosquitonet.com Geologic mapping, metallic minerals exploration and industrial minerals analysis or assessment.

#### Panalpina

4305 Old International Airport Rd., Suite A Anchorage, AK 99502 Contact: John Hodel, business unit manager Phone: (907) 245-8008 Fax: (907) 245-8018 E-mail: john.hodel@panalpina.com International and domestic freight forwarding and logistics services. Integrated solutions for supply chain management. Specialists in oilfield and mining projects.

#### **PTI Group**

Edmonton, AB, Canada T6N 1C8 Phone: (800) 314-2695 • Fax: (780) 463-1015 Email: ptigroup@ptigroup.com Website: www.ptigroup.com PTI Group Inc. is the premium supplier of integrated remote site services. Offering full turnkey packages or individual services such as construction, catering and wastewater treatment, PTI delivers above and beyond client expectations.

#### Shaw Alaska

2000 W. International Airport Rd, C-1 Anchorage, AK 99502 Contact: Jane Whitsett, office director E-mail: jane.whitsett@shawgrp.com Phone: 907-243-6300 Fax: 907-243-6301 Website: www.shawgrp.com Shaw Alaska is a subsidiary of The Shaw Group, one of the World's largest providers of engineering, design, construction, environmental, infrastructure, fabrication and manufacturing services.

#### **Taiga Ventures**

2700 S. Cushman Fairbanks, AK 99701 Mike Tolbert - president Phone: 907-452-6631 Fax: 907-451-8632 Other offices: Airport Business Park 2000 W. International Airport Rd, #D-2 Anchorage, AK 99502 Phone: 907-245-3123 Email: mike@taigaventures.com Web site: www.taigaventures.com Remote site logistics firm specializing in turnkey portable shelter camps – all seasons.

Emergency-Showers, Light Towers.

#### **Foundex Pacific**

2261 Cinnabar Loop Anchorage, AK 99507 Contact: Howard Grey, manager Phone: (907) 522-8263 • Fax: (907) 522-8262 E-mail: hgrey@foundex.com • Website: www.foundex.com Other offices: Surrey, BC Canada Contact: Dave Ward Phone: 604-594-8333 Email: dward@foundex.com Drilling services relating to exploration, geotechnical investigations and wells.

#### **GPS Environmental**

Industrial Water/Wastewater & Mining Equipment 7750 King St. Anchorage, AK 99518 Contact: Paul Schuitt Phone: (907) 245-6606 • Cell: (907) 227-6605 Fax: (928) 222-9204 Email: paul@gpsenvironmental.com Web site: www.pgsenvironmental.com *GPS Environmental, LLC is a manufacturer's representative company representing companies that manu*-

#### **MRO Sales**

Anchorage, AK 99518 Contact: Don Powell Phone: (907) 248-8808 • Fax: (907) 248-8878 Email: Sales1@mrosalesinc.com Website: www.mrosalesinc.com MRO Sales offers products and services that can help solve the time problem on hard to find items.

### **Northern Air Cargo**

3900 W. International Airport Rd. Anchorage, AK 99502 Contact: Mark Liland, acct. mgr. Anch./Prudhoe Bay Phone: (907) 249-5149 • Fax: (907) 249-5194 Email: mliland@nac.aero • Website: www.nac.aero Serving the aviation needs of rural Alaska for almost 50 years, NAC is the states largest all cargo carrier moving nearly 100 million pounds of cargo on scheduled flights to 17 of Alaska's busiest airports. NAC's fleet of DC-6, B-727, and ATR-42 aircraft are available for charters to remote sites and flag stops to 44 additional communities.

#### **Teck Cominco**

3105 Lakeshore Drive Building A, Suite 101 Anchorage, AK 99517 Contact: James Kulas Phone: 907-426-9129 Fax: 907-426-2108 Email: jim.kulas@teckcominco.com Website: www.teckcominco.com Teck Cominco is a diversified mining company that has been investing in Alaska for over 30 years. Teck Cominco manages both Red Dog and Pogo Mines.

#### **U.S. Bearings & Drives**

Anchorage, AK 99518 Contact: Dena Kelley, branch mgr. Phone: (907) 563-3000 • Fax: (907) 563-1003 Email: dkelley@bearings.com • Web site: www.bearings.com

U.S. Bearings & Drives has been providing solutions to it customers for over 25 years. We offer quality components, name brands and highly trained personnel.

### YUKON TERRITORY

### **Chinese flock to mineral-rich region**

Investments in Yukon mining companies by Asian enterprises escalate with help of territory's economic development officials

### **By ROSE RAGSDALE**

For Mining News

hinese investors are gradually building inroads into ownership of mining companies operating in Yukon Territory as part of a worldwide push to acquire reliable sources of precious and base minerals.

According to a report released by PricewaterhouseCoopers in March, mining merger and acquisition activity in 2008 is set to top 2007's record \$158.9 billion total as the number and size of deals escalate.

The report also noted the emergence of Chinese and Russian companies as major players in the acquisition hunt. Companies from these two countries accounted for US\$32.7 billion in deals last year.

PricewaterhouseCoopers said factors such as a slowing U.S. economy, financial market uncertainties and recessionary fears are taking a near-term toll on the mining market, creating "a bumpier dealmaking ride" for mergers and acquisitions, but sustained Asian commodity demand along with the entrance of new players (including major state-owned entities) into the takeover hunt may counter this and further drive the industry consolidation trend.

The trend is apparent in Yukon Territory, but it is also being actively encouraged and supported by the Yukon government.

### **Bold grab for Wolverine**

Griffin Mining Ltd., a Bermuda-based mining and investment company with substantial mining interests in China, is the latest to make a grab for rich Yukon mineral deposits.

Griffin and Yukon Zinc Corp. jointly unveiled a plan April 21 in which Griffin will acquire Yukon Zinc's exceptionally silver-rich Wolverine project in southeastern Yukon along with additional claims in the Finlayson Mining District.

Griffin, through its two Chinese joint ventures has a controlling interest in mining and exploration licenses over 67 square kilometers at Caijiaying in the Hebei Province in China. Within this area Griffin has successfully commissioned the Caijiaying mine and processing facilities, which currently processes some 500,000 metric tons of ore annually to produce a zinc concentrate and a separate lead concentrate containing gold and silver for sale in China. Griffin owns a 60 percent interest in the Caijiaying mine but is entitled to 100 percent of the net cash flow from the operation for the first three years since production began in July 2005.

### project to production.

"The transaction with Griffin will result in the development of the Wolverine deposit, which is projected to become a very low-cost producer," said Harlan Meade, president and CEO of Yukon Zinc. "Yukon Zinc's properties and exploration expertise will complement the development and financial strengths of Griffin and provide an attractive growth outlook for Yukon Zinc and Griffin shareholders."

Griffin Chairman Mladen Ninkov said the transaction "fulfills the stringent economic and geological and political criteria the company has imposed upon itself. Yukon Zinc will add a high grade, profitable mine to Griffin's portfolio and add extensive exploration acreage in one of the most exciting base metals regions in the world. The returns for existing Griffin shareholders and our new Griffin shareholders through Yukon Zinc will be very exciting."

### Hunan invests in tungsten

Hunan Nonferrous Metals Corp. is also among companies from the Peoples Republic of China that have bought up sizable chunks of ownership in Canadian companies that control significant Yukon mineral properties. Hunan signed an agreement in March to acquire nearly 10 percent of Vancouver, B.C.-based North American Tungsten Corp. Ltd., which operates the Cantung mine in eastern Yukon.

N.A. Tungsten also owns the rights to the Mactung property, widely regarded as one of the world's largest undeveloped high-grade tungsten skarn deposits. Mactung is located near Cantung and MacMillan Pass on the Yukon-Northwest Territories border.

Hunan will buy about 13.4 million shares and warrant units of N.A. Tungsten in a deal valued at roughly \$19.4 million financing and gain a 9.9 per cent equity stake in the Canadian company. The Chinese company also plans to help N.A. Tungsten develop the Mactung project.

N.A. Tungsten CEO Stephen Leahy said the investment by Hunan, a world leader in tungsten mining and processing with market capitalization of about \$1.8 billion, validates the strategic nature and value of its Mactung tungsten development project.

North American Tungsten officials have said that the Cantung and Mactung deposits combined may hold roughly 15 percent of the world's known tungsten supply.



NORTH OF 60 MINING

to woo Chinese investment to the territory's mining projects.

# We've got the coal world in our hands.

Do you want your company's ad to appear in the next issue of North of 60 Mining News?

This monthly special supplement from Petroleum News is dedicated to covering the latest, most significant news from Alaska and northern Canada's mining industry.





1 .11

Griffin had total assets valued at \$88.9 million on June 30, 2007, and said it currently retains more than \$200 million in cash resources.

Through a complex stock-swap deal, Griffin will control Wolverine, a high grade advanced zinc-silver-copper-goldlead project that is poised for development. Yukon Zinc completed a bankable feasibility study for Wolverine, built an access road to the project site and obtained many key operating permits in 2007.

However, the junior ran into financing difficulties later in the year and since has sought additional investment to bring the

"This investment will help advance the development of Mactung which is due to

see INVESTMENTS page 20

Contact Susan Crane at 907 770-5592 scrane@petroleumnews.com

Contact Bonnie Yonker at 425 483-9705 byonker@petroleumnews.com



### INNOVATIVE EQUIPMENT STORAGE

- Engineered clear-span design in widths up to 160 feet, manufactured to any length.
- Cover-All<sup>®</sup> combines high quality components with a superior balanced design for optimal wind and snow load strength.

COVERALL IS A REGISTERED TRADEMARK OF COVERALL BUILDING SYSTEMS INC/ STEEL TURING SUPPLIED BY ALLED

### NORTHWEST TERRITORIES

### Yellowknife demands EA for Giant cleanup

Public expresses concerns about attempt to remediate arsenic stored underground during 50 years of gold mining within city limits

#### **By ROSE RAGSDALE**

20

For Mining News

he City of Yellowknife has invoked a little-used federal law to force the Contaminants and Remediation Directorate (CARD) of Canada's

Department of Indian and Northern Affairs to complete an environmental assessment of its remediation plans for 237,000 metric tons of arsenic stored within the city limits.

CARD, in cooperation with the Government of the Northwest Territories, proposes to render harmless, mounds of arsenic trioxide dust left behind in 15 underground chambers by owners of the abandoned Giant Mine, once a mainstay of the Yellowknife economy. The agency applied in October to the Mackenzie Valley Land and Water Board for a water license needed to conduct the remediation program which is estimated to cost at least C\$300 million and as much as C\$900 million. The Land and Water Board concluded in February that an environmental assessment would not be needed for the project.

Yellowknife officials disagreed. On March 31, the city referred CARD's water license application for completion of an environmental assessment under authority granted by provisions of the Mackenzie Valley Resource Management

The arsenic dust, a by-product of at least 50 years of ore processing at the Giant Mine, resulted during production of more than 7 million ounces of gold in open pit and underground mining that



began in the 1930s and operated nearly continuously between 1948 and 1998. CARD proposes to install a system that will maintain the arsenic in a frozen state underground and prevent significant quantities of it from leaking into the area's groundwater.

The plan will result in the rate of arsenic released into the environment from the site decreasing to 402 kilograms per year from the current level of 642 kilograms annually, according to the federal agency. CARD points out that the current level of arsenic release is relatively low because of care and maintenance already in place at the remediation site. Without that effort, the agency said many thousands of kilograms of arsenic could be released into the environment every vear.

#### Yellowknife seeks thorough review

Yellowknife's request for an environmental assessment would normally trigger one automatically, had it asked for one when the land and water board was deciding whether to perform one, officials say.

But the city thought other agencies with the authority to trigger an EA would do so. When no one else came forward, Yellowknife city leaders took up the issue.

"The basis for the referral is that the proposed activities to take place during the term of the Water License will have, in the City's opinion, an adverse impact on the environment within its municipal boundaries," wrote Yellowknife Mayor Gordon Van Tighem in a letter to the review board.

"The Giant Mine commenced operations in the 1930s and the ore body that was mined there had a high concentration of arsenic. As a consequence, there are serious issues respecting arsenic contamination and environmental remediation

### Giant Min GIANT MINE CITY OF YELLOWKNIFE **Giant Mine RK Consulting** GIANT MINE LOCATION AND LAYOUT Indian and Northern Affairs Canada 2.1 10001.10 Dec

which are of concern to the City and the people of Yellowknife, and which may have significant adverse effects on the environment in the City," Van Tighem wrote.

from Yellowknife citizens before and during a March 18 City Council meeting. listening After to testimony, Yellowknife's City Council voted in favor

He also cited an outpouring of concern

see **GIANT MINE** page 21

metric tons at 0.78 percent contained tungsten contained within four mineralized zones.

The company also identified highergrade sections within the resource reviewing roughly 22.2 million indicated metric tons and 4.6 million inferred metric tons averaging more than 1 percent contained tungsten.

A total of 29 million MTUs of contained tungsten is estimated in the deposits indicated resource with a further 9.2 million contained MTUs projected within inferred resources.

source with the largest producer," Kenyon said.

Kenyon said new investment capital is critical to growth of Yukon's economy.

Last fall, Kenyon welcomed another investment delegation from China seeking opportunities in Yukon's mineral industry.

Coordinated by Yukon Economic Development, the visit enabled representatives from the Shaanxi Nonferrous Metals Holding Group Ltd., the Northwest Mining and Geological Exploration Bureau for Nonferrous Metals, and the Jinduicheng Molybdenum Group Co. Ltd. to tour six Yukon mineral properties and meet with management of 10 Yukon companies. Shortly after that visit, Yukon-Nevada Gold Corp. entered a joint venture with Northwest Non-Ferrous International Investment Co., an investment arm of Northwest Mining and Geological Exploration Bureau for Nonferrous Metals, which is a major subsidiary of China's Ministry of Metallurgy, one of the country's leading exploration and mining agencies. Yukon-Nevada's management said the alliance will not only provide investment capital but also access to Northwest Geological's 6,000 skilled employees, including 800 geologists, engineers and technicians.

Baroid & Boart Longyear

2700 S. Cushman Fairbanks, Alaska 99701 (907) 452-6631 Fax: (907) 451-8632 operations@taigaventures.com www.taigaventures.com

Airport Business Park 2000 W. Int'l Airport Rd, #D-2 Anchorage, AK 99502 907-245-312

engineering studies through the 1970-80s. Tungsten prices collapsed in the early 1980s, causing the miners to abandon their efforts.

Mactung was discovered by Amax in

The deposit is situated about 160 kilometers, or nearly 100 miles, northwest of the company's Cantung mine that restarted production in late-2005 when tungsten prices rebounded.

Cantung's output for fiscal 2007 just exceeded 286,000 metric ton units of tungsten concentrates. Tungsten currently sells for about US\$250 per MTU. One MTU is equal to 10 kilograms of contained tungsten per metric ton, or 7.93 kg/t of pure tungsten, and is the standard weight measure used in the industry.

North American Tungsten is now hoping to develop Mactung. In early 2007 the company boosted its estimates using a 0.5 percent cutoff grade for the deposit with an indicated resource of 33 million metric tons grading 0.88 percent contained tungsten plus a further 11.9 million inferred

### Yukon woos Chinese investors

Yukon officials hailed the transaction between Hunan and North American Tungsten as another sign their efforts to attract Chinese investment to the territory's mining industry is paying off.

Yukon Economic Development Minister Jim Kenyon said he helped broker the deal by bringing Hunan executives to the Yukon last summer to tour the tungsten deposits.

"This is a good example of what we've been doing, bringing investment into the Yukon," Kenyon told reporters in March.

"The Mactung project is the largest undeveloped tungsten project in the world. Hunan happens to control basically the largest production facility in the world. So we're merging the largest

### • ALASKA

### Junior seeks JV partner for SW claims

Owner of Big Chunk property sees similarities in mineralization to porphyry copper-gold-moly mining regions in Arizona, Nevada

### MINING NEWS

iberty Star Uranium and Metals Corp. April 10 said it has received interest from "more than one large global mining company" in becoming a joint venture partner

to explore the 113,000-acre Big Chunk property that borders the northern and western edges of the Pebble Property in Southwest Alaska.

The Tucson, Arizona-based junior said expressions of interest came within two days of a March 26 announcement that Liberty Star is seeking a partner to explore the property.

"It is early in the process and the company has no way of judging whether such a joint venture partnership deal will come to fruition. However, we are optimistic that it will," Liberty Star President James A. Briscoe said in a statement April 10.

Liberty Star currently holds 707 State of Alaska mineral claims, spanning about 177 square miles and centered 25 miles northwest of the Village of Iliamna on the north shore of Lake Iliamna and 200 miles southwest of Anchorage.

Liberty Star currently holds 707 State of Alaska mineral claims, spanning about 177 square miles and centered 25 miles northwest of the Village of Iliamna on the north shore of Lake Iliamna and 200 miles southwest of Anchorage. The Big Chunk claims adjoin the Pebble Project on the north and west borders, forming a large half-donut shape. Included is the Baltusrol block about 8 miles north, which covers a large area of porphyry copper mineralization.

### **Claims near Pebble**

Three properties held by Liberty Star, Northern Dynasty and Full Metal Minerals cover the entirety of the Big Chunk caldera, the volcanic-intrusive feature thought to be the source of mineralization in the area.

Big Chunk is one of three claim blocks on the Big Chunk caldera, a volcanic-intrusive feature thought to be the source of mineralization in the area. The Pebble Partnership, a 50:50 venture between Anglo American plc and Northern Dynasty Minerals Ltd., owns the Pebble Project, and Full Metal Minerals Ltd., who recently signed a joint venture agreement with Freeport-McMoRan Exploration Corp., holds the third property on the caldera.

Briscoe said geologists have known for many decades that porphyry copper-gold-moly deposits occurred in clusters.

"It is now well recognized that this clustering is related to very large explosive volcanic features known as calderas," he said.

The circular moat structure in a caldera is frequently mineralized. Examples of mineralized caldera moat structures or caldera edges include Silver Bell, Ariz.,



Round Mountain, Nev., Tombstone, Ariz., and the Mission–Sierrita Mining District in Arizona, he said.

### Geology similar to Lower 48 mines

The similarity of the Pebble mineral pattern published by Northern Dynasty Mining in 1973 led geologist Briscoe to recognize its pattern similar to the Silver Bell's porphyry copper-moly deposits on the moat structure of the Silver Bell caldera. This led to the acquisition by Liberty Star of 113,120 acres of state claims along the moat structure of the Big Chunk Caldera, which includes the Pebble deposit, the company said.

Liberty Star said it is establishing a virtual data room to allow interested parties to review all pertinent data. The junior has completed extensive airborne magnetic surveys over the entire area, along with IP surveys, collected about 11,000 geochemical samples and drilled 31 holes on the property.  $\bullet$ 

### continued from page 20 **GIANT MINE**

of requiring CARD to perform an EA of the project.

The councilors agreed that there was enough public concern to warrant further scrutiny of the plan, which will involve filling in waste tailings ponds and removing decrepit buildings along with freezing the poisonous dust stored in 15 stopes and chambers underground.

The councilors rejected the Land and Water Board's argument that an environmental assessment would result in an unnecessary delay for the cleanup.

The environmental assessment is expected to take three years to complete.

### **Unprecedented action**

Though no local government has successfully forced Canadian regulators to perform an EA in the past, Yellowknife has the authority to do so under federal law, according to Kevin O'Reilly, a former Yellowknife city councilor and environmental activist. "Every time the city has dealt with the Department of Indian Affairs and Northern Development and GNWT on the Giant mine, the city has come out on the short end of the stick, to put it mildly." —Kevin O'Reilly, environmental activist and former Yellowknife city councilor

"If that authority is not used for something as serious as a (C\$300 million to C\$400 million) project that sets up a perpetual care situation, when would the city ever exercise that authority?" asked O'Reilly.

In written comments submitted with the mayor's letter to the review board, O'Reilly noted that when Miramar Giant went bankrupt, the mine reverted to the federal and territorial governments and Yellowknife was left trying to collect C\$700,000 in back taxes or grants-in-lieu from Government of the Northwest Territories with no agreement for recovering those funds.

"Every time the city has dealt with the Department of

Indian Affairs and Northern Development and GNWT on the Giant mine, the city has come out on the short end of the stick, to put it mildly," O'Reilly said.

Chief Edward Sangris and Chief Fred Sangris of the Yellowknives Dene First Nation noted that the independent and comprehensive nature of an environmental assessment would go a long way toward providing their members with a level of comfort that the mine reclamation will proceed in a manner that puts the interests of Yellowknife citizens and YKDFN members first.

Van Tighem also told the review board that "the pending abandonment and restoration of the site will permanently reduce the city's existing land base and will eventually cost the city a substantial sum."

The actual mine area encompasses about 851 hectares, or 353 acres, which is 8.3 percent of Yellowknife's total land area.

"As such, there is need to mitigate the impact through some type of compensation or changes to municipal boundaries to maintain a comparable land quantum and effective property tax base for the city," he said.  $\bullet$ 

### ALASKA

### Tonogold outlines gold potential at Nyac

Junior seeks joint venture partner to pursue Fort Knox-style mineralization in multiple targets on Southwest Alaska property

### **By ROSE RAGSDALE**

For Mining News

onogold Resources Inc., in hopes of drawing attention to its search for an Alaska partner, released a geology, geochemistry and drilling report April 17 that covers exploration from 2005 to 2007 of its Nyac Porphyry Gold Project in southwestern Alaska.

The Nyac property consists of 57,600 acres and is located at the western end of the Alaska-Yukon Tintina Gold Belt on lands owned by Calista Corp, the Alaska Native regional corporation for the Yukon-Kuskokwim region. Tonogold leases the Nyac property from Calista.

During 2007 the La Jolla, Calif.-based junior focused most of its energies on exploration properties in Nevada.

Tonogold President Jeff Janda told Mining News April 22 that the company has attracted a joint venture partner, Centerra Gold, to help explore its Tonopah Divide gold property in Nevada.

"Centerra is the largest western-based gold producer in central Asia with over 500,000 ounces of gold production, and that's the kind of experienced producer we're looking for, and that's the type of deal we want to do for Tonogold in Alaska," Janda said. "One of the challenges we face is that properties are so big in Alaska that they can suck up a lot of capital real quick."

Janda said a number of exploration and mining companies have contacted Tonogold about Nyac, and he and his staff are currently trying to arrange site visits for them this summer.

### Nyac could offer bulk mining opportunity

In the latest report on Nyac, Tonogold incorporated results from two-years of grid surface sampling, an 11-hole core drilling program and several 2005 to 2007 geologic reports.

Total placer production since 1908 from the Nyac Gold District exceeded 500,000 ounces gold, but until 2005, the hard rock source of the placer gold went





unrecognized. That year, Tonogold successfully located six large areas with disseminated bedrock gold using a systematic method of district-wide, soil grid exploration sampling. Each of Tonogold's six prospects have multiple contiguous anomalous samples.

Tonogold geologists have theorized that mineralization in the area bears striking similarities to that of highly productive Fort Knox gold deposit near Fairbanks.

In 2005 Nyac crews took 3,149 soil samples at close centers over a sixsquare-mile and identified six large anomalies. Some 70 samples had gold in



concentrations greater than 0.5 parts per million. The maximum soil value retrieved was 4.21 ppm gold, the mean value was 1.1 ppm gold, and the median was 0.8 ppm

In 2006, Tonogold took 3,594 more soil samples and drilled 11 core holes. The miner intercepted thin, gold-bearing stock-work veinlets in a Cretaceous pluton in the first four holes, and encountered 1 ppm gold intercepts up to 1 meter long in three additional holes in wall rocks.

### Promising areas identified

Tonogold said it recognized three main



exploration targets – Bonanza Ridge, West Fork, and Saddle Mountain – in either mineralized granitics or altered volcanic rocks. All are either cut by goldbearing veins, veinlets, shears, faults and/or dikes, or are large geophysical targets projecting along strike beneath shallow cover.

The three targets are each capable of large, multimillion-ounce, bulk-mineable gold discoveries, Tonogold said. Host rocks in the Nyac Gold District are Tintina-style Cretaceous granodioritemonzonite intrusives and Jurassic volcanic wall rocks.

Tonogold said its geologic mapping, soil and rock chip geochemistry, and initial drilling results mandate a 2008 geophysical mapping program leading to renewed drilling in 2009. A total field magnetics aerial survey at 50-meter line spacing is recommended for 2008, backed up by more local gravity, IP, and possibly CSAMT, the report said. Janda said no work is planned for Nyac in 2008, and the company's goal for the next stage of exploration is to drill a discovery hole in one of the target areas. He also said Bonanza Ridge appears to be the most promising prospect. Donald G. Strachan, Tonogold's vice president of exploration, prepared the report. He recommended a three-year exploration program with a budget that includes 25 percent contingencies. It calls for geophysics and surface work in the first year, with an estimated cost of \$2.7 million; initial exploration drilling with at least one and possibly two discovery holes in the second year to cost \$6.5 million; and exploration and initial development drilling in the third year to cost \$9.7 million. The full report can be downloaded at http://www.tonogold.com/s/Nyac.asp.

 Geotechnical Site Investigations Offshore Drilling Specialists • Gravel, Placer Exploration • Large Diameter Bulk Sampling Grouting, Anchoring & Piling • 3" to 24" Water Wells Ground Improvement • Wireline Coring NQ3 to PQ3 • Wireline CPT & Vane Testing In-situ Testing & Instruments • Heli-portable Drilling Systems • Wide Range of Equipment Highly Experienced Staff Anchorage, Alaska Phone 907-522-8263 1972 — 2008 Fax 907-522-8262 HGrey@Foundex.com 36 www.Foundex.com Surrey BC Canada Years of 604-594-8333 Excellence

#### **GPS Environmental, LLC**

Industrial/sanitary Water & Wastewater, Portable Modular Camps & Mining Equipment

- 7750 King St. Anchorage, Alaska 99518 Ph: 907-245-6606 E-fax: 1-928-222-9204 paul@gpsenvironmental.com bill@gpsenvironmental.com www.gpsenvironmental.com
- GE Zenon Membrane Systems
- Wedeco UV & Ozone
- Gardner Denver pumps & blowers
- Royce Technologies Instruments
- Snyder Industries Poly Tanks
- Replacement Membranes
- Modular Camps/Buildings
- Tega Industries Mill liners
- American Fire Equipment
- Envirodyne Sludge Systems
- Huber Technologies- Screens
- GE Homespring H20 UF filters
- Harrington Plastics
- Bio Sentry- Pathogen Monitor
- ATI Instruments

# Gold properties with golden neighbors

Freegold pursues June exploration of Pogo-style Rob property, while confidence builds on drill results from nearby Golden Summit

### **By SHANE LASLEY**

Mining News

reegold Ventures Ltd. is returning to explore the gold-rich hills of the Goodpaster Mining District this summer and follow up on its quest for mineral riches near Fort Knox. The busy miner outlined its 2008 exploration program March 31 for the Rob gold property in Interior Alaska about 110 miles southeast of Fairbanks as well as plans for its Golden Summit property north of Fairbanks.

The 2008 program will include ground geophysics, geologic mapping and additional core drilling to trace and expand the high-grade gold mineralization intersected during its 2007 eight-hole drill program at the Gray Lead vein, Freegold said.

The Vancouver, B.C.-based junior plans to begin exploration at Rob in early June with mapping and ground-based geophysics aimed at tracing the Grey Lead vein farther along strike. This will be followed by 3,000 feet of core drilling likely to start in early July. Step-out drilling of 175 feet in both the north and south directions along strike will test the vein over a strike length of more than 500 feet and to a depth of about 200 feet.

The 2008 campaign at Grey Lead is follow-up to an eight-hole (1,529 foot) drill program completed in 2007. All eight holes intersected gold-mineralization, including one with an average of 29 grams per metric ton of gold over 13 feet.

Freegold said gold-bearing veins found at the Rob property share many geological and geochemical similarities to the highgrade gold mineralization found at the Pogo Mine, owned by Teck Cominco Ltd. and Sumitomo Metal Mining, some 20 miles to the west.

### Historic mining and exploration identify targets

Multiple targets of high-grade gold mineralization have been identified on the 4,240 acres of state mining claims at Rob and will be included in future exploration programs, the company said. The 2008 exploration plan also calls for a 2,000-foot drill program at the Michigan prospect two miles northeast of Grey Lead. The Blue Lead and Grizzly Bear veins, which appear to be the same structure, also will be included in the 2008 exploration plan. These two prospects are identified by small high-grade historical mine pits. About 150 tons of ore mined out of Blue Lead in 1938 and 1939 produced 132 ounces of gold and 25 ounces of silver. About 350 tons of ore were mined at Grizzly Bear between 1939 and 1942. There are no reports on the amount of metals recovered from the Grizzly Bear Mine. Joint venture partners Sumitomo Metal Mining and WGM spent about \$1.3 million on exploration on the Rob property in the late 1990s. This work included extensive airborne and ground geophysics, soil and rock geochemical sampling, geologic mapping, trenching and limited diamond drilling. An initial sampling program led to the identification of four target areas that were followed up with limited trenching and a small 20-hole drill program. The Wolverine prospect, discovered during the JV's exploration in the 1990s, Upper and Lower Trench prospects, and several other prospective areas also have been targeted for Freegold's exploration.



The 2008 program will include ground geophysics, geologic mapping and additional core drilling to trace and expand the high-grade gold mineralization intersected during its 2007 eighthole drill program at the Gray Lead vein, Freegold said.

"We are very excited about the new drilling at Rob in the coming months, and hope that the high-grade grab samples we have previously collected at the other prospects on this four-mile-long property are as indicative of the high-grade vein mineralization underneath as they were at Gray Lead," said Freegold President and CEO, Steve Manz.

### Drill results reveal structure continuity

The first assay results are in from Freegold's 2008 drill program at the Golden Summit property near Kinross Corp.'s Fort Knox Mine north of Fairbanks. The results are from Fence 24, which consists of 56 holes drilled in two rows with an average spacing of 20 feet and an average depth of 70 feet.

The holes in Fence 24 intercepted highgrade veins within lower-grade wider shear zones. Hole 684 had a 33-foot intercept with an average grade of 8.9 grams per metric ton gold, and included a six-foot intercept of 31.5 g/t gold. The assay results from Fence 24 and nearby Fences 4 and 5 reveal a good continuity of the mineralized structure within the Wackwitz vein swarm over a 550-foot strike length and 150-foot width, Freegold said. A 2007 drill program identified vein swarms that parallel the Wackwitz swarm. The continuity of Wackwitz is boosting Freegold's confidence that similar continuity of the parallel vein swarms will continue along the entire 1,200-foot-wide-by-5,000-foot-long area identified through the shallow-hole program last year. "By drilling the closer spaced holes, we have obtained a much better picture of the overall trend of the mineralization at Golden Summit," Freegold Vice President of Business Development Kristin Walcott told Mining News.

### Freegold begins core drill program

Freegold also has undertaken a 15,000foot core drilling program at Golden Summit aimed at testing the potential for deeper gold mineralization in areas where bulk tonnage and high-grade vein mineralization have been identified with shallow, close spaced drilling and surface bulk sampling.

The Wackwitz vein swarm has been one of the targets of the deep-hole core drilling program. The core drilling of this vein swarm will take place about 800 feet to the east of Fence 24. The company is also performing systematic core drilling of the Beistline area. Freegold has drilled a total of 23 of these deeper core holes in the two areas.

"We have been very fortunate to have secured the drill rigs we need for our various programs for this year, and 2008 is expected to be our most active year ever in terms of the number of drilling programs being undertaken on all of our properties," Manz added.  $\bullet$ 



Calista Corporation is committed to the responsible exploration and development of its natural resources, and to the preservation of our lands for the future. We constantly strive for excellence in the projects we build, the services we offer, and the jobs that we provide for our people.

#### CALISTACORP.COM



# YOU'RE BACKED **BY A WINNING** TEAM!

There is have been a tork a floor



**CMI Sales Team** 

EC700 Excavator loading A35D Truck at Fairbanks Gold Mine Inc. Fairbanks, Alaska

IN THE WORLD. Volvo, the best in construction

IN ALASKA. CMI, the best sales and product support lineup.

OLVO

**IN YOUR CORNER** The Winning Team.

equipment technology.





1111

ET N



**Construction Machinery Industrial, LLC** 

Anchorage, Alaska Fairbanks, Alaska Ketchikan, Alaska Juneau, Alaska

(907) 563-3822 (800) 478-3822 (907) 455-9600 (907) 247-2228 (907) 780-4030 (888) 399-4030