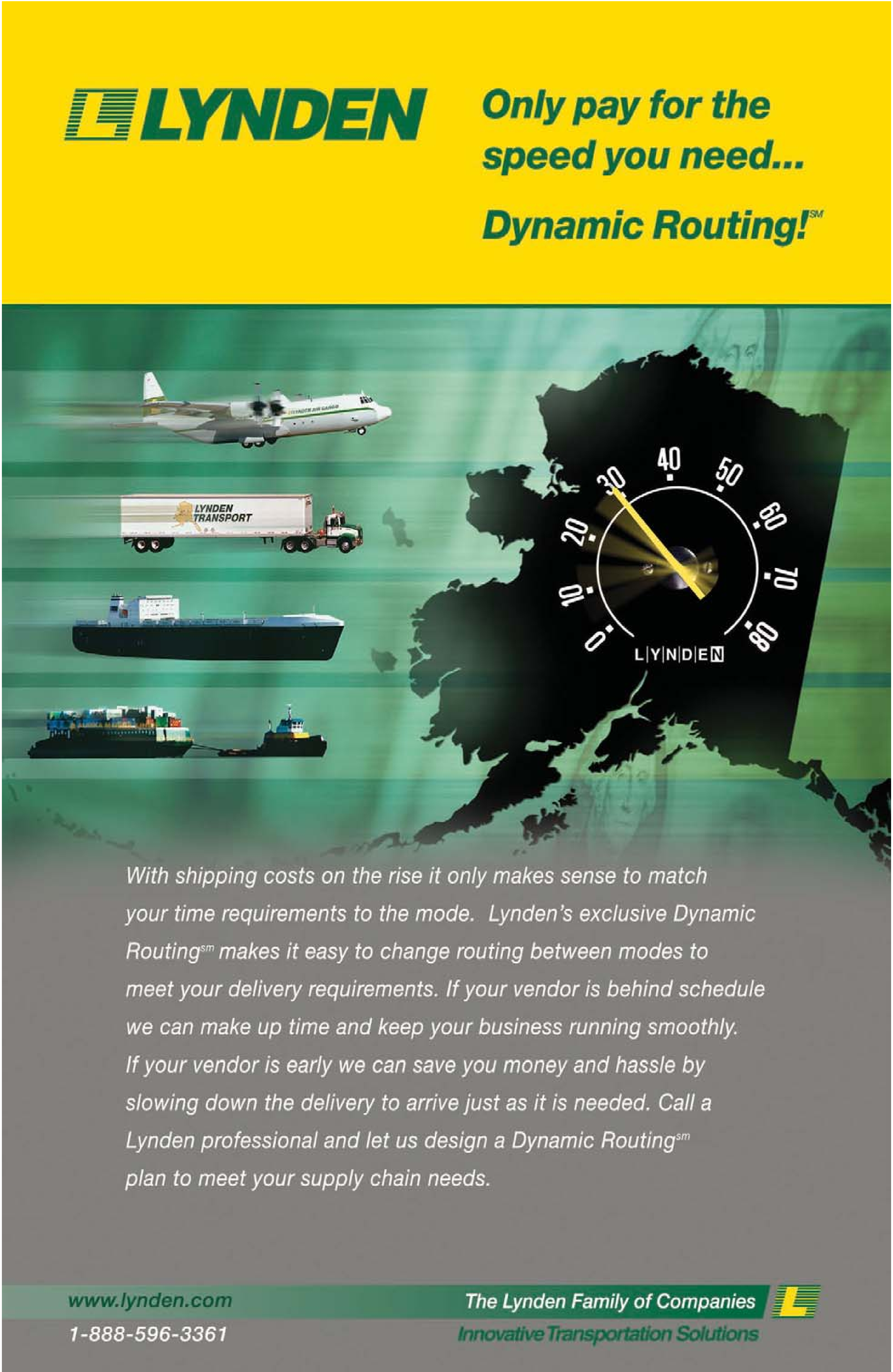
NORTH OF 60

MINING NEWS

Millrock Resources Inc. taps 102.1 meters averaging 1.04 grams of gold per metric ton in the discovery hole drilled at the RPM Showing of its Estelle gold-copper project in western Alaska. Since adopting a project generator model in 2009, Millrock has emerged as one of the more prolific exploration companies working in Alaska. The junior is among the many explorers scaling back their efforts in 2013.

PHOTO COURTESY MILLROCK RESOURCES INC.

A special supplement to Petroleum News
WEEK OF
May 26, 2013
Petroleum news


LYNDEN
Only pay for the speed you need...
Dynamic Routing!SM
LYNDEN TRANSPORT
40 50 30 20 60 10 70 0 80
LYNDEN
With shipping costs on the rise it only makes sense to match your time requirements to the mode. Lynden's exclusive Dynamic Routingsm makes it easy to change routing between modes to meet your delivery requirements. If your vendor is behind schedule we can make up time and keep your business running smoothly. If your vendor is early we can save you money and hassle by slowing down the delivery to arrive just as it is needed. Call a Lynden professional and let us design a Dynamic Routingsm plan to meet your supply chain needs.
www.lynden.com
1-888-596-3361
The Lynden Family of Companies
Innovative Transportation Solutions

● ALASKA

Deafening silence arises from explorers

Lack of news from a junior mining sector typically eager to share spells trouble for 2013 exploration in Alaska, around the globe

By SHANE LASLEY
Mining News

Following a rising chorus of junior companies touting impressive exploration programs on mineral prospects across Alaska that reached its crescendo in 2011, a deafening silence is resonating across the Far North expanse in 2013. And in the junior mining sector, no news is bad news.

Mineral exploration expenditures in Alaska, which were a meager US$23.8 million in 2001, climbed to US$347 million by 2008. The "Great Recession of 2008" tightened the equity markets, resulting in exploration spending retreating to US$180 million in 2009 only to redouble by US$365 million by 2011.

But since the million-dollar-a-day record set in 2011, mineral exploration in Alaska has been losing steam. Preliminary estimates of about US$275 million for exploration expenditures in 2012 and 2013 spending is shaping up to be closer to 2009 levels.

Alaska is not unique in this aspect, but serves as a microcosm of the drought of venture capital available to mineral exploration companies worldwide.

"Neither retail nor professional investors have the capacity, or appetite, to fund equity raisings, and so equity markets remain constrained," IntierraRMG, a global mining research firm, wrote in a May report. "With their share prices so low, most explorers can't realistically raise the necessary funds to bring themselves to the stage where they can generate cash flow from metals production."

SHANE LASLEY

This core is from RC11-187, which cut 178 meters averaging 4 percent copper, including 34.7 meters averaging 12 percent copper at NovaCopper's South Reef target in Northwest Alaska. NovaCopper plans to spend about C$16 million in 2013 exploring South Reef and other targets at the Upper Kobuk Mineral Project.

Restraint in the equity markets, which resulted in many of the exploration companies losing more than 90 percent of their value since late 2010, is being exacerbated by a recent plummet in gold and other metals prices.

"The first quarter of 2013 has been extremely challenging for the international mining industry, with the problematic combination of rising operating costs, falling metals prices, lower ore grades and a continued scarcity in the availability of funds," wrote IntierraRMG.

ITH scales back

International Tower Hill Mines Ltd. is a prime example of an exploration company on a path to generating its own cash flow but has been hit hard by the uncertainty in the financial markets.

Since its formation in 2007, Tower Hill has outlined an all-inclusive resource of more than 20 million ounces for its Livengood gold project in Interior Alaska. Over the first three years, the company's value grew with the ounces added, with its stock peaking at more than C$10 per share at the end of 2010.

Despite having a measured and indicated resource of 16.5 million ounces of gold alongside a paved highway, International Tower Hill has watched its share price wither by 90 percent since the beginning of 2011. At May 22, an ITH share was worth C91 cents on the Toronto Stock Exchange.

The plummet in gold price, from nearly US$1,700 at the beginning of 2013 to below US$1,400 by mid-April, added to the woes of the company, which was putting finishing touches on a feasibility study for its gold project. As a result, Tower Hill said it would scale back its work program to activities essential to permitting a mine at Livengood.

see **EXPLORATION DROUGHT** page 4

Contact North of 60 Mining News:

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

Petroleum news

North of 60 Mining News is a monthly supplement of the weekly newspaper, Petroleum News. It will be published in the fourth or fifth week of every month.

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

NEWS
907.229.6289
publisher@miningnewsnorth.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

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 $98 per year, which includes online access to past stories and early access to Petroleum News every week. (Canada/Mexico subscriptions are $185.95; overseas subscriptions are $220) Or, just purchase the online edition of Petroleum News, which also includes the mining supplement and online access to past stories, for $69 per year.

continued from page 3

EXPLORATION DROUGHT

"ITH has structured its budget and corporate initiatives to bring the highest value to its shareholders and we believe it still remains an attractive long-term investment," explained International Tower Hill President and CEO Don Ewigleben. "The Livengood Project hosts a very large gold resource in a favorable mining jurisdiction. Our current strategies remain the same with completing further development of the project while attracting a strategic alliance partner. Despite the recent drop in gold price, the value of the long life Livengood asset will be judged by factors in addition to today's gold price, including the existing infrastructure, favorable geopolitical setting and highly qualified development team."

At the end of March, International Tower Hill had US$23.14 million in working capital.

HECLA MINING CO.

Hecla Mining Co. has reduced its full-year exploration and predevelopment spending plans for 2013 by US$9 million. The company has not indicated whether the cuts will dip into the US$6.6 million exploration program budgeted for the Greens Creek Mine in Southeast Alaska.

Heatherdale drops Delta

Heatherdale Resources Ltd., another company with an Alaska mineral project nearing the permitting phase, also is scaling back to the most essential programs this year.

Heatherdale's stock price, which peaked at C$1.32 at the end of 2010, had slid 95 percent to C6 cents per share in May.

At the end of 2012, Heatherdale closed a C$3 million private placement of a convertible debenture with Sino-Canada Natural Resources Fund I.

The principal amount of the debenture is convertible into common shares of the company at a price of C20 cents per share, and the interest is convertible at the higher of C20 cents per share or the market price of the shares on the date of such conversion. At the end of the two-year term of the debenture, any remaining principal and interest amounts will be redeemed, at the option of the company, in cash, by the issuance of shares, or a combination of both.

Conserving its resources for the Niblack volcanogenic massive sulfide deposit in Southeast Alaska, Heatherdale returned Delta, an earlier stage VMS project in the state's Interior, to Agnico Eagle Mines Ltd.

"Current market conditions have necessitated that Heatherdale prioritize its efforts on our flagship Niblack Project, the 100 percent owned high-grade mine development opportunity in southeastern Alaska," explained Heatherdale President and CEO Patrick Smith.

The Lookout deposit at Niblack has an indicated resource of 5.64 million metric tons averaging 1.75 grams per metric ton gold, 0.95 percent copper, 1.73 percent zinc and 29.52 g/t silver.

Lookout and the nearby Trio contain an additional inferred resource of 3.93 million metric tons averaging 1.32 g/t gold, 0.81 percent copper, 1.29 percent zinc and 20.1 g/t silver.

A US$50 net smelter return cut-off was used to calculate the resources.

Tucked within the lower reaches of the Lookout deposit, there is a zone of continuous high-grade mineralization that, at a US$150 NSR cut off, contains 1.16 million metric tons averaging 3.21 g/t gold, 1.71 percent copper, 3.83 percent zinc and 62.28 g/t silver.

While Heatherdale had hoped to have a prefeasibility study for Niblack by mid-2013, financial restraints will likely compel the junior to push back that date.

With C$2.8 million in cash at the end of January, Heatherdale is letting prudence guide its plans for advancing Niblack the final steps towards permitting. This careful approach includes continuing stakeholder engagement, meeting permitting requirements and continuing the collection of environmental baseline data.

In the meantime, the company is exploring strategic funding to expand the Trio and Lookout deposits, complete the prefeasibility and begin permitting.

Millrock positions for recovery

Millrock Resources Inc., which has become one of the one of the more prolific Alaska exploration companies since adopting the project generator model in 2009, is another junior tightening its belt in 2013.

Millrock's shares were trading at C11 cents on May 22, an 88 percent drop from their peak of C96 cents in November, 2010. The project generator, though, has had little need to go to the equity markets to finance its exploration.

A C$2.2 million private placement financing completed by Millrock in November 2012 is the first time the company went to the equity markets for money since August 2010.

As a project generator, Millrock relies on joint venture partners to do most of the heavy financial lifting on its properties. Not only does this greatly diminish the company's need to raise money in the markets, but it reduces exploration risk and exposes its shareholders to a large amount of exploration expenditure per dollar invested.

Partners such as Teck Resources Ltd., Kinross Gold Corp., Vale S.A. and Inmet Mining Corp. (which was recently acquired by First Quantum Minerals Ltd.) have funded roughly 87 percent of the C$36.7 of exploration spending on Millrock properties since the founding of the company in 2007.

During 2012, Millrock's exploration expenditures were C$9.1 million, of which some 95 percent was funded by partners on its projects in Alaska and Arizona. With junior exploration companies unable to raise funds and majors doing belt tightening of their own, Millrock is looking for its 2013 program to be about half of last year's.

"While 2013 is shaping up to be a year of reduced budgets in comparison with 2012, Millrock anticipates that its exploration expenditures will be about US$5 million, with US$3.8 million coming from its partners," Millrock informed investors in March.

Most of Millrock's Alaska properties, though, will see little or no exploration this year.

On May 10, Millrock said it had terminated its agreement with Bering Straits Native Corp. on two Seward Peninsula gold properties.

This does not mean the project generator's Alaska portfolio is shrinking.

Looking for opportunity during adversity, Millrock is positioning itself for the time when markets improve and more venture capital funding is available. With depressed prices, Millrock plans to continue building a portfolio of projects that will attract the attention of major to mid-tier mining companies and junior explorers.

On May 7 the company said it has entered an exploration and option to lease agreement with Bristol Bay Native Corp. on a 680,650-hectare (about 1.682 million acres) tract of Alaska Peninsula land that covers three known porphyry copper-gold occurrences on the Alaska Peninsula – Kawisgag, Mallard Duck Bay and Bee Creek.

"This agreement gives Millrock access to a very large, highly prospective land package that has barely been explored," said Millrock President and CEO Greg Beischer.

Millrock must incur exploration expenditures of US$5 million and pay US$725,000 before the end of 2019. The initial payment is US$25,000 and the first-year exploration expenditure requirement

see **EXPLORATION DROUGHT** *page 5*

continued from page 4

EXPLORATION DROUGHT

is US$200,000.

"We look forward to performing systematic regional-scale exploration and making great discoveries on these lands. We plan to share the risk of this exploration work by partnering with other exploration and mining companies," explains Beischer.

Hecla cuts exploration

While the share prices of producers have not been hammered as hard at their exploration counterparts, uneasy equity markets and lower metals prices have still taken their toll, causing miners such as Hecla Mining Co. to rethink how much cash it is willing to spend on exploration.

"There has been significant weakness in precious metals prices this spring, which we are watching closely, but I am pleased to note the increase in demand for the physical metal, particularly in the Middle East and in Asia, that has emerged as a result of these lower prices," Hecla President and CEO Phillips S. Baker, Jr. explained. "I believe that in these times of price volatility and uncertainty, those companies like Hecla with low costs, high margins and the flexibility to scale back or increase discretionary expenditures, such as exploration, pre-development, capital and investments, will fare the best."

Hecla has lowered full-year exploration and pre-development spending across all of its current projects to US$42 million, excluding Aurizon exploration programs, a US$9 million drop from earlier announced projections.

Hecla had previously budgeted US$6.6 million for exploration at Greens Creek in 2013, the company has not indicated whether cuts in its discretionary spending will dip into this.

Hecla said Greens Creek exploration made significant progress in defining high-grade extensions to mineralization along the Deep Southwest, 5250 and Gallagher ore trends.

Deep Southwest is a recently discovered zone which lies below and further west of the Southwest Zone. The geometry of this body is currently being defined but it is open down dip and to the southwest along strike. Significant Deep Southwest intersections include 27.1 oz/ton silver, 0.39 oz/ton gold, 13.3 percent zinc and 6.1 percent lead over 8.6 feet (2.6 meters); and 21.5 oz/ton silver, 0.31 oz/ton gold, 8.9 percent zinc and 4.1 percent lead over 10.5 feet (3.2 meters).

One hole drilled at the 5250 Zone cut 21.9 oz/ton silver, 0.05 oz/ton gold, 5.8 percent zinc and 2.8 percent lead over 24.6 feet (7.5 meters).

Drilling will continue in an effort to define and expand the Deep Southwest further southwest and the 5250 Zone to the south. The emphasis, though, is expected to shift to in-fill drilling of the 200 South in an effort to convert resources to reserves and exploration drilling to the south and west that could extend mineralization beyond the current high-grade resources.

Not all bad news

While mineral exploration spending is expected to continue its downward spiral in 2013, a handful of multimillion-dollar programs are expected to soften the plunge.

With the goal of applying for development permits by the end of the year, Pebble Limited Partnership's US$80 million budget is expected to be the largest contributor to Alaska's exploration expenditures in 2013.

This program is anticipated to include engineering studies to complete a project description and advance a prefeasibility study; continued environmental monitoring studies; site investigations, including exploration, geotechnical and metallurgical drilling, as well as geo-hydrological testing; and stakeholder engagement.

NovaCopper Inc. is planning to carry out a C$16 million program at its Upper Kobuk Mineral Project in the Ambler Mining District in Northwest Alaska.

Over the past two years, NovaCopper has outlined some 3.5 billion pounds of copper in two adjacent deposits at the Bornite region of the Upper Kobuk Mineral Project.

South Reef, with an inferred resource of 43.1 million metric tons of material averaging 2.54 percent copper, is the second billion-pound-plus copper deposit NovaCopper has delineated at the Bornite project since forging a long-term collaborative agreement NANA Regional Corp. in 2011.

Testing the continuity of these higher high-grade zones is one of the targets being contemplated as the NovaCopper team plans the 2013 drilling. Expanding the overall South Reef deposit is another potential target.

Contango ORE Inc., which raised US$14.2 million early in 2013, is planning to spend US$9-US$13 million to expand upon a high-tenor gold-copper-silver discovery made at its Tetlin project in eastern Alaska.

The Houston, Texas-based explorer plans to drill 60-85 holes aimed at establishing a maiden resource at Tetlin and exploring similar targets across the 726,600-acre (294,000 hectares) land package.

Freegold Ventures Ltd., which is working on a resource estimate for the oxide component of its 6-million-ounce (1.5 million indicated and 4.4 million inferred) Golden Summit project near Fairbanks, was amongst the first to contribute to mineral exploration spending in Alaska this year.

The company completed 3,472 meters of this drilling during a winter program that ran from February to April. The Vancouver, B.C.-based junior will resume drilling in the coming weeks.

Pure Nickel Inc. March 27 reported that Itochu Corp., its joint venture partner on the Man Alaska project, has confirmed funding of about US$3.5 million for the 2013 exploration season at the nickel-platinum group element project.

Exploration activities in 2013 will consist primarily of a roughly 2,200-meter drill program targeting the western part of the Alpha complex, where drilling in 2010 and 2012 intersected anomalous nickel-copper-PGE mineralization.

"The MAN project continues to hold great promise, and we look forward to working with our partner, Itochu, to unlock the potential of the property in this our sixth season of working together," said Pure Nickel President and CEO David McPherson.

Adding the producers with mines in Alaska – Coeur Mining (Kensington Gold Mine), Sumitomo Metal Mining (Pogo Gold Mine), Kinross (Fort Knox Gold Mine), Usibelli (Healy Coal Mine) and Teck Resources (Red Dog zinc-lead mine) – it is expected that exploration spending across the Far North state during 2013 should rival the US$180 million spent in 2009.

Time will tell whether metals prices stabilize and the drought in venture capital recovers in time for mineral explorers to refill their coffers and continue to unlock Alaska's vast mineral potential in 2014. ●

● ALASKA

EPA doubles down on Bristol Bay study

Pebble opponents urge agency to veto controversial copper project, D.C. lawmakers claim unprecedented measure oversteps authority

By SHANE LASLEY

Mining News

The second draft of U.S. Environmental Protection Agency's Bristol Bay Assessment strengthens the notion that Pebble and other copper deposits in the Bristol Bay watershed are at risk of losing mining habitat due to the salmon population found there.

After spending about a year studying the area of Southwest Alaska where the enormous Pebble copper-gold-molybdenum project is located, EPA released the initial draft of the Bristol Bay Watershed Assessment in May, 2012.

Based on the critiques made by a 12-person peer-review panel and some 230,000 public comments, EPA bolstered the assessment, releasing a second draft on April 26.

Aside from dropping "Watershed" from the name, key changes to the revised assessment include: a better explanation of the hypothetical mine scenarios assessed; incorporation of modern conventional mining practices into mine scenarios and clarification that some of the projected impacts assume that those practices are in place and working properly; details about projected water loss and water quality impacts on stream reaches; and information on the potential ecological hazards related to the proposed transportation corridor.

"Generally, the updated assessment affirms the conclusions of the initial assessment," EPA Region 10 Administrator Dennis McLerran said in a conference call coinciding with the April 26 release of the revised study.

These findings reaffirm that Pebble, the largest known copper-gold-molybdenum deposit on the planet, is situated in the Bristol Bay region of Southwest Alaska, home of an equally world-class sockeye salmon fishery.

The Alaska Miners Association and other resource development organizations in the state said the revised assessment did little to incorporate their recommendations.

Pebble opponents, on the other hand, found the second draft of the Bristol Bay Assessment an even stronger condemnation of developing the copper-gold-molybdenum deposit.

"The EPA study finds that the impacts of the Pebble Mine, at maximum size, would be even bigger than before," said

PEBBLE LIMITED PARTNERSHIP

Environmental consultants measure winter stream flow levels near an exploration site at the Pebble copper-gold-molybdenum deposit in Southwest Alaska. This is part of some US$150 million of environmental research carried out by the Pebble Partnership in preparation for permitting.

Kimberly Williams, director of Nunamta Aulukestai, a Southwest Alaska Native conservation group.

Pre-emptive veto

Nunamta Aulukestai and fellow Pebble opponents such as Trout Unlimited are urging EPA to test the extent of its power under the federal Clean Water act by denying the Pebble Partnership the option of applying for permits to develop a mine at its world-class copper-gold-molybdenum deposit in the Bristol Bay region of Southwest Alaska.

"Pebble is far bigger and more threatening to renewable resource jobs than any other mine proposal in Alaska and it (is) planned for the worst location possible: the headwaters of Bristol Bay," said Tim Bristol, director of Trout Unlimited's Alaska Program. "Clearly, the time for action to protect Bristol Bay under the Clean Water Act is now."

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers is charged with issuing permits for discharge into wetlands. Some 130 million acres of Alaska, about the combined area of California and Kentucky, are considered wetlands. Much of this vast expanse, including the Pebble property, is treeless areas of moist and wet tundra underlain by a permanently frozen layer that prohibits water drainage.

Although the Corps has been relegated the authority over the discharge permits on these wetlands, under section 404(c) EPA was granted the power to prohibit, restrict, or deny such permits that pose an unacceptable adverse impact to fisheries or other water uses.

While CWA Section 404(c) has never been used to deny a project the right to apply for permits, EPA claims it has the power to do so.

The anti-Pebble coalition petitioned the EPA to use this presumed veto authority under section 404(c) of the federal Clean Water Act to pre-emptively deny the Pebble Partnership discharge permits required to build a mine at the world-class copper-gold-molybdenum deposit.

Responding to the request, the environmental agency initiated the Bristol Bay Watershed Assessment to assess the salmon and other ecological resources in the region; gain a better understanding of the impacts of large-scale mining on these resources; and determine if this extraordinary stretch of its CWA authority is justified.

Pebble opponents believe such an extreme measure is warranted.

"Now, it's time for the EPA to take immediate steps to protect Bristol Bay from the Pebble mine proposal and initiate the Clean Water Act's 404c process," said Nunamta Aulukestai Director Williams.

Characterizing the study as biased, costly and inherently flawed, the Pebble Partnership, a 50-50 alliance between Vancouver B.C.-based Northern Dynasty and London-based Anglo American, contends that its plans to develop the enormous copper project should be vetted within the United States' already rigorous permitting process.

"The Pebble Partnership is simply asking for due process: the right to submit a permit application, and to have our plans reviewed, based on the best-available science and the relevant federal, state and local laws," Shively commented.

With the goal of filing for permits by the end of the year, the Pebble Limited Partnership has agreed to a budget of roughly US$80 million for Pebble in 2013, which will push the total investment in the Bristol Bay area project to above US$750 million – with more than US$150 million of this spending on environmental research.

"At a time when the entire executive branch is having to cut important program funding because of sequestration, it is stunning that the EPA continues to pursue this matter instead of waiting for a permit application to review through the well-established regulatory process," said Pebble Partnership CEO John Shively. "Even more disturbing is the fact that the EPA's actions are consistent with the demands of those who want to deny the Pebble Partnership the right to submit a permit application."

Both sides have until May 31 to submit their views to EPA.

D.C. lawmakers blast EPA

Back in Washington D.C., a group of, mostly Republican, lawmakers on Capitol Hill are blasting the EPA for its involvement in a mining project that has yet to apply for permits – charging that the Bristol Bay Assessment is inappropriate and a preemptive veto of the Pebble project would overstep the environmental agency's legal authority.

"If the EPA has concerns about the impact of a project there is an appropriate time to raise them – after a permit application has been made, not before. It is clear to me that a preemptive veto of resource development is quite simply outside the legal authority that Congress intended to provide to of the EPA. I made that clear to the previous EPA administrator and I will make it clear to the current nominee, Gina McCarthy," said Sen. Lisa Murkowski, R-Alaska, in response to the revised assessment.

Alaska's senior senator is not the only one on Capitol Hill who is alarmed by EPA's tactics.

Sen. David Vitter, R-Louisiana, top Republican on the Environment and Public Works Committee, said, "EPA is playing a dangerous game, using hypothetical situations to shut down job creation."

In a February letter to EPA acting administrator Robert Perciasepe, Vitter and Sen. Roger Wicker, R-Mississippi challenged the EPA's authority to preemptively veto the Pebble Mine Project.

"Specifically, we are deeply troubled by EPA's unreasonable claim that it has 'pre-emptive veto authority' over the Pebble Mine Project before the sponsor has the opportunity to apply to the Army Corps of Engineers for a CWA permit. Such an interpretation is unreasonable and contrary to both plain text of the CWA and its legislative history," penned the pair of Republican senators.

Vitter and Wicker also laid out their cases to the temporary administrator.

House Committee on Oversight and Government Reform Chairman Darrell Issa , R-California, who has been trying to get the EPA to turn over records associated with the Bristol Bay Assessment for more than a year, has threatened to subpoena the agency to get the long past-due documents.

In April, Vitter joined Rep. Issa in his attempt.

In a letter to Gina McCarthy, who has been nominated but not confirmed to become EPA's next administrator, the Republican lawmakers wrote, "To date, the agency has fallen woefully short of enforcing these federal records laws and responding to our inquiries. Notably, our investigation revealed that EPA employees, including you, have operated in a manner that disregards internal protocols and inhibits the public's right to information in a potential effort to evade transparency."

Withheld information in regards to EPA's involvement in the Pebble project is among the documents the pair of lawmakers asked McCarthy to turn over.

Tainted assessment?

As lawmakers press the EPA to be forthright about its study of the Bristol Bay watershed, a Washington, D.C.-based research group questions whether the involvement of an environmental consulting firm that has admitted in a U.S. federal court to filing falsified reports has tainted the assessment.

"We're concerned that EPA could stop the development of what may be the largest-ever domestic copper resource before the permitting process has begun – and based on research presented by authors who have admitted falsifying their findings in other environmental studies," said American Resources Policy Network President Daniel McGroarty.

Stratus Consulting, which was involved

see EPA STUDY page 7

● ALASKA

Unique explorer, distinct mineralization

Texas-based Contango ORE raises US$14.2M to continue exploration of a one-of-a-kind gold-copper discovery in eastern Alaska

By **SHANE LASLEY**
Mining News

With a marketing campaign seemingly designed to send investors and their money running, Contango ORE Inc., also known as Core, may be the most unconventional mineral exploration company working in Alaska.

A presentation posted on the company's website in 2011 provides a sense of the explorer's unabashed frankness: "It would be truly exciting if Core owned gold or REEs (rare earth elements) – we sadly do not – we are an exploration company … i.e. a pure and simple speculation. In a speculation, one should be prepared – indeed expect – both financially and mentally, to lose it all."

Yet, while most of the company's more orthodox colleagues are lacking the venture capital needed to mount a significant exploration campaign, the Houston, Texas-based junior raised US$14.2 million in a private placement financing that closed in March.

"They tell me it was a tough market this year," Core President and CEO Brad Juneau told Mining News.

Juneau attributes Core's successful fundraising in a tough market to the merits of Tetlin, an emerging high-tenor gold-copper-silver project about six miles (10 kilometers) southeast of the crossroads town of Tok.

"I just think the project makes a lot of sense," said Juneau.

While a drill intercept of 58.5 meters averaging 14.45 grams of gold per metric ton, 9.1 g/t silver and 0.24 percent copper within 12 miles (20 kilometers) of the Alaska Highway makes sense, the style of mineralization discovered at Tetlin is as distinctive as the company exploring it.

Unique company

Juneau, a petroleum engineer with a 25-year history in the oil and gas industry, was not being coy about his familiarity with the mineral markets.

His privately held exploration firm, Juneau Exploration L.P., has spent the greater part of the past 15 years seeking out oil and gas prospects for Contango Oil & Gas Co., an exploration and production company with petroleum resources primarily in the shallow waters of the Gulf of Mexico.


AVALON DEVELOPMENT CORP.

Armed with a handheld auger, a technician makes his way to the next soil sampling site during Contango ORE's 2012 program at the Tetlin gold-copper-silver project in Eastern Alaska. The Texas-based explorer has budgeted US$500,000 for additional reconnaissance exploration in 2013, including soil and rock sampling.

Juneau got his first taste of minerals exploration when he decided to expand his company's horizons to Alaska in 2008 – leasing a large land package from the Tetlin Village Council, an Alaska Native Village in Alaska's Eastern Interior.

Instead of black gold, the Texas oilman turned up a largely overlooked yellow gold prospect at Tetlin.

To gain a better understanding of the gold-copper potential of the Tetlin property, Juneau tapped the mineral exploration expertise of Avalon Development Corp., a Fairbanks-based geological consulting firm. Juneau is quick to attribute the success of the technical program at Tetlin to Avalon and its president, Curt Freeman, who continues to design and execute the exploration programs at the project.

When Avalon confirmed Tetlin's promise with an initial round of reconnaissance exploration, Juneau leased the large land package from the Tetlin Village Council, an Alaska Native Village in Alaska's Eastern Interior, marking the early days of what was to become Contango ORE.

"We went up there looking for any kind of minerals and since we are oil and gas people that was our first thought," Core co-founder and former President and CEO Kenneth Peak reflected during a 2011 interview with Mining News.

The company also tied up a number of rare earth properties across the state, but has since culled that down to two of the better REE prospects in Southeast Alaska.

When Peak was diagnosed with a brain tumor in 2012, Juneau assumed more responsibilities at Core.

"I am glad that Brad Juneau, the founder and originator of our exploration activities in Alaska, has agreed to become our president and chief executive officer," Peak commented on the December appointment. "Brad has a successful track record of finding resources and the results of our successful 2012 exploration program in Alaska suggest the company has identified a potentially significant gold-copper occurrence in an area with no previous significant exploration activities."

Peak died in April. To continue the success he spoke of before his untimely passing, Core has budgeted US$9-US$13 million for exploration at Tetlin in 2013. This program aims to establish a maiden resource an exciting gold-copper-silver discovery that bears the name of the late co-founder, and investigate several of the other similar-looking prospects across the 726,600-acre (294,000 hectares) property.

"We will have two or three exploration rigs drilling about 60-85 core holes on our Tetlin lease this summer as well as complete additional airborne geophysics, reconnaissance exploration and environmental studies," Juneau said.

Juneau told Mining News that Peak was a tenacious supporter of the Tetlin project right up to his untimely passing in April and a major contributor to each financing carried out by Core.

"If it weren't for Ken's courage and investment we almost certainly would have never discovered the Peak zone," he said.

A US$5 million initial phase of the 2013 program that began in May includes geophysical surveys, additional drilling at the Peak zone and initial drilling at three other prospects. Upon reviewing the phase 1 results, Core will decide how best to allocate its efforts for the remainder of the season.

Using oil & gas nomenclature, Juneau explained, "We are

see **TETLIN EXPLORATION** *page 14*

continued from page 6

EPA STUDY

in authoring two reports associated with the Bristol Bay Assessment, also produced assessments that were used to win a US$19 billion judgment against Chevron in Ecuadorian court.

Charging that Stratus falsified its reports, Chevron sued the environmental research firm for fraud and racketeering. In an April 11 response to the suit, Stratus published a 28-page affidavit accompanied by 16 pages of individual declarations disavowing the environmental assessments.

McGroarty May 6 delivered a letter to Sen. Vitter and Senate Committee on Environment and Public Works Chair Barbra Boxer, urging them to investigate EPA's relationship with Stratus.

"We were concerned by the news of this admission, as public records show that the EPA has multiple active contracts with Stratus Consulting collectively worth up to tens of millions of taxpayer dollars," said McGroarty.

ARPN is particularly troubled by Stratus' contributions to the EPA's recently released draft Bristol Bay Assessment.

"We also discovered that several research reports authored by Ann Maest, managing scientist for Stratus Consulting – who played a key role in producing and personally disavowing the falsified research in Ecuador – are currently being used to support a major environmental assessment by the EPA."

According to research conducted by ARPN, the Bristol Bay Assessment cites two non-peer-reviewed documents – Kuipers et al. (2006) and Wobus et al. (2012) – co-authored by Maest.

Noting that these reports had not been previously vetted, the EPA had an internal peer-review conducted on these and five other documents.

Concluding its internal peer-review process, the EPA said "the reports are of 'sufficient scientific quality and credibility' to be incorporated into the second external review draft of the Bristol Bay Assessment."

David Atkins, EPA's top-listed peer-reviewer of the Kuipers report, is a former managing scientist for Stratus Consulting – the same position currently held by Maest, author of the report. Atkins also sits on the 12-person panel charged with peer-reviewing the Bristol Bay Assessment.

The Center for Science in Public Participation, a conservation group that is involved with the attempt to convince EPA to veto the permits to develop Pebble, credits Maest for providing technical support on geochemistry and hydrology used in its stance against development of the Southwest Alaska copper project. ●

COLUMN

Bottom feeders hunt projects in Alaska

Cold spring, slow times chill plans for mineral exploration spending as projected outlays for 2013 drop 50 percent from 2011 peak

By CURT FREEMEN
For Mining News

The unseasonably, interminably, unspeakably cold spring that is delaying mineral exploration and development work in Alaska this year is being mimicked by a financial chill that is affecting Alaska exploration efforts just like it is the rest of the world. Not to put too fine a point on it, but from a mineral exploration standpoint, Alaska is shaping up to be as dead as a doornail this summer (ever wonder where that saying came from ... but I digress.).

How dead? Try this statistic on for size: Of the 49 exploration projects I have been tracking around the state, the two largest (Pebble and Donlin), will account for almost two-thirds of this year's estimated exploration expenditures. The top five will account for almost 85 percent of this year's estimated exploration expenditures. Perhaps equally distressing is the fact that more than half of the 49 "active" exploration projects are planning to spend little or nothing on exploration.

Granted, not everyone announces their annual exploration budgets, but many companies do and even if they don't put a number on the work programs they describe, it usually is not hard to estimate what they might spend.

Another arresting quasi-factoid is the dramatic year-on-year decrease in exploration expenditures from Alaska's all-time high of US$365.1 million in 2011. It is a quasi-factoid because 2012 and 2013 exploration expenditures are still estimated amounts; however, based on what I can see in my rutilated quartz crystal ball, 2013 exploration expenditures are looking like they will be down at least 25 percent from what we saw in 2012 and will plunge more than 50 percent from the peak exploration spending levels of 2011.

As is always the case when slow times hit the mining industry, counter-cyclical buying (some call it bottom feeding) is occurring, quietly and deliberately, but the result will be new faces and names in the list of active Alaska mineral industry entities.

The author


CURT FREEMAN

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column May 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 website is www.avalonalaska.com.

> *"Of the 49 exploration projects I have been tracking around the state, the two largest (Pebble and Donlin), will account for almost two-thirds of this year's estimated exploration expenditures. The top five will account for almost 85 percent of this year's estimated exploration expenditures. Perhaps equally distressing is the fact that more than half of the 49 "active" exploration projects are planning to spend little or nothing on exploration."* —**Curt Freeman, guest columnist**

Western Alaska

TECK RESOURCES LTD. (75 percent) and partner **NANA, INC.** (25 percent) reported first quarter 2013 results from its Red Dog mine. In the first quarter, the mine produced 128,200 metric tons of zinc in concentrate, almost identical to the year-previous period. Zinc ore grade decreased slightly to 17.8 percent, while mill recoveries fell slightly to 82.3 percent. The mine also produced 23,000 metric tons of lead in concentrate. Lead ore grade decreased to 3.9 percent, while mill recoveries increased to 66.8 percent. The mine posted a US$71 million operating profit for the quarter, up significantly from the US$64 million profit a year earlier. Mill throughput increased to 873,000 metric tons versus 859,000 metric tons a year ago.

ZAZU METALS CORP. announced that a second Cost Reimbursement Agreement had been signed with **ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY**. This agreement funds studies commissioned by AIDEA to evaluate the potential use of AIDEA's haul road and port that currently services **TECK RESOURCES LTD.**'s Red Dog mine, for hauling and shipping concentrates from Zazu's Lik deposit. These studies satisfied AIDEA's requirement that the project demonstrate sufficient viability to warrant further support. The second study will determine if modifications are required for handling Lik concentrate, based on current mine output expectations. It also will produce a Term Sheet detailing the expected cost for Zazu to use the road and port facilities. Current resources at Lik include Lik South with an indicated mineral resource of 18.74 million metric tons grading 8.08 percent zinc, 2.62 percent lead and 52.8 grams per metric ton silver, plus an inferred mineral resource of 1.23 million metric tons grading 6.80 percent zinc, 2.12 percent lead and 35 g/t silver, at a 5 percent zinc cut-off grade. Lik North is an additional 5.18 million metric tons grading 9.65 percent zinc, 3.25 percent lead and 51 g/t silver of inferred resource at a 7 percent zinc cut-off grade.

GRAPHITE ONE RESOURCES INC. announced initial beneficiation tests at its Graphite Creek graphite project north of Nome. These tests demonstrated that a leaching process could produce graphitic carbon from a rough concentrate with a purity of 99.2 percent. Metallurgical test work is ongoing to develop a simple concentration and leaching process to produce an ultra-high purity (99.9 percent) graphite product.

MILLROCK RESOURCES INC. said had terminated its agreement with **BERING STRAITS NATIVE CORPORATION** on the Bluff project and a portion of the Council project.

FULL METAL MINERALS LTD. announced that it has agreed to sell a 100 percent interest in its Pebble South project to **PEBBLE LIMITED PARTNERSHIP**, a 50:50 partnership between Anglo American plc and Northern Dynasty Minerals Ltd. The sale price was US$750,000.

SILVER PREDATOR CORP. announced that it has completed an option agreement with privately-held **PLAN B MINERALS CORP.** whereby Plan B can earn up to a 100 percent interest in the Illinois Creek gold-silver property. Under the agreement, Plan B will pay an aggregate US$264,500 and a total of 2 million common shares of Plan

see **FREEMAN** page 9

● COLUMN

Spring is in the air, let's go mining!

Despite the world's unrelenting tribulations, it's time to break out the yellow iron, move some Alaska dirt and make some money

By J. P. TANGEN
For Mining News

Earth gets its price for what Earth gives us;
The beggar is taxed for a corner to die in,
The priest hath his fee who comes and shrives us,
We bargain for the graves we lie in;
At the Devil's booth are all things sold
Each ounce of dross costs its ounce of gold …
– James Russell Lowell (1819-1891)

Each year about this time, the sun begins to shine like never before, the rivers rise and the ice melts, the daylight hours grow longer, and miners across Alaska bend their shoulders to their avocation. While it is true that the endless problems we all face don't go away; nonetheless, they seem to take their place as a part of the background noise with which we have to deal while getting on with the real business of life.

Somehow, despite the unending bickering in Washington, so traditional for a lame duck administration; despite the tornados of spring; despite the confrontations in the Levant and the Orient; Alaska's highest priority is to go to work. Looked at in that context, it seems fair to say that now is a good time to be here. Although the price of gold has taken a dip and the Dow waxes boldly, we know in our heart that these developments will change direction soon. What matters is production.

Mining & the law

J.P. TANGEN

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

Now is a good time for all Alaskans to step up to the plate and be proud of our mining heritage. As has been often noted in this column, modern mining is a healthy, safe and environmentally sound industry, and it has been thus in Alaska for a very long time. Few lost-time injuries occur in Alaska's mines and mortal injuries are truly rare. Today's Alaska mines simply don't pollute. Despite all the machinations of the EPA, the Bristol Bay Study has not adduced a shred of evidence that the Pebble Project will harm a single hair on the headwaters of the nearby streams. The Usibelli mine, adjacent though it may be to Denali National Park, hasn't scared away a single tourist in six decades. The Red Dog bounds forward leaving a trail of benefits for all.

It is time to be proud of the Alaska Miners Association, as well. The AMA, under new management, has built a new credibility on a firm foundation, reaching out to its members and others alike, and sharing news of the fiscal benefits that a strong industry produces as well as the needed commodities of a demanding world. Where could there be a better place to mine than in Alaska? For the benefit of those who haven't checked lately, the AMA's website has been revitalized and the AMA has a new Facebook page. Even if you are not inclined to pick up a pen and comment on any of the more pressing regulatory impositions that our leaders are imposing upon the heroes of the tunnel and pit, at least you can click on the "Like" link and swell the ranks of the Association's supporters. Ten thousand likes doesn't seem like too steep a goal to pursue.

As the poet says, "each ounce of dross costs its ounce of gold," but the good news for us, is that the gold comes from our hills and streams. ●

continued from page 8

FREEMAN

Predator will retain a 0.5 percent net smelter returns royalty in the property, provided a feasibility study establishes a minimum proven mineral resource of 500,000 ounces of gold. The Illinois Creek property is centered on a 10-kilometer- (six miles) long east-west striking mineralized zone with related precious and base metal occurrences. The most prominent mineralized area is an open pit heap leach gold-silver mine that was productive in the 1996-1998 time frame. Plan B plans a field program for 2013 that could include drilling in and around the open pit, with the goal of expanding and confirming zones of gold and silver in the quartzite host rocks. In 1997, the geologic resource was estimated to be 7,761,000 tons of ore grading 0.063 ounces-per-ton gold and 1.38 oz/t silver.

TNR GOLD CORP. announced completion of a resource estimate at the Shotgun gold project near Dillingham. The Shotgun Ridge prospect contains a Canadian National Instrument 43-101-compliant inferred mineral resource of 20,734,313 metric tons grading 1.06 g/t gold for a total of 705,960 oz gold using a 0.5 g/t gold cut-off. This mineral resource estimate is based on 34 diamond drill holes totaling 4,932.3 meters. The mineralization at Shotgun Ridge is crops out at surface on a topographic high point and is only defined to a vertical depth of 150 meters. Mineralization appears to be open both at depth and along strike. There are several targets at

see **FREEMAN** *page 10*

continued from page 9

FREEMAN

surface in close proximity to the defined resources that have never been drill tested. These targets will be a priority for future drill campaigns.

MILLROCK RESOURCES INC. said it had entered into an exploration agreement with **BRISTOL BAY NATIVE CORPORATION** on about 650,000 hectares (1,606,150 acres) of land containing at least three known porphyry copper occurrences, Kawisgag, Mallard Duck Bay and Bee Creek. At the Kawisgag prospect, targets are immediately ready to drill. There are two main centers of mineralization and alteration which locally contain disseminated and vein chalcopyrite, molybdenite and pyrite at surface. The Mallard Duck Bay prospect is a zone of hydrothermal alteration covering an area greater than eight square kilometers. Limited exploration indicates that mineralization is associated with a diorite stock. Previous worked identified a strong chargeability induce polarization anomaly coincident with exposed mineralization in a potassic alteration zone but this target never drilled. Mineralization at the Bee Creek prospect is hosted in hornfelsed sediments intruded by a multiphase diorite intrusive rock containing mineralized veins and disseminated chalcopyrite, molybdenite and pyrite. A broad, central, potassic alteration zone bordered by a discontinuous halo of phyllic alteration is exposed at surface. The prospect was initially explored by Bear Creek Mining with five drill holes in 1976. In 2005 and 2006, Metallica Resources Inc. and Full Metal Minerals Ltd. carried out geochemical and geophysical surveys, and drilled two holes. One of the holes intersected 118 meters averaging 0.31 percent copper, 0.009 percent molybdenum and 0.126 parts-per-million gold with 20 meters of 0.66 percent copper and 0.255 ppm gold. Under terms of the deal, Millrock must incur exploration expenditures of US$5 million and pay US$725,000 prior to Dec. 31, 2019. A sliding-scale net smelter return royalty ranging from 1 percent to 2 percent is payable on gold with a 1 percent net smelter return royalty due on production of all other metals.

FULL METAL MINERALS LTD. and **ANTOFAGASTA MINERALS S.A.** announced an initial NI 43-101-compliant inferred mineral resource estimate at the Pyramid copper-gold-molybdenum project on the Alaska Peninsula. At a 0.21 percent copper equivalent cut-off, total contained copper in the Inferred resource category is estimated to be 1.338 billion pounds of copper, 74 million lbs of molybdenum and 488,000 oz gold. Both near-surface supergene enriched mineralization as well as hypogene copper mineralization were modeled and interpolated. At a 0.21 percent copper- equivalent cut-off, this near surface supergene enrichment zone hosts 93.7 million metric tons averaging 0.40 percent copper, 0.019 percent molybdenum and 0.092 g/t gold, or 0.55 percent copper-equivalent. This equates to 823 million lbs copper, 40 million lbs molybdenum and 277,000 oz gold. The hypogene zone hosts 79.1 million metric tons averaging 0.26 percent copper, 0.020 percent molybdenum 0.083 g/t gold, or 0.45 percent copper-equivalent at a 0.21 percent copper-equivalent cutoff. This equates to 514 million lbs copper, 35,000,000 pounds of molybdenum and 212,000 oz of gold. The mineral resource estimate shows that the hypogene mineral resource remains open to depth and along strike in most areas, and the higher grade supergene enriched mineralization is also open for expansion in several areas. Under zero to 90 meters of leach cap, the Pyramid deposit hosts a supergene enrichment blanket, dominated by chalcocite and local covellite mineralization. The supergene blanket has a variable depth, extending to below 250 meters surface in some areas. This 2013 initial resource estimate is based on 30 drill holes totaling 7,486 meters completed by Full Metal and Antofagasta during 2010 to 2012 and an additional 19 shallow historic holes totaling 1,921 meters completed by Quintana-Duval during the mid-1970s.

Interior Alaska

KINROSS GOLD announced first quarter 2013 results from their Fort Knox mine. The mine produced 93,252 ounces at a cash cost of US$558 per ounce versus 61,716 ounces at a cash cost of US$861 per ounce in the year-previous period. This impressive performance occurred in spite of the expected winter slowdown of production from the heap leach and lower mill output as a result of harder ore and slightly lower grade. The harder ore Fort Knox encountered during the quarter is not expected to continue in the second quarter. The mine processed 7,361,000 metric tons of ore with the mill treating 2,894,000 metric tons grading 0.88 g/t gold with a mill recovery of 84 percent. The heap leach saw additions of 536,000 metric tons of ore grading 0.25 g/t gold. The mine continued pre-production stripping for its phase 7 pit and valley leach expansion.

FREEGOLD VENTURES LTD. reported winter 2013 drilling results from its Golden Summit project near Fairbanks. Drilling targeted infill and expansion at the 6 million ounce Dolphin/Cleary Hill deposit. Significant results include 134.9 meters grading 0.71 g/t gold in hole GSDL1301, 112 meters grading 1.03 g/t gold in hole GSDL1302, 120.1 meters grading 0.87 g/t gold in hole GSDL1304, 49.7 meters grading 1.02 g/t gold in hole GSDL1305, 106.7 meters grading 0.54 g/t gold in hole GSDL1306, 30.6 meters grading 0.93 g/t gold in hole GSDL1309 and 34.6 meters grading 0.91 g/t gold in hole GSDL1310. Holes GDSL1301 through GSDL1306 were drilled in a fence approximately 80 meters east of the previous drilling. Results indicate the mineralization within the Dolphin intrusive remains open to the east and to depth, with the mineralization generally increasing in in grade at depth. Hole GSDL1307 through 1310 were drilled along the north edge of the current resource and affirm the potential for expansion of the resource to the north. Freegold is also working towards completion of an updated NI 43-101-compliant resource based on the oxide component of the current resource inventory. The oxide cap at Golden Summit is confined largely to the upper 200 feet of the rock column. The company also indicated that it was planning additional exploration on the remaining 99 percent of the Golden Summit project. High priority target areas include reverse circulation drilling from 1998 in the Tamarack zone, which returned 62 meters grading 0.55 g/t gold in hole TKR 98-01 and 130 meters grading 0.68 g/t gold in hole TKR 98-07, reverse circulation drilling conducted between 1992 and 1998 in the Goose Creek zone which included GSR92-01 which intersected 36 meters grading 0.8 g/t gold, and 8.1 g/t silver, GSR 92-04 which returned 19.8 meters grading 1.72 g/t gold, GCR97-01 which returned 49 meters grading 4.1 g/t gold and 55 meters grading 30 g/t silver, GCD 97-01 which intersected 19 meters of 1.0 g/t gold and 28.4 g/t silver and GCR98-01 returned 18 meters of 3.8 g/t gold and 6.3 g/t silver. Historical reverse circulation drilling in the Too Much Gold area returned 27 meters grading 2.3 g/t gold in hole TMG9606, and 38 meters grading 0.95 g/t gold in hole TMG 9608. In the Iowa area Hole IAR98-01intersected 24 meters grading 0.74 g/t gold in, and hole IAR 98-03 intersected 27 meters grading 0.72 g/t gold.

Teryl Resources Corp. announced drilling plans at its Fish Creek property

see **FREEMAN** *page 11*

continued from page 10

FREEMAN

adjacent to **KINROSS GOLD**'s Fort Knox mine. The company plans to drill six holes to test an intrusive target. These targets were defined in part by previously completed airborne geophysical surveys.

INTERNATIONAL TOWER HILL MINES LTD. provided a corporate update at its Livengood gold project. The company is focusing on completing all the engineering and analysis to support the completion of its Feasibility Study and the environmental work needed to maintain its current schedule. The company indicated that in light of the recent decrease in the gold price and its effect on the gold mining industry, the company has prepared for the potential of a continuing lower gold price and has developed an alternate work program. The company revised its 2013 program to limit spending to the engineering and analysis required to support the completion of the base case feasibility study and the environmental baseline work and project documentation needed to continue to advance the project toward the permitting stage along with the company's corporate activities and compliance matters. As the feasibility study nears completion, the company indicated that it would review its budgetary and financing options, including consideration of a future strategic alliance to assist in further development, permitting and construction costs.

Alaska Range

HEATHERDALE RESOURCES LTD. announced that it has returned the Delta polymetallic project in the eastern Alaska Range to **AGNICO EAGLE MINES LTD.** and no longer holds an interest in the project. The company indicated that current market conditions require the company to focus its efforts on the advanced-stage Niblack polymetallic project in southeastern Alaska.

WESTMOUNTAIN GOLD, INC. reported that heavy equipment had been mobilized to its Terra project in anticipation of a May startup of facilities construction, including a larger airstrip, a road network and a mine portal opening for underground development. These efforts will support its 2013 bulk sample milling and mining activities at the Ben Vein Zone.

Northern Alaska

NOVACOPPER INC. announced the signing of a memorandum of understanding with the **ALASKA INDUSTRIAL DEVELOPMENT EXPORT AUTHORITY** to investigate the viability of permitting and constructing an industrial access road to the Ambler mining district and the company's Upper Kobuk mineral project which encompasses both the Bornite and Arctic deposits. The agreement formalizes the roles of each party as they relate to permitting and funding the Ambler Mining District Industrial Access Road. Since 2009 considerable work has been carried out by the **ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**, which has evaluated various road options in the region since 2009, including numerous possible access routes and the collection of environmental baseline data. The State of Alaska has expended about US$10 million on these studies. A further US$8.5 million is included in the 2013 fiscal budget to support permitting activities for the Ambler Mining District Industrial Access Road.

GOLDRICH MINING CO. and **NYACAU, LLC** announced successful completion of mobilizing of equipment and supplies needed for its 2013 placer gold drilling program and its placer mining operation this summer at Chandalar, Alaska. Total investment in equipment and assets mobilized to the site for both exploration and mining activities, including equipment previously purchased, now exceeds US$8 million.

Southeastern Alaska

HECLA MINING announced first-quarter 2013 production results from the Greens Creek mine on Admiralty Island. The total cash cost per ounce of silver produced at Greens Creek for the quarter was US$5.02 per ounce versus US$2.24/oz in the year previous period, due primarily to lower by-product credits as a result of lower by-product production. Mining and milling costs per ton were up by 13 percent and 16 percent, respectively, in the first quarter compared to the same period in 2012. The increase in milling costs was primarily due to diesel fuel costs related to the generation of more power on-site due to lower availability of less expensive hydroelectric power. Both mining and milling costs were impacted by an increase in labor costs as a result of higher costs of medical and other benefits and higher salary costs. Higher mining costs are also the result of higher maintenance costs. The average grade of ore mined during the quarter was 12.74 ounces-per-ton silver, up from the average grade of 11.08 oz/t that was mined in the first quarter of 2012. During the first quarter, the mine produced 1,780,524 oz of silver, 13,689 oz of gold, 4,835 tons of lead and 14,072 tons of zinc. The mill processed 197,823 tons of ore during the quarter. Silver production in the first quarter was 34 percent higher than the same period in 2012. This increase was due primarily to 20 percent higher tonnage and 15 percent higher grades compared to last year. Exploration at the mine made significant progress in defining high-grade extensions to mineralization along the Deep Southwest, 5250 and Gallagher ore trends. Deep Southwest is a recently discovered zone which lies below and further west of the Southwest Zone. The geometry of this body is currently being defined but it is open down dip and to the southwest along strike. Significant intersections include 27.1 oz/t silver, 0.39 oz/t gold, 13.3 percent zinc and 6.1 percent lead over 8.6 feet (Deep Southwest); 21.5 ounces of silver per ton, 0.31 oz/t gold, 8.9 percent zinc and 4.1 percent lead over 10.5 feet (Deep Southwest) and 21.9 oz/t silver, 0.05 oz/t gold, 5.8 percent zinc and 2.8 percent lead over 24.6 feet (5250 Zone). Drilling will continue in an effort to define and expand the Deep Southwest further southwest and the 5250 Zone to the south; however, the emphasis is expected to shift to in-fill drilling of the 200 South in an effort to convert resources to reserves. The company also announced year-end 2013 reserves and resources for the mine including proven reserves of 12,000 tons grading 9.3 oz/t silver, 0.095 oz/t gold, 2.7 percent lead and 7.8 percent zinc and probable reserves of 7,845,600 tons grading 12.0 oz/t silver, 0.092 oz/t gold, 3.4 percent lead and 9.0 percent zinc. In addition, the mine contains 448,600 tons of indicated resources grading 5.9 oz/t silver, 0.119 oz/t gold, 3.2 percent lead and 7.0 percent zinc and 3,784,500 tons of inferred resources grading 11.4 oz/t silver, 0.100 oz/t gold, 2.4 percent lead and 6.2 percent zinc. I know we are not supposes to do this, but if you add up the silver in all categories, the mine is carrying more than 140 million ounces of silver in resource!

COEUR D'ALENE MINES announced updated first-quarter 2013 production results from its Kensington gold mine near Juneau. The mine produced 25,206 ounces of gold at a cash cost of US$1,055 per ounce following fourth quarter 2012 production of 28,717 gold ounces at cash operating costs of US$1,065 per ounce. During the first quarter, the mill processed 129,057 tons of ore averaging 0.20 oz/t gold, 13 percent lower than the fourth quarter 2012, but 11 percent higher than first quarter 2012. Mill recoveries came in at 96.2 percent. The gold grade is expected to gradually improve during the remaining quarters of 2013 as higher-grade stopes are mined and processed. During the first quarter, rebuilds of generators limited backfilling rates, which negatively impacted overall efficiency and costs. The mine is expected to produce 108,000 to 114,000 ounces of gold during 2013. Development drilling during the first quarter was focused on production definition drilling in order to develop mining blocks from year-end reserves. Exploration drilling focused on upgrading and expanding existing mineralized zones to be used in subsequent reserve estimation, mostly at zones 10 and 50 of the main Kensington deposit. In addition, drilling was performed at the Comet target, which is situated about 5,000 feet southeast of the high-grade, narrow vein Raven deposit. New assay results from the Kensington South zone showed potential for Kensington-style mineralization from this large, relatively untested area. To facilitate future drilling, construction of a new cross-cut drift began in the first quarter with completion of 430 feet of the planned 750 feet of drift. ●

NUNAVUT

Skittish markets hamper metals prices

Economist shares Scotiabank global commodities forecast for 2013-14 at Nunavut gathering; predicts mixed bag for commodity prices

By ROSE RAGSDALE

For Mining News

Scotiabank's Commodity Price Index, after losing significant ground in late 2012, started 2013 on a stronger note, climbing 3.8 percent in January before slipping 0.9 percent a month later, Scotiabank Vice President, Economics Patricia M. Mohr told a capacity crowd at 2013 Nunavut Mining Symposium in April.

The annual gathering, held April 8-11 in Iqaluit, NU, the northern territory's capital, attracted 500 delegates, matching the record attendance reported for the symposium in 2012.

Mohr, a commodity market specialist at the Toronto-based financial institution, developed the Scotiabank Commodity Price Index, which is the first index designed to measure price trends for Canadian commodities in export.

PATRICIA M. MOHR

In 2012, Scotiabank was ranked as the No.1 lead arranger (by deal count) in the Canadian and North American mining sectors; and the most international of the Canadian banks, with offices in Beijing, Shanghai, Chongqing and Hong Kong, operations across Asia Pacific (including India, Malaysia and Thailand), throughout Latin America (including Mexico, Chile, Peru, Brazil and Colombia), London and New York.

Giving an overview of the outlook for metal prices, currencies and global growth in 2013-14 and beyond, Mohr told the Nunavut gathering that commodity prices started 2013 on a positive note but the markets remain skittish because of lingering uncertainty in the U.S. and European economies and mixed signals from China.

"The global mining industry appears to be entering a period of more cautious and disciplined capital spending to boost returns for shareholders. Some new mine development has been deferred. This reflects the significant operating and capital cost escalation of the past three years and a still uncertain global economic environment – with major companies having difficulty dealing with global volatility – the start-stop nature of world economic growth since 2008 – and over-paying for large acquisitions," she said.

Commodity prices are expected to receive a modest lift this year from the restocking of raw materials, after buyers worldwide lost confidence and liquidated inventories or deferred orders in 2012, though prices for some metals, such as copper and nickel, will ease, she said.

In 2014, world growth should strengthen to average 3.8 percent, with GDP in the consumer-driven U.S. economy gaining 2.7 percent, while China's GDP is expected to grow about 8.3 percent.

This is moderately supportive of stronger commodity prices, said Mohr.

Noting a seismic shift in global growth has occurred from the G7 industrialized countries to emerging markets (especially in Asia), she said the share of investment spending in China's GDP, at 48.7 percent, is much higher than in the United States (12.3 percent), reflecting China's ongoing industrialization, urbanization and technological upgrading. This feature has tremendously boosted global demand for base metals, iron ore and steel over the past decade, she said.

"Riskier assets such as commodities and equities were buoyed by the 2012:Q4 pick-up in China's economy – with (gross domestic product) accelerating to 7.9 percent from 7.4 percent in Q3, accompanied by raw material restocking; a partial resolution of the U.S. 'fiscal cliff' (extension of the Bush-era tax cuts, excepting the payroll tax reduction, and stepped-up taxes on high-income earners); and expectations of some pick-up in the U.S. economy by (the second half of 2013)," Mohr said.

China is expected to continue pursuing the economic initiatives in its 12th Five-Year Plan, unveiled in March 2011, though the country has new "once-in-a-decade" leadership (elected in November) that is expected to seek more market-related solutions (less central planning), be more 'populist' and emphasize government over party interests.

China's State Council, concerned over escalating residential property prices, announced a five-point plan to contain prices. The plan calls for increasing land supply and speeding up home construction, including 6.3 million units of affordable, 'socially assisted' housing starts for 2013. Mohr said residential construction has an important impact on demand for steel rebar and metals.

China is no longer pursuing "economic growth at any cost," which reflects a subtle shift toward a slower, more market-determined advance, she said.

Mohr also said sales of oil, natural gas and motor vehicles are potential bright spots in the economies of both China and the United States during the next two years. But lagging jobs growth in the United States is slowing the economic recovery. The economist said U.S. payrolls advanced gained 1.91 million jobs during the year ended March 31, up slightly from the previous 12-month period.

Gold outlook

Among individual commodities, gold prices languished in early 2013 due to a shift of investor interest from gold to equities in anticipation of a moderate pick-up in the U.S. economy in the second half of 2013; the unlikelihood that the Federal Reserve will need to apply even more quantitative easing to kick-start the U.S. economy; a tax by India on gold imports; and the failure of Basel III to include gold in the liquidity coverage ratio for banks. (Basel III, or the Third Basel Accord, is a global, voluntary regulatory standard on bank capital adequacy, stress testing and market liquidity risk.)

see SKITTISH MARKETS page 13

continued from page 12

SKITTISH MARKETS

While the Fed will maintain its 'asset purchase' program for some time, the mere discussion of when it will be withdrawn has unnerved the gold market, Mohr observed.

Scotiabank's price forecast is for gold to average US$1,600-US$1,650 per ounce in 2013 and US$1,600/oz in 2014.

Copper horizon

Global supply and demand conditions were in deficit in 2011 and largely flat in 2012 for copper, but are gradually shifting into modest surplus, according to Mohr.

"Copper prices are likely to ease alongside brownfield mine expansion," she predicted, noting that global consumption should pick up again in 2014 and 2015 (+5 percent per annum). However, world mine production will finally increase more substantially by the second half of 2013 and in 2014 (+8 percent), pushing down copper prices.

Scotiabank's price outlook is for copper to average US$3.54 per pound in 2013 and US$3.20/lb in 2014.

Copper prices are likely to ease below the US$3/lb mark by 2015, and rebound later in the decade, to US$3.50/lb, given high capital costs for new mine development," Mohr observed.

Zinc outlook

Describing zinc as the next big base metal play, Mohr said demand for the metal will be boosted mid-decade by a recovery in G7 construction activity, and zinc prices could climb as high as US$1.50 in 2016-17.

Global supply and demand conditions for refined zinc shifted into a surprising deficit in 2012, as Chinese producers temporarily shut down smelters in view of low treatment charges on domestic and imported concentrates, poor profitability and tight credit from Chinese banks.

China's smelters reduced output by an unprecedented 5.4 percent to 4.8 million metric tons in 2012, shifting the global zinc concentrate market into a moderate surplus, Mohr said.

On a more positive note, the supply and demand balance for both smelted/refined metal and concentrates will likely be in deficit by mid-decade due to significant mine depletion and inadequate zinc mine development, she observed.

"In the second half of the decade, zinc demand will be boosted by a recovery in G7 construction activity. Residential construction was exceptionally weak in the United States, following the 2008 'Great Recession', but is starting a multiple-year recovery," Mohr said.

Scotiabank's price outlook is for zinc to average US96 cents/lb in 2013 and US$1.10/lb in 2014.

Competitive iron

Iron ore benchmark prices will face more competitive market conditions as producers are challenged to compete with Western Australian iron ore with cash costs of only US$40-60 per metric ton and ocean shipping costs of US$7.60 to Beilun, China, said Mohr, noting that higher-cost Chinese mines will close, making room for capacity expansion in Australia, Brazil, West Africa and Canada, including the new world-class iron ore region that is emerging in the Nunavut/Labrador Trough.

The quarterly contract price for Pilbara Blend/Mt. Newman fines (FOB loading port in Western Australia) – the key international benchmark – should settle at about US215 cents/dmtu for the first quarter of fiscal 2013, Mohr said. Prices remain quite profitable for Rio Tinto and BHP Billiton in the Pilbara region, yielding a 67 percent margin over cash costs at the port.

However, the pace of China's steel production growth will likely slow in 2014-16, cutting the growth rate in world iron ore demand to 3.7 percent per annum, she predicted.

At the same time, large new and very low-cost supplies will be developed in Western Australia, with world supplies increasing by 8.4 percent per annum. The net result, market conditions will shift into balance by 2014-15, with a risk of surplus in 2016, she said.

In view of expected lower prices mid-decade and given the correction in China's iron ore imports last summer, companies are now examining project development more critically, with some mines deferred and other operations reconfigured to cut costs, she observed.

Baffinland Iron Mines Ltd., for example, is paring the size of its proposed C$4 billion Mary River iron ore project, which government regulators had approved for production in December. Under the current project certificate, Baffinland would produce 18 million tonnes of iron annually and ship the ore year-round, but the company, owned 50-50 by Luxembourg-based steelmaker Arcelormittal and Iron Ore Holdings Corp. of Australia, now wants to produce 3.5 million metric tons annually to be shipped during the Arctic's three-month summer-fall open water season. Baffinland is currently preparing an addendum to the project's final environmental impact statement, expected by the end of June. The company said the new proposal will shorten the project's development timetable and generate revenue to help pay for the larger mine project.

Scotiabank's price outlook is for iron ore to average US188 cents per dry metric ton unit FOB loading port in 2013, US180 cents/dmtu in 2014, and US145 cents/dmtu in 2016.

Soft uranium

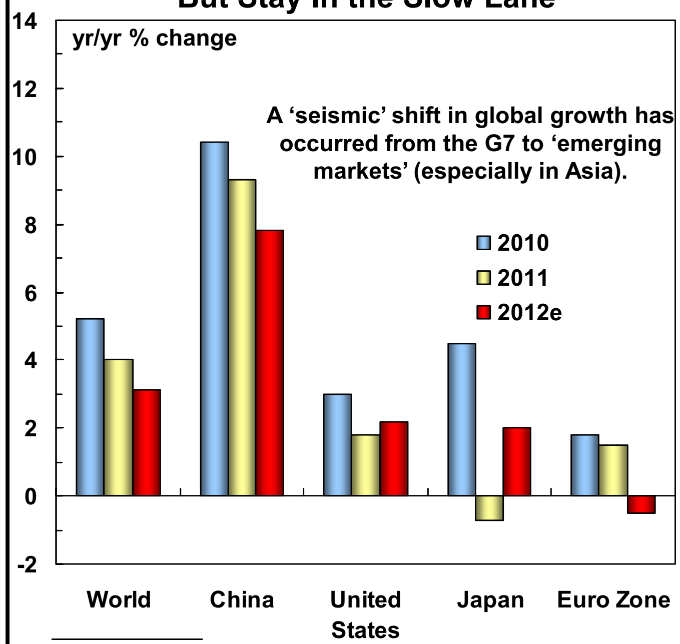
Spot uranium prices remain at low ebb in early 2013 – at US$42.25/lb – well below the US$66/lb average just prior to the Fukushima-Daiichi incident in Japan.

Mohr said global supply and demand conditions for uranium were in slight surplus in 2012, with U3O8 demand at about 184 million lbs just under total supply of 191 million lbs (about 151-152 million lbs of mine production plus secondary supplies of 39 million lbs). U.S. Department of Energy sales at roughly 10 million lbs per annum add to secondary supplies. The DOE had inventory of 111 million lbs equivalent in 2012 and will likely continue to sell off stock to pay for environmental cleanups.

However, she said a number of developments, including an aggressive push to build and operate nuclear reactors in Japan, Kazakstan and China point to a medium-term price recovery. "And most importantly, the end of the U.S.-Russia HEU Agreement in late 2013 (reducing supplies in the West by 24 million lbs U3O8 equivalent)," will affect uranium prices, Mohr added.

Scotiabank's spot price forecast is for uranium to average US$44/lb in 2013, US$50/lb in 2014, and US$60-65/lb in 2016. ●

Global Growth Will Edge Up in 2013, But Stay In the Slow Lane



In 2014, world growth should strengthen to 3.8% – moderately supportive of stronger commodity prices. U.S. GDP 2.7%, China 8.3%.
U.S. Federal Gov't Deficit: FY2012 US$1.089 tr; 2013F US$950 bn.

GDP (% per annum)

	2008	2009	2010	2012e	2013f	2014f
WORLD*	2.8	-0.6	5.2	3.1	3.1	3.8
MEXICO	1.2	-6.2	5.5	3.9	3.6	3.9
CANADA	0.5	-2.5	3.2	1.8	1.6	2.4
UNITED STATES	0.0	-2.6	3.0	2.2	2.0	2.7
CHINA	9.6	9.2	10.4	7.8	8.1	8.3
INDIA	5.2	7.7	9.0	5.0	6.0	6.5
BRAZIL	5.1	-0.2	7.5	0.9	3.3	4.0
JAPAN	-1.1	-5.5	4.5	2.0	0.9	1.4
EURO ZONE	0.5	-4.1	1.8	-0.5	-0.5	0.9

*Scotiabank estimates. Average 1988-1997: 3.4% p.a. prior to the "economic take-off" in China and India.

Scotiabank 7

● NUNAVUT

Territory offers vast mineral potential

With 8 mines in development and many more early-stage projects, Nunavut is emerging as a formidable magnet for mining activity

By ROSE RAGSDALE

Mining News

There is a reason why Nunavut has one of the fastest-growing economies in Canada: mining.

With one operating gold mine at Meadowbank, two projects on the verge of startup at Hope Bay and Mary River , five projects advancing through the environmental assessment process at Meliadine, Back River, Hackett River, and the Izok corridor, and exploration activities continuing across all three regions in 2013, there's little wonder that Nunavut's "time has come."

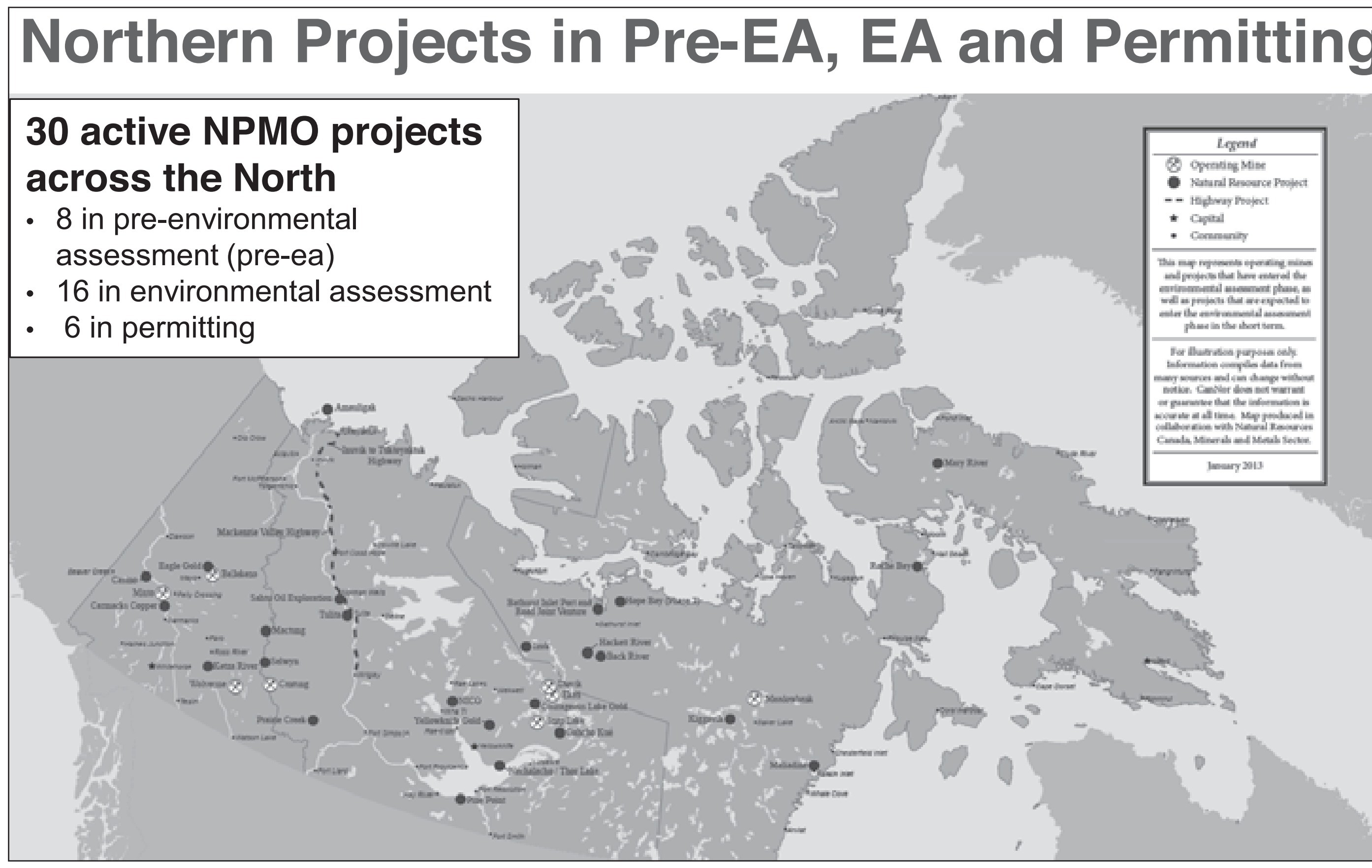
That's the word from Matthew Spence, director general of the Northern Projects Management Office of the Canadian Northern Economic Development Agency.

"Mining has the best potential to create jobs and long-term prosperity for Nunavumiut," Spence told an audience at the Nunavut Mining Symposium held in Iqaluit, NU in April.

In all, eight mining projects in various stages of development are currently winding their way through the regulatory assessment and permitting process in Nunavut. Representing a large number of different commodities, the ventures also will bring more than C$12 billion in capital investment and 5,000 full-time jobs to Nunavut, a mammoth territory with a sparse population of less than 35,000 residents and currently an available labor force of roughly 2000 people.

"Mining (in Nunavut) offers a broad range of direct and indirect career opportunities," Spence said. He also noted that multi-generational opportunities are associated with many of the mine projects

see NUNAVUT POTENTIAL page 19



NORTHERN PROJECTS MANAGEMENT OFFICE, CANADIAN NORTHERN ECONOMIC DEVELOPMENT AGENCY

---

continued from page 7

TETLIN EXPLORATION

going to drill our wildcat wells in phase 1 and drill our appraisal wells in phase 2."

Distinctive property

To the tune of some US$3.6 million, the largest portion of Core's 2013 drilling will focus on establishing an inaugural resource at Peak, a unique zone of high-grade gold and copper mineralization located in the northeastern part of the 1,135-square-mile (2,940 hectares) Tetlin property.

"The idea is to try to find a limit to Peak because we certainly feel like we did not find the limit last summer," Juneau said.

Peak is one of five prospective zones situated within a nine-square-mile (23 square kilometers) area of Tetlin known as Chief Danny.

The best intercepts of a maiden 11-hole drill program carried out at Chief Danny in 2011 were cut in an area at the southern end of the prospect dubbed the Discovery zone.

TET1105, the discovery hole, cut 3.7 meters averaging 3.1 grams per metric ton gold, 300.2 g/t silver and 0.26 percent copper. TET1107 – drilled about 100 meters to the north – cut 6.4 meters grading 7.4 g/t gold, 4.9 g/t silver and 0.15 percent copper.

Encouraged by the results from the maiden drill program, Core revisited the Discovery zone in 2012.

Not finding the mineralization it was seeking at Discovery, Core drilled a "wildcat" hole at a geochemical-geophysical target some 500 meters to the northeast. This fifth hole of the 2012 program, TET1216, cut multiples zones of gold-copper-silver mineralization over the initial 114 meters, highlights include:

•25.8 meters averaging 7.83 g/t gold, 23.5 g/t silver and 0.05 percent copper, from a depth of 20 meters;

•6.7 meters averaging 3.5 g/t gold, 15.8 g/t silver and 0.54 percent copper, from a depth of 53.3 meters;

•13.7 meters averaging 2.77 g/t gold, 1.4 g/t silver and 0.05 percent copper, from a depth of 64.6 meters; and

•32.6 meters averaging 3.74 g/t gold, 2.6 g/t silver and 0.11 percent copper, from a depth of 81.4 meters.

On the back of this discovery, Core redirected the focus of the 2012 drilling on the newly discovered Peak zone.

TET1217 cut 49.1 meters averaging 11.22 g/t gold, 21.6 g/t silver and 0.09 percent copper, from a depth of 7.9 meters; and TET1218 cut 58.5 meters averaging 14.45 g/t gold, 9.1 g/t silver and 0.24 percent copper.

TET1236, drilled 125 meters west of hole 18, cut strikingly similar mineralization. From a depth of 155.5 meters, hole 36 cut 48.8 meters averaging 14.72 g/t gold, 10.1 g/t silver and 0.24 percent copper.

Particularly high-grade copper mineralization was encountered at the southeastern extent of the 2012 drilling at the Peak zone. TET1238 cut 36.6 meters averaging 0.31 g/t gold, 71.6 g/t silver and 1.11 percent copper from a depth of 118.9 meters; and TET1260 cut two thick copper-rich zones – 32.6 meters averaging 0.06 g/t gold, 28.7 g/t silver and 1.34 percent copper from a depth of 116.4 meters, and 59.1 meters averaging 0.02 g/t gold, 8.8 g/t silver and 0.37 g/t copper, from a depth of 116.4 meters.

The 24 holes (5,400 meters) completed at Peak during 2012 traced a 500-meter-long zone of mineralization that seems to be writing a new chapter in the chronicles of economic geology.

Freeman said the gold-dominated mineralization at Peak is schist-hosted and has relatively high sulfide content. In addition to gold, copper and silver – cobalt sometimes shows up in the assays.

"There are only one or two places in the world that have that sort of combination, and they are all higher-temperature systems," explained Avalon Development President Curt Freeman.

Like intrusive-related gold deposits found in the Tintina Gold Belt, the gold found at Peak zone has a strong correlation with bismuth. The deposit also demonstrates some similarities to porphyry copper deposits.

"It is kind of a hybrid beast right now – it is writing its own model as we speak," said Freeman.

Avalon and Core have nailed down some characteristics that will help them expand the Peak zone and seek out other similar deposits at Tetlin. One of the clearest indicators is that the copper-gold mineralization intersected during drilling coincides with a zone that has both a high magnetic and high conductivity response – the lower the geophysical response, the lower the values of gold and copper.

"The Peak zone stands out as one of those really highly conductive and magnetic zones, and if you look around nearby, there are a dozen other places that you should go look because they have a similar geophysical signature," Freeman explained.

Seeking the big kahuna

While expanding and establishing an inaugural resource at the yet-to-be defined mineralization at Peak, Core will use what it has already learned to investigate some of the other zones with a similar geophysical and geochemical signature.

"Grow Peak zone but more importantly go look at some of these other zones and make sure they are not the really big kahuna out there," Freeman summarized.

Four of these highly conductive and magnetic zones are located within the larger Chief Danny area and will initially be the primary focus of the 2013 search for the "big kahuna."

About US$2.6 million of the 2013 budget has been allocated to drilling 15 to 20 holes in these areas located within about two miles (3.2 kilometers) of Peak.

Another US$1.5 million of the 2013 budget has been allocated to drill 10 to 13 holes at three more distal areas – MM, Chisana and Copper Hill.

MM, situated some nine miles (15 kilometers) southwest of Chief Danny, was first identified through pan concentrate sampling. One pan sample collected in 2009 topped 1 g/t gold and follow-up panning in 2010 discovered gold concentrates exceeding 0.1 g/t gold in several of the drainages in the MM prospect area.

Later geophysical surveys have identified three areas that may be the big kahuna.

Located some 25 miles (40 kilometers) southeast of Chief Danny, Copper Hill is a prospect that Core planned to drill in 2012 but did not get to, due to the focus on the Peak discovery.

Pan concentrates collected from the north side of Copper Hill returned assays of more than 23 g/t gold and another stream draining to the south turned up 4.9 g/t gold. Rock and soil sampling have shown that copper and gold mineralization is most prevalent along an east-west trending thrust fault that runs along the highland area dividing the gold-enriched drainages.

Coincident magnetic and resistivity highs have confirmed the target area for the drilling planned for Copper Hill in 2013.

Streams draining Chisana, a prospect situated about 12 miles (19 kilometers) east of Chief Danny, have turned up visible gold in pan concentrates.

While a number of regions at Tetlin have sufficient geophysical and geochemical information to target drilling, there are many more prospects across the property for which the dataset is not complete.

To help generate the next set of targets, Core has budgeted US$750,000 for airborne geophysics and US$500,000 for additional reconnaissance exploration, including soil and rock sampling.

The company also has allotted US$500,000 to see if it can apply what it has learned at Tetlin to other regions of Alaska's Eastern Interior, an area that has been scanned for porphyry copper and intrusive-related gold deposits but never for Peak-style gold-copper-silver mineralization. ●

● NUNAVUT

Producer clears hurdles at Meadowbank

Mine overcomes myriad challenges, major setbacks to contribute 366,000 ounces of gold to Agnico-Eagle's total production in 2012

By ROSE RAGSDALE

For Mining News

The story of the Meadowbank Mine in central Nunavut continues to be a tale of challenges met and obstacles conquered.

From the hour that its development was conceptualized in the middle of the past decade, the gold at Meadowbank has delivered a succession of hurdles for its developers – first Cumberland Resources and then Agnico-Eagle Mines Ltd. – to clear. Agnico-Eagle acquired Cumberland in April 2007 in an all-share acquisition valued at C$710 million. In 2010, the gold producer brought Meadowbank into commercial production.

Located in the Kivalliq region of Nunavut, about 2,600 kilometers (1,612 miles) northwest of Toronto and near Baker Lake, NU, the low-lying gold deposits at Meadowbank are surrounded by and/or situated on the bottom of nearby lakes.

Success story

Three years after startup, Meadowbank is Agnico-Eagle's only Arctic mine. Mined from a system of open pits with the aid of water retention dykes, it has emerged as Agnico Eagle's largest gold producer, and is gaining recognition for innovations in water management.

Meadowbank reported record production of 366,000 ounces at average cash costs of US$913 per ounce in 2012, along with higher sustained mill throughput of 11,000 metric tons per day and growth in reserves at higher grades that could have a positive impact on mine life, which currently extends six years to 2018. The mine is located on a large property (49,000 hectares or 121,079 acres) that has additional exploration potential for gold.

The 25-kilometer Meadowbank gold trend currently has three deposits – Goose Island, Portage and Vault – which together have 2.3 million ounces of gold in reserves (25 million metric tons at 2.8 grams per metric ton.

Meadowbank also enjoys the distinction of being the first operating gold mine to be constructed on Inuit Owned Land since Nunavut settled its land claims with its aboriginal residents. Consequently, mineral royalties for the gold extracted ultimately flow to the Inuit through an umbrella organization, the Nunavut Tunngavik Inc. The mine's Portage and Goose pits are sited on mineral claims that predate the NLCA and thus the royalties are set under the Canada Mining Regulations, while the Vault pit royalties are established by a production lease with NTI.

Commitment to Nunavut

Meadowbank is also one of the largest private employers in Nunavut with about 780 workers, of which 249 are Inuit.

Moreover, Inuit-owned companies are gaining a growing share of contracts let by Agnico-Eagle to supply the mine with goods and services. In 2012, Agnico-Eagle spent C$391.45 million on goods and services to operate the mine, of which C$230.32 million, 58.8 percent, went to Nunavut-based companies, including C$127.17 million, or 32.5 percent, to NTI-registered firms.

The gold producer also paid roughly C$28 million in federal, territorial and municipal taxes in 2012.

For 2013, Agnico-Eagle has projected spending C$364.84 million to run Meadowbank, including some C$124 million on payroll.

The company is also developing the high-grade Meliadine gold project located 290 kilometers (180 miles) southeast of Meadowbank as a larger open pit and underground mine with an initial mine life of 10-15 years.

In addition, the miner is advancing a new labor force development plan in partnership with Nunavut's Department of Education to stimulate the interest and capacity of the territory's future labor force.

The plan includes developing an earth sciences curriculum for Nunavut's schools and providing multi-year support for a "mining matters" program, an in-schools early apprenticeship program, and a new upward mobility program at Meadowbank to advance the mine's core Inuit labor force with a career path.

Further, the company is providing up to C$7 million over two years to support the Kivalliq Mine Training Society; expanding the Arviat Driller Training program with the Hamlet of Arviat; and launching a new effort with the Socio-Economic Monitoring Committee to consider community-based supports and networks to help its employees and their families be successful with employment.

"Our plan is a step in the right direction, but Agnico Eagle does not have all of the answers, the mandate or resources to develop a labor force and address social impacts," said Denis Gourde, corporate director of regulatory and external affairs at Agnico-Eagle.

Gourde told delegates to the 2013 Nunavut Mining Symposium in April that "industry, governments, Inuit organizations, Hamlet leaders and educational organizations need to come together to develop a long-term plan to develop the interest and capacity of the Nunavut's labor

see MEADOWBANK OUTPUT page 18

● BRITISH COLUMBIA

Developer eyes Mount Milligan startup

Thompson Creek says C$1.5 billion copper-gold project is on schedule to commence operations in August, commercial production in Q4

By ROSE RAGSDALE

For Mining News

The Government of British Columbia's push in recent years for mine exploration and development in the northern region of the province is slowly bearing fruit. An early plum is Thompson Creek Metals Co. Inc.'s Mount Milligan copper-gold mine in north-central B.C., which is rolling toward startup in August and commercial production in the fourth quarter.

Terrane Metals Corp., a subsidiary of Thompson Creek, reports that construction of the 60,000-metric-tons-per-day open pit mine, which is located 155 kilometers (about 96 miles) northwest of Prince George, B.C. and mid-way between the communities of Fort St. James and Mackenzie, was 85-89 percent complete in early May.

On-schedule construction

Thompson Creek Chairman and CEO Kevin Loughrey told analysts on a conference call May 9 that the Mt. Milligan project is progressing satisfactorily.

"Our important Mt. Milligan project is very much on schedule," Loughrey said. "This week, in fact, we've started the primary crusher and it is crushing waste and creating a base with the waste for the stockpile we will build over the next several weeks, and we are on schedule to the guidance previously given. We believe now that we'll start the mill running in August of this year with commercial production still slated for the fourth quarter of 2013, which is very good news for us."

Mt. Milligan has been designed as a conventional truck-shovel open pit operation using a copper flotation concentrator for extraction of higher grade and rich reserves in the early years of a 22-year mine life with a strip ratio of 0.84:1. Plant recoveries are expected to average 84.1 percent for copper and 71.4 percent for gold in a clean and marketable copper concentrate grading 26.4 percent copper and 43.7 grams per metric ton gold, with a minor silver credit. Mine production is expected to average 89 million pounds per year of copper and about

THOMPSON CREEK METALS CO. INC.

The Mount Milligan copper-gold mine project in north-central British Columbia is scheduled to begin production in August with a 60,000-metric-tons-per-day open pit operation with a 22-year mine life. The project's mine pit and mobile equipment, including two electric shovels and a fleet of trucks, is already fully operational.

262,100 ounces per year of gold during the first six years of operation.

Mt. Milligan had 6.0 million oz in gold reserves, which is currently the second-largest gold reserve in Canada and 2.1 billion lbs in copper reserves.

The current capital expenditure to construct and develop Mt. Milligan is estimated at C$1.5 billion, of which 95 percent has been spent or contractually committed.

Loughrey also praised the workers at Mt. Milligan, noting that they are approaching 5 million work hours without a lost-time incident

Other recent achievements include bringing the mine pit into full operation with all mobile equipment, including two electric shovels and a fleet of trucks, currently operational; preparing the SAG and ball mills for pre-commissioning; and hiring the operations senior management, he said.

In March, the company reported the appointment of Dennis Hoof as vice president and general manager at Mt. Milligan. Hoof has more than 20 years of management experience across the chemical, petrochemical and mining industries.

As of Dec. 31, 202 permanent workers had been hired for the mine. Of that number, 67 percent are residents of the local region.

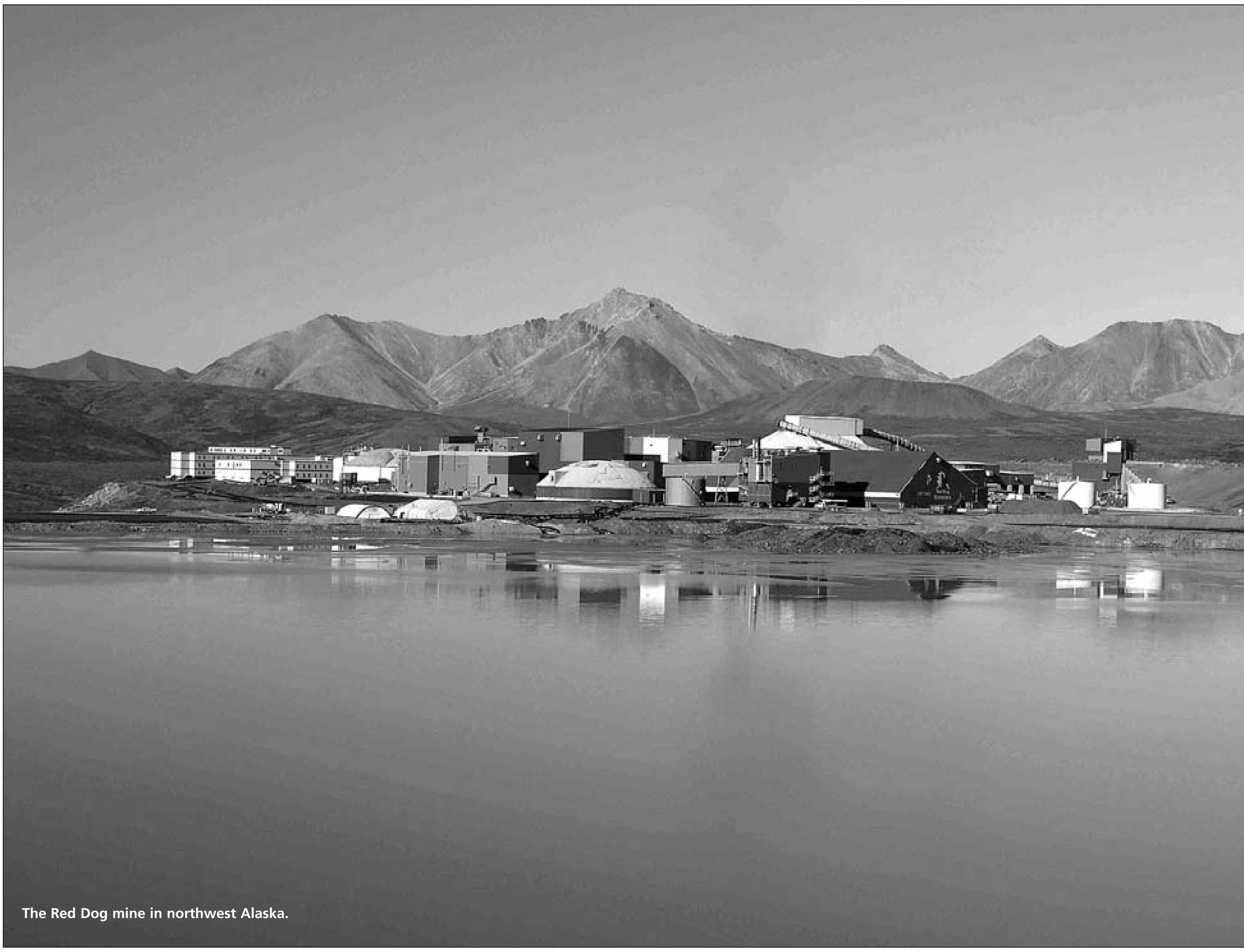
Thompson Creek plans to begin copper and gold sales in the fourth quarter. Some 85 percent of the mine's production is already committed through 2013, with copper concentrate to be shipped to the Pacific Rim. In addition, 120,000 tons of concentrate is committed for 2015 and 2016.

see MOUNT MILLIGAN page 19

North of 60 Mining News

Companies involved in Alaska and northwestern Canada's mining industry

DIRECTORY



The Red Dog mine in northwest Alaska.

Mining Companies

Kinross Fort Knox/Fairbanks Gold Mining Inc.
Fairbanks, AK 99707
Contact: Anna Atchison, Manager,
Community and Government Relations
Phone: (907) 490-2218 Fax: (907) 490-2290
E-mail: anna.atchison@kinross.com
Website: www.kinross.com
Located 25 miles northeast of Fairbanks, Fort Knox is Alaska's largest producing gold mine; during 2011, Fort Knox achieved 5 million ounces of gold produced, a modern record in Alaska mining.

Usibelli Coal Mine
Fairbanks, AK 99701
Contact: Bill Brophy, VP Customer Relations
Phone: (907) 452-2625
Fax: (907) 451-6543
Email: info@usibelli.com
Website: www.usibelli.com
Other Office
PO Box 1000
Healy, AK 99743
Phone: (907) 683-2226
Usibelli Coal Mine is headquartered in Healy, Alaska and has 700 million tons of coal reserves. UCM produces an average of 2 million tons of sub-bituminous coal each year.

Service, Supply & Equipment

Alaska Air Cargo • Horizon Air Cargo
P.O. Box 68900 SEAFZ
Seattle, WA 98168
Contact: Joe Sprague, Vice President of Cargo
Phone: (206) 392-2705 or 800-2ALASKA
Fax: (206) 392-2641
E-mail: joe.sprague@alaskaair.com
Website: www.alaskacargo.com
Award winning cargo services to more places, more often, with more lift to, from, and within the state of Alaska.

Alaska Analytical Laboratory
1956 Richardson Highway
North Pole, AK 99705
Phone: (907) 488-1266 • Fax: (907) 488-077
E-mail: jlovejoy@mappatestlab.com
Environmental analytical soil testing for GRO, DRO, RRO, and UTEX. Field screening and phase 1 and 2 site assessments also available.

Alaska Earth Sciences
Anchorage, AK 99515
Contact: Bill Ellis, Rob Retherford, owners
Phone: (907) 522-4664 • Fax: (907) 349-3557
E-mail: wellis@alaskaearthsciences.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 or Chris Ledgerwood
Phone: (907) 562-5303
Fax: (907) 562-5309
E-mail: afcinfo@ak.net
Website: akfrontier.com
Alaskan heavy civil construction company specializing in Arctic and remote site development with the experience, equipment and personnel to safely and efficiently complete your project.

Alaska Steel Co.
1200 W. Dowling
Anchorage, AK 99518
Contact: Joe Pavlas, outside sales manager
Phone: (907) 561-1188
Toll free: (800) 770-0969 (AK only)
Fax: (907) 561-2935
E-mail: j.pavlas@alaskasteel.com
Fairbanks Office:
2800 South Cushman
Contact: Dan Socha, branch mgr.
Phone: (907) 456-2719 • Fax: (907) 451-0449
Kenai Office:
205 Trading Bay Rd.
Contact: Will Bolz, branch mgr.
Phone: (907) 283-3880 • Fax: (907) 283-3759
Rebar Division
1200 W. Dowling
Anchorage, AK 99518
Contact: Mike Galyon, rebar mgr.
Phone: (907) 561-1188 • Fax: (907) 562-7518
Full-line steel, aluminum, and rebar 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 move-

ment. 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

Construction Machinery Industrial, LLC
5400 Homer Drive
Anchorage, AK 99518
Contact: Robert Fairbanks, Sales Manager
Phone: (907) 563-3822
Fax: (907) 563-1381
Email: r.fairbanks@cmiak.com
Website: www.cmiak.com

ERA Helicopter
6160 Carl Brady Drive
Anchorage, AK 99502
Contact: David Sell, Business Development Alaska
Phone: (907) 550-8607
Fax: (907) 550-8608
E-mail: dsell@erahelicopters.com
Website: www.erahelicopters.com
Helicopter charters, flight-seeing tours, aerial photography, oil and gas support, mineral exploration, construction, seismic remote site work, internal and external load, heli-hiking and sled-dog adventures.

GCI Industrial Telecom
Anchorage:
11260 Old Seward Highway Ste. 105
Anchorage, AK 99515
Phone: (907) 868-0400
Fax: (907) 868-9528
Toll free: (877) 411-1484
Web site: www.GCI-IndustrialTelecom.com
Rick Hansen, Director
Richard.Hansen@gci.com
Mark Johnson, Business Development Manager
Mark.Johnson@gci.com
Deadhorse:
Aurora Hotel #205
Deadhorse, Alaska 99734
Phone: (907) 771-1090
Mike Stanford, Senior Manager North Slope
Mike.Stanford@gci.com
Houston, Texas:
8588 Katy Freeway, Suite 226
Houston, Texas 77024
Phone: (713) 589-4456
Hillary McIntosh, Account Representative
Hillary.Mcintosh@gci.com
GCI Industrial Telecom provides innovative solutions to the most complex communication issues facing industrial clientele. We deliver competitive services, reputable expertise and safely operate under the most severe working conditions for the oil, gas and natural resource industries. GCI-your best choice for full life cycle, expert, proven, industrial communications.

Global Equipment Services Inc.
3820 Schact St.
Fairbanks, AK 99701
Contact: Jeff Dahl, General Manager
Phone (425) 531-1854
Email: jdahl@gesequipment.com
Website: www.GESequipment.com
Global Equipment Services Inc. purchases, sells and rents high quality heavy equipment worldwide with a strong emphasis on high quality work ready Caterpillar Track type tractors.

HDR Alaska Inc.
2525 C St., Ste 305
Anchorage, AK 99503
Contact: Jaci Mellott, Marketing Coordinator
Phone: (907) 644-2091
Fax: (907) 644-2022
Email: Jaci.Mellott@hdrinc.com
Website: www.hdrinc.com
HDR Alaska provides engineering, environmental, planning, and consultation services for mining and mineral exploration clients. Services include: biological studies; cultural resources; project permitting; NEPA; stakeholder outreach; agency consultation; and environmental, civil, transportation, energy, and heavy structural engineering.

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
511 W. 41st Ave, Suite 101
Anchorage, AK 99503
Contact: Judy Patrick
Phone: (907) 258-4704
Fax: (907) 258-4706
E-mail: jpp@mtaonline.net
Website: www.judypatrickphotography.com
Creative images for the resource development industry.

Keller Williams Commercial
101 West Benson, Ste. 503
Contact: Stewart Smith, Associate Broker
Anchorage, AK 99503
Phone: (907) 865-6505
Cell: (907) 727-8686
Email: stewart@stusell.com
Contact: Ryan Mae Lucas, Associate
Cell: (907) 360-7135
Email: ryan@stusell.com
Website: www.stusell.com;
www.AKMiningClaims.com
Mining Claims to buy, sell, or lease, call the Alaska professionals. We provide real estate brokerage service to the mining industry, with over 35 years of commercial experience. Call for a list of our featured properties.

Last Frontier Air Ventures
39901 N. Glenn Hwy.
Sutton, AK 99674
Contact: Dave King, owner
Phone: (907) 745-5701
Fax: (907) 745-5711
E-mail: helicopter@LFAV.com
Anchorage Base (907) 272-8300
Web site: www.LFAV.com
Helicopter support statewide for mineral exploration, survey research and development, slung cargo, video/film projects, telecom support, tours, crew transport, heli skiing. Short and long term contracts.

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 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.

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.

Pebble Partnership
3201 C St., Suite 604
Anchorage, AK 99503
Phone: 907-339-2600
www.pebblepartnership.com

PND Engineers Inc.
1506 W. 36th Ave.
Anchorage, AK 99503
Phone: (907) 561-1011
Fax: (907) 563-4220
Website: www.pndengineers.com
Full-service engineering firm providing civil, structural, and geotechnical engineering, including mining support, resource development, permitting, marine and coastal engineering, transportation engineering, hydrology, site remediation, and project management.

TTT Environmental LLC
4201 "B" St.
Anchorage, AK 99503
Contact: Tom Tompkins, general manager
Phone: 907-770-9041 • Fax: 907-770-9046
Email: info@tttenviro.com
Website: www.tttenviro.com
Alaska's preferred source for instrument rentals, sales, service and supplies. We supply equipment for air monitoring, water sampling, field screening, PPE and more.

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.

Total Safety U.S. Inc.
209 E. 51st Ave.
Anchorage, AK 99503
Contact: Tyler Zollinger, District Manager.
Phone: (907) 743-9871
Fax: (907) 743-9872
E-mail: tyler.zollinger@totalsafety.com
Website: www.totalsafety.com
A full service safety company specializing in Remote Medical Services, H2S Services, Industrial Hygiene, and Safety Consultants. Total Safety provides Service, Rental, or Sales of Safe Breathing Air, Gas Detection, and Technical Safety Equipment.

URS Corp.
700 G Street, Suite 500
Anchorage, AK 99501
Contact: Joe Hegna, Alaska Vice President/Alaska Operations Manager
Phone: (907) 562-3366 • Fax: (907) 562-1297
E-mail: joe_hegna@urscorp.com
Website: www.urscorp.com
Provide engineering, construction and technical services with capabilities to support all stages of project life cycle. We offer a full range of program management; planning, design and engineering; construction and construction management; operations and maintenance; and decommissioning and closure services.

Advertiser Index

continued from page 15

MEADOWBANK OUTPUT

force."

"Collaboration and shared investment will bring significant economic benefit," he added.

Mining in a lake

Still, Agnico-Eagle has come a long way in just six years. Among the early challenges met and overcome at Meadowbank were the company's limited arctic experience, the logistical headaches of a limited shipping season and the remoteness of the mine site, difficulties of fuel storage and management and the need to train such a large staff, including an Inuit work force.

But the most intriguing hurdle that the company was required to clear was the challenge of mining in a lake.

Meadowbank was designed as a series of open pits, with initial ore taken from the Portage pit, with the waters of Second Portage Lake kept away from the pit area by a containment dike, a structure modeled after those built at the Diavik diamond mine in Northwest Territories.

The enclosure was then pumped dry and prepared for mining. Containment dikes also were erected around the Goose Island pit, which began production in 2011.

To protect the arctic char and lake trout living in the area of the future Portage pit, Agnico-Eagle conducted a "fish-out" process, which involved removing and transporting about 550 kilograms of live fish to nearby lakes at an average cost of C$400 per fish.

The Portage and Goose Island pits are expected to be depleted in 2014 when the Vault pit will begin production. Under the current mine plan, Vault will provide most of the ore to be produced at Meadowbank after 2015.

To win approval for its mine plan for Meadowbank from federal and territorial regulators, Agnico-Eagle agreed to 202 conditions to obtain its water license, and 86 conditions to gain a project certificate from the Nunavut Impact Review Board. It also had to ante up nearly C$91 million to meet security requirements for the mine's closure.

With mine closure, the containment dikes will be breached and the pits allowed to flood.

Production woes

After the mine commenced commercial production in 2010, the challenges kept coming. Among them:

Mining in blizzards and cold temperatures, which led to temporary shutdowns and equipment issues; Mining in permafrost and the need to dewater the mine;

AGNICO-EAGLE MINES LTD.

The 11,000-metric-tons-per-day Meadowbank gold mine located in central Nunavut is mined from three low-lying open pits with the aid of water retention dykes.

Boosting throughput to 8,500 tpd capacity in the processing plant;

Storing the ore and dealing with frozen stockpiles;

Managing dilution of grade due to narrow mining widths, ore zone angle and ore dispersion from blasting;

Coping with high turnover, including 229 departures among Inuit workers (permanent and temporary) in 2011; and,

Recovering from a devastating kitchen fire in 2011.

Payable gold production at Meadowbank in 2011 totaled a disappointing 270,801 ounces with average cash costs per ounce of US$1,000. That compares unfavorably with the mine's full-year 2010 output of 265,659 ounces at total cash costs per ounce of US$693.

The higher operating costs at Meadowbank directly impacted the gold grade that the producer could mine economically.

"Simply put, some of what was previously considered ore is now considered waste," a company spokesman said in announcing the writedown

As a result, Agnico-Eagle pared Meadowbank's ore reserves to reflect its belief that it could no longer economically mine some of the lower grade ore in the deposits.

The company also adopted a new optimized mine plan for Meadowbank that shortened the mine's life and resulted in an associated reduction in the carrying value of the operation. Meadowbank's value was reduced to about US$762 million from a previous property, plant and mine development book value of roughly US$1.7 billion.

Brighter outlook

Agnico-Eagle said Meadowbank was the biggest contributor to its strong performance in 2012.

The Meadowbank mill processed an average of 11,193 tpd in the fourth quarter of 2012, up 26 percent from the 8,866 tpd achieved in the same period a year earlier. The improved mill throughput was due to significant improvements in equipment availability and maintenance.

The company believes this level of throughput is sustainable, given the mine's initial design rate of 8,500 tpd has been consistently exceeded since the startup of a permanent secondary crusher in June 2011.

Mine site costs per metric ton averaged C$90 in the fourth quarter and C$88 for the full year of 2012, down from C$98 and C$91 in the fourth quarter and full year of 2011, respectively. The improvement in costs per metric ton was primarily driven by less waste being moved in the new mine plan and overall productivity gains.

The mine is expected to produce 360,000 ounces of gold in 2013 at costs of US$985/oz, and about 358,000 ounces of gold annually in 2014 and 2015.

"Following two difficult startup years, Meadowbank exceeded expectations in 2012 primarily due to improved operating efficiencies, higher sustained throughput, better equipment availability and improvements in dilution. The currently expected mine life now extends partially into 2018. This is a slight extension of the previously disclosed mine life, in spite of the plan for much higher throughput rates, due to optimization of the mine plan largely at the Vault orebody," the company said.

Ongoing challenges

But Agnico-Eagle continues to encounter new challenges at Meadowbank. One of its latest hurdles is the mine's thirst for increasing amounts of water.

The company applied to the Nunavut Water Board in April for an amendment to its water license to permit the withdrawal of 1.87 million cubic meters per year of fresh water in 2013, and 1.15 million cubic meters per year thereafter, for domestic camp use, mining, milling, and associated uses.

Since gold production commenced at Meadowbank in 2010, Agnico-Eagle has reused water from the tailings slurry for mill processing. This reclaimed water has accounted for the majority of the mill's water intake (73 percent in 2012), with the balance obtained from ore water (1 percent in 2012) and fresh water (26 percent in 2012).

Meadowbank's current water license permits Agnico-Eagle to obtain 700,000 cubic meters per year of fresh water for domestic camp use, mining, milling and associated uses. But the company has exceeded the license limit for the past three years.

Despite significant success at engineering solutions to optimize fresh water use, the mine's requirements are projected to continue to exceed the permitted rate. Increased fresh water use is due to higher than anticipated rates of ore processing, and an adjustment of the initial water balance model, resulting in a deficit of reclaimed water.

Following inspections in March and July, Aboriginal Affairs and Northern Development Canada recommended that the company apply for a license amendment to permit an increase to the allowable usage of fresh water.

No significant impacts to the local aquatic ecosystem are anticipated as a result of the requested increase in fresh water use, because the total volume withdrawn for mining under maximum use for 2010 – 2018 would be less than 2.5 percent of the volume of Third Portage Lake.

Agnico-Eagle told the Water Board that it is developing an action plan to further reduce fresh water withdrawal by using attenuation pond water for mill processing and tailings deposition. The requested fresh water withdrawal rates are therefore considered to represent a conservative worst-case scenario, in the case that the planned reductions are not successful. ●

continued from page 15

MOUNT MILLIGAN

Cash generator

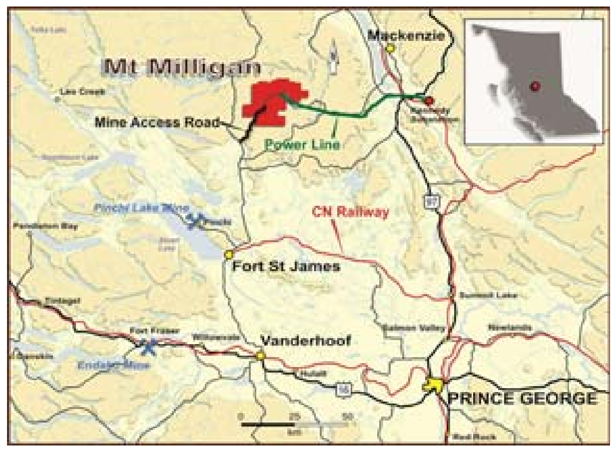
At current commodity prices, Mt. Milligan could generate about US$520 million in annual cash revenue during the first six years of production at annual estimated cash costs of US$280 million, including refining and transportation cost, according to Loughrey.

Considered a significant source for gold, Mt. Milligan also will produce minor payable quantities of silver.

The progress at Mt. Milligan is also good news for Thompson Creek's partner, Royal Gold Inc., which invested US$781 million in the project in exchange for 52.25 percent of the mine project's gold stream, for a payment of $435 per ounce. Thompson Creek used the funds to help finance construction of the mine.

The project is expected to provide a huge boost to Royal Gold's cash flow, potentially generating US$131 million (or US$2.02 per share) at current gold prices. By comparison, the company generated a total of US$172 million during the past four quarters from its other investments.

Thompson Creek has plans to sell its nearly 48 percent of the mine's gold output at prevailing market prices, generating at current prices about $200 million annually, which is enough revenue to offset most of the mine's total operating costs.



THOMPSON CREEK METALS CO. INC.

This means the cost of producing copper at Mt. Milligan could be negative or at least very low, Loughrey told the analysts.

Mining indicator

Mt. Milligan also represents the second new mine to come on stream in British Columbia in recent years and is one of two new mines under construction north of Prince George. Imperial Metals Corp.'s Red Chris copper project is also under construction, and in 2012 New Gold Inc. re-opened its New Afton mine in the southern part of the province.

Further, there are 30 mining projects with potential to be developed in the near future in British Columbia, a province described as still largely unexplored by the Association of Mining Explorers British Columbia.

"The best indicator of success for mineral explorers is the construction and development of new mines," AME BC officials have said.

Provincial officials also laud the Mt. Milligan mine project as an important economic engine for north-central B.C. In 2012 alone, Terrane Metals did business at Mt. Milligan with about 200 companies within the region, generating a regional spend of some C$125 million. The region is defined as the area from Prince George to Fraser Lake in the south and Mackenzie and Fort St James in the north.

Total project procurement is 2012 was just over C$480 million, which means that more than a quarter of Mt. Milligan's purchasing was sourced locally.

Mt. Milligan is also a part of British Columbia's historic revenue-sharing agreements signed in 20120 with three First Nations – the McLeod Lake Indian Band and Stk'emlupsemc of the Secwepemc Nation (Skeetchestn and Tk'emlúps First Nations), regarding the mines at Mount Milligan and New Afton, respectively. British Columbia is the first province in Canada to share direct revenue generated from mining activities with First Nations.

In addition, Duz Cho Construction, a company owned by the McLeod Lake Indian Band has won the contract to build the tailings storage facility at Mt. Milligan. ●

continued from page 14

NUNAVUT POTENTIAL

being developed.

Vast potential

Elizabeth Kingston, general manager of the Nunavut office of the NWT & Nunavut Chamber of Mines, told the Iqaluit gathering that the tremendous mineral potential of both Nunavut and Northwest Territories made them great places to invest.

"More than C$32 billion worth of minerals have been mined since 1932 from the two territories; 44 percent was diamonds, 22 percent zinc, 18 percent gold, 9 percent lead, 4 percent tungsten, 2 percent silver, 1 percent uranium and less than 1 percent copper," she said.

Kingston cited Nunavut's eight geological provinces, diverse mineralogy, including gold, silver, diamonds, lead, zinc, uranium, tungsten, rare earths, cobalt, bismuth, nickel and copper, and the fact that the vast territory, roughly one-third larger than Alaska, is also undermapped and under-explored

She noted that the annual Fraser Institute survey of mining executives ranked Nunavut No. 7 among 93 global jurisdictions with attractive geology.

Kingston also observed that in addition to eight to 10 advanced mine projects in its development pipeline, Nunavut also boasts 10 additional promising projects – North Country Gold Corp.'s Three Bluffs, Committee Bay (gold); Stornoway Diamonds Corp.'s Hammer (diamonds); North Arrow Minerals Inc.'s Oro (gold); Prosperity Goldfields Corp.'s Kiyuk (gold); Starfield Resources Inc.' Ferguson Lake (nickel/copper/platinum); Cameco's Aberdeen (uranium); Canada Coal Inc.'s Nunavut Coal (coal); Commander Resources Ltd.'s Baffin Island Gold (gold); Peregrine Diamonds Ltd.'s Chidliak (diamonds); and Advanced Explorations Inc.'s Roche Bay (iron) as well as numerous early stage ventures.

Kingston said the benefits of this mining activity will add up and generate numerous training and job opportunities as well as business expenditures, government royalties, tax revenues and social assistance savings; Inuit revenues in direct royalties and shared resource revenues.

Potential benefits of mining in Nunavut from 2013-2030 include those derived from one currently operating mine and seven potential new mines; the territory's GDP climbing to C$36 billion, total federal and territorial tax (direct + royalties) exceeding C$10 billion, nearly 100,000 person-years of employment and total income earned in Nunavut of more than C$9 billion.

Robust exploration

Mineral exploration activity continues to be a bright spot in Nunavut's economy as explorers shoveled a total of C$443 million into projects across the territory in 2012, according to Natural Resources Canada. As a result, Nunavut ranked fourth-highest among Canada's provinces and territories in attracting mineral exploration spending.

Matthew Senkow, district geologist in the Nunavut Regional Office of Aboriginal Affairs and Northern Development Canada, told the Symposium that 31 projects – 10 gold, eight base metals, five iron; four uranium; two diamonds; one nickel-copper-platinum group elements, and one coal - were active in 2012 in Nunavut. Several projects include multiple properties and/or are multi-commodities.

Most of the investment, C$228.7 million, was focused on projects seeking precious metals, primarily gold, while base metals drew C$81.2 million; iron, C$80.5 million; uranium, C$40.2 million; diamonds, C$8.9 million and other minerals, C$3.6 million.

For 2013, NRCan projects comparable mineral exploration spending in Nunavut to decrease significantly to C$312.7 million, which is still fifth-highest in Canada. Iron and uranium will take the biggest hits in 2013, dropping to C$8.2 million and C$29.0 million, respectively. Precious metals will attract C$192.2 million, while base metals will draw C$69.9 million, and diamonds, C$3.5 million. The hunt for other minerals (nickel, copper, PGE and coal), however, will see spending nearly triple to C$10.0 million.

Policy changes

Recognizing the importance of mining to the future of Nunavut's economy, federal, territorial and other policy-makers are taking steps to enhance investment and regulatory certainty in Nunavut. Recent actions to provide investment certainty include the Northern Regulatory Improvement initiative, federal Bill C-47 (Northern Jobs and Growth Act), and the Nunavut Planning & Project Assessment Act, which streamlines the project review and assessment process, Kingston said.

Policy certainty improvements include the Mineral Exploration & Mining Strategy adopted in 2007; the reinforced supportive Nunavut Uranium Policy approved in 2012; Nunavut Economic Development Strategy and Nunavut Land Use Plan (Poverty reduction) currently under way and early-stage devolution discussions. ●