

# NORTH OF 60 MINING NEWS

- 4 Yukon explorers seek Carlin gold  
*Newmont, bevy of juniors seek mineralization reminiscent of Nevada trend*
- 8 NovaGold makes tectonic shifts  
*New leaders Lang, Kaplan focus on developing 40M/oz Donlin Gold deposit*
- 14 Yukon First Nations, miners agree  
*MOU aims to preserve traditional values while promoting minerals industry*

This core from hole RC-11-187 is part of a 34.7-meter intercept averaging 12 percent copper, drilled at the Bornite property in the Upper Kobuk region of Northwest Alaska. NovaCopper Inc., a company created to continue the exploration of NovaGold Resources Inc.'s Ambler project, will expand on this drill intercept when it takes over exploration of the Upper Kobuk Mineral Project in 2012. Page 10

*A special supplement to Petroleum News*

WEEK OF  
December 25, 2011







**Only pay for the  
speed you need...**

**Dynamic Routing!<sup>SM</sup>**



*With shipping costs on the rise it only makes sense to match your time requirements to the mode. Lynden's exclusive Dynamic Routing<sup>SM</sup> 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 Routing<sup>SM</sup> plan to meet your supply chain needs.*

[www.lynden.com](http://www.lynden.com)

1-888-596-3361

The Lynden Family of Companies



Innovative Transportation Solutions



• A L A S K A

# Heatherdale to buy partner, produce PEA

Consolidating ownership of Niblack, company appraises economic viability of building a mine at Prince of Wales Island VMS project

By SHANE LASLEY  
Mining News

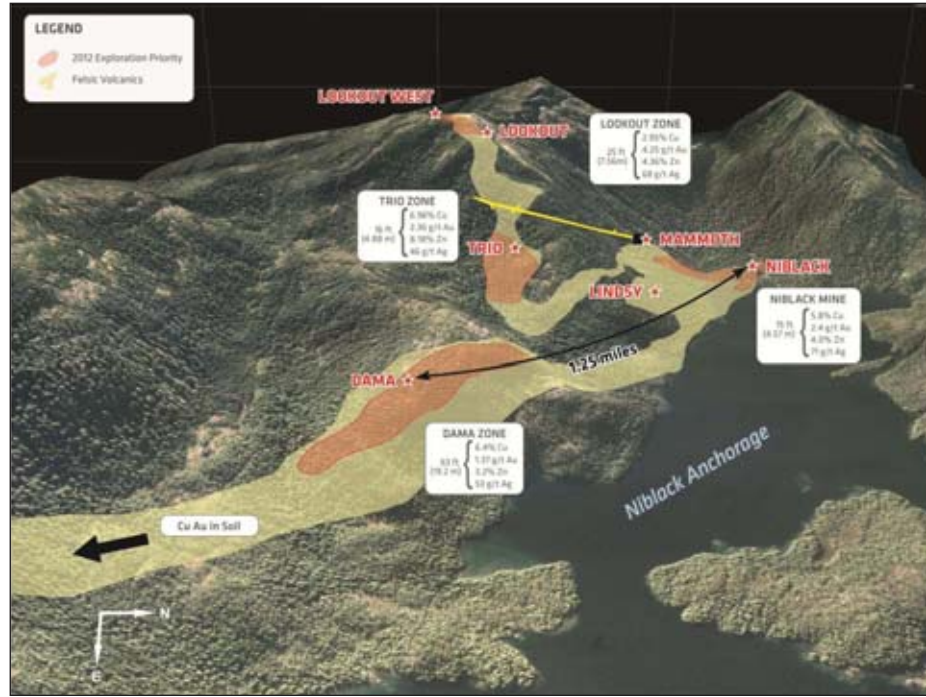
By consolidating ownership of the Niblack copper-gold-silver-zinc-silver project on Prince of Wales Island in Southeast Alaska, Heatherdale Resources Ltd. is taking long strides in advancing the volcanogenic massive sulfide project toward development.

"After three years of successfully operating the Niblack project as a joint venture, the boards of directors of Heatherdale and Niblack (Niblack Mineral Development Inc.) have agreed that the best way to efficiently advance development of the Niblack project is to consolidate project interests into one company," said Heatherdale Chairman Scott Cousens. "During this time we have had an excellent working relationship with the professional team at Niblack, and through our joint efforts we have achieved a number of milestones at the Niblack project over the past 24 months, including a significant increase in mineral resources and establishing the veracity of our geological model through discovery of new zones. Work is now focused on progressing with engineering work toward completion of a preliminary economic assessment for the project."



SCOTT COUSENS

Heatherdale and Niblack Mineral Development have agreed, subject to customary approvals, that the Hunter Dickinson-affiliated company will acquire all of the common shares of Niblack in exchange for Heatherdale shares, on the basis of one-half of a Heatherdale share per Niblack share. Based on the current number of outstanding shares in Niblack, Heatherdale anticipates the issuance of about 18 million shares to complete the transaction.



HEATHERDALE RESOURCES LTD.

Niblack Mineral Development Dec. 16 mailed an informational circular asking its shareholders to approve the arrangement.

"The offer will provide Niblack shareholders with increased value provided through ownership of shares in a well structured company which is operated by strong management with years of Alaskan development experience," said Niblack President and CEO John Williamson.

A special meeting of Niblack shareholders will be held on Jan. 11 and the buyout is expected to be made official Jan. 13.

## Resource growth continues

In late November Heatherdale announced that its 2011 underground drill program has increased the indicated resources at Niblack by 33 percent and added 29 percent to the inferred resources category. This updated resource will provide the basis for the PEA due out early in 2012.

Based on 373 holes drilled at Niblack through Nov. 4, the Lookout deposit now has an indicated resource of 5.64 million

metric tons averaging 0.95 percent copper, 1.75 grams per metric ton gold, 29.52 g/t silver and 1.73 percent zinc.

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

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

The previous resource estimate for Niblack project, released in March, delineated a higher-grade core zone within the Lookout deposit that Heatherdale consid-

ers to be an ideal starter zone for a mine. Heatherdale said the 2011 drilling has confirmed this higher grade zone.

At a US\$150 NSR cut-off this core zone contains 1.16 million metric tons averaging 1.71 percent copper, 3.21 g/t gold, 62.28 g/t silver and 3.83 percent zinc. The company said the 29 percent expansion of inferred resource tonnage at Trio further demonstrates the potential for resource expansion at Niblack. Current outlined dimensions of the Trio deposit are approximately 335 meters by 105 meters, with an average thickness of some 65 meters.



PATRICK SMITH

In addition to defined tons and grade, the Heatherdale CEO noted that the geometry and continuity of the Lookout and Trio deposits – in particular their thicknesses – make them attractive candidates for low-cost underground mining.

"We now have a more refined understanding of the geometry and grade of the deposits at Niblack, an understanding that will significantly enhance the accuracy and longevity of the mine-model currently being developed within the Niblack Project Preliminary Economic

see HEATHERDALE page 21

## Contact North of 60 Mining News:

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



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.

<b>Shane Lasley</b>	PUBLISHER & NEWS EDITOR	<b>ADDRESS</b> P.O. Box 231647 Anchorage, AK 99523-1647
<b>Rose Ragsdale</b>	EDITOR-IN-CHIEF (contractor)	
<b>Mary Mack</b>	CHIEF FINANCIAL OFFICER	<b>NEWS</b> 907.229.6289 publisher@miningnewsnorth.com
<b>Susan Crane</b>	ADVERTISING DIRECTOR	
<b>Heather Yates</b>	BOOKKEEPER	<b>CIRCULATION</b> 907.522.9469 circulation@petroleumnews.com
<b>Bonnie Yonker</b>	AK / INTERNATIONAL ADVERTISING	<b>ADVERTISING</b> Susan Crane • 907.770.5592 scrane@petroleumnews.com
<b>Clint Lasley</b>	GM & CIRCULATION DIRECTOR	
<b>Marti Reeve</b>	SPECIAL PUBLICATIONS DIRECTOR	Bonnie Yonker • 425.483.9705 byonker@petroleumnews.com
<b>Steven Merritt</b>	PRODUCTION DIRECTOR	
<b>Curt Freeman</b>	COLUMNIST	<b>FAX FOR ALL DEPARTMENTS</b> 907.522.9583
<b>Allen Baker</b>	CONTRIBUTING WRITER	
<b>Judy Patrick Photography</b>	CONTRACT PHOTOGRAPHER	Several of the individuals listed above are independent contractors
<b>Forrest Crane</b>	CONTRACT PHOTOGRAPHER	
<b>Tom Kearney</b>	ADVERTISING DESIGN MANAGER	
<b>Mapmakers Alaska</b>	CARTOGRAPHY	
<b>Dee Cashman</b>	CIRCULATION REPRESENTATIVE	

## CORRECTION

In an article about Yukon prospector-geologist Jean Pautler published in the Nov. 20 edition of North of 60 Mining News, the location of the Heart Peaks exploration project was incorrectly reported. The Heart Peaks Project is located in northern British Columbia about 45 kilometers (28 miles) northeast of the past-producing Golden Bear Mine.

**P | N | D**  
ENGINEERS, INC.

**Extreme Conditions Call For Extreme Engineering**

CIVIL • STRUCTURAL • GEOTECHNICAL  
MARINE • COASTAL ENGINEERING  
HYDROLOGY • SANITARY/WASTEWATER  
SURVEYING • VALUE ENGINEERING  
INSPECTION • PERMITTING  
SITE REMEDIATION

WWW.PNDENGINEERS.COM

**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](http://www.PetroleumNews.com). The price in the U.S. is \$78 per year, which includes online access to past stories and early access to Petroleum News every week. (Canada/Mexico subscriptions are \$165.95; overseas subscriptions are \$200) Or, just purchase the online edition of Petroleum News, which also includes the mining supplement and online access to past stories, for \$49 per year.



• YUKON TERRITORY

# Explorers chase signs of Carlin gold

Osiris discovery in 2010, geochemical survey data spark aggressive claims staking and exploration rush throughout Selwyn Basin

By ROSE RAGSDALE  
For Mining News

It is still early days in the exploration play for gold in eastern Yukon Territory, but a score of companies got a jump on competitors in 2011 by targeting promising occurrences of gold and pathfinder elements in a frenzy of unprecedented claim staking and reconnaissance.

The early explorers rushed to the region following a report by Atac Resources Ltd. in September 2010 that it discovered unusual mineralization in the rocky eastern ridges of its 1,600-square-kilometer (618 square miles) Rackla Project. Atac posted high-grade assays from several zones on Rackla where rocks mimic those found far to the south in Nevada's Carlin Trend, where miners have produced more than 90 million ounces of gold in recent decades. The junior named the discovery Osiris after the Egyptian god of the underworld in a nod to Underworld Resources Inc., another Yukon junior that made the White Gold discovery farther west in 2009 and touched off the modern-day Yukon gold rush that still continues.

Energized by Atac's report, a slew of explorers rushed to the region, scrambling to identify drill-ready and near-drill-ready targets that could contain Carlin-style mineralization.

Darwin Green of Constantine Metal Resources Ltd. and Adam Travis, president and CEO of Colorado Resources Ltd., were among geologists and others who joined Atac President Robert Carne in reporting the progress of some of these exploration programs at the Yukon Geoscience Forum Nov. 19-23.

## A strategic joint venture

"Our history starts with Atac's discovery last September," said Green in describing the genesis of a joint venture that Constantine formed with Carlin Gold Corp. "We thought it was important to get up here and investigate."

Through the JV, the companies hoped to profit from both Constantine's familiarity with mining north of the 60th parallel and Carlin Gold's experience tracking Carlin Trend systems in Nevada. The companies' managers also boast 125 years of combined mineral exploration experience.

Green, who is vice president of exploration at Constantine, said the JV team devoured all of the data it could find, including historic research and government data, and started staking claims just weeks after Atac's announcement.

"Probably our biggest tool was (regional geochemical sediment) data," he told a rapt audience of about 500. "We were looking for the key pathfinders, arsenic, antimony, gold and thallium, if they were there. Add to that some regional-scale antiforms and other structures to make nice traps for some of the unique minerals associated with Carlin systems."

Green and others also described poring over research papers written by companies exploring the Selwyn Basin for uranium and base metals in the 1970s and 1980s.



The Yukon Prospectors Association recognized Bill Wengzynowski of Archer Cathro & Associates (1981) Ltd. and Robert C. Carne, president of Atac Resources Ltd., as the 2011 "Yukon Prospectors of the Year" for their work exploring the Rackla Gold Project in east-central Yukon Territory, including the 2010 discovery of Carlin-style mineralization in the Osiris gold zone.

"We looked at what was better than 10 parts-per-billion gold in the RGS data, and we looked at the graininess around Osiris and the rocks in Nevada in the Carlin Trend.

From this research, the Constantine-Carlin Gold JV created a "witches brew of what you want to see in the database and things started popping out at us," Green explained.

"We also looked at where the Dawson Thrust goes and it created all these ideas, and we went out there and staked them. Now, it's truth time to see what we've got."

The Constantine-Carlin Gold JV now controls 4,967 claims in 12 gold property areas totaling about 1,000 square kilometers (386 square miles). Its exploration team has collected 12,000 soil, silt and rock samples to date as part of a C\$1.2 million exploration program.

In September, the companies confirmed the presence of a gold and arsenic soil anomaly (soils with greater than 100 parts-per-million arsenic and greater than 20 ppb gold) spanning 6.5 kilometers (4 miles) in length and 300-1,200 meters in width on its Tut property.

Individual soil samples within this area assayed as high as 2,809 ppb (2.81 grams per metric ton gold) and 58,652 ppm (5.87 percent) arsenic. The JV said other separate areas on the Tut property receiving follow-up evaluation include a zone of gold-in-soil values encountered on a reconnaissance soil traverse 6 kilometers (3.75 miles) west of the first anomaly. This zone is defined by anomalous gold-in-soil values ranging from 56 ppb to 163 ppb gold over a distance of about 1 kilometer (0.62 mile) and is the focus of additional grid sampling, prospecting and mapping.

Initial sampling at the JV's X Block property also encountered several areas with anomalous gold and arsenic, with associated thallium and mercury that are the focus of detailed follow-up work. Separate soil samples have returned values of up to 4,248 ppb (4.25 g/t) gold, 9,756 ppm arsenic, 13.6 ppm thallium and 9.3 ppm mercury. The geological setting of these anomalous sample areas is with-

in the lower Paleozoic strata and structures targeted in the initial staking.

The TUT and X Block properties are located about 140 kilometers (87 miles) northeast of the community of Ross River.

## Aggressive staking push

Colorado Resources is another junior that owes its acceleration out of the starting gate, if not its actual birth, to industry excitement about the gold discoveries in the Yukon.

Travis said he attended the 2010 Yukon Geoscience Forum where many in the industry were buzzing about Atac's Osiris discovery, including representatives of Barrick Gold Corp. and Newmont Mining Corp.

The junior rushed out and quickly staked 50 claims before issuing a C\$2 million initial public offering.

Colorado returned to the Selwyn Basin and found itself caught up with Newmont and the Constantine-Carlin JV in "a good, old-fashioned staking rush, albeit in February," Travis said. "We were hoping to stake the claims in the spring rather than in February. Newmont cost me an extra C\$400,000. At one time, we had three choppers and 23 guys flying from Faro there every day."

Travis said the company focused on staking claims along the shelf margin of the Selwyn Basin. The junior controls 1,400 claims, or about 60 square kilometers (23 square miles) in the region.

"It's certainly not an Atac-size claim block, but it's not bad," said Travis.

"We were told that we had the next best target after Atac. It has the right kind of rocks in the right kind of setting and with the right kind of structure," he explained. "And it is punctuated with the right kind of orpiment-realgar showing right in the middle with decent gold in the trenches and drill holes."

Travis said the results of 14,000 soil samples, 1,200 rock samples, 2,000 line kilometers in a DGEMA survey and 15 trenches identified favorable geology. This along with detailed reports written by earlier explorers in 1979 and 1983 and the impressions of visiting experts from Nevada convinced the junior that it is seeing Carlin-style mineralization in a 4-kilometer- (2.5 miles) long soil anomaly and other targets on its claims.

Newmont spokesman Omar Jabara said the major staked 1,475 claims in the Yukon in 2011, but no other information on the work was available, which is not surprising given that the gold producer has a number of such programs around the globe in its development pipeline.

## More gold at Rackla

After completing 32,500 meters in 118 drill holes in 2011 on its Rackla gold project, Carne said Atac is now very comfortable with the term "Carlin-type mineralization."

Among Atac's latest exploration results, drill hole OS-

see CARLIN GOLD page 22

Successful camp operations begin with Chiulista Camp Services, the premier provider of remote logistics in the state of Alaska. Our professional and efficient services include:

Camp Setup • Camp Management  
Catering • Housekeeping

## Chiulista Services, Inc.

Global Resources. Regional Support. Local Hire.

907.278.2208 | 800.277.5516 | [chiulista.com](http://chiulista.com)



• COLUMN

# Recent mining revival sparks déjà vu

Columnist recalls that similarly positive conditions prevailed in Alaska in 1998 just before the bottom fell out of the industry

By **CURT FREEMAN**  
For Mining News

I was tempted to make a few 2012 predictions now that 2011 is nearly gone, but I decided not to when I came across the following lines and was struck by how closely they mimic our current mining climate:

“On a more local level, several old Alaska properties have been rejuvenated by new players to the Alaska mineral scene. Reserve announcements have touched off renewed land acquisitions and property negotiations. Contracts for technical personnel, drill rigs, helicopters and analytical services are being let earlier than in previous years as companies large and small try to beat the competition to the best services possible. All in all, Alaska looks like its heading into another year of frenetic exploration and development. Hopefully Alaska is reaching Yogi Berra status (nobody goes there any more, the place is too crowded).”

If you recognize these words, you really need to get out more – I wrote them in January 1998 for this publication’s predecessor, Mining News Alaska. Little did I know, I was writing just before Alaska’s mining industry fell out of bed, choking on a sandwich of multi-metals price collapse and the coincident flight of investment capital that plagued the industry for the next four years. So, while I am officially not superstitious, it seems foolish to tempt fate. Best just to shut my gob and enjoy the ride!

## Western Alaska

**NOVAGOLD RESOURCES INC.** and partner **BARRICK GOLD CORP.** announced the long-awaited feasibility study on the Donlin Creek in early December. The study indicates that the mine would produce 1.5 million ounces of gold per year in its first five years of operation at an average cash cost of US\$409 per ounce, which is expected to accelerate project payback, and an average of 1.1 million ounces of gold per year at average cash cost of US\$585 per ounce over its projected 27-year mine life.

The study was based on proven and probable mineral reserves estimated at 33.8 million ounces at an average grade of 2.09 grams per metric ton gold established along only 3 kilometers (2 miles) of a well-established mineralized corridor in excess of 8 kilometers (5 miles) long. Current measured and indicated resources (including the above-mentioned resources) pencil out at 39.007 million ounces grading 2.24 g/t gold and an additional inferred resource of 5.993 million ounces grading 2.02 g/t gold. Don’t tell anyone but this puts total resources at an amazing 45 million ounces of gold. Exploration upside is considered excellent. The capital cost estimated at US\$6.7 billion includes US\$834 million for a natural gas pipeline and nearly US\$1.0 billion in contingencies. The resultant after-tax net present value using the base case three-year trailing average of US\$1,200 per ounce gold displays a positive US\$547 million using a 5 percent discount rate. Importantly, the resultant net present value using sensitivity analysis shows a more than eight-fold expansion of the net present value using to US\$4.6 billion

## The author

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column Dec. 19. 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](mailto:avalon@alaska.net) and his website is [www.avalonalaska.com](http://www.avalonalaska.com).



CURT FREEMAN

at US\$1,700-per-ounce gold, and then a nearly 50 percent increase again to US\$6.7 billion at \$2,000-per-ounce gold. The economic analysis is based on a 27-year mine life with a mill producing 53,500 metric tons per day at a stripping ratio of 5.5 to 1. Average life-of-mine recovery is estimated at 89 percent. Milling will include use of a semi-autogenous grinding mill and two-stage ball mills, sulfide floatation autoclave pressure oxidation and carbon-in-leach cyanidation. Operating costs are estimated at US\$5.91 per metric ton mined and \$38.13/t milled. The partners anticipate the formal initiation of the environmental impact assessment and permitting processes by April 2012.

**ZAZU METALS CORP.** announced additional drilling results from its Lik lead-zinc-silver deposit. All 7 of the metallurgical test holes drilled in 2011 intercepted more than 5 percent lead, plus zinc intervals. Significant results include hole 215 which intersected 50.3 meters grading 3.5 percent lead, 11.4 percent zinc and 86.4 g/t silver, hole 216 which intersected 10.7 meters grading 2.0 percent lead, 8.5 percent zinc and 9 g/t silver, hole 217 which intersected 23.2 meters grading 2.6 percent lead, 8.3 percent zinc and 29.4 g/t silver, hole 221 which intersected 7.9 meters grading 1.8 percent lead, 12.6 percent zinc and 5.5 g/t silver. Field activities at the property have been completed for 2011 but additional metallurgical, engineering, access and environmental studies are ongoing.

**CEDAR MOUNTAIN EXPLORATION INC.** announced drill results from its South Fox prospect on its Kelly Creek gold project on the Seward Peninsula. Significant intercepts include 15.3 meters grading 0.42 g/t gold in hole 11SF05 and to 24 meters grading 0.76 g/t gold in 11SF06. Mineralization in these holes is hosted within faulted and sheared quartz-veined and stock-worked mica quartz schists and partly calcareous graphite quartz schists that have been traced over 250 meters of strike length in drilling. Elsewhere on the project, soil sampling at the Moose prospect returned gold in soils samples up to 1,105 ppb gold and defined a soil anomaly 800 meters long and open in three directions. At the Jaeger prospect, soil sampling defined a new gold in soil anomaly with peak values of 129 ppb gold over a 600-meter-by-200-meter area.

**FIRE RIVER GOLD CORP.** announced that operations at the Nixon Fork mine had resumed on December 14 after a four day shut down due to

inclement weather which prevented support airplanes from reaching the mine for over 10 days. During the third quarter, the mine produced 4,670 ounces of gold from ore averaging 17.4 g/t gold. The company also completed work on a new dry-stack tailing impoundment facility and the 250 tpd carbon-in-pulp cyanide leach circuit. It is expected that total gold recovery will exceed 90 percent when both the floatation and leach circuits are on-line. The company also began development work on the newly discovered 3550 zone, located only 150 meters from existing mine workings.

**INVENIO RESOURCES** announced additional results from its Candle Hills project near McGrath. Geochemical results indicate a 650-meter-wide by 1900-meter-long, northeast trending gold-in-soil anomaly that occurs on the western-most portion of the grid. The gold, arsenic, and copper anomaly is open to the north, west, and southwest. The soil sampling targeted a contact area between biotite-quartz monzonite of the Candle Hills pluton and porphyritic andesite and hornfelsed slate and sandstone of the Kuskokwim Group. Northeast trending, porphyritic quartz-feldspar phyrlic rhyolite and quartz-feldspar-biotite phyrlic dacite dikes have been identified within the anomalous gold-in-soil trend and indicate that a major through-going structure may exist within the anomalous area. Results from soil sampling, along with the discovery

of favorable host rocks, visible gold in pan concentrates and geologic mapping define a 6.5-kilometer-long northeast trending gold-bearing corridor within the property. The corridor is aligned with placer gold deposits that were historically mined along the Candle Creek valley and may be a source of these placer gold deposits.

**LIBERTY STAR URANIUM & METALS CORP.** announced results from a technical report on Big Chunk porphyry copper, gold and molybdenum project in southwestern Alaska. The report indicates that the best targets identified by previous geochemical sampling and geophysical surveys have not been drill tested. Previous drilling on the project intercepted only propylitic alteration, normally found in the outer-most alteration zone of a typical porphyry copper deposit. Recommendations include a US\$24.3 million multi-rig drilling program lasting 12 to 18 months. This program would allow 12,000 feet or drilling in four drill holes at each of 6 to 12 ZTEM geophysical and/or geochemical targets.

**REDSTAR GOLD CORP.** announced results from recent drilling on the Shumagin vein system at its Unga project near Sand Point. Significant results include hole 11SH001 which returned 0.61 meters grading 16.75 g/t gold and 20.2 grams of silver per tonne, hole

see FREEMAN page 6

**GENERAL REFINING CORPORATION**



**ALASKA**

**SERVING THE GREAT STATE OF ALASKA FOR OVER 30 YEARS**

**Highest Rate of Return Gold • Silver Platinum**



**Alaska’s Most Trusted Gold Refiner**

**1-800-281-4133**

**Immediate Payment • Lock in Flexibility**

Fairbanks • Nome • New York

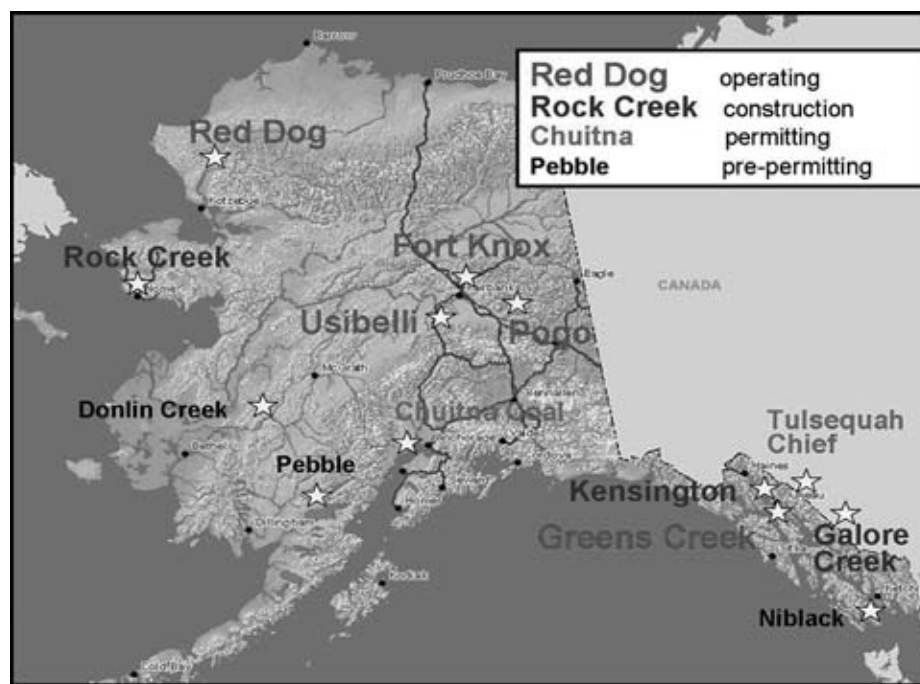
<b>GRC FAIRBANKS</b> 516 2nd Avenue, Ste. 409 Fairbanks AK 99701 Contact: William Ho	<b>GRC NOME</b> 112 Front Street, Ste. 109 Nome AK 99762 Contact: Ken Hughes
---	---



continued from page 5

## FREEMAN

11SH007 which returned 21 meters grading 4.02 g/t gold and 5.4 grams of silver per tonne, hole 11SH009 which returned 30 meters grading 2.141 g/t gold and 6.2 g/t silver including 0.9 meters grading 43.1 g/t gold and 37.2 g/t silver and hole 11SH010 which returned 29.65 meters grading 14.977 g/t gold and 11.5 g/t silver including 1.65 meters grading 246.419 g/t gold and 136.8 grams of silver per tonne. Drilling has demonstrated the continuity of the vein system over at least 800 meters of strike with mineralization open in all directions. The Shumagin vein occurs along a 1.5 kilometer wide and 9 kilometer long northeast-trending fault zone within volcanic rocks. The vein has been identified over at least 1.3 km of strike with mineralization identified along at least 800 meters of the vein. The epithermal gold-silver vein mineralization occurs within steeply-dipping quartz/carbonate veins and breccias at the faulted contact between andesite flows and a crystalline tuff. There are other mineralized vein zones within the vein corridor that



have seen only limited exploration. The company is planning an extensive drilling program in 2012.

### Interior Alaska

**FREEGOLD VENTURES LTD.** announced a resource update at its Dolphin deposit on the Golden Summit

project. At a 0.35 g/t gold cut-off grade, the revised Dolphin deposit resource include indicated resources of 14,480,000 metric tons grading 0.66 g/t gold (316,000 ounces) and an inferred resource of 50,460,000 metric tons grading 0.61 g/t gold (991,000 ounces). The resource estimate is based on 77 drill

holes (11,802 meters) that were drilled into the mineralized Dolphin stock, a multi-phase, felsic to intermediate intrusion. The east-west elongated stock has been mapped on surface and is approximately 366 meters by 610 meters. The new resource more than doubles the previously announced resource and is based on 6,500 meters of drilling conducted on the Dolphin prospect earlier this year. Additional drilling is planned at Dolphin in early 2012.

**CORVUS GOLD INC.** announced that it had re-acquired 100 percent interest in its LMS and West Pogo gold projects from First Star Resources Inc. During First Star's operating periods on the properties, approximately \$3.5 million of exploration and development work was completed which defined an important high-grade feeder structure in the LMS deposit and a high-grade gold vein target on the West Pogo project. A 7 drill-hole program totaling 2,332 meters was completed at LMS this summer and the results from these holes are expected shortly. This work extended the main alteration and mineralization in the quartz breccia zone along strike 500 meters to the west and an extension of the system to 700 meters down dip with the deposit remaining open in all directions. Additional drilling is planned in 2012. At the West Pogo project First Star completed about \$500,000 worth of work, primarily three dimensional induced polarization geophysical surveys, geological mapping and surface sampling. This work has defined a kilometer long, high-grade, vein target with grades up to 118.5 g/t gold-in-quartz vein exposures. Additional drilling is planned in 2012.

**INTERNATIONAL TOWER HILL MINES LTD.** announced that it had acquired certain mining claims and related rights in the vicinity of their Livengood gold project. The assets, which were purchased for aggregate consideration of US\$24.5 million in cash and relate to land that was previously unused or was used for placer gold mining. The acquisitions enable the company to pursue additional site facility location evaluations and to investigate other land use opportunities including the potential for placer gold extraction in the near-term. The company also announced that, while the bulk of engineering studies have been timely completed, a detailed review of their previously completed Preliminary Economic Assessment flow sheet has indicated further metallurgical optimization is possible. As a consequence, the company has pushed back the expected publication date of the Prefeasibility Study to the first half of 2012.

**FULL METAL MINERALS LTD.** announced results from exploration at its Rolling Thunder project in the Fortymile District. This year's program collected 2,373 soil samples, 379 rock samples, and 178 trench samples. Soil sampling focused on completing coverage of the ridges and spurs on Rolling Thunder claim blocks as well as expanding grids at South Pika and McElfish prospects and placing a soil grid at the Pika target. Grab samples of sulfide veins at the Pike prospect returned 5,750 and 4,950 grams of silver per tonne. Mineralization is associated with strong sericite-limonite-silica alteration observed in dominantly augen gneiss, a soil grid was established measuring about 2,000 by 2,000 meters at 50-meter centers and 100-meter line spacing. Within the soil grid, as well as expanded 'ridge and spur' soil lines, five



## ALASKA MINERS ASSOCIATION

### 23rd Biennial Mining Conference Fairbanks, Alaska

## MARCH 19 - 24, 2012

**"Technologies & Challenges for  
Mining in Cold Climates"**

**Westmark Fairbanks Hotel & Conference Center**

**For information or to register,  
please visit [www.arcticminers.org](http://www.arcticminers.org)**

**or contact**

**Delbert Parr • (907) 490-2207  
[Delbert.Parr@Kinross.com](mailto:Delbert.Parr@Kinross.com)**



• GUEST COLUMN

# A timely wish: Gold bless us, every one

*Uncertainty exacerbates risk, and risk deters investment. The candidate who will freeze new regulations will win the White House*

By J. P. TANGEN  
For Mining News

As probably everyone who follows this column realizes, I spend most of my life looking at the world through the wrong end of the telescope. On the other hand, with apologies to Dr. Seuss: "Oh, the things you will see." During the recent noise masquerading as the selection process for the presidential candidate of the Republican Party, I have listened carefully, in vain, for something that seems simple and self-evident to me.

First, and as a premise, I assume that no "money" has disappeared in the past half dozen years. It's all out there somewhere, and in most cases, I am guessing that it is hiding safely under the mattress. Mind you, there was also a great deal of "fake money," a/k/a debt, lying around for a while and that make-believe money actually did disappear. (Skilled magicians, known as "bankers" are quite capable of making money seem to appear and disappear at will, simply by lending money they don't have to people. After all, if I lend you \$5, and I don't have five cents, then I haven't lent you anything. If you exchange that loan for something tangible, then you are ahead. If your seller then demands that I pay and I say "sorry, I have no money,"

## Mining & the law

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



J.P. TANGEN

he is out of a product, and you have bought something for nothing. Properly regulated bankers don't get to do that sort of thing, of course; but when directed to do so by the government, then "Voilà! Free Money." I believe that is a fair analysis of the recent national monetary experience – here and in Greece.

Second, in recent conversations and presentations, it has come clear that the primary problem encountered by First World industries in general and the domestic mining industry, in particular, is regulatory delays. In the US today, individual permits are taking something on the order of two years for approval, far longer than anywhere else in the world; and, according to what I have

learned, such delays are the primary factor in deterring new investment in exploration and mine development.

Finally, it seems clear that investment is risk adverse – or stating it otherwise, the cost of capital is equal to the capital lent divided by the perceived risk. Accordingly, money under the mattress is more likely to emerge when risk is low than when it is high.

The simple point that follows, is if someone wants to be elected president of the United States, he or she should make a simple commitment to reduce the uncertainty associated with government oversight of the regulatory process, if only temporarily, in order to stabilize the risk for "real money" to venture into the capital marketplace again.

Notice that I am not calling for any regulations to be repealed, nor am I suggesting that any regulators do less than their appointed duty. I simply say this: He or she who wishes to be elected president in 2012 should pledge now that there will be a moratorium on new regulations for two years, including regulations still in the pipeline. This could be accomplished by executive order, and could be retrospective for 12 months, to preclude any midnight finagling.

According to a recent article in the Wall Street Journal, "[t]he evidence is

overwhelming that the Obama regulatory surge is one reason the current economic recovery has been so lackluster by historical standards. Rather than nurture an economy trying to rebuild confidence after a financial heart attack, the administration pushed through its now-famous blitz of liberal policies on health care, financial services, energy, housing, education and student loans, telecom, labor relations, transportation and probably some other industries [like mining] we've forgotten. Anyone who thinks this has only minimal impact on business has never been in business."

While the federal government hides behind many blades of grass, and it is probably impossible to differentiate among the various pronouncements as to which constitute regulations, as opposed to guidance, directives, precedents, interpretations, etc., nonetheless, the straightforward prayer, at least for the time being, is that the status quo be allowed to take root. We have a Congress right now that is in irons, and that is not such a bad thing. Peace and tranquility in 2012 could easily be defined if the administration were to embrace a similar mode.

My simple New Year's wish for a frazzled nation: furlough the Federal Register.

continued from page 6

## FREEMAN

separate multi-element soil trends were identified, ranging from 400 to 1,800 meters in length. One of these particular trends is 1,800 meters in length; 239 samples range from trace to 6.9 g/t silver in soil, averaging 1.0 g/t silver. In addition, ten trenches were completed across the Pika prospect exposing a series of mineralized north-northeast trending structures carrying anomalous gold, silver or lead. Trenches PC11-02 and PC11-03 contained 2.8 parts-per-million silver and 1,153 ppm lead over 17.7 meters and 1.9 ppm silver and 402 ppm lead over 30 meters, respectively. One grab sample from PC11-04 assayed 256 ppm silver and 4.49 percent lead and grab samples from the trenches returned values up to 1.095 g/t gold, 5.75 g/t silver and greater than 20 percent lead.

### Alaska Range

**USIBELLI COAL MINE INC.** announced that it expects to load 18 ships with Healy coal destined for the export market, reaching 1.1 million metric tons of coal exported in 2011. Coal exports in 2012 are expected to exceed those shipped in 2011. For the first time in 26 years, the Seward Coal Terminal will load over one million metric tons of coal in 2011. Currently, Usibelli supplies fuel to Alaska's six coal-fired power plants, and exports coal to Chile, Japan, and South Korea.

**HEATHERDALE RESOURCES LTD.** announced results from its 2011 exploration program at the Delta Project in the central eastern Alaska Range. The company deployed a single drill rig in 2011 to test copper-zinc-lead-silver-gold volcanogenic massive sulfide targets identified on the property. In addition to

drilling on the Mid Zone, the company's exploration team evaluated and sampled other potential targets on the property - including the DW, DDS and SC zones. Significant drill results include hole 2011-153 which intersected 75.7 feet grading 0.42 percent copper, 2.91 percent zinc, 1.07 percent lead, 0.99 g/t gold and 44 g/t silver and hole 2011-154 which intersected 43.9 feet grading 0.56 percent copper, 5.21 percent zinc, 2.36 percent lead, 1.56 g/t gold and 85 g/t silver. Thirty massive sulfide boulder and six outcrop samples also were collected with the boulders averaging 0.091 percent copper, 3.11 percent zinc, 3.57 per-

cent lead, 15.86 g/t gold and 477.03 g/t silver. The six outcrop grab samples collected had an average grade of 0.53 percent copper, 5.46 percent zinc, 4.93 percent lead, 3.62 g/t gold, and 150.16 g/t silver.

**KISKA METALS CORP.** announced additional drill results from the Island Mountain, Muddy Creek and Whistler Orbit areas at its Whistler project. Results from Island Mountain include hole IM11-040, which averaged 0.53 g/t gold, 3.55 g/t silver and 0.13 percent copper over 364 meters, including a higher grade interval that averages 0.62 g/t gold, 6.36 g/t silver and 0.17 percent

copper over 141 meters, hole IM11-036, which averaged 0.98 g/t gold, 0.51 g/t silver and 0.03 percent copper over 74 meters and hole IM11-037, which averaged 1.00 g/t gold, 0.28 g/t silver and 0.02 percent copper over 79 meters. The company also released results from its first drill program at the Muddy Creek prospect. Significant results include hole MC11-001, which averaged 0.43 g/t gold, 1.15 g/t silver and 0.03 percent copper over 38.8 meters and hole MC11-002 which averaged 0.41 g/t gold, 1.33 g/t silver and 0.04 percent copper over

see FREEMAN page 8

**WE'RE NOT AFRAID TO GET OUR HANDS DIRTY.**

**Order now!**  
Available now at the low price of \$78.00 for print or \$39.00 for online.

**MINING NEWS** 907-522-9469 | [www.miningnewsnorth.com](http://www.miningnewsnorth.com) | [publisher@miningnewsnorth.com](mailto:publisher@miningnewsnorth.com)



• ALASKA

# New NovaGold leaders focus on Donlin

Former Barrick exec Lang is new CEO, Electrum CEO Kaplan gains chairmanship; restructured company sheds copper in favor of gold

By SHANE LASLEY  
Mining News

NovaGold Resource Inc. has made tectonic shifts in its leadership and corporate structure. Shedding all of its assets except for the Donlin Gold project in Southwest Alaska, the restructured company is singularly focused on bringing this 40-million-ounce gold deposit into production by the end of the decade.

Rick Van Nieuwenhuysse – who founded NovaGold and guided the exploration company through 15 years of trials and triumphs – is relinquishing NovaGold's top executive office to make room for Greg Lang, who will assume the role of president and CEO in early January.



GREG LANG

"His extensive background in developing mines for the largest gold producer in the world, combined with his leadership ability, makes him the right person at the right time to take the helm at NovaGold as it enters its next phase of development to become a significant North American gold producer," Van Nieuwenhuysse said of his successor.

Lang, who will move into the NovaGold executive office early in January, is no stranger to the Donlin Gold project. From 2003 until accepting NovaGold's top executive position, Lang served as president of Barrick Gold Corp.'s North America Business Unit. In that job he was responsible for Barrick's nine operations in the United States, Canada and the Dominican Republic – including



Mary Sattler, manager of community development and sustainability manager, explains some of the design specifications of how the pit may be developed at the nearly 40-million-ounce Donlin Gold deposit.

the Donlin Gold project, which is equally owned by NovaGold and Barrick.

"Greg Lang brings unparalleled credentials to the leadership of NovaGold. His track record of successfully permitting, building and operating major mines around the world and, in particular, his intimate knowl-

edge of NovaGold's 50 percent-owned Donlin Gold property, will provide NovaGold with excellent stewardship in the successful development of what we believe will become one of the most-significant and valuable gold mines in the world," said Gerry McConnell during

see DONLIN FOCUS page 9

continued from page 7

## FREEMAN

45 meters. Mineralization at Muddy Creek occurs as sheeted quartz veins within a 5-kilometer-wide diorite to monzonite intrusive complex. The prospect is partially covered by contour soil sampling that highlights a 2.4 square kilometer area where soil samples average 2.3 g/t gold and 0.06 percent copper. Rock samples collected within a 5.4-square-kilometer area averaged 4.4 g/t gold.

**CORVUS GOLD INC.** announced results from the 2011 resource expansion drilling program on its Terra project in the western Alaska Range. The four-hole, 2011 drill program has been successful in expanding the high-grade "Ben Vein" system an additional 200 meters to the north significantly expanding the potential size of the deposit. Significant intercept include hole WGC-33-11, which intersected 0.84 meters grading 7.42 g/t gold and 69.39 g/t silver, hole WGC-34B-11 which intersected 3.4 meters grading 11.6 g/t gold and 106.5 g/t silver and hole WGC-35-11 which intersected 0.53 meters grading 25.6 g/t gold and 4.90 g/t silver. The drilling also intersected additional vein systems outside of the current resource area in the hangingwall of the main Ben Vein. These veins returned encouraging gold and silver values and will be followed up in future work. Corvus has been notified by joint venture partner WestMountain that it intends to follow up this year's drilling success with further resource expansion drilling, and it intends to initiate bulk sampling in 2012 with the pilot plant mill constructed at the site in 2011.

**MILLROCK RESOURCES INC.** and **TECK AMERICAN INC.** announced results from drilling at the Shoeshine, Shadow and Discovery prospects of the Estelle gold property. Significant results

from the Shoeshine prospect include hole SE-002, which intersected 241.8 meters averaging 0.24 grams of gold per tonne. Gold values in the core are associated with arsenopyrite, and minor chalcopyrite. Sulfides were seen in narrow quartz veins and veinlets and disseminated in small grains throughout the intrusive host rock. Six main zones of large-scale anomalous gold and pathfinder element geochemistry have been identified over the past two years at the Shoeshine, Shadow, Train, Oxide Ridge, RPM and Stoney prospects. At the Shoeshine and Oxide Ridge prospects surface mineralization is spatially associated with porphyritic intrusive rocks, quartz stockworks and hydrothermal breccias. At RPM rusty, pyritic, hornfelsed sediments with anomalous gold indicate the potential for an auriferous intrusion at a shallow level. The Stoney prospect is a high-grade, polymetallic vein occurrence located near a strong, circular magnetic high pointing to the possibility of nearby porphyry mineralization.

## Northern Alaska

**NOVAGOLD RESOURCES INC.** and **NANA REGIONAL CORP., Inc.** announced additional results from a 6,000-meter drilling program on the Bornite project in the Brooks Range. Significant results include hole RC11-194 which intersected 110.6 meters grading 2.6 percent copper including 11.8 meters grading 7.5 percent copper, hole RC11-185 which intersected 121.3 meters averaging 1.4 percent copper including 18.1 meters grading 3.8 percent copper, hole RC11-186 which intersected 153.1 meters averaging 1.2 percent copper. Over-limit assays on hole RC11-187 in the South Reef prospect modified this spectacular hole into a continuous interval of 178 meters grading 4.0 percent copper including 34.7 meters grading 12 percent copper. The South Reef remains open to expan-

sion and will be a focus of exploration drilling in 2012 to enable a resource estimate to be completed on this zone. NovaGold also announced that it intends to spin off its base metal assets into NovaCopper Inc. and that longtime President and CEO Rick Van Nieuwenhuysse will step down as president and CEO of NovaGold Resources to accept the same position at NovaCopper.

**ANDOVER VENTURES INC.** announced that it has staked additional mining claims at its Sun massive sulfide project in the Ambler Mining District. The company now controls 45,920 acres of mining claims in the district.

**GOLDRICH MINING CO.** reported exploration results from its Chandalar gold project. Significant drilling results from the 25-hole, 4,404-meter program include 1.5 meters grading 6.57 g/t gold in hole LS11-0063 on the Aurora prospect and 2.1 meters grading 6.02 g/t gold in hole LS11-0041 on Rock Glacier prospect. While constructing a drill-access road, the company encountered two zones of shearing with sheeted and stockwork quartz veinlets, approximately 5 meters and 15 meters wide. These zones are located 135 meters vertically above and 200 meters southwest of the Aurora prospect holes. Representative continuous chip sampling of these zones yielded assays of 2.8 g/t gold and 2.1 g/t gold. Mineralized intercepts have now been intersected by drilling over a vertical elevation difference of 550 meters, with the lowest exposure being in the northeast at the Aurora prospect which is close to the Little Squaw alluvial gold deposit. Additional soil sampling results are pending.

## Southeast Alaska

**HEATHERDALE RESOURCES LTD.** announced a 31 percent increase in mineral resources at its Niblack volcanogenic massive sulfide deposit on Prince of Wales

Island. Based on underground delineation drilling completed during 2011, the new resource model outlines a 33 percent increase in the indicated resource metric tons for the Lookout Deposit, while the inferred resource metric tons at the Trio Deposit have increased by 29 percent. The new mineral resource estimate is based on data from 373 drill holes. At the Lookout zone, indicated resources have increased to 5.638 million metric tons grading 0.95 percent copper, 1.73 percent zinc, 1.75 g/t gold and 29.52 g/t silver, while inferred resources now stand at 2.37 million metric tons grading 0.73 percent copper, 1.17 percent zinc, 1.42 g/t gold and 21.63 g/t silver. At the Trio zone, inferred resources have increased to 1.023 million metric tons grading 1.00 percent copper, 1.56 percent zinc, 1.11 g/t gold and 16.56 g/t silver. Current outlined dimensions of the Lookout Deposit are about 2,200 feet by 1,700 feet, with an average thickness of 70 feet. Current outlined dimensions of the Trio Deposit are about 1,100 feet by 350 feet, with an average thickness of 220 feet.

**QUATERRA RESOURCES INC.** and partner **GRANDE PORTAGE RESOURCES LTD.** announced the final 2011 exploration results from their Herbert Glacier gold project near Juneau. Significant drilling results include the Deep Trench vein, hole 11F-3 intercepted a brecciated quartz vein averaging of 11.53 g/t gold over 3.52 meters, hole 11G-2 which intercepted 4.18 g/t gold over 4.6 meters, hole 11G-4 which averaged 9.26 g/t gold over 1.36 meters, hole 11F-1 which averaged 4.35 g/t gold over 1.55 meters and hole 11G-8 which intercepted 50.0 g/t silver and 0.42 g/t gold over an intercept of 1.18 meters and 3.43 g/t gold and 10.4 g/t silver over 1.35 meters. The company plans to explore the property on 150-meter to 200-meter centers in 2012 with two drills on the Main, Goat and Deep Trench veins. ●





ALISON NORTHEY, COURTESY OF NOVAGOLD RESOURCE INC.

The current camp at Donlin Gold is used to conduct ongoing baseline studies and other activities in the area surrounding the 40-million-ounce gold deposit. According to a feasibility study completed for Donlin Gold partners NovaGold Resources Inc. and Barrick Gold Corp., a permanent camp will be located about 2 kilometers (1.2 miles) southwest of the deposit.

*continued from page 8*  
**DONLIN FOCUS**

his final days as chairman of NovaGold's board of directors.

McConnell remains on the NovaGold board but Thomas Kaplan assumed the chairmanship in November.

Kaplan is chairman and CEO of The Electrum Group LLC, a privately held global natural resources investor. An affiliate of Electrum currently holds around 21.65 percent interest of NovaGold's outstanding shares.

Electrum Group President Igor Levental also sits on NovaGold's board of directors and NovaGold Senior Vice President and Chief Operating Officer Gil Leathley joined the board in November.

Lang, Leathley and Levental have worked together in the past. All three held senior executive positions with Homestake Mining Co. immediately prior to that company being bought out by Barrick.

"Donlin Gold is a uniquely attractive asset. In size, it ranks among the top 1 percent of gold deposits in the world and its grade, long mine-life and exploration potential are exceptional. In addition, Donlin Gold is located in the right place – the United States," Kaplan said. "At a time when the oft-used mining expression 'world-class' is losing its meaning, as resource nationalism has meant that great assets are often in political or economic jurisdictions that are simply becoming un-investable, fiduciaries are now being forced to begin their analysis not with size and cost, but jurisdictional safety. Within this overall context, which is likely to get worse over time rather than better, truly great assets such as Donlin Gold, which 'have it all,' are becoming 'category killers' that we expect will enjoy premium ratings. For all of these combined relative advantages, we believe that NovaGold particularly — a well-managed company transforming itself into a pure-play gold developer with extraordinary exploration potential and exceptional leverage to the price of gold — is set to emerge as one of the select few jurisdictionally safe, institutional-quality development-stage gold equities."

**Significant milestone**

In early December, the restructured NovaGold announced the completion of an updated feasibility study for the Donlin Gold project. This study, compiled by AMEC Americas Ltd., revises the feasibility study completed in 2009 with updated mineral reserves and resources, capital cost and operating cost estimates.

One of the primary differences

between the current feasibility study compared to the one completed in 2009 is using natural gas to power the Donlin Gold operations, as opposed to the diesel fueled power generation previously considered.

NovaGold said the study confirms the attractiveness of utilizing natural gas over diesel for power generation at the massive gold project.

Power represents about 25 percent of the expected operating costs at Donlin Gold. Natural gas-fired electrical generation is anticipated to be about half that of using diesel.

"The cost of producing a kilowatt of power on-site with gas versus diesel is half," Van Nieuwenhuysse explained. "This is a huge mine; it will be consuming 85 megawatts of power, which is enough power for a city of 120,000 people."

Natural gas would be delivered to site via a buried pipeline that would run 500 kilometers (310 miles) northwest from Alaska's Cook Inlet to the Donlin Gold site. The company currently plans to build a 12-inch gas line but may increase the size to 14-inch to accommodate future expansion of Donlin Gold and to supply gas to other users in the Kuskokwim region.

While imported liquefied natural gas is still the scenario being considered in the feasibility study, Alaska gas may still be used to power Donlin Gold. While addressing the potential of sourcing in-state gas, Van Nieuwenhuysse noted the recent natural gas discovery made in Cook Inlet by Escopeta Oil Co., an explorer that has recently changed its name to Furie Operating Alaska LLC.

"It is certainly exciting to see renewed interest in the Cook Inlet," said Van Nieuwenhuysse. "If gas were available in Alaska we would certainly look to use it."

The NovaGold leader observed that if gas is transported from the North Slope via an in-state pipeline, Donlin Gold would prefer to use that instead of importing LNG.

Improved environmental management and social infrastructure; provide flexibility for future operational modifications; and facilitate future increases in the scale of operations are other advantages of the

natural gas alternative.

"Completion of this study is a significant milestone for NovaGold, joint-owner Barrick, the project and our Alaska Native partners," Van Nieuwenhuysse told Mining News. "With Greg Lang, a proven mine builder, assuming the leadership of NovaGold and Barrick bringing best practices to permitting, developing and operating large scale open-pit gold mines, Donlin Gold has all of the necessary components to be developed into one of the largest, most efficient, environmentally sound and valuable gold producers in the world."

Donlin Gold LLC – which is owned equally by NovaGold and Barrick Gold Corp. – anticipates permitting of the Southwest Alaska gold project to begin early in 2012. Estimating that permitting will take about 3.5 years and construction will take about as long, the company foresees Donlin Gold project going into production toward the end of 2019.

**More gold, less capital**

If it is put into production as proposed in the study, Donlin Gold is expected to rank among the world's largest gold mines.

The updated feasibility study for the Kuskokwim area project outlines 33.85 million ounces of gold in proven and probable reserves, representing a 16 percent increase over 2009. At a 53,500-metric-ton-per-day throughput these reserves are enough to support a 27-year mine life, an increase of six years compared to the former study.

Over the current 27-year mine life, Donlin Gold is expected to average 1.1 million ounces of gold per year at a cash cost of US\$585 per ounce. During the first five years of operation, the massive project is scheduled to produce 1.5 million ounces of gold per year at an average cash cost of US\$409/oz. This increased gold production at a 30 percent lower cost during the onset of operations will help reduce the payback period for the estimated US\$6.7 billion of capital costs needed to build the mine.

Using a three-year trailing average of US\$1,200-per-ounce gold price as the base, the feasibility study predicts an after-tax net present value (five percent

discount) of US\$547 million and an after-tax internal rate of return of six percent. This base scenario foresees an annual after-tax cash flow of US\$949.5 million for the first five years and US\$500.7 million over the life of the mine – resulting in a payback period of 9.2 years.


Plugging in a US\$1,700 per ounce gold price, the after-tax NPV (5 percent) jumps 837 percent, to US\$4.58 billion, and the after-tax IRR more than doubles to 12.3 percent. Annual after-tax cash flow increases by more than 50 percent to US\$1.5 billion over the first five years and US\$814.9 million over the life of the mine – resulting in a payback period of 5.3 years.

While staggering, the capital costs produced in the feasibility study are about US\$300 million less than NovaGold forecast in September and include US\$834 million for completing the natural gas pipeline and US\$984 million of contingencies.

Van Nieuwenhuysse told investors Dec. 5 that the costs in the feasibility study were calculated at a P-85 level, or an 85 percent probability that the actual expenditures will be at or below the capital costs included in the feasibility study.

"We have gone to this P85 level ... because, obviously, many projects are experiencing capital cost increases and

see DONLIN FOCUS page 21




**Pacific Rim  
Geological Consulting, Inc.**

Mailing address:  
P.O. Box 81906  
Fairbanks, AK

Phone: 907 458-8951  
Fax: 907 458-8511  
bundtzen@mosquitonet.com  
www.pacrimgeol.com

**Thomas K. Bundtzen, President**



**ALASKA  
EARTH  
SCIENCES**

*Comprehensive Geologic Services*

- ▲ Geologic Consulting
- ▲ Geologic Staffing
- ▲ Geotechnical Services
- ▲ Reporting (including 43-101)
- ▲ Logistics/Operation Coordination
- ▲ Remote Site Management
- ▲ GIS Services
- ▲ Permitting Assistance
- ▲ Community Engagement
- ▲ Claims Staking
- ▲ Claims Administration
- ▲ Equipment Rental

*Dedicated to responsible  
development of Alaska's resources.*

**11401 Olive Lane  
Anchorage, Alaska  
907-522-4664**

**www.aes.alaska.com**



• ALASKA

# Excitement builds at new NovaCopper

NovaGold spin-out is eager to expand upon the 178 meters of 4% copper drilled at Bornite, test other targets in the Upper Kobuk

By SHANE LASLEY  
Mining News

Rick Van Nieuwenhuyse, who is stepping down as the president and CEO of NovaGold Resources Ltd., is jumping into the driver's seat of NovaCopper Inc., a vehicle designed for the continued exploration of NovaGold's Ambler project and other prospects in the Upper Kobuk region of Northwest Alaska.

"My passion is exploration and just like we found two other world-class, high-quality targets in Donlin and Galore (projects), we are looking to do the same thing in the Ambler district,"



RICK VAN NIEUWENHUYSE

Van Nieuwenhuyse told Mining News during a Dec. 15 interview.

Upon NovaGold shareholder and other customary approvals, NovaCopper's exploration portfolio will boast Arctic



SHANE LASLEY

**"It is one of the best copper holes drilled in the world, ever!"**

—Rick Van Nieuwenhuyse,  
CEO, NovaCopper Inc.

RC11-187 – drilled by NovaGold Resources Inc. at the Bornite deposit in the Ambler Mining District of Northwest Alaska – cut a continuous intercept of 178 meters averaging 4 percent copper, including 34.7 meters at 12 percent copper.

and Bornite, two of the highest grade unmined copper deposits in the world.

In October, NovaGold and NANA Regional Corp. forged a partnership that

consolidates NovaGold's (NovaCopper's) Ambler project and lands owned by the Alaska Native regional corporation into an 180,000-hectare (445,000-acre) land

package currently known as the Upper Kobuk Mineral Project.

Arctic – the most advanced of the projects on NovaCopper's Ambler property – currently has an indicated resource of 16.8 million metric tons averaging 4.1 percent copper and 6 percent zinc. The deposit has an additional 12.1 million metric tons averaging 3.5 percent copper and 4.9 percent zinc in the inferred resource category.

At a copper-equivalent grade of 8.3 percent, the Arctic project is regarded as one of the highest-grade undeveloped volcanogenic massive sulfide deposits in the world.

Bornite – the most promising of the prospects on the land NANA brings to the Upper Kobuk Mineral Project – is a carbonate replacement-style deposit that contains some 70 million metric tons averaging 1.2 percent copper and at least 454,000 metric tons of higher grade ore averaging around 4 percent copper, according to exploration carried out by Kennecott Exploration Co. during the 1950s and 1960s.

After some 5,900 meters of drilling carried out by NovaGold in 2011, the company believes that Bornite is bigger and higher grade than the historical resource suggests.

"We had the first year of exploration on the Bornite property with some absolutely spectacular drill results," Van Nieuwenhuyse said.

## Spectacular copper in 2012

The initial six holes, RC11-181 to 186, of NovaGold's 2011 program have more than confirmed the historical high-grade copper zones within the Bornite deposit.

Highlights of the confirmation drilling:

RC11-181 cut 17.6 meters grading 8.4 percent copper. Overall the hole intersected four mineralized intervals totaling 122.3 meters averaging 2.3 percent copper;

RC11-182 cut two mineralized inter-

see NOVACOPPER page 11

## A New Era in Remote Site Access

**Era**★  
HELICOPTERS LLC  
a SEACOR company

Safe, Professional, Experienced & Ready to Fly  
907 550 8600 • [erahelicopters.com](http://erahelicopters.com)

**MTH** Modular Transportable HOUSING, Inc.

### CUSTOM DESIGNED TO MEET YOUR SPECIFICATIONS

- Modular Camp Facilities
- Mine Dry
- Laundry Facilities
- Office Facilities
- Control Rooms
- Sleeper & Wash Cars
- Kitchen and Dining Halls
- Recreation Rooms & TV Lounges
- First Aid Facilities
- Conference Rooms

(509) 248-8616 Toll-Free: (877) 929-9902  
[office@mthousing.net](mailto:office@mthousing.net) | [www.mthousing.net](http://www.mthousing.net)



300 Man Camp Facility  
Designed and Built by:  
MTHousing Inc.



continued from page 10

## NOVACOPPER

vals totaling 93.2 meters averaging 2.1 percent copper;

RC11-183 cut 6.8 meters grading 24.5 percent copper within a mineralized interval totaling 26.3 meters grading 6.7 percent copper;

RC11-184 cut 5.5 meters grading 28.5 percent copper within a mineralized interval totaling 31.9 meters grading 5.4 percent copper;

RC11-185 cut 18.1 meters grading 3.8 percent copper. Overall the hole intersected two mineralized intervals totaling 121.3 meters averaging 1.4 percent copper; and

RC11-186 cut three mineralized intervals totaling 153.1 meters averaging 1.2 percent copper.

NovaCopper will incorporate these drill results into NI 43-101-compliant resource, expected to be completed early in 2012.

While the confirmation drilling cut grades that more than proved the robustness of Bornite, the most exciting results came in two exploration holes drilled into South Reef, a new zone located some 500 meters northeast of the historical deposit.

RC11-187, the first hole to target South Reef, cut a continuous 178 meters averaging 4 percent copper, including 34.7 meters at 12 percent copper.

"It is one of the best copper holes drilled in the world, ever!" said a beaming Van Nieuwenhuysse.

After losing several holes before reaching target depth, NovaGold also was able to drill a second hole into the South Reef zone.

RC11-194, drilled 700 meters along strike to the northeast of RC11-187, cut 110.6 meters of 2.6 percent copper.

Given the grades, thicknesses and apparent strike-extent, South Reef is shaping up to be a substantial addition to the Bornite project, and Nova Copper plans to enable a resource to be calculated for the project at the end of the 2012 drill season.

"We are very excited about our initial drilling at Bornite, specifically the discovery of a new zone at South Reef, and we will be following that up with an exploration program next year," Van Nieuwenhuysse told Mining News.

### Preparing for 2012 drilling

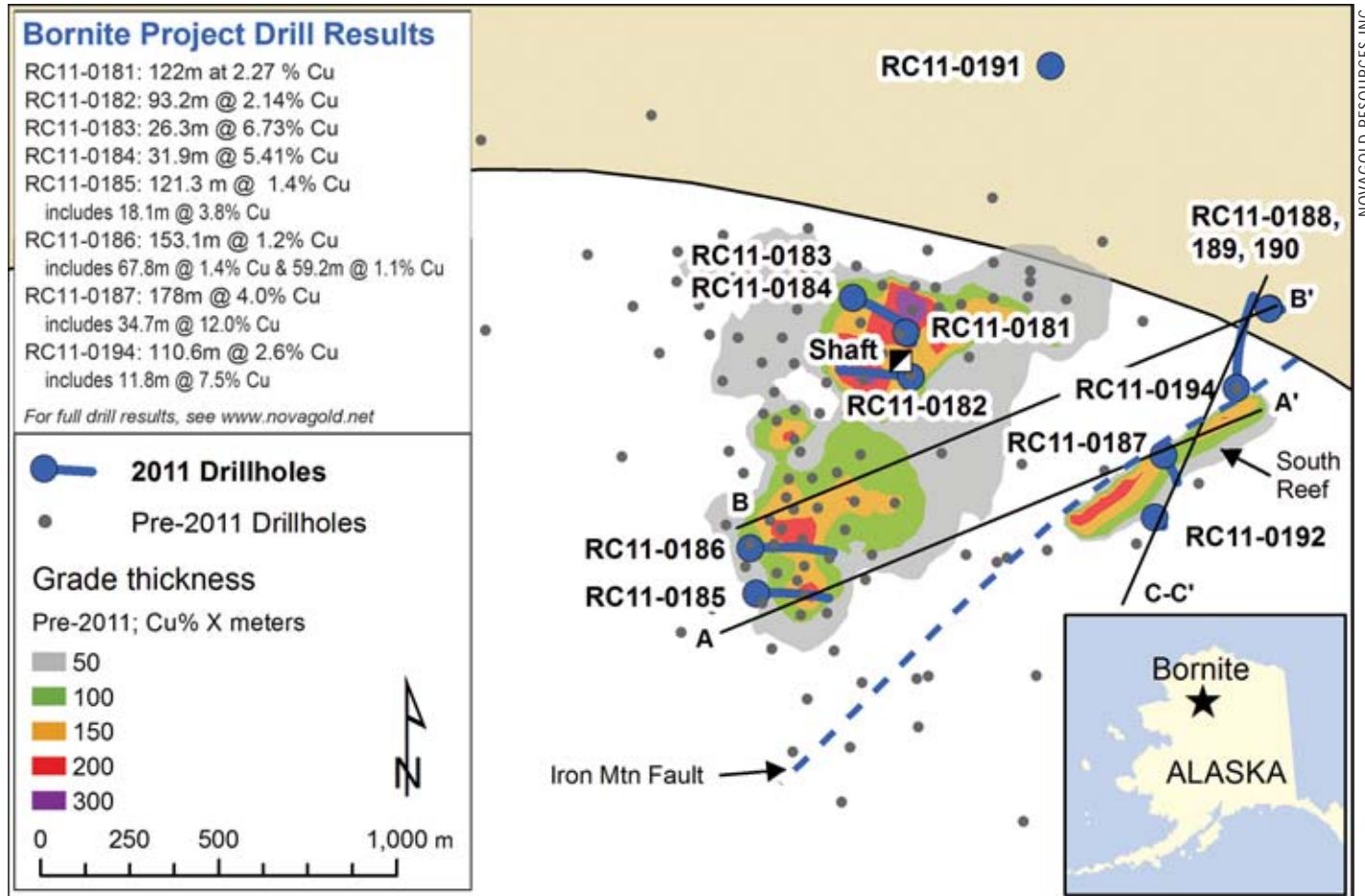
NovaCopper is already busy planning the 2012 drill program for the Upper Kobuk Mineral Project. Van Nieuwenhuysse told Mining News that the company plans to open up the Bornite camp in April and is currently securing drills, helicopter and all of the other components need for a successful exploration program.

"We will look forward to a good, aggressive drill program next year – I am excited!" said the incoming NovaCopper president and CEO.

The Upper Kobuk Mineral Project consists of two contemporaneous and adjacent mineralized belts – the Devonian Ambler VMS belt blanketed by NovaCopper's 90,624 acres of state, federal and patented mining claims and the Devonian Bornite carbonate-hosted copper-cobalt belt that is hosted primarily on the lands owned by NANA.

Prior to 2011, NovaGold's exploration in the district focused on the Arctic deposit which lies some 26 kilometers (16 miles) to northeast of the Bornite deposit.

A preliminary economic assessment prepared for Arctic early in 2011 envisions a 4,000-metric-ton-per-day-mine producing some 1.7 billion pounds of copper, 2 billion pounds of zinc, 291 mil-



**"We will look forward to a good, aggressive drill program next year. I am excited!"**

–Rick Van Nieuwenhuysse,  
CEO, NovaCopper Inc.

lion pounds of lead, 266,000 ounces of gold and 22 million ounces of silver over a 25-year mine life.

Van Nieuwenhuysse said previous investigations of the Upper Kobuk – primarily by companies exploring the region in the 1960s and 1970s – has revealed more than a dozen promising exploration

targets and selecting which of these prospects to drill is "a bit like being a kid in a candy store."

"We have other areas we want to target in the Bornite area of the Cosmos Hills and we have some excellent targets to follow up on adjacent to the Arctic deposit," Van Nieuwenhuysse explained.

It is proposed that the shares of NovaCopper will be distributed to shareholders of NovaGold as a return of capital by way of a plan of arrangement under the Companies Act (Nova Scotia). NovaGold shareholders will vote on the plan at a special meeting scheduled for February.

"Management believes that this is one of the most exciting copper opportunities

in the industry, and we are planning an increased work program next year to expand the newly identified South Reef deposit at Bornite as well as test a number of other VMS targets in the district. These outstanding drill results demonstrate the potential for Ambler to become one of the highest-grade and most-significant polymetallic copper-dominant districts in the world," said Van Nieuwenhuysse. "We are encouraged by this season's drilling campaign and believe that our shareholders will derive significant value from direct ownership of these valuable and exciting assets." ●

**Right on time. Dig it?**

Miners all over Alaska have relied on Alaska Air Cargo and employees like Marcy to supply their projects for decades. That's because we have more flights and destinations in the Last Frontier than any other major carrier. And, our record of reliability is second to none, so you can count on getting what you need, when you need it.

Dig into reliable shipping at [alaskacargo.com](http://alaskacargo.com).

**Alaska Air Cargo**  
ALASKA AIRLINES & HORIZON AIR

COMMITTED TO CARGO

THE #1 ON-TIME AIRLINE IN NORTH AMERICA\* | [alaskacargo.com](http://alaskacargo.com)

Marcy is a Customer Service Legend. She is celebrating nearly 30 years with Alaska Airlines.

\*2010 FLIGHTSTATS.COM



• NORTHWEST TERRITORIES

# Prairie Creek Mine gets environmental OK

Industry applauds regulatory stance, cites potential for decision to help improve northern territory's mining investment climate

By ROSE RAGSDALE  
For Mining News

The Mackenzie Valley Environmental Impact Review Board has approved a proposal by Canadian Zinc Corp. for protecting the environment during operation of the Prairie Creek Mine in the Northwest Territories.

The move, which comes after more than three years of review, is seen as perhaps a major milestone in the permitting process for the underground lead-zinc mine project and a signal that the investment climate for mining may be changing for the better in the northern territory.

The Mackenzie Valley Environmental Impact Review Board issued its Report of Environmental Assessment and Reasons for Decision for the project Dec. 8, submitting it to Canada's Minister of Aboriginal Affairs and Northern Development John Duncan to begin the next regulatory phase for permitting the mining operation.

The Prairie Creek Mine property has substantial quantities of zinc, lead and silver that would-be developers have pursued for more than 30 years. Canadian Zinc has worked to develop the Prairie Creek resource for more than a decade.

The property, which is situated within the South Nahanni River watershed of the Mackenzie Mountains and surrounded by the Nahanni National Park Reserve, has estimated measured and indicated resources totaling 5,840,329 metric tons grading 10.71 percent zinc, 9.90 percent lead, 0.326 percent copper, and 161 grams



The Prairie Creek Mine located in the Mackenzie Mountains of Northwest Territories has existing infrastructure and facilities built primarily in the 1980s. With upgrades and improvements, Canadian Zinc Corp. is seeking permits to launch an underground mining operation that would produce up to 1,200 metric tons per day of lead-zinc-silver ore.

per metric ton silver and a large inferred resource of 5,541,576 metric tons grading 13.53 percent zinc, 11.43 percent lead, 0.514 percent copper and 215 g/t silver.

The polymetallic deposit's measured and indicated resources are capable of supporting a mine life of more than 14 years at a planned initial production rate of 600 metric tons per day, which will increase to 1,200 tpd; future inclusion of inferred resources would extend the mine's life to at least 20 years.

The Review Board is the primary authority responsible for all environmental assessment and review throughout the natural resources-rich Mackenzie Valley of Northwest Territories. Canadian Zinc's application for operating permits was deemed complete in mid-2008. Since then

the Review Board has conducted an extensive environmental assessment of the project and concluded in its latest decision that the proposed development is unlikely to have any significant adverse impacts on the environment or be a cause for significant public concern.

The next step in this process is for federal and territorial regulators to either accept the Review Board's decision or refer the matter for environmental impact assessment. Responsible regulators include the Government of the Northwest Territories Minister of Environment and Natural Resources and several federal ministers, including Duncan. The ministers have 10 business days to decide to accept the report, send

the project for an EIS Review or extend their deliberations (if required). They were expected to issue a decision by Dec. 22.

If the Review Board's opinion is endorsed, officials say the project application would proceed to the regulatory phase of permitting, which is administered by the Mackenzie Valley Land and Water Board.

## Improved development

In a summary of its decision, the Review Board outlined major aspects of Canadian Zinc's proposal, which not only involves constructing an underground mine capable of producing up to 1,200 tpd of ore, but also upgrading or replacing existing mine site facilities and building new water treatment, paste backfill plant, dense media separation plants and other facilities at the mine site. In addition, the company intends to construct a waste rock pile in the Harrison Creek valley; re-design an existing water storage pond and possibly build a second water storage pond; re-clear the existing winter road from the mine site to the Liard Highway and re-align portions of the winter road route.

The Review Board said the company proposed design modifications to the mine site and winter access road throughout the environmental assessment process, changes designed to improve the project and minimize potentially adverse impacts on the environment.

The new operation would utilize existing infrastructure and facilities that were built and never used in the 1980s and will be upgraded and enhanced to meet current-day environmental standards. The improvements proposed for specific site facilities will further mitigate the potential impact the project might have on the environment. Specifically, Canadian Zinc proposes to place waste rock and tailings underground in a cemented backfill mix, use the existing large pond for temporary water storage, and place development waste rock in an engineered facility removed from the Prairie Creek floodplain.

All mining will be performed from underground and no hazardous chemicals will be used in the milling process. All flotation tailings will be backfilled into the voids in the underground mine in a mix with the waste rock aggregate and cement. The flotation tailings are expected to be non-acid generating with low sulphide content and excess buffering capacity. Waste rock from underground development along with excess waste rock aggregate from the DMS plant will be placed in an engineered Waste Rock Pile in the adjacent Harrison Creek valley.

Concentrates will be bagged, stored under cover and trucked off-site on flat-deck trailers over the winter road. Canadian Zinc also has applied for Type "A" Land Use Permits for two new transfer facilities, one to be located about midpoint along the winter road and the other at the junction of the winter road with the Liard Highway near the community of Nahanni Butte. The trucks will then travel southbound on Highway 7 for about 130 kilometers (81 miles) to the British Columbia border and onwards to the railway at Fort Nelson, where they will be loaded onto railcars and shipped to smelters in Canada and/or to a port for

## MOVING THE EARTH



AIC has the expertise, equipment and skilled personnel to tackle the challenging needs of the mining industry – wherever it may take us.



AICLLC.COM



AIC, LLC. | 301 W. NORTHERN LIGHTS BLVD., SUITE 600 | ANCHORAGE, AK 99503 | T: 907-562-2792 F: 907-562-4179

see PRAIRIE CREEK page 13



continued from page 12

## PRAIRIE CREEK

transport overseas.

When in production, the Prairie Creek Mine is expected to add significantly to Canada's production of lead and zinc concentrates, averaging up to 100 million pounds of zinc, 90 million pounds of lead and 2 million ounces of silver per year in full-scale production.

### Strong commitments

"Key design modifications include the developer's commitment to increase water storage capacity at the mine site, an improved mine-effluent outfall design, an enhanced water treatment plant and realignments to the winter road. The final list of commitments is included in Appendix B of the Review Board's Report of Environmental Assessment. These commitments are fundamental to the Review Board's decision on the significance of adverse impacts," the Review Board noted.

The board also offered three suggestions aimed at improving the monitoring and management of potential impacts from the development:

**Suggestion 1** – The Review Board believes that either option proposed by Canadian Zinc Corp. to increase water storage on site will improve water quality in Prairie Creek. The Review Board notes that construction of a second pond may address a broader range of risks and result in better water management on site and improved water quality in Prairie Creek. The Review Board suggests that the Mackenzie Valley Land and Water Board consider this during the licensing phase.

**Suggestion 2** – The Review Board suggests that Canadian Zinc Corp. prepare a tailings management plan for both the permanent storage of tailings underground and the temporary storage of tailings on surface at the mine site. The Review Board suggests that this plan should be part of the water license.

**Suggestion 3** – The Review Board recognizes that there are better ways to contain concentrate during transport along the winter road than the bag method proposed by the developer. The Review Board suggests that the developer use secondary containment of concentrate during transport along the winter road to reduce the risk of contaminant dispersal. The Mackenzie Valley Land and Water Board and Parks Canada can best address this issue during the regulatory phase.

### Significant dissent

The administrative tribunal said it strives to make consensus decisions, but it failed to reach a unanimous decision in this case. Two of the board's nine members opposed the decision, and offered dissenting comments in the Review Board's report.

Danny Bayha of Aboriginal Affairs and Northern Development and Rachel Crapeau of Parks Canada cited "gaps in the evidence which should have been provided by the developer to fully describe the project, explain its effects, and set out clear mitigation strategies to avoid development impacts."

Bayha and Crapeau said they believe the Review Board should have established a mandatory framework to ensure that the developer's numerous commitments to protect water quality will be undertaken. "In the absence of such certainty, we find ourselves unable to agree that significant impacts from this development will be avoided and are unlikely," they added.

In letters to Minister Duncan, the Dehcho First Nations and the Nahanni Butte Dene Band also expressed opposi-



COURTESY OF CANADIAN ZINC CORP.

The Prairie Creek deposit has estimated measured and indicated resources totaling 5,840,329 metric tons grading 10.71 percent zinc, 9.90 percent lead, 0.326 percent copper, and 161 grams per metric ton silver and a large inferred resource of 5,541,576 metric tons grading 13.53 percent zinc, 11.43 percent lead, 0.514 percent copper and 215 g/t silver. Here, Canadian Zinc Corp. workers examine drill core from recent underground exploration.

tion to the Review Board's decision.

"DFN communities support the economic development potential of the proj-

ect and the impact benefits agreements signed by the Liidlii Kue First Nation and Nahanni Butte Dene Band, however, we

believe that the project should only proceed with standards in place to ensure that the environmental integrity of the Nahanni National Park Preserve is maintained and the downstream communities of Nahanni Butte, Fort Simpson and Wrigley are not impacted by water contamination," wrote Dehcho Grand Chief Sam Gargan in a Dec. 13 letter.

However, the First Nations support a "Reference Condition Approach" suggested by Parks Canada and Aboriginal Affairs and Northern Development, which requires a higher standard for water effluent treatment, Gargan told the minister.

Chief Fred Tesou of the Nahanni Butte Dene Band said the Review Board failed on two procedural counts by not imposing measures to mitigate acknowledged impacts and protect the First Nation's rights. He asked Duncan to send the report back to the Review Board with instructions to rewrite it and impose "clear and specific mitigative measures" on the development that eliminate potential for significant adverse environmental impacts.

"If this approach is taken, NDDB does

see PRAIRIE CREEK page 17



### World-class project. World-class science.

Pebble is a world-class copper deposit and one of North America's most significant copper discoveries. Since 2001, more than 100 independent scientists and technicians have conducted one of the most extensive environmental studies program in Alaska.

The Pebble Partnership is committed to responsible resource development in Southwest Alaska — recognizing that a world-class project requires world-class science.

[www.pebblepartnership.com](http://www.pebblepartnership.com)





• YUKON TERRITORY

# Chamber signs MOU with two First Nations

Pact outlines future collaboration to promote responsible mining; Na-cho Nyak Dun and Tr'ondëk Hwëch'in share views with industry

By ROSE RAGSDALE  
For Mining News

The Yukon Chamber of Mines recently signed a memorandum of understanding with the First Nation of Na-cho Nyak Dun and the Tr'ondëk Hwëch'in to create a framework within which the industry and aboriginal groups will work together for their respective goals.

The First Nations said they seek to preserve a way of life that is based upon an economic and spiritual relationship with the land, while the Chamber of Mines said it aims to promote a vibrant, healthy, safe and responsible mining and exploration industry in the Yukon.

The MOU, unveiled Nov. 20 during the Chamber's annual Yukon Geoscience Forum in Whitehorse, formalized a collaboration that the Na-cho Nyak Dun and the Tr'ondëk Hwëch'in began earlier this year with the Yukon Chamber of Mines.

From those efforts, the Chamber and the First Nations developed a "Quick Reference Guide to Effective Respectful Engagement Practices with Yukon First Nations and Communities, released Aug. 18.

The MOU commits the parties to form a steering committee that will meet three times a year in collaboration aimed at enhancing communications and improving the relationship between Yukon First Nations and the Yukon mining industry. The steering committee will identify priorities for each fiscal year



First Nation of Na-cho Nyak Dun Chief Simon Mervyn, left, and Tr'ondëk Hwëch'in Chief Eddie Taylor, right, join outgoing President Claire Derome of the Yukon Chamber of Mines in signing a memorandum of understanding aimed at promoting safe and responsible mining in Yukon Territory.

(April 1 to March 31), from which a working group will develop an annual plan to achieve those priorities that will be approved by the steering committee.

Specifically, the MOU commits the parties to:

- To work together to leave a positive legacy for future generations and ensure that the essential characteristics and productive capacity of the land in Yukon remains substantially unchanged;

- To respect land use planning processes and work to ensure that social, cultural, economic and environmental policies are applied to the management,

protection and use of land, water and resources in an integrated and coordinated manner so as to ensure sustainable development;

- To support each other in protecting and advancing their respective rights and interests;

- To work collaboratively to identify issues arising from applicable legislation and regulatory processes, and where appropriate, recommend solutions;

- To encourage proactive and transparent consultation between Yukon First Nations and the mining industry, as soon as practicable after a miner decides to

explore for minerals in the First Nations' traditional territories;

- To do their best to encourage the application of this MOU to all mining activity in Yukon and all interaction between miners and Yukon First Nations, recognizing that the Chamber cannot bind its members, nor can the two First Nations bind other Yukon First Nations;

- To encourage increased partnerships between the mining industry and Yukon First Nation communities and businesses, investigate and increase investment potential, establish and foster procurement practices that benefit Yukon First Nations, and enhance human resources development and labor force development activities with Yukon First Nation communities and people;

- To encourage open and transparent communications and to develop a communications protocol between the Parties which embraces principles such as timely and frank exchange of information and a commitment to converse prior to contentious or difficult matters becoming public;

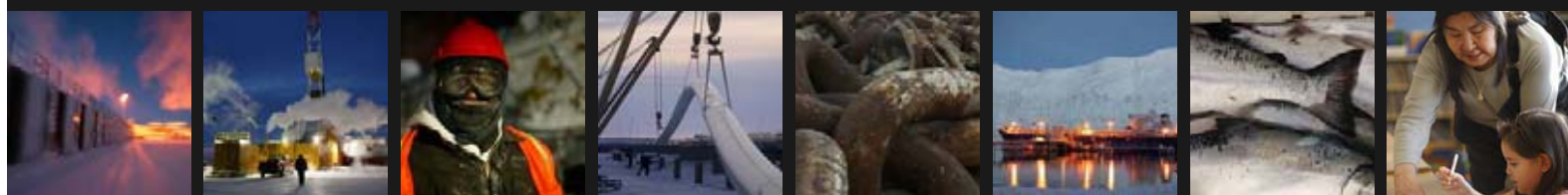
- To develop a dispute resolution process; and,

- To endeavor to develop and advocate a common position in respect of the resource royalty regime in Yukon.

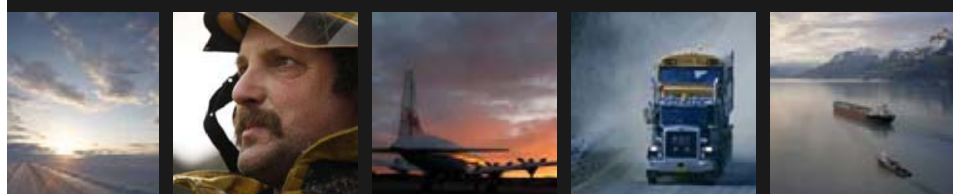
Claire Derome, outgoing Yukon Chamber of Mines president, said the MOU reflects a new willingness among the parties to have a dialogue that "is not

see MOU page 15

# WHATEVER



# WHENEVER



# WHEREVER

Creative photography for the oil & gas industry.  
judypatrickphotography.com  
907.258.4704

**JUDY PATRICK**  
PHOTOGRAPHY



continued from page 14

## MOU

going to make the front page of the newspaper.”

“We hope to discuss things over the coming year that we have not been able to discuss before,” Derome said during a panel presentation on social responsibility Nov. 20. “I think we will address issues of concern to the Na-cho Nyak Dun and the Tr’ondëk Hwëch’in that will not be in the media, and we will learn to work together better. We will also promote mutual understanding and cooperation for benefit of everybody in the community,” she added.

Tr’ondëk Hwëch’in Chief Eddie Taylor said, “Our people have been involved in mining since the Gold Rush and continue to support responsible mining that does not compromise the environment, our culture or the exercise of TH aboriginal rights. It is sustainable, respects settlement lands, does not affect the productive capacity of the land, does not have negative social effects and does not take place in special places that have high cultural, spiritual or environmental values like the Peel River Watershed. So stay the heck out of there!”

As First Nations, the Na-cho Nyak Dun and others “have come from being approached by whiskey traders to being viewed as independent governments,” Chief Simon Mervyn told the forum participants. “If we can do it, other First Nations can do it as well.”

Because there are no legal requirements, Mervyn said it is important for mining companies to build trust with Yukon aboriginal groups that either own land or have traditional territory where the companies want to work.

“Cooperative agreements are smart for everyone,” he said.

However, developing such agreements with companies like Victoria Gold Corp., Alexco Resource Corp. and Atac Resources Ltd. have evolved over time. “While Alexco is a wonderful partner, we didn’t always know what we needed,” Mervyn said.

In 2008, the Na-cho Nyak Dun established guiding principles to mining within its traditional territory and a cooperative engagement process for economic activities within its traditional territory.

“However, we soon realized we needed a far more in-depth statement of our requirements regarding proponent engagement with Na-cho Nyak Dun,” Mervyn said.

In 2011, the First Nation developed a new guide designed to promote true partnerships with project proponents. “It sets out expectations and objectives of resource agreements and provides for application of a strategic approach that will be applied in a consistent and coordinated manner with respect to various activities,” Mervyn explained.

While Na-cho Nyak Dun has developed increasingly beneficial relationships with Victoria, which is working to build a mine at the Eagle Gold Project on its Dublin Gulch Property, and with Alexco, which recently began production in 2011 at its Bellekeno silver, lead and zinc mine, Mervyn said the First Nation “didn’t expect too much” from agreements inked with mining explorers.

“Atac taught us differently,” he observed.

Na-cho Nyak Dun received equity participation in the highly prospective Rackla gold project a recent exploration agreement with Atac. “We became real partners because we both realized what we could do,” Mervyn added. ●

## Miners: Build relationships, not agreements

Brad Thrall, executive vice president and chief operating officer of Alexco Resource Corp., said the initial focus of his company’s agreements with the First Nation of Na-cho Nyak Dun in Yukon Territory was care, maintenance and exploration in the historic Keno Hill Silver District and that focus changed with Alexco’s activities and involvement.

Thrall was one of several mining company executives who shared their experiences working with Na-cho Nyak Dun in Yukon Territory during a panel discussion on social responsibility at the Yukon Geoscience Forum held in Whitehorse Nov. 19-23.

Over time, Alexco’s agreements evolved with the scope and level of the company’s activities. The company first entered a memorandum of understanding, then an exploration and cooperation agreement and last a comprehensive cooperation and benefits agreement once a positive production decision was made.

Thrall said the agreements provided Alexco with all-important project certainty.

“Implementation is the key to the success of these agreements. Everyone in the organization must buy into the agreements,” he added.

Mark Ayranto, vice president of Victoria Gold Corp., said his company has found that the agreement itself with Na-cho Nyak Dun “is not that important.”

“It’s really about relationship building. It’s about the process,” he said. “Our relationship with NND is extremely important.”

That relationship has paid off for Victoria as it advanced the 6 million-ounce Eagle Gold Project toward production. The company hopes to begin construction of a 200,000-ounce-per year min-

ing operation at Eagle in 2012.

Victoria’s relationship with Na-cho Nyak Dun also resulted in the company signing a letter of intent in mid-December for the purpose of staking the First Nation’s land that is adjacent to the Dublin Gulch Project, where the Eagle project is located. Victoria staked 1,443 claims on two parcels of NND Category B Land, nearly doubling the company’s land package within NND traditional territory in the Yukon. The highly prospective ground covers about 290 square kilometers (112 square miles) and has seen no exploration activity in more than 20 years.

Ayranto advised mining companies to start early in engaging First Nations and “engage often, follow up and provide updates – where you’re at, where you’re trying to get to.”

“Know what you want and what you can provide, whether that jobs, training or whatever,” he said. “The sooner you can do that, the better you can advance discussions. Be who you say you are. This speaks to transparency.” Ayranto also urged company representatives to become visible in the local communities.

“Show them you have no horns on your head,” he said. “Invest the time. Don’t think that it will take three meetings. Every meeting won’t go well. You will have ups and downs. Recognize that there will be an ebb and flow to these things.”

He also urged mining executives to get to know the people in the community, not just the chief and the council, learn when key events occur in the community and show up for them.

“Pop into the coffee shop to say hello. Buy your fuel there. Those things will pay off down the road,” he added.

—ROSE RAGSDALE

**Exceeding Expectations Everyday**

**2011 Milestone: 5 million ounces of gold produced, a modern record in Alaska mining.**

**KINROSS** Fort Knox  
Fairbanks, Alaska kinross.com



• ALASKA

# Governor pushes to gain access to west

Parnell's FY2013 budget includes US\$50M for three 'Roads to Resources,' streamlined permitting, better maps and REE assessment

By SHANE LASLEY  
Mining News

Much of Alaska's resource wealth is locked up in more than 350,000 square miles (906,000 square kilometers) west of the state's contiguous road system. Alaska Gov. Sean Parnell has included some US\$50 million in his fiscal 2013 state budget proposal to support measures aimed at gaining access to much of the state's abundant oil, gas and minerals resources including three roads that would trek westward.

"Better transportation corridors will open up petroleum and mining opportunities," Parnell told the Alaska Chamber of Commerce Dec. 15. "Our Roads to Resources Initiative will be funded at US\$28.5 million to access oil and gas-rich lands around Umiat – in the Foothills West; to open access to the Ambler Mining



JAMES BROOKS

the Elliott Highway that extends to the northwest from Fairbanks is the westernmost artery in Alaska's road system. Alaska Gov. Sean Parnell included US\$10 million in his FY2013 budget to advance construction of a road to connect the end of the Elliott Highway with the Village of Tanana, which would be the first leg of a proposed 800-kilometer (500-mile) highway through Interior Alaska to Nome.

District; to open up mining lands in a route to Tanana; and to fund work on the Klondike Industrial Use Highway outside

of Skagway, to name a few."

In addition to a US\$28.5 million allotment to the state's Roads to Resources pro-

gram, the governor's budget includes funding for streamlining the permitting process in Alaska, continued assessment of the state's rare earth element potential, a statewide digital mapping program and a geological assessment of shale oil on the North Slope.

"Funding Roads to Resources; more timely permits; a rare earths assessment; and statewide digital mapping — it's all about jobs and creating new opportunities for independent, hard-working Alaskans to move forward," Parnell said while rolling out his budget plans.

## Heading west

The governor's proposed Roads to Resources funding includes US\$24 million towards three road projects that, if built, would extend ground transportation westward into a resource-rich area about twice the size of California.

The two largest Roads to Resources items in the 2013 budget, at US\$10 million each, are proposed roads to Tanana and Umiat.

The road to Tanana would be the first leg of a proposed 800-kilometer (500-mile) highway that would pass near mineral prospects such as Silver Predator Corp.'s Illinois Creek project, as it wends its way westward to the historical mining community of Nome.

Dowl HKM, an Anchorage-based engineering firm contracted to carry out the state-funded Western Alaska Access Planning Study, originally evaluated four routes to the Seward Peninsula mining town. Of the alternatives considered, the firm determined that the Yukon River Corridor offered the best balance of resource and community development benefits with the least adverse impact to the environment as well as land ownership and management.

The preferred route would begin at Manley Hot Springs, near the end of the Elliott Highway and head nearly due west for some 110 kilometers (70 miles) to the village of Tanana where it would cross to the north side of the Yukon River. From Tanana, the highway would roughly parallel the historical waterway for much of the route as it continues to the westernmost reaches of Alaska.

Benefits for mining were among considerations in the study. Though not specifically targeting any particular projects, the proposed Yukon Highway is expected to lower exploration, development and operations costs for mining projects throughout western Alaska.

Communities along the route are expected to be among the largest beneficiaries of the proposed road.

The Tanana Chiefs Conference, a unified group of 42 Interior Alaska Native communities, has endorsed the Yukon route. The alliance's board of directors cites the current high transportation and fuel costs as reasons it stands behind building the road.

The communities of Tanana, Ruby, Galena, Koyukuk, Koyuk and Nome would share in an expected annual savings of US\$19.1 million per year in fuel, freight and mail transport costs if road transportation is used.

The road to Umiat, also known as the Foothills West Transportation Access Project, is a proposed 160-kilometer (100-mile) road running along the north slope of

see ROADS TO RESOURCES page 17

# NORTH OF 60 MINING NEWS

I would like to introduce you to North of 60 Mining News, a monthly supplement to Anchorage-based Petroleum News. North of 60 Mining News covers the mining industry in the Arctic, focusing on Alaska and northern Canada. It is inserted in Petroleum News the fourth week of every month.

Mining News carries the latest news in the industry, as well as features on the most important projects and issues, such as new technology, environmental policy, aboriginal rights and mining legislation. It is the only newspaper that covers this far northern region in such depth, and our reporters frequently travel to see mining projects for themselves and to attend major mining conferences.

In addition to news and features, we publish regular columns by Fairbanks geologist Curt Freeman and Anchorage attorney J.P. Tangen, a specialist in mineral law. A subscription to the paper includes access to the online archive of thousands of mining and petroleum articles from past years.

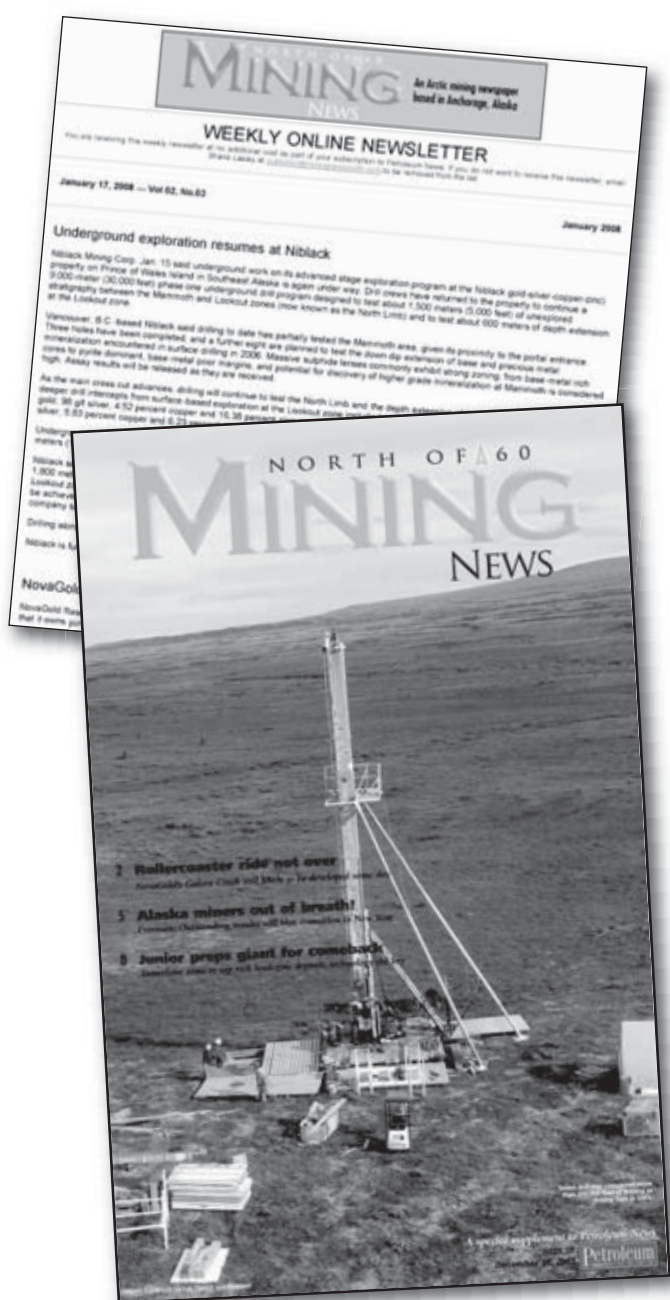
The most recent addition to North of 60 Mining News is the weekly online newsletter, keeping you up to date on the most important news affecting the industry.

North of 60 Mining News is a newspaper that no company involved in this region's mining industry should be without. It's your paper, for your industry. We would like to hear from you!

If you have any questions about advertising, subscribing or if you would like additional information please contact Shane at (907) 522-9469 or publisher@miningnewsnorth.com.

Shane Lasley

Available now at the low price of \$78.00 per year. Order now!





continued from page 16

## ROADS TO RESOURCES

the Brooks Range. This transportation corridor would provide access to oil and gas fields in the foothills and the National Petroleum Reserve-Alaska.

The Umiat funding in Parnell's budget provides for continued work on an environmental impact statement; continued evaluation of routes from Umiat to existing roads on the North Slope and definition of a preferred alternative; and securing environmental permits and right of way for the Umiat project.

### Copper road

For the mineral industry, the most important project may be a proposed road to the Ambler Mining District – a region of Northwest Alaska renown for a 110-kilometer- (70 miles) long belt of world-class volcanogenic massive sulfide deposits rich in copper, zinc, lead, gold and silver that sweep across its breadth.

The 2013 budget put forward by the governor includes US\$4 million towards defining an optimal corridor to the Ambler Mining District; establishing a right-of-way; and beginning the environmental and permitting work to build the 320-kilometer (200 miles) transportation route to the remote copper-rich region. This adds to the US\$5.25 million approved by the Alaska Legislature over the past two budget cycles for scoping the viability of establishing a transportation link to Ambler.

Parnell said the state will explore the potential for a public-private partnership to proceed with financing and construction of the Ambler Mining District Road.

NovaGold Resources Inc. and NANA Regional Corp. are the likely private partners and primary beneficiaries of a road to the Ambler region.

In October, the mineral exploration company forged a partnership with the Inupiat-

owned Alaska Native regional corporation to explore and develop 180,000 hectares (445,000 acres) of copper-rich lands at the western terminus of the proposed Ambler Road. The pact consolidates NovaGold's Ambler property, including the world-class Arctic deposit, with the copper-rich Bornite deposit and other mineral prospects on NANA lands in the upper Kobuk River area.

While studying the economics of building a mine at the Arctic deposit, SRK Consulting (U.S.), Inc. determined that a 340-kilometer (211-mile) road stretching west from the Dalton Highway to the village of Kobuk, would be the best route for linking the copper-rich deposit to Alaska's road-system.

For purposes of the study, SRK assumed that the road would be designed and constructed by the State, and NovaGold would then reimburse the State on an agreed-upon basis over the operating life of the mine. A similar arrangement exists between the State and the Red Dog Mine in Northwest Alaska for its road and port facility.

In addition to being important to mineral development, NANA and its shareholders see the infrastructure as a means to reducing skyrocketing energy costs to the residents of Northwest Alaska.

"When we first started having discussions about roads 15 to 20 years ago our region did not support roads, but 15-20 years later that has changed because of our economy, our high cost of energy and the need for more employment," NANA President and CEO Marie Greene told Mining News.

### Klondike Highway upgrades

Parnell also has allotted US\$2.5 million for refurbishing and strengthening the pavement and bridge structures along Alaska's 24-kilometer (15-mile) section of the historical Klondike Highway. The governor said the improvements to the industrial route are needed to accommodate the large increase in traffic from the transportation of ore from Canadian mines to the Port of Skagway for

shipment to smelters around the world.

The Klondike Highway links the Alaskan coastal town of Skagway to the mining town of Dawson City in Yukon Territory and its route somewhat parallels that used by prospectors during the Klondike Gold Rush.

Today, Alaska Route 98 continues to an important link for miners seeking to unlock the Yukon Territory's vast mineral wealth. Since 2007, Capstone Mining Corp. has used the industrial route to ship copper concentrates from its Minto Mine in central Yukon to the Seward Ore Terminal – from there the copper-rich concentrates were shipped to international destinations. Last year the copper miner shipped around 47,000 metric tons of copper concentrates containing some 40,000 pounds of copper, 22,000 ounces of gold and 207,000 ounces of silver down the Klondike Highway.

Alexco Resources Corp. also utilizes the Klondike Highway to ship silver-rich zinc and lead concentrates from its recently commissioned Bellekeno Mine through Skagway to a refinery in southern British Columbia.

In May Parnell signed legislation that authorizes the Alaska Industrial Development and Export Authority to issue up to US\$65 million in bonds to finance expansions and upgrades to the Skagway port, including the ore terminal.

Parnell said the US\$2 million balance of his Roads to Resources funding is for smaller resource road opportunities to promote significant revenue and employment opportunities.

### Permits, maps and REEs

In addition to advancing projects to establish transportation corridors toward resource-rich regions of western Alaska, Parnell intends to smooth the way for companies seeking to gain permissions to extract these resources. To that end the governor's budget includes US\$3.3 million for streamlining the state's permitting process.

The governor said that between 85 per-

cent and 90 percent of the state's general fund revenue comes from the development and use of state land and natural resources. Streamlining the permitting process would provide more timely decision making for mining, timber, public access, land sales and transfers, and other resource development applications.

"Mineral exploration expenditures are up, and with our efforts to streamline the permitting process, we are working to secure Alaska's resources for Alaskans' benefit," he explained.

Parnell also would like to see US\$15.9 million – US\$3.7 million in state's general funds, with the balance from federal funds – spent on a statewide digital mapping program.

"One thing often overlooked in growing an economy is the value of a good map. USGS (United States Geological Survey) topographic maps of Alaska are more than 50 years old, inaccurate, and do not meet national mapping standards," he explained. "Accurate elevation data is vital to responsible resource and economic development, aviation safety, navigational devices, modern-day emergency response, and routing for roads and pipelines."

Parnell also has included US\$2.7 million for a three-year project to assess Alaska's rare earth element and critical minerals potential. During the 2012 budget cycle, the Alaska Legislature approved US\$498,000 proposed by the administration to begin this statewide REE evaluation.

The governor said the area around Bokan Mountain in Southeast Alaska is potentially one of the largest REE deposits in North America, and geologists have identified more than 150 REE occurrences across the state.

"The timing is right for rare earth development," Parnell told an audience at the Strategic and Critical Minerals Summit held Sept. 30 in Fairbanks. "We're on track to assess, incentivize and develop the rare earth elements we can provide the world." ●

continued from page 13

## PRAIRIE CREEK

not believe that the project should be referred to an environmental impact assessment ... NDDB wants it clearly understood that it supports the mine going forward, with the added certainty of appropriate environmental protection ...," Tesou added.

### Industry praise

Canadian Zinc and the Nwt & Nunavut Chamber of Mines applauded the Review Board's decision "This favorable report is a significant step forward for the Prairie Creek Mine," Canadian Zinc Chairman and CEO John Kearney said in making the announcement. "It has been a long and exhaustive process, the Review Board carried out a detailed environmental assessment and receiving a positive decision from the Review Board is confirmation that all of our efforts have been worthwhile. We are very satisfied with this Report and Decision and gratified to have received the approval of the Review Board," Kearney added.

Canadian Zinc Chief Operating Officer Alan Taylor said the company is comfortable with the Review Board's suggestions. "The support from the Nahanni Butte Dene Band and from the Liidlii Kue First Nation, together with the co-operation and support of the Government of the Northwest Territories, were important factors in the Review Board's decision and reflect the significant economic contribution that the Prairie Creek Mine will bring to that region of the Northwest Territories," Taylor added.

Canadian Zinc Dec. 13 also announced a

**"Key design modifications include the developer's commitment to increase water storage capacity at the mine site, an improved mine-effluent outfall design, an enhanced water treatment plant and re-alignments to the winter road. The final list of commitments is included in Appendix B of the Review Board's Report of Environmental Assessment. These commitments are fundamental to the Review Board's decision on the significance of adverse impacts."**  
 –Mackenzie Valley Environmental Impact Review Board

public offering of 6 million units and at a price of C67 cents per unit for gross proceeds of C\$4.02 million and a concurrent private placement of flow-through shares of the company to raise gross proceeds of up to C\$2.025 million at a price of C75 cents per FT share. The company said it will use net proceeds from the offering for the advancement of the Prairie Creek Project and for general corporate and working capital purposes.

Calling the Review Board decision "encouraging," Chamber of Mines President Pamela Strand said "this would be an important milestone for the Northwest Territories and will help send a signal of confidence to companies considering investment in the Territories."

The Chamber of Mines encourages all

parties to continue to demonstrate leadership in making appropriate changes in the regulatory processes to reinstate the NWT as an attractive investment destination."

Strand said the mining industry group continues to actively encourage the Government of Canada in its work to improve the northern regulatory environment, and the boards in their work to improve the efficiency and predictability of their processes.

"Chamber members are also encouraged with the recent announcement that a mining strategy will form part of the new NWT Government's priorities," she added.

In a separate announcement, Strand observed that the investment environment in Northwest Territories is not as strong as it should be. "Given that the NWT diamond mining industry is now reaching its plateau, the lack of grassroots exploration investment is worrisome," she said.

Estimates of mining exploration expenditures in the territory continue to decrease, while comparable spending in neighboring Nunavut and Yukon Territory has continued to climb in recent months. A recent revised estimate of NWT spending by Natural Resources Canada fell to C\$81 million from C\$83 million originally projected in March. Estimates in Nunavut and the Yukon, by comparison, jumped 23 percent to C396 million from C\$323 million and 21 percent to C\$309 million from C\$256 million, respectively, in the March forecast. The lower exploration activity in the NWT is mainly attributed to regulatory complexity associated with aboriginal land claims and high levels of proposed protected areas. ●



Portable Tent Camps  
 Expediting Services  
 All Seasons

operations@taigaventures.com

PacWest  
 drilling supply, inc.

Baroid Drilling Fluids  
 Well Monitoring Supplies  
 Pacto Waterless Toilets

2700 S. Cushman  
 Fairbanks, Alaska 99701  
 (907) 452-6631  
 Fax: (907) 451-8632  
 www.taigaventures.com  
 Airport Business Park  
 2000 W. Int'l Airport Rd, #D-2  
 Anchorage, AK 99502  
 907-245-3123



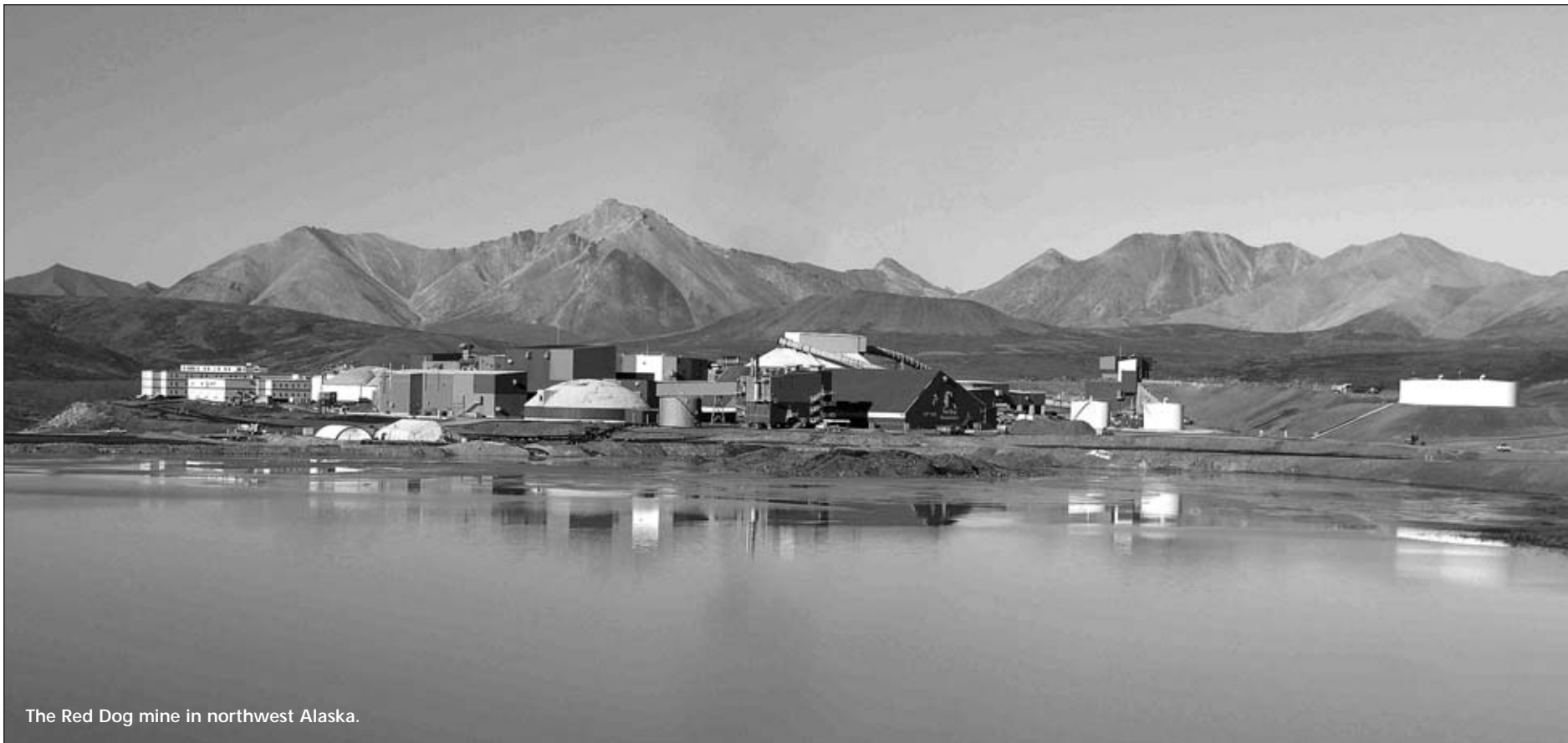
# MINING

NORTH OF 60

Companies involved in Alaska and  
northwestern Canada's mining industry

NEWS

DIRECTORY



The Red Dog mine in northwest Alaska.

## Mining Companies

### Fairbanks Gold Mining/Fort Knox Gold Mine

Fairbanks, AK 99707

Contact: Lorna Shaw, community affairs director

Phone: (907) 488-4653 • Fax: (907) 490-2250

Email: [Ishaw@kinross.com](mailto:Ishaw@kinross.com) • Web site: [www.kinross.com](http://www.kinross.com)

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

### Kiska Metals

Suite 575 – 510 Burrard St.

Vancouver, BC, Canada V6C 3A8

Contact: Jason Weber: President and CEO

or Drew Martel: Investor Relations

Phone: (604) 669-6660

Fax: (604) 669-0898

Email: [info@kiskametals.com](mailto:info@kiskametals.com)

Website: [www.kiskametals.com](http://www.kiskametals.com)

*Gold and Copper projects in Alaska, Yukon, BC, Australia and Mexico. Preferred partner of senior mining firms.*

### Usibelli Coal Mine

Fairbanks, AK 99701

Contact: Bill Brophy, vp cust. relations

Phone: (907) 452-2625 • Fax: (907) 451-6543

Email: [info@usibelli.com](mailto:info@usibelli.com) • Web site: [www.usibelli.com](http://www.usibelli.com)

Other Office

P. O. Box 1000 • Healy, AK 99743

Phone: (907) 683-2226

*Usibelli Coal Mine is headquartered in Healy, Alaska and has 200 million tons of proven coal reserves.*

*Usibelli produced one million tons of sub-bituminous coal this year.*

## Service, Supply & Equipment

### Air Liquide

Anchorage, AK 99518

Contact: Brian Benson

Phone: (907) 273-9762 • Fax: (907) 561-8364

Email: [brian.benson@airliquide.com](mailto:brian.benson@airliquide.com)

*Air Liquide sells, rents, and is the warranty station for Lincoln, Miller, Milwaukee, Victor and most other welding equipment and tool manufacturers.*

### Alaska Analytical Laboratory

1956 Richardson Highway

North Pole, AK 99705

Phone: (907) 488-1266 • Fax: (907) 488-077

E-mail: [jlovejoy@mappatestlab.com](mailto: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](mailto: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, President

Phone: (907) 562-5303 • Fax: (907) 562-5309

Email: [afcinfo@ak.net](mailto:afcinfo@ak.net)

*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 Interstate Construction (AIC)

301 W. Northern Lights Blvd., Suite 600

Anchorage, AK 99503

Contact: Fred Hargrave

Phone: (907) 562-2792 • Fax: (907) 562-4179

Email: [info@aicl.com](mailto:info@aicl.com)

Website: [www.aicl.com](http://www.aicl.com)

*AIC provides cost-effective solutions to resource development industries. We provide innovative ideas to meet each requirement through the provision of best-in-class people and equipment coupled with exceptional performance.*

### 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](mailto: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.*

### Alaska Telecom

6623 Brayton Dr.

Anchorage, AK 99507

Contact: Kevin Gray or Martin Stewart

Phone: (907) 344-1223

Fax: (907) 344-1612

E-mail: [klg@alaskatelecom.com](mailto:klg@alaskatelecom.com) or

[mjstewart@alaskatelecom.com](mailto:mjstewart@alaskatelecom.com)

Website: [www.alaskatelecom.com](http://www.alaskatelecom.com)

*Providing telecommunications support to oil exploration and production companies and contractors.*

*Satellite communications, voice, data, microwave, VHF/UHF radio, engineering and installation.*

### Arctic Foundations

Anchorage, AK 99518-1667

Contact: Ed Yarmak

Phone: (907) 562-2741 • Fax: (907) 562-0153

Email: [info@arcticfoundations.com](mailto:info@arcticfoundations.com)

Website: [www.arcticfoundations.com](http://www.arcticfoundations.com)

*Soil stabilization – frozen barrier and frozen core dams to control hazardous waste and water movement.*

*Foundations – maintain permafrost for durable high capacity foundations.*

### Austin Powder Company

P.O. Box 8236

Ketchikan, AK 99901



Contact: Tony Barajas, Alaska manager  
 Phone: (907) 225-8236 • Fax: (907) 225-8237  
 E-mail: tony.barajas@austinpowder.com  
 Web site: www.austinpowder.com

*In business since 1833, Austin Powder provides statewide prepackaged and onsite manufactured explosives and drilling supplies with a commitment to safety and unmatched customer service.*

**Calista Corp.**

301 Calista Court, Suite A  
 Anchorage, AK 99518  
 Phone: (907) 279-5516 • Fax: (907) 272-5060  
 Web site: www.calistacorp.com

**Chiulista Services Inc.**

6613 Brayton Dr., Ste. C  
 Contact: Joe Obrochta, president  
 Contact: Monique Henriksen, VP  
 Phone: (907) 278-2208 Fax: (907) 677-7261  
 Email: info@chiulista.com  
*The 100 percent Alaska Native owned and operated catering company at the Donlin Creek Prospect and with North Slope experience, catering and housekeeping to your tastes, not ours; providing operations and camp maintenance.*

**Construction Machinery**

5400 Homer Dr.  
 Anchorage, AK 99518  
 Contact: Ron Allen, Sales Manager  
 Phone: (907) 563-3822 • Fax: (907) 563-1381  
 Email: r.allen@cmiak.com • Web site: www.cmiak.com  
 Other Offices:  
 Fairbanks office  
 Phone: 907-455-9600 • Fax: 907-455-9700  
 Juneau office  
 Phone: 907-780-4030 • Fax: 907-780-4800  
 Ketchikan office  
 Phone: 907-247-2228 • Fax: 907-247-2228  
 Wasilla Office  
 Phone: 907-376-7991 • Fax: 907-376-7971

**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:**  
 800 East Dimond Boulevard, Suite 3-565  
 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, Account 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:**

8588 Katy Freeway, Suite 245  
 Houston, Texas 77024  
 Phone: (713) 589-4456  
 Hillary McIntosh, Account Representative  
 Hillary.McIntosh@gci.com  
*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.*

**General Refining Corp.**

59 Madison Ave.  
 Hempstead, NY 11550  
 Contact: Dave Greenfield, Ellen Han  
 Phone: (516)538-4747

**Advertiser Index**

**Air Liquide**  
**Alaska Analytical Laboratory**  
**Alaska Dreams**  
**Alaska Earth Sciences** ..... 9  
**Alaska Frontier Constructors** ..... 23  
**Alaska Interstate Construction (AIC)** ..... 12  
**Alaska Steel Co.**  
**Arctic Foundations**  
**Austin Powder Co.**  
**Calista Corp.**  
**Chiulista Services** ..... 4  
**Constantine Metal Resources**  
**Construction Machinery** ..... 24  
**Everts Air Cargo**  
**Fairbanks Gold Mining/Fort Knox Gold Mine**... 13  
**GCI Industrial Telecom**  
**General Refining Corp.** ..... 5  
**Jackovich Industrial & Construction Supply** ..... 22  
**Judy Patrick Photography** ..... 12  
**Kiska Metals**  
**Last Frontier Air Ventures** ..... 21  
**Lynden** ..... 2  
**MRO Sales**  
**Nature Conservancy, The** ..... 20  
**Northern Air Cargo**  
**Pacific Rim Geological Consulting** ..... 9  
**PND Engineers Inc.** ..... 3  
**Salt+Light Creative**  
**Taiga Ventures/PacWest Drilling Supply** ..... 17  
**URS Corp.**  
**Usibelli Coal Mine**

Website: www.generalrefining.com

**Gold Canyon Mining**

1075 S. Idaho Road, Ste. 104  
 Apache Junction, AZ 85119  
 Contact: David Fortner  
 Phone: (480) 302-4790  
 Fax: (480) 671-5368  
 Website: www.gcmMining.com  
*Specializing in mine site development, contract mining, and final mine closure. With a solid reputation for proficiency, productivity and safety, ready to take on both your large and small projects.*

**Jackovich Industrial & Construction Supply**

Fairbanks, AK 99707  
 Contact: Buz Jackovich  
 Phone: (907) 456-4414 • Fax: (907) 452-4846  
 Anchorage office  
 Phone: (907) 277-1406 • Fax: (907) 258-1700  
*24-hour emergency service. With 30 years of experience, we're experts on arctic conditions and extreme weather.*

**Judy Patrick Photography**

Anchorage, AK 99501  
 Contact: Judy Patrick  
 Phone: (907) 258-4704 • Fax: (907) 258-4706  
 Email: jpphoto@mtaonline.net  
 Website: JudyPatrickPhotography.com  
*Creative images for the resource development industry.*

**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.*

**MRO Sales**

Anchorage, AK 99518  
 Contact: Don Powell  
 Phone: (907) 248-8808 • Fax: (907) 248-8878  
 Email: Sales1@mrosalesinc.com  
 Website: www.mrosalesinc.com  
*MRO Sales offers products and services that can help solve the time problem on hard to find items.*

**Northern Air Cargo**

3900 W. International Airport Rd.  
 Anchorage, AK 99502  
 Contact: Mark Liland, acct. mgr. Anch./Prudhoe Bay  
 Phone: (907) 249-5149 • Fax: (907) 249-5194  
 Email: mliland@nac.aero • Website: www.nac.aero  
*Serving the aviation needs of rural Alaska for almost 50 years, NAC is the states largest all cargo carrier moving nearly 100 million pounds of cargo on scheduled flights to 17 of Alaska's busiest airports. NAC's fleet of DC-6, B-727, and ATR-42 aircraft are available for charters to remote sites and flag stops to 44 additional communities.*

**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.*

**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.*

**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\_heгна@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.*



The Nature  
Conservancy 

Protecting nature. Preserving life.™

nature.org



# CORPORATE COUNCIL *on the* ENVIRONMENT

Fish printing workshop at Salmon Camp, a conservation program of the Bristol Bay Economic Development Corp. with support from The Nature Conservancy

## Lead Corporate Partners (\$25,000 & above)

Alaska Airlines & Horizon Air · *Alaska Journal of Commerce*  
BP · ConocoPhillips Alaska, Inc. · *Petroleum News*

## Join Us

## THANK YOU

### Corporate Partners

ABR, Inc.  
Accent Alaska.com-Ken Graham Agency  
*Alaska Business Monthly*  
Alaska Rubber & Supply, Inc.  
Alaska Steel Company  
Alaska Wildland Adventures  
Alyeska Pipeline Service Company  
American Marine Corporation  
Arctic Slope Regional Corporation  
Arctic Wire Rope & Supply  
Bristol Bay Native Corporation  
Calista Corporation

Carlisle Transportation Systems, Inc.  
Chevron  
CIRI  
Clark James Mishler Photography  
CONAM Construction Company  
Denali National Park Wilderness Centers, Ltd.  
Fairweather, LLC  
Flint Hills Resources  
Holland America Lines Westours, Inc.  
Kim Heacox Photography  
Koniag, Inc.  
LGL Alaska Research Associates, Inc.

Lynden Family of Companies  
McKinnon & Associates, LLC  
NANA Development Corporation  
Northern Economics, Inc.  
Oasis Environmental, Inc.  
Pacific Star Energy  
Shell Exploration & Production Company  
Staser Consulting Group, LLC  
Stoel Rives, LLP  
Trident Seafoods Corporation  
Udelhoven Oilfield System Services, Inc.  
XTO Energy, Inc.

### The Nature Conservancy

715 L Street · Suite 100 · Anchorage, AK 99501 · alaska@tnc.org · 907-276-3133 · nature.org/alaska



*continued from page 3*  
**HEATHERDALE**

Assessment study,” said Heatherdale President and CEO Patrick Smith.

In July, Heatherdale announced that it had struck a new zone of deeper mineralization between Lookout and Trio rich in gold and silver. Five of the six holes targeting this lower stratum cut mineralization. U123, the best hole of this series, cut 2.4 meters averaging 19.51 g/t gold, 263 g/t silver and 1.67 percent copper.

“The project continues to become more robust with each phase of work,” he said.

**Geological model**

While drilling at Lookout and Trio zones have outlined a robust deposit with volumes and grades worthy of considering the viability of building a mine, the modeling done by Heatherdale geologists suggests the felsic horizon that hosts this mineralization extends more than 10 kilometers (6 miles), of which only about two kilometers (1.2 miles) hosts the current resources.

“At best only about 20 percent of this prospective horizon has been tested by drilling – and that has been focused on the outcropping mineralization only. This is also a three dimensional opportunity so mineralization might very well occur below seemingly barren surface rocks,” Smith told Mining News.

The Heatherdale CEO explains that all

of the known sulphide mineralization at Niblack is hosted in a felsic horizon that was deposited on the seafloor some 565 million years ago. This metals-rich stratum has been folded and deformed into the geometry that Heatherdale is revealing through its exploration.

“The Niblack deposit(s) differ somewhat from the classic model in that the majority of the sulphide deposition appears to have taken place beneath the seafloor, within permeable, possibly unconsolidated fragmental volcanic rocks. The known deposits on the Niblack property generally represent surface exposed mineralization discovered by early explorationists,” he explained.

In May and June, a helicopter-supported surface drill rig was added to the program to test several exploration targets. Heatherdale said six of the seven exploration holes drilled from surface at Niblack cut sulphide mineralization.

Additionally, three exploration holes drilled from underground firmly established the continuity of the mineralization hosting felsic horizon between the Lookout and Trio zones as well as to the northwest of the Lookout zone, and have provided positive indicators for the next stage of drilling in these areas.

“I am extremely pleased with the results of the 10 exploration holes – three of which were drilled from underground and seven from surface. These holes are confirming the excellent potential of the stratigraphy that hosts mineralization at

Niblack and have validated the application of the new geological interpretation,” said Smith.

**Priority targets**

With an enhanced understanding of the VMS mineralization at Niblack, Heatherdale geologists have generated some new ideas about additional targets as the felsic horizon wends its way through Lookout Mountain.

Lookout West, Trio, Niblack Mine zone and Dama are priority exploration targets the team has generated for 2012.

Heatherdale identified the Lookout West target through mapping of the felsic host-stratigraphy west of the Lookout Zone. Smith said this target is difficult to drill from the underground drift and will be a target for surface drilling later in 2012.

“There are priority surface drilling targets to test both down plunge extensions of the main Lookout mineralization and to test Lookout West,” the Heatherdale leader explained.

At Trio, the company plans to upgrade the resource already outlined there and continue tracing the mineralization toward the Mammoth Zone, located some 915 meters to the northwest.

“The prospective stratigraphy is folded back around to the limb between Trio and Mammoth. The surface drilling program will focus on adding resource at Trio and exploring extensions along the limb to Mammoth as well,” Smith said.

The exploration drift from which Heatherdale is conducting its underground drilling is collared into the Mammoth zone. U112 – drilled at Mammoth in 2011 – cut 5.8 meters averaging 3.32 percent copper, 0.49 g/t gold, 3.14 percent zinc and 28 g/t silver.

Further northeast the felsic horizon surfaces in the area of the historical Niblack Mine, which from 1905 to 1908 miners extracted some 20,000 tons of ore grading 4.9 percent copper, 2.2 g/t gold and 30 g/t silver from underground workings here.

From the historical mine, the mineralization appears to turn sharply to the southeast and surface geochemistry suggests it may continue for at least 5,000 meters in this direction. A historical hole drilled in the Dama zone – located about 2,000 meters along this projected path – cut 19.2 meters averaging 6.4 percent copper, 1.37 g/t gold, 53 g/t silver and 3.2 percent zinc.

Smith told Mining News that Dama is high-priority target and the area warrants several drill holes.

**Infrastructure needs**

While geologists continue to chase the multitude of exploration targets Niblack has to offer, other members of the Heatherdale team are busy identifying power sources and other infrastructure needs for developing the project.

Anticipating an operation of similar  
*see HEATHERDALE page 23*

*continued from page 9*  
**DONLIN FOCUS**

over-runs; and our decision to go to P85 is really driven by this,” he explained.

Van Nieuwenhuysse said the board of directors has approved a budget to advance Donlin Gold towards permitting, a process scheduled to begin in the first half of 2012.

Over the first two years of permitting capital requirements for Donlin Gold will be minimal. These costs are expected to ramp up as the permitting process advances to a point that is time to pre-order some of the larger equipment.

“Between now and 2014 most of the project activities will be involved with permitting and some of the engineering work; in 2014 you really see the spending step up as you approach that fine line as you expect your permits to be delivered,” Van Nieuwenhuysse explained to investors.

Production spending at Donlin Gold is scheduled to top US\$1 billion by the end of 2015 – about the same time the project is expected to transition from permitting to construction.

NovaGold Dec.16 filed a preliminary short form base shelf prospectus that enables the company to raise up to US\$500 million through the sale of securities during a 25-month period that begins in January.

**Golden upside**

Add measured and indicated resources to the 33.85 million ounces of proven and probable reserves, the Donlin Gold deposit tops 39 million ounces and the pit encompasses an additional 5.99 million ounces of inferred resource. These 6 million ounces of gold that has not yet been proven to a standard that is reliable enough to be considered in the economics of the project is currently treated as waste but a large portion is expected to be upgraded during the course of mining.

Van Nieuwenhuysse said that gold-rich ore remains in the sidewalls and floor of

the current pit at Donlin, leaving the deposit open both laterally and at depth.

“The pit is really limited by the drilling,” the outgoing NovaGold CEO said. “There is nothing that limits the ore-body at depth, and we certainly believe that with additional drilling we will be able to extend the pit down further.”

NovaGold said the more than 40 million ounces of gold reserves and resources are located along about 2,000 meters, 25 percent of a mineralized corridor that stretches for more than 8,000 meters.

“As an exploration geologist I love to talk about the exploration potential of the Donlin project – I think it is one of the best gold deposits in the world,” Van Nieuwenhuysse beamed. “It is a fantastically large-scale system with over 40 million ounces, and we have only drilled about a quarter of the property package.”

Several drilled prospects and other exploration targets are found along the underexplored 5,000-meter trend north of the Donlin Gold deposit.

While still serving in his former role as president of Barrick North America, Lang spoke about the upside potential at Donlin.

“In addition to the already significant resources, the exploration potential is high. Several areas have already been identified, with the potential to extend the mine-life,” he said.

NovaGold said one of these targets in particular, Dome, has the potential to support a stand-alone operation.

“I am an absolute believer that it will be a 100-million-ounce (gold) district before it is all said and done,” Van Nieuwenhuysse touted. “The vision I have for Donlin Gold is: ‘You will double the throughput from 55,000 to 110,000 (metric tons), and you will be producing well over 2 million ounces of gold annually for 50 years.’”

The company notes, though, that the future impact of these Donlin Gold-trend exploration targets depends on location, geological complexity and capital cost.

***If put into production as contemplated in the prefeasibility study, Galore Creek would be the fourth-largest copper mine in North America and the largest in Canada.***

**Pure-play gold developer**

In order to help raise the cash it will need to advance Donlin Gold to production and achieve its new maxim of becoming “a pure-play gold developer,” NovaGold has decided to move the copper-rich Ambler and Galore Creek projects out of its portfolio.

NovaGold’s Ambler project in Northwest Alaska is being spun out into NovaCopper Inc., a company in which Van Nieuwenhuysse will assume the role of president and CEO.

On the other hand, the gold-focused company has put its 50 percent interest in the Galore Creek project located in northern British Columbia up for sale. According to a prefeasibility study completed in July, NovaGold’s 50 percent share of the capital requirements to develop the massive copper-gold-silver project would be about US\$2.58 billion – Galore Creek-partner, Teck Resources Ltd., would be responsible for the other half.

“With two large-scale, truly world-class deposits in Donlin Gold and Galore – we would have to raise a very large amount of money to develop both of these

projects,” said Van Nieuwenhuysse.

Seeking the financial expertise of J.P. Morgan Securities LLC and RBC Capital Markets, NovaGold decided to sell its stake in Galore and use the funds to help foot its half of the some US\$6.7 billion needed to build a mine at Donlin.

Galore Creek is forecast to produce 6.2 billion pounds of copper, 4 million ounces of gold and 65.8 million ounces of silver over about an 18-year mine life with cash costs averaging US\$80 cents per pound of copper at base price case assumptions of US\$2.65 per pound copper, US\$1,100 per ounce gold and US\$18.50 per ounce silver and a foreign exchange rate of 1.11 C/US.

If put into production as contemplated in the prefeasibility study, Galore Creek would be the fourth-largest copper mine in North America and the largest in Canada. Van Nieuwenhuysse believes a project of this size, located in politically stable British Columbia, makes it an attractive asset to a number of miners seeking to add copper, gold and silver to their production stream.

“We think there will be a lot of interest, and we look forward to executing the process in the New Year,” he said.

“We have engaged the Royal Bank of Canada and JP Morgan to assist us with the sale of Galore Creek,” Van Nieuwenhuysse added. ●

**LAST FRONTIER AIR VENTURES**  
**(907) 745-5701**  
39901 N. Glenn Hwy.  
Sutton, AK 99764  
helicopter@LFAV.com  
www.LFAV.com

**Helicopter Charters**  
Exploration | Survey | Slung Cargo | Tours | Film



continued from page 4

## CARLIN GOLD

11-058 cut 41.15 meters grading 7.33 g/t gold with 13.72 meters grading 16.23 g/t gold, 2.20 meters grading 10.15 g/t gold and 2.76 meters grading 10.94 g/t gold; and hole OS-11-062 cut 59.44 meters grading 4.32 g/t gold with 19.54 meters grading 8.75 g/t gold and 4.33 meters grading 4.80 g/t gold in the Conrad Zone, one of five Carlin-type gold exploration targets within a 4-kilometer-by-3-kilometer (2.5 miles by 2 miles) area within the Nadaleen Trend. The Conrad zone lies 1 kilometer (0.62 miles) east of the Osiris zone and 1.5 kilometers (1 mile) east of Isis East, Atac's new high-grade discovery where it intersected 6.77 g/t gold over 15.24 meters in hole OS-11-40. Additional prospecting in 2011 identified two arsenic, thallium, mercury and antimony soil geochemical anomalies, named Dale and Pyramid, which are located 14 kilometers (9 miles) and 26 kilometers (15 miles), respectively, to the west of Conrad, where orpiment and realgar mineralization was discovered at surface. Aggressive exploration is planned for 2012 in the area with a focus on the Dale and Pyramid targets along with follow-up work at Conrad and Isis East.

Carne said Atac has explored the region since early in the past decade and credits a Geological Survey of Canada RGS database, which has been in the public domain for a long time, with providing critical clues for its exploration programs.

Carne also said he would like to see more geochemical sampling done in the area.

He said the key was a focus on looking for structures in the region and examining the rocks adjacent to the structures.

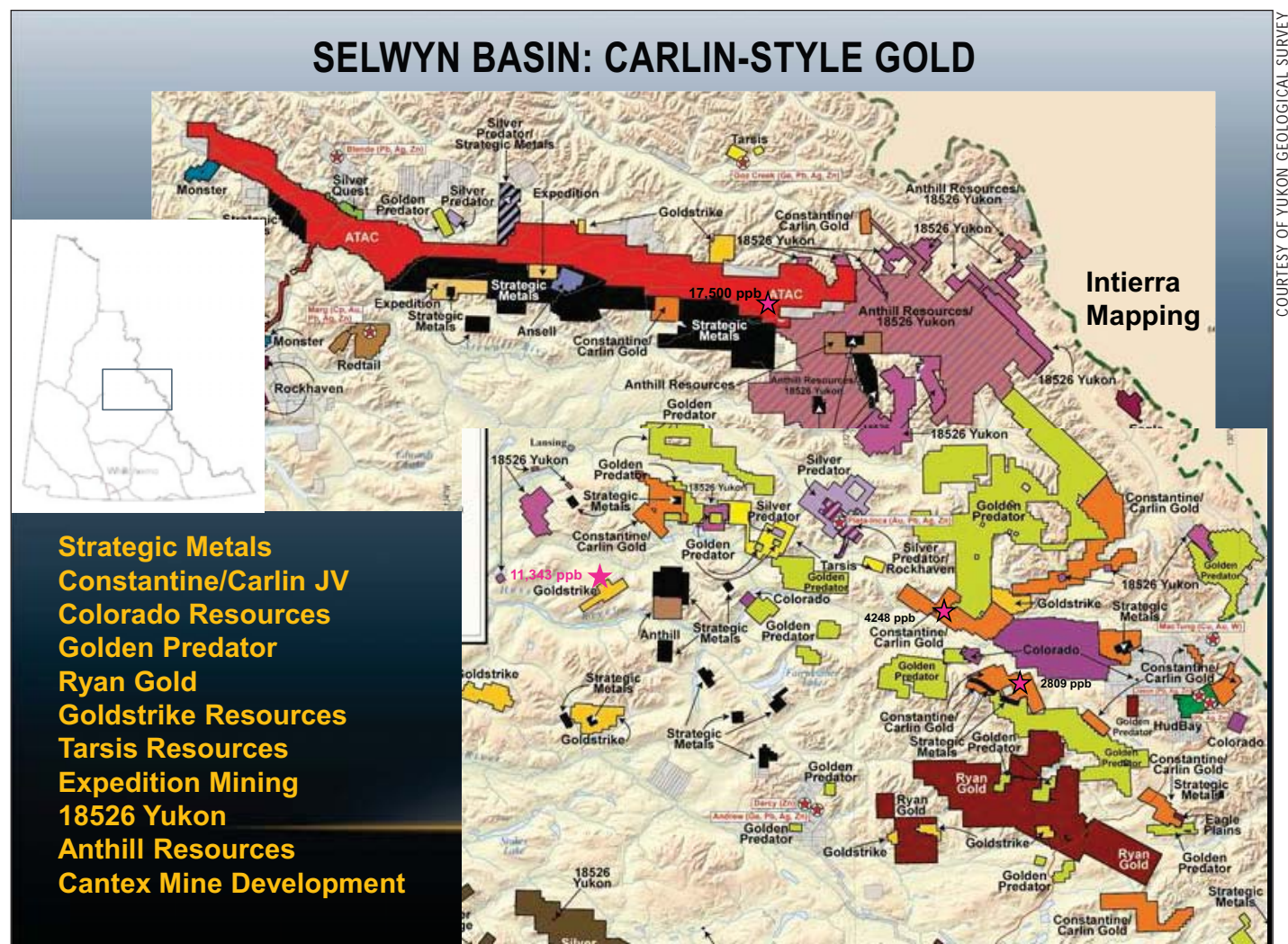
The work paid off for Carne and for fellow explorer, Bill Wengzynowski of Archer Cathro & Associates (1981) Ltd., not only with the 2010 Osiris discovery and subsequent related discoveries but also with industry recognition as "Yukon Prospectors of the Year" for 2011.

### Other early programs

Lara Lewis, economic geologist for the Yukon Geological Survey, offered forum participants a glimpse of the extensive exploration activity underway all over Yukon Territory in 2011, including in the Selwyn Basin with claims maps prepared by Intierra Mapping.

Lewis said the Selwyn Basin map showed just some of the many companies chasing Carlin-style gold based on regional stream sediment samples and regional mapping of potential host units – Paleozoic carbonates.

"Carlin-type deposits in Nevada occur in



clusters and along 'trends', so there is good reason for the staking rush in the area," she said.

Lewis noted that the region also has intrusion-related gold targets, including Golden Predator Corp.'s Cynthia and Harlan properties, as well as silver and base metal-rich properties such as the polymetallic vein silver-lead-zinc Plata property being explored by Rockhaven Resources Ltd.

Other companies either already having identified and/or currently exploring for Carlin-style gold in the area include:

- Goldstrike Resources Ltd. in the Gold Rush Zone on its Plateau property located 85 kilometers (53 miles) north of Atac's Osiris discovery.
- Arcturus Ventures Inc. on its 56-claim, 1,130-hectare (2,792 acres) Keele Project located about 100 kilometers (62 miles) away from Osiris at Keele Peak, Yukon.
- Aben Resources Ltd. explored its Selwyn Recce and Hit properties, permits and newly staked claims cover prospective targets with both Carlin-style stratigraphy and promising geochemical signatures. In addition to being prospective for the presence of Carlin-type gold deposits, Aben said its permits and claims have the potential to host carbonate and sedimentary-exhalative style silver-lead-zinc deposits as well as sediment-hosted copper deposits.

### New staking rush

In late August, the YGS released a slew of regional geochemical sample data collected years earlier by the GSC. Yukon government geologists re-analyzed and standardized the database for gold, arsenic, antimony, mercury and thallium values typical of Carlin-style mineralization.

The new information generated additional excitement in an already intense exploration environment and sparked a new round of claim-staking in a region of eastern Yukon Territory bounded on the north by the Dawson Thrust and on the south by the Tintina Fault, a large strike-slip fault extending in a boomerang-shaped belt of rocks from northwestern British Columbia through the Yukon and across Interior and southwestern Alaska. Numerous right deposits of gold have been found and mined along the Tintina Fault in all three jurisdictions.

"People jumped on it pretty darn quick," said Patrick Sack, YGS economic geologist, referring to the new flurry of staking.

Though the industry has been aware that the Selwyn Basin was loaded with lead and zinc since exploration in the 1960s and earlier, its potential for other types of mineralization is far less understood, Sack told Mining News.

"The majors had been up there looking

for 10 years or more, but they would not analyze their samples for gold," he said.

With advances in technology, the dataset has improved over the years and "whoever was on the ball, grabbed the data when we released it" and soon began staking claims, Sack explained.

"The thallium anomalies were gone within a week. Helicopters started flying and it was crazy for a while," he said.

Though the YGS has no plans to collect additional RGS data at this time, Sack said the Survey has planned to undertake a new project aimed at mapping the Dawson Thrust and adjacent areas (up to about 25 kilometers, 16 miles wide) to the east. He said the Dawson Thrust is thought to have played an important role in the Osiris discovery. In fact, both the Tiger and Osiris gold discoveries made by Atac resulted from following up on RGS anomalies.

Constantine's Green said the Carlin-style gold play in eastern Yukon "is pretty compelling."

"One of the really exciting things about the Yukon, in general, is how underexplored it is," he said. "That's the kind of place the Yukon is right now. It's very early days. You can go out there with an idea and find something. We encourage everybody to get out there and go prospecting." ●

*We were there at the beginning.*

With **43 years** of experience, we're experts on arctic conditions and extreme weather!

Solutions for Petroleum, Mining, Construction, & Timber Industries using top quality products.

Come see us; ask us questions.

907.277.1406

1716 Post Road  
Anchorage, AK 99501

907.376.7275

Fx: 907.376.7269  
1201 Hay Street  
Wasilla, AK 99654

907.456.4414

1600 Wells Street  
Fairbanks, AK 99701

**JACKOVICH**  
INDUSTRIAL & CONSTRUCTION SUPPLY

Please visit our new website, [www.jackovich.com](http://www.jackovich.com)

"Service: Our specialty since 1969"



continued from page 21

## HEATHERDALE

scale as Hecla Mining Co.'s Greens Creek silver mine near Juneau, Heatherdale foresees the need for some 11.5 megawatts of power to operate a mine and mill at Niblack.

"While it's early days, we believe Niblack will require the provision of some 3.5 megawatts of power to operate a 1,500- to 2,000-ton-per-day underground mine, and another 8 megawatts to operate a mill and processing plant," Smith said. "The final identification, permitting, development and realization of these facilities and services will take a number of years to accomplish, but we already have an impressive suite of local entities and institutions who are working collaboratively with us to identify the optimum solutions."

Heatherdale also has engaged with the Alaska Energy Authority and the Alaska Industrial Development and Export Authority, which regularly provides financing to public-private partnerships to facilitate infrastructure development and economic growth in the state.

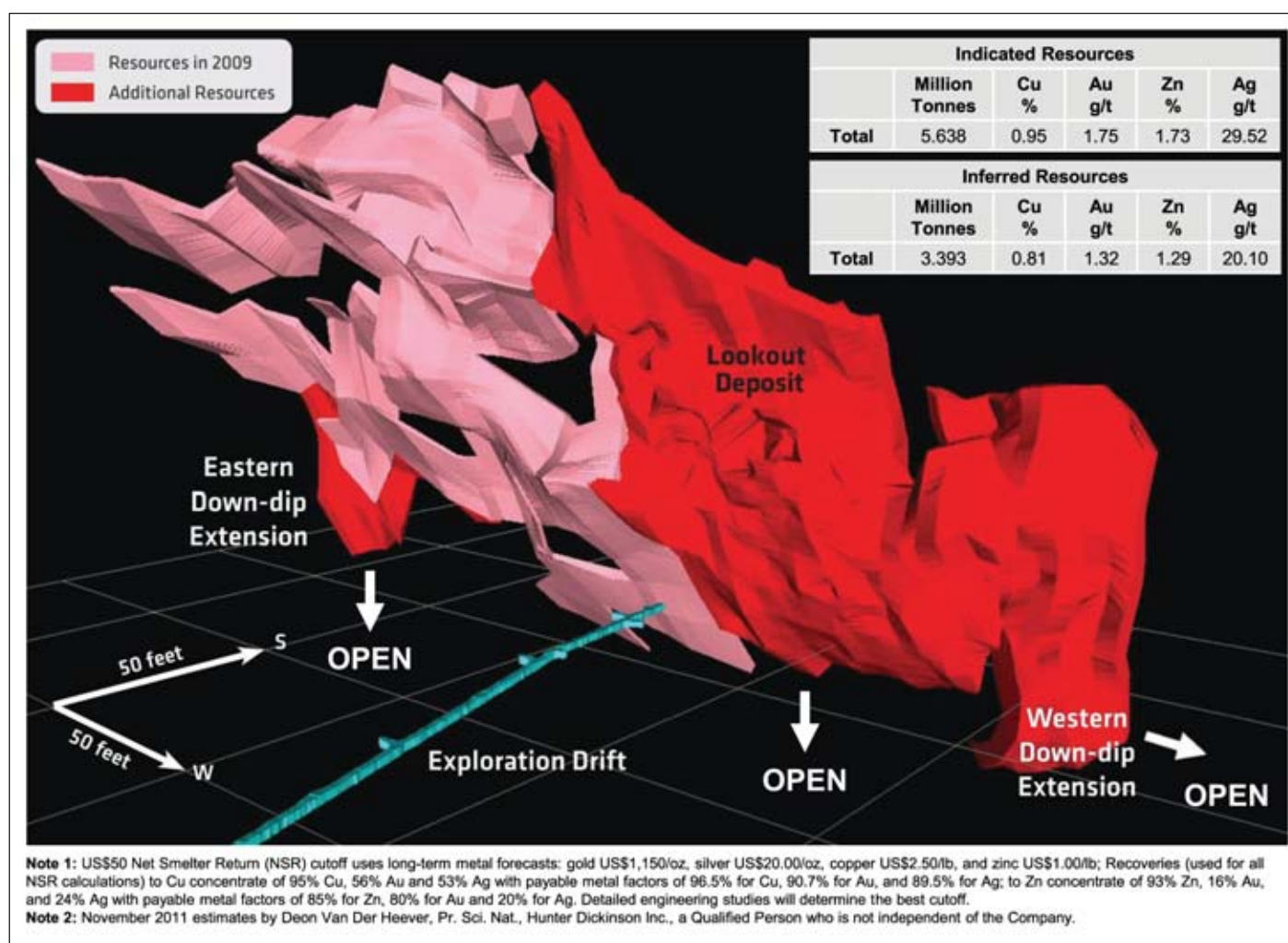
In addition to power alternatives, Heatherdale is investigating locations for ore processing facilities, including the option of barging ore from Niblack to a suitable offsite location.

Smith said Heatherdale's efforts to identify sites that meet specific criteria for development of a processing plant and tailings storage facility for Niblack have been met with positive encouragement from a broad range of local entities. He expressed confidence that offsite milling is a viable option for Niblack, particularly given the proactive assistance being provided by state and regional institutions.

Alaska Department of Natural Resources Deputy Commissioner Ed Fogels told Mining News early in 2011 that state officials met with representatives from Heatherdale and Ucore Rare Metals Inc., a junior exploring the Bokan Mountain rare earth element project, to see if any synergies exist between these tidewater projects located about 25 kilometers (15 miles) apart.

One common thread revealed during the meetings is that both projects may need additional room for processing facilities.

Fogels said the state is investigating whether there are any state lands nearby that could facilitate a REE production facility for Ucore and/or a milling facility



for ore mined at Niblack. The deputy commissioner suggested that a brownfields site or some other state-owned lands proximal to the two tidewater projects would be ideal.

While addressing the Alaska Strategic and Critical Minerals Summit held in Fairbanks in late September, Alaska Gov. Sean Parnell reaffirmed the state's commitment to assisting these Prince of Wales Island mineral projects.

"In Southeast Alaska, where the federal government has decimated timber jobs, the private sector is establishing a beachhead of opportunity there for new jobs. And we are exploring how there could be shared facilities on state land for both Niblack and Ucore's anticipated rare earth development at Bokan Mountain," Parnell said.

### Community outreach

Heatherdale has also been actively involved in reaching out to its neighbors on Prince of Wales Island and keeping community, tribal and Alaska Native corporation leaders informed of the progress at Niblack.

"To the greatest degree possible, we

want the Niblack project to benefit the people and communities of Southeast Alaska," Smith said. "Since day one, the priority at Niblack has been to employ local people, contract local companies and pursue local partnerships. We have every expectation that the attention we've paid to being a good neighbor now will be acknowledged in the future as the Niblack project proceeds through permitting and into construction and operations."

Since the outset of its involvement with Niblack in 2009, Heatherdale has maintained a commercial partnership with the Prince of Wales Tribal Enterprise Consortium – owned by the Craig Tribal Association and the Organized Village of Kasaan – to assist with supplying the manpower needs at Niblack. Through POWTEC, Heatherdale has trained and employed some 36 local people over the past three years.

"From the outset, Heatherdale has made it clear that it wants its mineral development activities on Prince of Wales Island to benefit local people and communities through local hire and contracting," said POWTEC CEO Bill Cole. "The eco-

nommic development and partnership opportunities that this project represents for our company, our employees and shareholders, and all of Southeast Alaska, are really tremendous."

Smith said the residents of Prince of Wales Island and surrounding communities in Southeast Alaska are largely supportive of Heatherdale's efforts to advance Niblack toward development.

"Our efforts to expand known deposits of high-grade VMS mineralization at Niblack and prepare the project for development and permitting continue to receive widespread support and encouragement from the people, communities and institutions of Southeast Alaska," Smith said. "Southeast Alaskans want and encourage responsible development of their mineral resources, and are willing to work cooperatively with progressive companies that invest in programs that generate benefits for local communities while ensuring protection of valued natural resources. It is a very encouraging and supportive environment for Heatherdale and the Niblack project." ●

# Ready for Anything

Alaska Frontier Constructors is the team to call for your next mining project. We have the right equipment, the skilled personnel, and unsurpassed expertise working on Alaska's largest resource development projects. With a proven track record and a demonstrated ability to operate safely and on budget, you can rely on AFC for your next big job.



Ready for tomorrow. Today.

6250 S. Airpark Place Anchorage, Alaska 99502 | (907) 562-5303 | akfrontier.com



# Total Equipment Solutions

*Atlas Copco*



Wrangell, AK

Atlas Copco ROC D3 drill in Ketchikan, AK

**Construction Machinery Industrial is proud to be your Atlas Copco and Secoroc drill bits and steel dealer.**

**IN THE WORLD**

Atlas Copco, the best in drilling equipment technology.

**IN ALASKA**

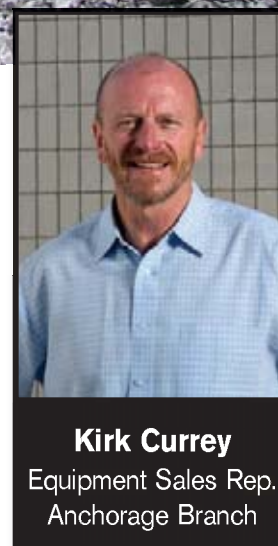
CMI, the best sales and product support lineup.

**IN YOUR CORNER**

The Winning Team.



**John Cole**  
Equipment Sales Rep.  
Fairbanks Branch



**Kirk Currey**  
Equipment Sales Rep.  
Anchorage Branch

- Anchorage, Alaska (907) 563-3822 • (800) 478-3822
- Fairbanks, Alaska (907) 455-9600
- Ketchikan, Alaska (907) 247-2228
- Juneau, Alaska (907) 780-4030

