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As part of its statewide search for rare earth elements, the Alaska Division of Geological and Geophysical Surveys is conducting a field investigation of the Ray Mountains in the Ruby Terrane north of the Yukon River. A similar program carried out in 2011 unearthed REEs and other critical minerals in the neighboring Melozitna Mining District.

SHANE LASLEY PHOTO

A special supplement to Petroleum News

WEEK OF
July 29, 2012

Petroleum news

• ALASKA

Alaska geologists unearth rare earths

DGGS conducts strategic survey of state's REE potential; finds critical metals in streams draining Interior Alaska's Ruby Terrane

By SHANE LASLEY
Mining News

Putting Alaska on the map as a domestic source of rare earth elements and other strategic and critical minerals is a priority of Alaska Gov. Sean Parnell. During the 2012 budget cycle, Alaska lawmakers approved US$498,000 proposed by the administration to begin a statewide REE evaluation. This year's budget includes US$2.7 million for a three-year project to continue this initiative.

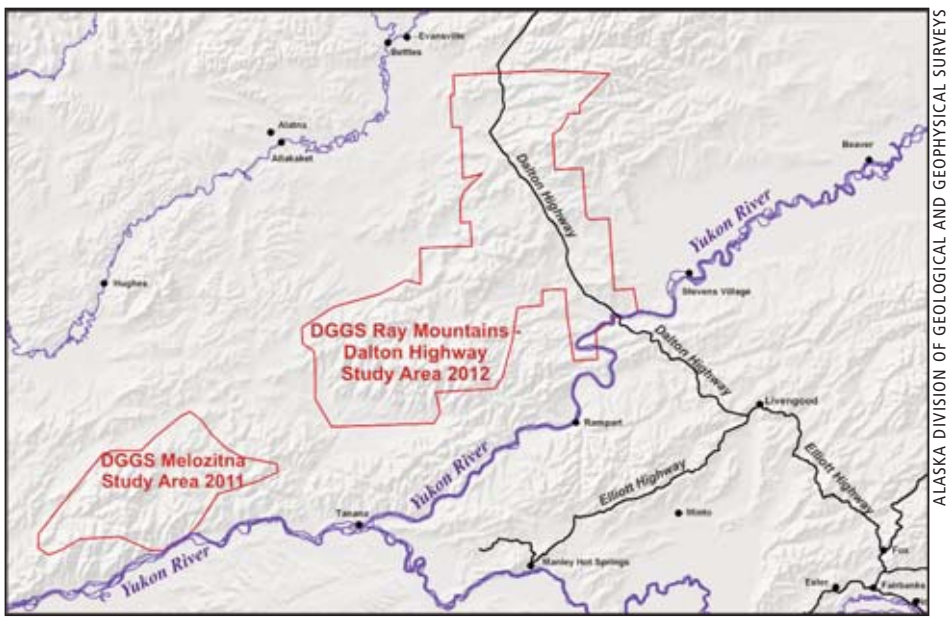
"Alaska can become America's source for rare earth elements," Alaska Gov. Sean Parnell proclaimed when rolling out his proposed Fiscal Year 2012 Budget in December 2010. "We cannot afford to be dependent on foreign sources of rare earth elements – and we believe Alaska's subsurface contains vast quantities."

The unique properties of REEs – a group of 17 previously obscure metals that include scandium, yttrium and the 15 lanthanides – are key ingredients of a number of military applications such as guided missiles, lasers, radar systems and night vision equipment; high-tech consumer goods like mobile phones and iPods; and green technology applications such as wind turbines and hybrid cars.

In order to substantiate Gov. Parnell's conviction that stores of these critical elements are lurking in the substrate, the Alaska Division of Geological and Geophysical Surveys initiated a strategic assessment of the 49th state in the summer of 2011.

This project – which has identified more than 150 REE occurrences in Alaska – includes a review of historical data, new geochemical analyses of REE-prospective samples stored at the state's Geologic Materials Center in Eagle River and field investigations of some of the more promising strategic metals targets in the state.

A 2011 field investigation has unearthed some high concentrations of REEs in the Melozitna mining district, one of several rare earth-prospective areas associated with the 3,000-square-mile (8,000 square kilometers) Ruby batholith in Interior Alaska.



ALASKA DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

"Today we are making an announcement on some very positive anomalies in regard to gold and rare earths," Alaska Department of Natural Resources Commissioner Dan Sullivan announced on July 13.

"We did some stream-sediment sampling, and we are publishing the geochemical report today," DGGS Minerals Resources Section Chief Melanie Werdon expanded. "There are a couple of streams that are really high in rare earth element values."

Melozitna REEs

DGGS – which had flown detailed geophysical surveys over the Melozitna mining district in 2010 – chose this area on the north banks of the Yukon River about 25 miles (40 miles) west of the community of Tanana as an initial target for its field investigation of Alaska's REE potential.

"Melozitna is an older mining district, and we did see some anomalies in there earlier," explained DGGS Director Bob Swenson. "We shot a geophysical survey there two summers ago, and there were some anomalies in that data."

Blanketed by the tundra and taiga forest typical of Interior Alaska, the Kokrines Hills of the Melozitna district provide geologists with few clues to the bedrock hidden below. The geophysical data gathered in 2010 provided the state geologists with a glimpse below this pervasive cover.

"In Interior Alaska, there is not a lot of exposure. We deal a lot with exposures and so it is really important that we go out and shoot high-resolution geophysics," Swenson explained.

Anomalous concentrations of REEs and uranium were first identified in this portion of Interior Alaska's Ruby Terrane by National Uranium Resource Evaluation – a program originally charged with evaluating domestic uranium potential when initiated by the U.S. Atomic Energy Commission in 1973 and later expanded to test for REEs and other strategic metals – during a late 1970s assessment of Alaska.

Using the geophysical and NURE data to guide their search, DGGS geologists collected 32 stream-sediment and 28 pan-concentrate samples from rivulets draining the most promising rare earth targets of the Melozitna study area.

In addition to the full suite of REEs, the results of this 2011 geochemical survey revealed promising levels of tungsten, titanium, chromium and niobium.

DGGS disclosed the sample results in a July 13 report, "Geochemical trace-element and rare-earth element data from stream-sediment and pan-concentrate samples collected in 2011 in the Melozitna mining district, Tanana and Melozitna quadrangles, Interior Alaska."

One pan-concentrate sample, 2011LF540A, stands out for its particularly high concentrations of REEs and strategic metals.

Collected from Wolf Creek – a drainage

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REE SURVEY

on the north side of a mountain-bearing the same name – sample LF540A returned more than 28,900 parts per million (2.9 percent) total REEs (365 ppm dysprosium, 70.7 ppm terbium, 6,020 ppm neodymium, 1,460 ppm yttrium, more than 1,000 ppm praseodymium, 7,950 ppm lanthanum, more than 10,000 ppm cerium, more than 1,000 ppm samarium, 607 ppm gadolinium, 129 ppm ytterbium, 154.5 ppm erbium, 62 ppm holmium, 18.4 ppm lutetium, 30 ppm scandium, 22 ppm thulium and 6.6 ppm europium).

In addition to rare earths, the sample contained a suite of metals considered critical: 10,400 ppm manganese, 8.82 percent titanium, 890 ppm tungsten, 144 ppm chromium, 60 ppm gallium and 147.5 ppm niobium.

Strong mineralization of a stream sediment sample collected at the same location corroborates the results of the pan concentrate.

Similar concentrations of REEs – about 25,260 ppm (2.5 percent) TREEs – were analyzed from pan-concentrate sample 2011514B, collected from a creek draining the east side of Wolf Mountain and about eight miles (15 kilometers) to the southeast of 2011LF540A.

Several other samples collected in this area also returned elevated concentrations of REEs and other strategic metals.

"Pretty exciting – it is exactly what we were hoping would happen on our first try," Sullivan said, referring to Alaska's strategic mineral assessment.

The geochemical samples collected by DGGS coupled with the geophysical surveys and mapping completed by the state geologists could supply the private sector with potentially ground staking information.

"When the geophysics come out, the maps come out and the reports come out; that is when we see these big spikes in the staking," said Swenson.

SHANE LASLEY

The tundra and taiga forests that blanket the Ruby Terrane provide geologists with few clues to the bedrock hidden below. High-resolution geophysics and stream-sediment sampling are helping to guide the search for rare earth elements in this region of Interior Alaska.

Claims blanket Wolf

Contango ORE Inc., or CORE, did not wait for DGGS to assess the potential before staking its claim to the mineral rights of Wolf Mountain. Based upon historical data that was reviewed and analyzed by Avalon Development Corp., the Houston Texas-based explorer blanketed this most prospective region of the Kokrines Hills with some 200 mining claims in May 2010.

"CORE has leased or filed mining claims on 759,800 acres in Alaska, with about 650,000 acres focused on gold and related mineral exploration and approximately 100,000 acres focused on rare earth element exploration," CORE Chairman and CEO Kenneth Peak said when the mineral exploration company went public late in 2010.

Wolf and three other properties – Swift, Spooky and Alatna – account for 97,280 acres of CORE's initial REE land position and are found at some of the state's promising rare earth areas from the Alaska Range to the Brooks Range.

The company's two remaining rare earth prospects, Salmon Bay and Stone Rock Bay, are located along a trend of prospects and deposits on Prince of Wales Island in Southeast Alaska that includes Ucore Rare Metals' Bokan Mountain project.

CORE – which is currently focusing its exploration on the Tetlin gold-copper project in eastern Interior Alaska – has only completed reconnaissance stage work on its REE properties over the past two years. The company has budgeted some US$400,000 to continue this work in 2012.

The geophysical data completed by DGGS indicates some prospective REE areas may exist beyond CORE's Wolf property. It is unclear whether the Texas-based explorer has added to its claims based on the results of the state survey.

Though the Melozitna mining district currently does not have road access, studies for a road linking Tanana to Alaska's highway system are currently in the advanced stages and the preferred route for a highway that continues westward to Nome would transect the REE-prospective area.

DGGS eye Ray Mountains

Following up on its 2011 success, this year DGGS is investigating the REE potential of the Ray Mountains, another Ruby batholith-related prospect area that spans an enormous region from just north of the Yukon River along the Dalton Highway to about the Arctic Circle.

A belt of highly prospective strategic metals hunting ground stretches along from the Kokrines Hill in the Melozitna district for at least 150 miles northeast were it crosses the Dalton Highway, the transportation corridor that links the oil-rich plains of the North Slope to Fairbanks.

"The Ray Mountains and the Kokrines Hills area of the state is one of the places that stand out of rare earths," Avalon Development President Curt Freeman told Mining News.

Avalon Development – a Fairbanks-based mineral exploration consulting firm – has an extensive database of REE occurrences in Alaska.

A suite of 110-million-year-old granitic rocks with a unique chemical signature containing anomalous tin, tungsten, uranium, REEs and other strategic metals have been identified along this stretch of the Ruby Terrane.

While the U.S. Bureau of Mines and a handful of private companies completed reconnaissance assessment of the mineral potential of the Ray Mountains at the end of the 20th Century, no comprehensive exploration of the region has been undertaken since that time.

"That terrane has been known to have rare element content for a long time – no one has gone out to look specifically for them until very recently," said Freeman.

Several Ruby batholith associated plutons – bodies of intrusive igneous rock that crystallized from magma cooling below earth's surface – identified in the Ray Mountain study area and are the targets of the state's REE assessment there.

The Hot Springs pluton – an area tested by the Bureau of Mines in the 1980s – is a primary focus of the DGGS assessment of the Ray Mountain study area.

In addition to the historical data, portions of the Hot Springs pluton are free of vegetative cover, providing state geologists with relatively good bedrock exposure for mapping and sampling.

DGGS hope this reconnaissance work at Hot Springs and other plutons in the region will help unlock the REE potential of the Ray Mountains.

Ucore studies placers

State geologists are not the only ones that recognize the REE potential of the Ray Mountain region of Interior Alaska. While DGGS is investigating plutons for potential hardrock strategic metals occurrences, Ucore Rare Metals Inc. is seeking alluvial deposits of REEs and associated minerals that have been weathered off the Ruby batholith into the Ray River drainage.

The junior explorer – best known for the work it is doing at its Bokan Mountain heavy rare earth deposit in Southeast Alaska – has draped with claims an 11,400-acre (4,613.5 hectares) area of the Ray Mountains prospective for economic placer deposit of REEs, tin, tungsten, tantalum and niobium.

"The State of Alaska has shown tremendous support for Ucore and our plan to

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REE SURVEY

expedite the development of America's pre-eminent heavy REE asset at Bokan Mountain, Prince of Wales Island," Ucore President and CEO Jim McKenzie said. "With this in mind, we've elected to even further invest in Alaska REE exploration and development. With the Ray Mountains acquisition, we've now covered what we believe to be two of the most prospective remaining REE exploration targets."

To better understand the placer potential of its Ray Mountain property, Ucore collected alluvial samples from upper Kilolitna River, Ray River, and No Name Creek during a field investigation carried out in 2011.

Using a shaking table – a standard gravity separation tool common to placer gold mining – Ucore concentrated these measured samples collected from the Ray Mountain drainages.

That assays of these concentrates returned up to 50 percent tin; as much as 10 percent total REE; and 0.01 to 1 percent tungsten, tantalum and niobium. Heavy rare earths – including terbium, dysprosium, erbium and yttrium – make up 15 to 25 percent of the total rare earth content in the majority of samples. As much as 60 percent of the TREE content of samples collected at No Name Creek is the prized HREEs.

The company said most of the initial samples were collected directly from surface exposures, and the heavy mineral content can be expected to increase at greater depths within the alluvium. In some areas the gravels are reported to be as much as 100 meters deep.

"The Ray Mountains project has select areas rivaling HREE content at our Bokan property, and the remarkable advantage of collateral tin, niobium and tantalum mineralization which enhances prospective values per ton. Ucore will be advancing the Ray Mountains area as a priority exploration target as it transitions its Bokan flagship into mine development," McKenzie said in January.

The shaker table used to concentrate the alluvial samples captured some 75 to 80 percent of the REEs and associated metals, demonstrating the potential of using simple gravity methods at the promising placer deposit.

This technique, used by placer gold miners across Alaska and around the world, is typically simpler and quicker to permit and develop.

Additionally, the technology to separate the individual REEs from the concentrates has long been known elsewhere in the world

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SHANE LASLEY

From the vantage of the Hot Springs pluton, Alaska Division of Geological and Geophysical Surveys Geologist Larry Freeman and Alaska Department of Natural Resources Commissioner Dan Sullivan discuss the state's 2012 program to evaluate the rare earth element potential of the Ray Mountains in Interior Alaska.

● YUKON TERRITORY

Rackla, Coffee, others promise more gold

Some projects across central area could deliver on encouraging early results even though exploration stampede has slowed to crawl

By ROSE RAGSDALE
For Mining News

Two of the projects credited with touching off the recent gold rush to Yukon Territory reported results from their 2012 programs in July that suggest they could deliver on all that their early results promised.

While new entrants have slowed to a trickle and other early players retire from the scene, at least until the anemic capital markets regain their vigor, Atac Resources Ltd. and Kaminak Gold Corp. and a handful of other juniors are quietly churning out impressive assay results in robust multimillion-dollar drill programs this year.

High-grade results at Rackla

Atac July 18 reported the first 10 diamond drill hole results from the Conrad and Isis East zones within the Nadaleen Trend at the eastern end of its 1,600-square-kilometer (618 square miles) Rackla Gold Project in east-central Yukon.

The results included the highest-grade gold intersection to date at the Conrad Zone with 46.06 meters averaging 11.24 grams per metric ton gold in hole OS-12-103. The interval included several high-grade sections – 9.31 meters average 25.93 g/t gold starting at 71.19 meters depth and 15.39 meters average 3.46 g/t gold starting at 147.07 meters depth and including 8.39 meters average 5.12 g/t gold. In hole OS-12-098, Atac encountered 40.30 meters averaging 10.10 g/t gold starting at 90.76 meters depth, including 17.59 meters averaging 21.24 g/t gold starting at 91.86 meters depth; and in hole OS-12-094, 9.15 meters averaging 4.68 g/t gold starting at 285.90 meters depth.

The feedback comes as Atac continues its 2012 exploration program begun May 22 with six drills turning – four on Conrad and two on the Osiris Zone. At July 18, Atac said it had completed 15,000 meters in 58 holes of a planned 30,000-meter program. The company has not reported a budget for 2012 exploration at Rackla, but last year it spent C$29.5 million on exploration, including 26,600 meters of drilling.

"We are very pleased with the developing continuity and the high-grade nature of the first 2012 drill-holes at the Conrad Zone. Holes OS-12-98 and OS-12-103 intersected mineralization near surface with the highest grade intervals that we have encountered to date," said Atac CEO Graham Downs in a statement. "The fact that we also have extended gold mineralization at Isis East by stepping-out from the 2011 discovery holes is also encouraging and drilling continues to test for further down-dip and strike extensions."

Five Carlin-type gold exploration targets were outlined in 2011 by wide-spaced diamond drilling within a 3-kilometer-by-4-kilometer (1.9 miles by 2.5 miles) area. The 2012 drill program is intended to expand and better define these known areas of mineralization, as well as test a number of undrilled geochemical anomalies.

LARRY JOHNSON, CHIEF FINANCIAL OFFICER, COMSTOCK METALS LTD.

Comstock Metals Ltd.'s trench crew – Jean Pautler, Eric Bellefeur, David Norwell and Pautler's dog, Shadow – discusses progress in Trench 2 at the QV Property in the White Gold district in central Yukon Territory where the junior made a significant gold discovery in July.

The Conrad zone has a current strike length of some 475 meters and extends 490 meters below surface. The zone remains open in all directions. Some of the best grades and longest intersections from previous drilling are located at a shallow depth in the crest area of an anticlinal fold at or near the contact of relatively impermeable silty shale with an underlying limestone unit. The potential for additional deep high-grade gold mineralization as encountered in hole OS-11-036 (8.06 g/t gold over 21.34 meters starting from 687.32 meters down hole) also will be systematically tested in 2012. True width averages 60-80 percent for all intercepts reported.

Atac also reported extending the Isis East discovery, which lies along the southern edge of the mineralized area, with step-out holes along a 200-meter unfolded strike length to a depth of 225 meters in the crest of an anticlinal fold.

In hole OS-12-097, drilling intersected 24.39 meters averaging 5.58 meters starting at 31.39 meters depth, including 12.19 meters averaging 9.96 g/t gold starting at 42.06 meters depth; in hole OS-12-101, a 21.60-meter interval averaging 5.11 g/t gold starting at 79.00 meters depth; and in hole OS-12-091, a 13.72 interval averaging 5.14 g/t gold starting at 198.73 meters depth. True width averages 50-80 percent for all intercepts reported.

As with Conrad and Osiris, which that lie immediately to the north, gold mineralization is stratabound at Isis East and localized in the crest area of an anticlinal fold – in this case at or near the contact of relatively impermeable dolomite altered limestone with underlying unaltered silty limestone. The mineralized band remains open to expansion to the east and to depth with further drill testing to be completed in 2012.

Connecting the zones

Kaminak July 9 reported drilling results from 18 reverse circulation drill holes and 25 diamond core drill holes that significantly expanded the strike length of its Supremo T3 and T4 gold zones at the Coffee Gold Project in the White Gold district of west-central Yukon to greater than 1,600 meters and 1,400 meters, respectively. The drilling also connected the project's Supremo and Latte gold zones and expanded the Double Double zone to 400 meters in strike length. All gold zones drilled to date at Coffee start at surface and remain open down dip and along strike.

Kaminak also said it has completed more than 30,000 meters of drilling since it commenced a C$17 million exploration program March 19, and is on schedule to complete its 2012 objective of 50,000 meters of drilling.

Last year, the junior spent C$22 million on exploration at Coffee, including 48,000 meters of drilling and significant camp infrastructure investments

Kaminak said RC drilling began in mid–March with the discovery of gold along the newly defined Supremo T4-5 trends, while diamond drilling started in early April and began testing the Supremo T3 trend for along strike extensions of the near-surface and oxidized gold mineralization previously identified.

New drilling at Supremo intersected multiple high-grade intervals, including 12.53 g/t gold over 13 meters from 158 meters core depth in hole CFD-199; 15.5 g/t gold over 11 meters from 31 meters core depth in hole CFD-210; 10.5 g/t gold over 13 meters from 212 meters core depth in CFD-221; 29.2 g/t gold over 3 meters from 86 meters core depth and 9.2 g/t gold over 1 meter from 1 meters core depth in hole CFD-223; 27.8 g/t gold over 3 meters from 134 meters core depth in hole CFD-226; 25.83 meters g/t gold over 2 meters from 61 meters core depth in hole CFD-213.

The mineralization occurs in brittle fractures and breccia zones within gneissic host rock and felsic-intermediate intrusive rocks, accompanied by silica flooding and pyrite (oxidized to limonite/hematite). Higher grade gold is associated with intense silica-sericite alteration and high pyrite/limonite content. The mineralized structures are totally to partially oxidized as deep as 180 meters below surface, with the deepest gold intercept to date in CFD-221 (10.5 g/t gold over 13 meters) comprising heavily oxidized mineralogy (limonite and hematite).

SHANE LASLEY

Kaminak Gold Corp.'s camp on the banks of the Yukon River serves as a hub for the junior's 50,000-meter drill program at the Coffee Gold project in 2012. Ethos Gold Corp. and Comstock Metals Ltd. are two other juniors finding significant aurum on their properties in the White Gold district of central Yukon.

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YUKON PROSPECTS

Ongoing drilling continues to focus on expanding the Supremo zones at depth and northwards along trend. Diamond core drilling at Double Double commenced in early May comprising 50 meters step-outs along strike of the drilling completed over the 2010/11 field seasons.

To date, an additional 200 meters strike has been added to the trend this season, for a total strike length of 400 meters. New results include: 35 g/t gold over 4.5 meters (from 64 meters core depth), 39.4 g/t gold over 1.5 meters (from 71 meters) and 6.9 g/t gold over 5.2 meters (from 85.3 meters). Mineralization occurs in discrete east-northeast trending, steeply-dipping to vertical lodes characterized by intense silicification, polyphase breccia and strong clay and sulphides. True width is estimated at about two-thirds down-hole length for all intersections.

Kaminak further said results of eight additional drill holes are pending along trend, and drilling is currently ongoing, testing down-dip extensions of the zone.

Another big gold discovery?

Comstock Metals Ltd. is a newcomer to the Yukon. The junior July 25 reported initial results from a trenching program on the QV Project in the White Gold district, including a significant gold discovery.

The discovery trench, QVTR12-06, assays 3.74 g/t gold over 75 meters (entire length of the trench), with a maximum grade of 7.31 g/t gold over 5 meters and a minimum grade of 1.41 g/t gold over 5 meters. The gold mineralization is open on all sides of QVTR12-06.

The trenches were designed to test a 1.8-kilometer- (1 mile) long gold-in-soil anomaly with values up to 395.6 parts-per-billion gold. A visible gold-bearing vein (VG Vein) that returned 16.28 g/t gold occurs 60 meters west of Trench 6. Current results from Trenches 3 and 6 and the VG Vein indicate a minimum 265-meter strike extent for the gold-bearing structure.

In comparison, the initial trenching on the Golden Saddle zone at Kinross Gold Corp.'s White Gold deposit, some 15 kilometers (9 miles) to the south of QV, returned 1.3 g/t gold over 37.5 meters, with a maximum grade of 4.7 g/t over 5 meters and a minimum grade of 0.1 g/t gold over 0.3 meters (Underworld News Release, June 17, 2008). Initial trench results from the Coffee Project of Kaminak Gold Corp. included 2.3 g/t gold over 21.0 meters and 11.45 g/t gold over 5.0 meters (Kaminak News Release, Oct. 8, 2009).

"We are fortunate to have encountered such a large continuous gold mineralized trench with fairly uniform gold grades," said Comstock President and CEO Rasool Mohammad in announcing the discovery. "This makes Comstock Metals' the third significant discovery in the White Gold District after Kinross' Golden Saddle deposit and Kaminak's Coffee; kudos to our team."

Comstock's 2012 exploration program at the QV project, which got underway June 12, consists of about 1.5 line kilometers of trenching (12 trenches over four zones) and mapping, prospecting, and sampling over soil anomalies that the junior defined in 2011. These soil anomalies returned maximum values of 1,027.1 ppb gold, 8.7 parts-per-million silver, 3,767 ppm arsenic, 66.2 ppm antimony, 4.13 ppm mercury, and 2,597 ppm barium. Additional grid soil geochemical sampling (1,400 samples) also was planned in order to define the limits of the 2011 soil anomalies.

Comstock did not indicate how much it planned to spend on exploration at the QV project this season, but the junior raised nearly C$300,000 in the first tranche of a private placement in early July that it intends to spend on exploration and development, along with general expenses.

Since the White Gold district is unglaciated, very little overburden overlies bedrocks in the district. Overburden can reach up to a maximum thickness of about 60 centimeters or 2 feet in places. Trenching can expose the bedrock relatively easily.

Results for three of six trenches on the QV Grid have been received; the balance is pending. The trenches were excavated by Talus Exploration Inc. of Dawson City, using a Candig mini-excavator.

Similarities to Coffee

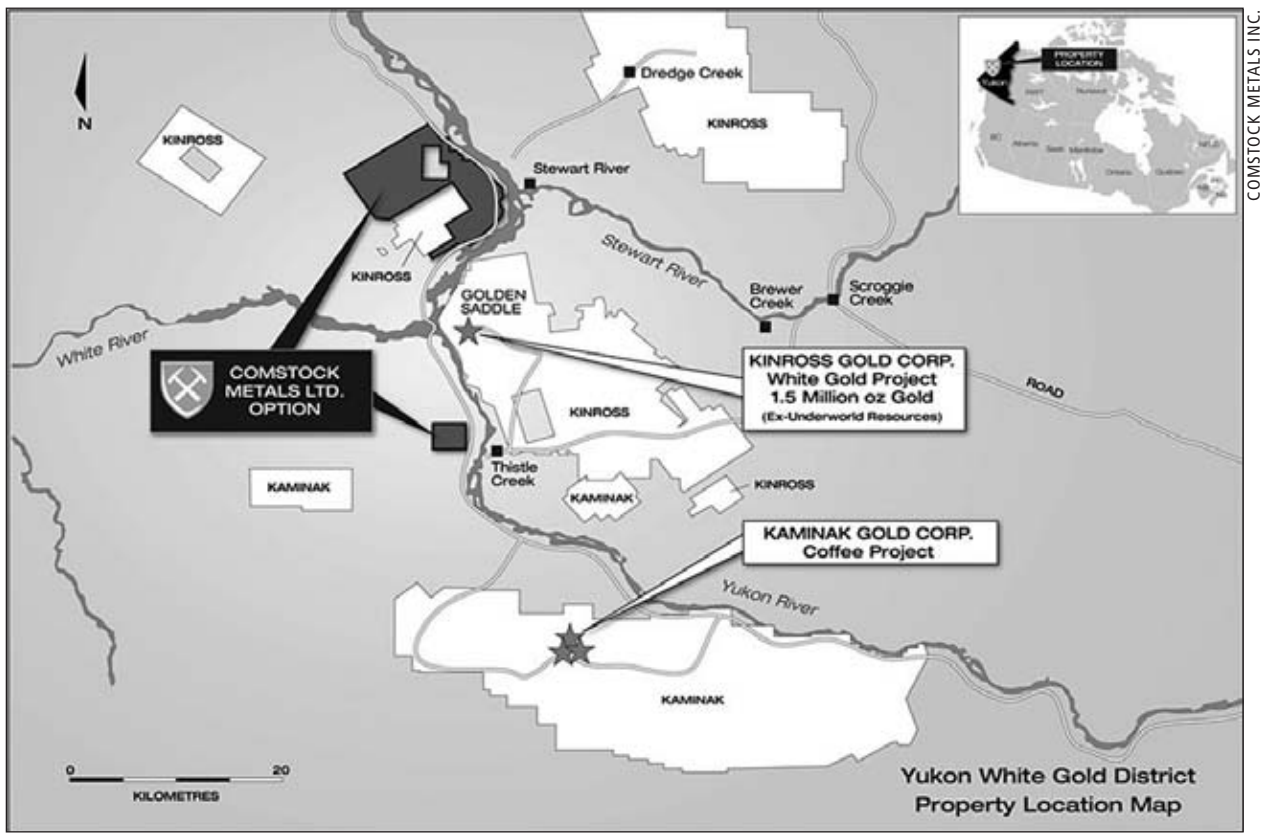
Other highlights of 2012 exploration at the QV property include:

Trench 3 results of 0.85g/t gold over 45 meters;

Grab Rocks assaying up to 16.28 g/t gold and 47 g/t silver;

Soil gold assays run up to 1,030 parts-per-billion, or 1.03 g/t gold;

Pathfinder elements indicative of a gold system similar to Kaminak's Coffee project are present on



COMSTOCK METALS INC.

JEAN PAUTLER

Tao Henderson of Talus Exploration Inc. pulls out a boulder that ran 7.71 grams per metric ton gold on a hillside at the QV Property that Comstock Metals Ltd. is exploring in the White Gold district of central Yukon Territory.

Comstock's QV claims;

Gold and the associated anomalies are of the same strength as at Kaminak's Coffee project;

Atrong geophysical magnetic anomaly present on the Coffee project and on Kinross' ground is also present on the Comstock claims;

Multiple zones of high gold values associated with the pathfinder elements such as high arsenic, mercury, antimony, and barium indicate a large mineral potential; and,

Two anomalous zones measure 2,600 meters and 1,530 meters long, respectively, and are both open.

Mineralization at the QV property consists of quartz veins, stockwork, silicification and weak brecciation, accompanied by minor pyrite. The host rocks are "augen" gneiss (a metamorphosed intrusive rock) and metamorphosed sedimentary rocks.

Comstock said only minor property scale mapping has been undertaken on the QV property, but government mapping indicates that the property has promising geology.

Trench QVTR12-03 is located 205 meters east of Trench QVTR12-06, and Trench QVTR12-04 lies 100 meters to the south of Trench QVTR12-03. QVTR12-04 is situated south of the apparent trend of the main gold-bearing structure. The trenches generally crosscut the 070-075-degree trend of the veins, but due to extensive silicification, the determination of the dip of the veins and the exact controls on mineralization require follow-up work. Consequently, the true width of the mineralized zone (open to the north and south in trench QVTR12-06 and open to the north in trench QVTR12-03) is yet unknown, the junior said.

More gold at Betty property

Ethos Gold Corp. also posted encouraging 2012 results in the Yukon.

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JEAN PAUTLER

Chip samples from a buried subcrop boulder with visible gold that prospector-geologist Jean Pautler discovered June 10 on a bare hillside at Comstock Metals Ltd.'s QV Property in the White Gold district of central Yukon. The samples average 16.28 grams per metric ton gold.

● ALASKA

Enviros to Obama: Stop Pebble, now!

The EPA races to determine fate of proposed Bristol Bay mine under current presidential term, before developers apply for permits

SHANE LASLEY

From a nearby vista, visitors gaze across the enormous Pebble copper-gold-molybdenum deposit. This chunk of real estate, located about 90 miles (145 kilometers) northwest of Bristol Bay, is ground-zero of the controversy that prompted the U.S. Environmental Agency to conduct an early assessment of potential effects of mining on the Southwest Alaska watershed acclaimed for its world-class salmon fishery.

By SHANE LASLEY
Mining News

"What's the rush?" This is the question the Pebble Partnership and a growing number of lawmakers, resource development advocates and state officials are asking the U.S. Environmental Protection Agency in regard to the regulator's assessment of the Bristol Bay Watershed.

EPA Region 10 Administrator Dennis McLerran

Companies hoping to develop promising mineral deposits in the United States typically spend several years and millions of dollars to gather environmental baseline information needed to initiate a long and arduous permitting process that typically ranges from three years to decades.

So, when the EPA spends about a year on a watershed assessment intended to determine whether to ban the development of one of the largest accumulations of copper, gold and molybdenum on the planet and then allots a short six months to vet the assessment, Pebble proponents and Alaska officials question the motives of the expedited timeline.

"What is the rationale for that deadline? What is the rush? Why is this assessment being conducted before a detailed mine proposal has been presented? Why have critical data sources been overlooked? Why has the EPA not conducted any field investigations to inform its science? Why is the peer review process overlapping public review?" asks Northern Dynasty Minerals Ltd. President and CEO Ron Thiessen.

Vancouver-based Northern Dynasty is a 50 percent co-owner of the Pebble Limited Partnership, a company formed in 2007 to develop the Pebble project. London-based Anglo American holds the other half.

Pebble opponents, on the other hand, are pressuring the regulatory agency to bypass the vetting process all together.

In a July 18 letter to President Barack Obama, the Save Bristol Bay coalition wrote that now is the time to initiate a process under Section 404(c) of the Clean Water Act to prohibit or restrict large-scale mining in the Bristol Bay watershed.

Under Section 404 of the Act, the Army Corps of Engineers is charged with issuing permits for dredge and fill discharge into navigable waters, including wetlands. EPA was granted veto authority to prohibit, restrict, or deny a discharge that poses an unacceptable adverse impact to fisheries or other water uses.

"We ask that you act on this before the end of July 2012 to ensure you can complete this process before January 20, 2013, and give this broad and diverse coalition of fishing, hunting, jewelry, food and investment companies the certainty we need for future planning and investment," the anti-Pebble coalition wrote in its letter to the President.

This timeline suggests the environmental advocacy group spearheaded by Trout Unlimited would like to ensure action is taken under the Obama Administration.

"Perhaps the most troubling aspect of EPA Region 10's actions with regard to the Bristol Bay Watershed Assessment is

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EPA ASSESSMENT

its insistence that the process must be complete before Americans go to the polls in November," Thiessen said.

Alaska officials believe there may be more than political motivation behind the environmental agency's rush to judgment.

No more time

Releasing a draft of the Bristol Bay Watershed Assessment at the end of May, EPA allowed stakeholders until July 23 to review the document and provide comment.

The State of Alaska was among the first to argue that the 60-day comment period did not provide adequate time to address the technical and legal merits of the draft Bristol Bay Watershed assessment and asked EPA to allow an additional 120 days, with a new deadline of Nov. 20.

This sentiment was shared by more than half the people that testified at a June 4 hearing the EPA held in Anchorage on the draft assessment.

"Please revisit the assessment and give it the necessary time required to develop into a comprehensive analysis or drop the assessment process altogether," testified Alaska State Chamber of Commerce President and CEO Rachael Petro.

Once the Pebble Partnership submits permit applications under the National Environmental Policy Act, state and federal regulatory agencies would have at least three-and-a-half years to review the applications and exercise proper authorities – providing the EPA plenty of time to complete a thorough study before development began.

"The current assessment and any preemptive action would deprive government agencies and stakeholders of the specific information, science, and rigorous reviews that would come out of the multiyear NEPA process," testified Petro.

State legislators who attended the meeting unanimously called for the federal agency to extend the comment period. The group included Rep. Charisse Millet, R-Ancorage, who characterized the process as premature and short.

Pebble-opponents that spoke at the meeting pressed the EPA to stick to the timeline.

Despite the call for more time and no immediate risk of mine development in the watershed, the EPA insisted on sticking to its expedited schedule.

"In order to ensure that the final assessment is released in a timely fashion, it is imperative that this process move forward on schedule," the agency explained when announcing that it was holding to the July 23 comment deadline.

"The EPA's refusal to provide additional time for the public to comment on the draft watershed assessment for Bristol Bay demonstrates, once again, that the agency does not understand Alaska," Sen. Lisa Murkowski, R-Alaska, said in response to the agency's denial of an extension. "There is no deadline – other than the one arbitrarily imposed by the EPA – that requires the agency to act now."

Race is on

Alaska officials say they believe the EPA's insistence on completing the assessment "in a timely fashion" is a race to finalize a CWA 404(c) determination before the Pebble Partnership has an opportunity to apply for permits under NEPA. By doing so, the federal agency would circumvent any need to consider the state's management plan for the

Bristol Bay region.

The 2005 Bristol Bay Area Plan – which lays out the state's vision for some 17.5 million acres of Alaska-owned lands in the region, an area larger than West Virginia – sets aside the area around Pebble for mineral development.

In 2010, six Alaska Native groups petitioned the environmental agency to use its presumed 404(c) authority to strike down the possibility of developing Pebble before permit applications are submitted – a milestone that would trigger the NEPA and associated Environmental Impact Statement processes.

"To do otherwise will compel EPA, the Corps and other agencies, in the context of NEPA and an EIS process, either to defend the state's methods used in the 2005 BBAP (which would be untenable), or to ignore them, which would be contrary to (federal law)," the Pebble opposition explained to the environmental agency.

Alaska Attorney General Michael Geraghty – in a July 23 letter to EPA Administrator Lisa Jackson and Region 10 Administrator Dennis McLerran – expressed the state's concern that this reasoning is the basis for the federal agency's "accelerated development of the assessment."

"Implicitly, petitioners argue that because EPA is generally exempted from complying with NEPA's requirements in the absence of a permit application, EPA's pre-emptive review can forego consideration of state management plans," he wrote.

The Pebble Partnership anticipates spending some US$107 million in 2012 to advance the enormous Pebble copper-

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COLUMN

State, feds plan digital maps for Alaska

Long overdue collaborative initiative reflects growing awareness that current maps do not meet 'National Map Accuracy Standards'

By CURT FREEMAN
For Mining News

In a long overdue step to bring Alaska into the 21st Century, state and federal agencies met in late June to discuss collaborative funding strategies for Alaska's Statewide Digital Mapping Initiative, an enterprise designed to create Alaska's first high-quality digital topographic map.

The roundtable was convened by Alaska Lt. Gov. Mead Treadwell and the Assistant Secretary for Water and Science, U.S. Department of Interior. Alaska remains the only state in the United States that has not been digitally mapped and its current maps do not meet "National Map Accuracy Standards." Alaska has contributed funding in the past that resulted in digital mapping that covered 10 percent of Alaska. In a statement that will live beyond this administration, Treadwell said, "Mars and the moon have been better mapped than Alaska." As someone who has flown and walked over large areas of the state, I can attest to the accuracy of the lieutenant governor's statement. I have found mountain tops where the maps say none exist, and I have gone looking for mountain tops shown on maps only to find that those peaks, in fact, do not exist in the real world. While Alaska's Statewide Digital Mapping Initiative will greatly assist the mineral industry, it also will have immediate applications across a wide spectrum of disciplines.

Western Alaska

TINTINA RESOURCES INC. reported the commencement of the first exploration drill campaign at its Baird project in the Western Brooks Range. The company plans to test several kilometric-scale copper-zinc surface anomalies with 2,500 meters of drilling. The program will focus on previously identified mineral targets at the Omar, Deadfall, and Frost targets. The Omar target exhibits mineralization over an area measuring 4 kilometers by 2 kilometers (2.5 miles by 1.24 miles) with coincident copper and zinc soil and rock chip anomalies. Historic drilling results showed significant bedrock mineralization including 22.8 meters grading 3.99 percent copper, 6.1 meters grading 9.37 percent copper and 7.32 meters grading 2.95 percent copper. The Deadfall target consists of a 4-kilometer-(2.5 miles) long zinc and copper anomaly. Although no drilling has been completed on this target, channel sampling has identified significant bedrock mineralization, including 12 meters grading 10.1 percent zinc and 42.4 grams per metric ton silver within 36 meters grading 6 percent zinc and 21.7 g/t silver.

GRAPHITE ONE RESOURCES INC. reported rock sampling results and commencement of drilling at its Graphite Creek graphite prospect on the Seward Peninsula. Twelve rock grab samples were collected along the electromagnetic conductor and 10 of the samples contained graphite with grades, ranging from 0.77 percent to 41.4 percent graphitic carbon. Follow-up work included collection of 307 rock grab samples, geologic mapping along the known electromagnetic conductor and completion of two drill holes which tested surface graphite showings near Graphite Creek. The company also collected three surface bulk samples which total about 10.5 metric tons. These samples will be used for mineralogy and metallurgical testing.

MILLROCK RESOURCES INC. provided an update on its plans for its Humble project in southwestern Alaska and its Council project on the Seward peninsula. At Humble, Millrock and partner **KINROSS GOLD CORP**. are contemplating a follow-up drilling program for later in 2012. At Council, Millrock and partner Kinross plan to drill six shallow holes to test strong surface gold geochemical anomalies and gold-bearing veins discovered by prospecting crews at the Elkhorn prospect. The project is budgeted at $1 million.

NOVAGOLD RESOURCES INC. and partner **BARRICK GOLD CORP.** approved their recently completed update feasibility study and approved the long-awaited permitting process for their Donlin Creek gold deposit. When in production, the deposit is expected to produce approximately 1.5 million ounces of gold per year in the first five full years of production and average more than 1 million ounces of gold per year over a 27-year mine life. Current measured and indicated resources stand at 39 million ounces of gold contained in 541 million metric tons grading 2.2 grams per metric ton gold. Permitting, through the federal National Environmental Policy Act will include completion of an environmental impact statement.

NYAC GOLD LLC reported the completion of a 920-meter diamond drill hole at its Saddle Mountain prospect at its Nyac gold property under lease from **CALISTA CORP.** The hole was drilled near the center of a 7.5-acre hydrothermal breccia pipe that is coincident with a roughly circular 2,450-meter diameter aeromagnetic anomaly thought to represent an underlying Cretaceous pluton. Surface quartz vein samples in the breccia pipe have yielded up to 59.2 g/t gold with anomalous silver and mercury values. The hole cut pervasively potassically altered andesite with biotite flooding plus disseminated and vein magnetite. Anhydrite veining and flooding is prevalent to a depth of 750 meters. Hydrothermal alteration and fluidized hydrothermal brecciation often obliterate original textures. Significant intercepts include 16 feet grading 4.9 meters of quartz-carbonate vein breccia at 580 meters and 28 meters of intensely quartz-sericite-pyrite-altered porphyritic intrusive in two intervals below 812 meters. The altered intrusive is similar to a mineralized cupola occurring elsewhere on the property that may have generated the placer gold deposit in the creek draining the cupola. The hole was terminated in silicified quartz-sericite-pyrite-altered andesite that contains up to 2 volume percent fine quartz-chlorite-anhydrite stockwork. The company intends to complete at least 2,440 meters of drilling in deep holes in the breccia pipe this season.

LIBERTY STAR URANIUM & METALS CORP. said it received of updated geophysical data from its ZTEM electromagnetic survey covering the south block of its Big Chuck project. Reprocessing of these data is in progress.

TNR GOLD CORP. said drilling and other exploration work on schedule for start-up in mid-July at its Shotgun gold project. Objectives of the Shotgun Gold Ridge prospect drill program include about 1,500 meters of infill drilling to support an industry-compliant resource estimate, testing of new geophysical targets identified in 2011, further testing at depth on feeder zones discovered in 2006 and completion of additional geophysical surveys on other parts of the project.

Interior Alaska

FREEGOLD VENTURES LTD. reported additional drilling results from its Golden Summit project near Fairbanks. At the Dolphin zone, significant results 136.7 meters grading 1.57 g/t gold in hole GSDL1213 within a broader zone of mineralization grading 0.82 g/t gold over 542.8 meters (collar to termination depth). Mineralization is hosted in pervasively sericite altered granodiorite cut by later sheeted and stockwork quartz veins. Elevated gold values are associated with disseminated and quartz vein-hosted arsenopyrite and pyrite with lesser silver and lead sulfosalts. Additional drilling is on-gong in the Dolphin zone and is planned for other areas of the project in 2012.

TERYL RESOURCES CORP. reported that exploration

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The author

CURT FREEMAN

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work was planned for its Westridge gold project in the Fairbanks District. The proposed initial work programs will include locating and surveying historic drill holes on the ground within the claim block, a reconnaissance drilling program utilizing a small diameter drill rig, upgrading of access and water source areas, general reconnaissance of the placer potential on Moose Creek and securing a larger-diameter diamond drill or a reverse circulation drill for follow-up drilling. The company plans to complete 760 meters of drilling this season.

INTERNATIONAL TOWER HILL MINES LTD. provided an update regarding the optimization review of its Livengood project. The company has determined that the most efficient and cost-effective path to permitting is to incorporate results from current engineering and metallurgical test work directly into a definitive feasibility study, which the company expects to complete in the first half of 2013. Earlier this year, the company sent **SGS CANADA INC.** 10,800 kilograms of material from about 3,000 samples selected from throughout the deposit for the final stage of metallurgical optimization testing and analysis. Results are pending. Additional optimization work is looking at crushing and grinding and over-all mill scale options. Mill and facilities condemnation studies also are ongoing. Budget reductions have forced the company to postpone much of its district-wide exploration drilling program and reduce a portion of its condemnation drill program. The company will focus on completing all the necessary field work and drilling to support the completion of a feasibility study and the environmental work needed to keep its permitting schedule on track. The company also reported on the identification of five key exploration areas with the potential to provide substantial resource growth over time and which would be the focus of the company's future mine-area drill programs. These areas include the Scraper Ridge, Money Knob Pit, SW, Gertrude Basin and Moose Gulch/Lucky Creek areas. The presence of a combination of dikes, volcanic host rocks and a large gold in soil anomaly indicates potential for the discovery of mineral resources in the newly identified Scraper Ridge target. Mineralization has been confirmed in scout hole MK-10-97 which intersected 1.52 meters of 4.82 g/t gold in the most favorable host rocks. Gold in soil and other diagnostic geochemical pathfinders have outlined a large, coherent target area. To date, almost all of the drill holes in the Money Knob deposit have bottomed in gold mineralization and six deep holes extending below the proposed 300-meter pit bottom penetrated intervals with similar gold grades to the main deposit. Additional mineral resources may be defined below the current pit design by sequential drilling conducted as part of an ongoing mining operation. Previously identified mineralized intercepts in the northern portion of the SW Zone include 15.24 meters at 3.69 g/t gold and 22.86 meters grading 0.86 g/t gold. These intercepts are relatively shallow and indicate an opportunity for the delineation of resources that might extend early mining in the proposed pit towards the west. Deep, well-mineralized intersections in the southern part of the SW zone offer the possibility of extending the present mineral resource to the southwest later in the life of the proposed project. Geotechnical drilling in the Gertrude Basin area has intersected dike-related mineralization in favorable host rocks within a large gold in soil anomaly. Significant results include 1.68 meters grading 5.72 g/t gold, 9.77 meters at 0.83 g/t gold and 9.85 meters assaying 0.65 g/t gold. In the Moose Gulch/Lucky Creek area, northwest trending faults, dikes and anomalous gold in soils coincide. Exploration and geotechnical drilling in the area has encountered gold mineralization, mostly in and immediately adjacent to dikes, including 3.56 meters at 2.0 g/t gold and 6.07 meters grading 0.67 g/t gold.

ALIX RESOURCES CORP. said it has completed phase 1 sampling at its Money Rock and West Pogo gold projects in the Goodpaster Mining District. Over 300 samples have been collected to date, including 210 soil, 34 stream sediment, and 82 rock grab samples. A 1,800-meter drilling program has now commenced. Previous work at West Pogo identified two zones of gold mineralization from rock-chip grab samples with up to 118.5 g/t gold. Drilling has begun within the larger of these two zones and is designed to test for potential mineralization along roughly northwest-trending structures identified through re-interpretation of geophysical data.

SONO RESOURCES INC. announced that it had changed its name to **ALASKA GOLD CORP.** and commenced its 2012 exploration program on its Bear project in the Circle District. The company collected 219 mobile metal ion geochemical samples and followed up with a three dimensional induced polarization/resistivity survey. The company hopes to identify 6 to 10 drill targets where it can subsequently complete 4,000 to 6,000 feet of diamond core drilling later in 2012.

In what we all hope is a shape of things to come, the **DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES** announced that step one of the Roads to Resources program has begun with clearing and surveying of the proposed road from Manley Hot Springs to Tanana Village. Both the State of Alaska and the **ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY** are funding this initial US$10 million effort. The goal will be creating of a summary document that will be subject to public comments. The land along this segment of the corridor is owned partly by the State of Alaska and partly by the **TOZITNA NATIVE CORPORATION.**

Alaska Range

USIBELLI COAL MINE INC. recently released updated demographics for Usibelli Mine employees. The mine employs 144 people full time with an additional seven seasonal employees. The average mine employee has been employed there for nine years. A total of 46 employees have been at the mine for more than 10 years, with 11 of those having been employed for more than 30 years at Usibelli Mine. Approximately 27 percent of the workforce, or 39 employees, are second, third or fourth generation employees.

CORVUS GOLD INC. reported that joint venture partner **OCEAN PARK VENTURES CORP.** has not finalized its exploration program for the summer, but has indicated to Corvus Gold that the work will be limited in scope as necessary to fulfill Ocean Park's remaining 2012 work commitment.

PURE NICKEL INC. said its US$4.9 million 2012 exploration program at the MAN project, funded by partner **ITOCHU CORP.**, began in late May, with mapping, soil geochemistry and induced polarization geophysical surveys. Drilling began in late June with a total of 2,600 meters expected to be completed by the end of the program.

GTSO RESOURCES said that, in addition to its gold properties already under evaluation, it has begun evaluation of tungsten prospects in Alaska. The initiative grew out of results from the company's black sands core samples collected in June.

MILLROCK RESOURCES and partner **TECK AMERICAN INC.** said drilling has commenced at the Estelle project. The US$1.8 million drilling program will include seven holes totaling up to 1,500 meters of drilling. Five of the planned holes will be drilled at the previously drilled Oxide Ridge prospect. Previous drilling intersected variably altered magmatic intrusive rock with quartz veins and stockworks containing gold mineralization which returned a 0.43 g/t gold over 365.3 meters.

CORVUS GOLD INC. reported that joint venture partner **WESTMOUNTAIN INDEX ADVISORS INC.** will conduct additional exploration at the Terra property this summer. Work will include core drilling and installation and operation of a small mill that will utilize stockpiled material left on site. The company also plans to begin construction of the road from the project camp to the main mining area at the Ben Vein. Diamond drilling will focus on the continued extension of the Ben Vein to the north as well as infilling the additional 200 meters of vein extension delineated in 2011.

Northern Alaska

NOVACOPPER INC. and **NANA REGIONAL CORPORATION** Inc. reported initial industry compliant resources estimates for the Bornite copper-cobalt prospect at its Upper Kobuk project in the Ambler District. At a 0.5 percent copper cutoff grade, the Ruby Creek Zone of the Bornite deposit contains indicated resources of 6.8 million metric tons at 1.19 percent copper, or 178.7 million pounds of contained copper. In addition, at a 0.5 percent copper cutoff grade, the Ruby Creek zone contains inferred resources of 47 million metric tons of 0.84 percent copper, or 883.2 million pounds of contained copper. The Ruby Creek zone resource does not include any of South Reef target mineralization located roughly 600 meters east of the Ruby Creek zone. Exploration drilling at South Reef in 2011 encountered exceptional grade-thickness intervals, including 178 meters grading 4.01 percent copper, including a 34.7 meter section grading 12.03 percent copper. Mineralization in the Ruby Creek zone occurs as two dis-

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• COLUMN

EPA pushes error-riddled assessment

Rarely has a federal agency had the gall to publish so factually-deficient a document as this hypothetical mine impact analysis

By J. P. TANGEN
For Mining News

The very founding of our country was premised upon resistance to governmental excesses. Authors and movie producers from Ayn Rand's Atlas Shrugged ("A government is the most dangerous threat to man's rights: it holds a legal monopoly on the use of physical force against legally disarmed victims.") to Steven Spielberg's "Men in Black" (Bug: "Place your projectile weapon on the ground." Edgar: "You can have my gun, when you pry it from my cold dead fingers." Bug: "Your proposal is acceptable.") have warned us against the rising tide of government intrusion into our lives.

The arrogance of federal agencies, especially when it comes to Alaska, has been documented incessantly since the Purchase. The most recent unimaginable manifestation of that phenomenon has occurred with the publication of the Bristol Bay Watershed Assessment, which is currently being finalized for adoption by the U.S. Environmental Protection Agency. The area subject to the assessment is huge, the amount of time the EPA has dedicated to its preparation does not pass the blush test, and predictably, it is riddled with significant, substantive errors in logic and science.

Innumerable commentators have stepped up to the plate to shine the spotlight of reason on this inept exercise; however, because 2012 is an election year, it is critical to this administration that the entire process be completed before the President is inaugurated in January – just in case there is a change in administrations. Few Alaskans will have taken the time to read the assessment and fewer still will prepare and file incisive comments. By the time this piece is published, the comment period will have passed. Nonetheless, it seems important to document for all a sampling of the incredible deficiencies in the report. The following enumerates more than two dozen blatant errors that have been identified by the Alaska Miners Association in its effort to leverage the EPA away from the ill-conceived course which it is following:

The EPA purports to be analyzing the impacts of large-scale mining in the Bristol Bay watershed. Since the Pebble Project has not released a mining plan, the analysis ostensibly is not about Pebble; however, the thinly veiled hypothetical mine that is discussed unmistakably is the evil shadow of what a Pebble proposal might look like. In brief, however, the hypothetical mine neither resembles anything Pebble could ever imagine – an unpermittable project – nor does it correspond with any other imaginable project in southwest Alaska or anywhere else in the country.

Copper porphyry deposits are not representative of the mineral deposits in the Bristol Bay watershed. There are other significant deposits in the area that have been documented by the Bureau of Land Management and the U.S. Geological Survey as well as a number of undiscovered deposits USGS deems probable. Their analyses estimate that there is 50 percent probability that there are 14 non-copper-porphyry deposits within the watershed.

The EPA's hypothetical mine overestimates the size of likely mines in Bristol Bay by more than five times the average open-pit mine in Alaska and British Columbia, and more than four times the average copper mine.

The EPA's hypothetical mine uses a non-representative geochemical make-up. There is no typical geochemical make-up for a metal ore that would be representative of all ores within a region; therefore, the geochemistry of one deposit cannot be used to represent the geochemistry or geochemical risks of other deposits in the area.

The EPA's hypothetical mine omits mitigation and prevention strategies that necessarily will be used by any large mines in the Bristol Bay watershed. Given the large variety of mitigation and prevention techniques available to today's mining industry, it would be an extraordinary coincidence if any as-yet un-designed mine used exactly the set of mitigation/prevention strategies that the EPA assumes in its hypothetical mine.

The EPA omits mitigation and prevention strategies that would eliminate or significantly reduce the impacts it predicts for its hypothetical mine. These include such strategies as dry tailings closure and moving the product by pipeline.

The EPA's hypothetical mine does not meet minimum permitting standards because the design used by the agency includes no mitigation provisions for eliminating anadromous fish habitat and wetlands impacts. Waste rock cannot be placed in such a creek under state or federal regulatory standards. Accordingly the hypothetical mine as proposed by the EPA could not be permitted.

The EPA overestimates the realistic mine size. The habitat modification description in the assessment is a direct consequence of the mine size and location. As the EPA overestimated the mine size for other mines, the habitat modification impacts are significantly overestimated.

The watershed assessment lacks a realistic water budget. Therefore the water withdrawal impacts cannot be confirmed, analyzed or disputed.

It is quite possible that mines within the watershed would not be developed using a road. Therefore, the predicted impacts from road construction and operation cannot be taken as representing an impact of large-scale mining in

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Mining & the law

J.P. TANGEN

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the watershed.

The EPA proposes a specific road alignment and by implication construction techniques and then disparages them because of the environmental impacts they will cause. The obvious solution is to provide a higher level of design/construction standards to eliminate the impacts.

The EPA, incidentally, failed to reach the same conclusions that it reached in the assessment with regard to two other mine roads it has approved.

Today's mining practices are hugely more protective of the environment than those of even 1990. Therefore, statistical prediction from legacy mines does not represent the statistical probability of failure from modern mines, nor does it represent the protective practices that the mining industry uses today and that state and federal government agencies require.

The EPA's lack of design details makes its analysis of water collection and treatment failure events meaningless. The agency does not evaluate any specific failure modes or present data on similar failures at other mines.

The analysis omits any discussion of prevention and mitigation strategies. Mines typically have back-up systems in case effluent escapes from the primary containment mechanism.

The analysis ignores Alaska's excellent record of protecting water quality and fish.

Conclusions in the assessment's executive summary contradict the conclusions in the body of the document. The analysis in the assessment says, "The probability of failure cannot be estimated from the data," but the executive summary says that the probability of failure is "high." There is no justification in the body of the assessment for the conclusion stated in the executive summary.

The EPA came to different conclusions in other mine analyses. In environmental impact statements for at least two mines on which the EPA was the lead agency, it did not even mention the risk. It is inconsistent of the EPA to conclude that the probability of a water treatment and collection failure is "high" and the consequence of failure severe, when the identical issue did not even rise to the level of discussion in other recent analyses by the agency on the same subject.

A pipeline may be required to develop a mine at Pebble, but no other mine in Alaska uses a pipeline. Because most mines do not use a pipeline, the predicted pipeline risks are unlikely to be representative of a mine other than at the Pebble Project in the Bristol Bay watershed.

The EPA's hypothetical pipeline omits obvious prevention and design strategies. In fact, some components of a mine are fixed and are difficult to change, but pipelines can be designed to different standards. It is unclear why the EPA would design a pipeline with an unacceptable risk and not include design changes to decrease the risk.

The EPA came to a different conclusion for a potential mine pipeline at the Red Dog Mine where the federal agency recommended a pipeline. In that case the agency concluded that "it is highly unlikely that the pipelines would be compromised."

Not all mines have dams and, as the assessment states "[a]fter mine closure, [tailings ponds] can be drained eliminating the consequences of tailings dam failures." Despite the potential to eliminate the risk, the EPA's hypothetical mine uses a wet closure to represent what it expects to be typical of large-mine impacts in Alaska. The predicted impact from the EPA's hypothetical mine most likely does not represent other as-yet-to-be designed mines in the watershed, and may not represent the risks from a mine at the Pebble Project.

Numerous potential large mine locations in the Bristol Bay watershed would have significantly less risk than the location chosen for the EPA's hypothetical mine.

In brief, the EPA has generated a fundamentally flawed work product that is specifically intended to be used for a political purpose. The document deserves to be withdrawn, and if a Bristol Bay watershed assessment actually is necessary and authorized by law, it needs to be prepared with vastly more professional care. ●

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crete strata bound lenses: the Lower Reef which outcrops and dips approximately 30 degrees to the northeast; and the Upper Reef lying roughly 150 meters above the Lower Reef stratigraphy and which includes a small high-grade zone named the No.1 Orebody by Kennecott. Mineralization is hosted by a Devonian age carbonate sequence containing broad zones of silica-dolomite alteration and associated sulfide mineralization including bornite, chalcopyrite, chalcocite occurring as disseminations and vein stockworks as well as crackle and mosaic breccia fill and locally massive to semi-massive replacement bodies. Four rigs are currently drilling at the project with the goal of completing 15,000-18,000 meters of diamond drilling in two principal areas: the South Reef and Ruby Creek zones at Bornite and the Sunshine deposit, a satellite polymetallic volcanogenic massive sulfide deposit located 12 kilometers west of the Arctic volcanogenic massive sulfide deposit where previous drilling identified significant intersections of massive sulfide mineralization in the same stratigraphic horizon as the Arctic deposit. The US$16.5 million 2012 exploration program also consists of extensive surface exploration of the roughly 18 kilometer long belt of prospective carbonate stratigraphy adjacent to the Bornite deposit. Two known mineralized occurrences (Aurora Mtn. and Pardner Hill) along with broad areas of hydrothermal dolomite and anomalous soil geochemistry occur along the belt. Surface exploration will utilize 60+ line kilometers of wide-spaced dipole/dipole induced polarization and radial line down-hole IP and 25 line kilometers of soil sampling.

ANDOVER MINING CORP. reported initial drilling results from its 2012 drill program at the SUN copper-silver-lead-zinc-gold volcanogenic massive sulfide project in the Ambler District. Drill hole SUN 12-29 was the first drill hole of the 2012 drill program and returned 8.6 meters grading 1.49 percent copper, 1.6 percent lead, 9.03 percent zinc, 66.2 g/t silver and 0.190 g/t gold from 71.9 to 80.5 meters depth, 6.2 meters grading 2.73 percent copper, 1.27 percent lead, 6.54 percent zinc, 116.4 g/t silver and 0.396 g/t gold from 100.5 to 106.7 meters depth and 2.3 meters grading 1.68 percent copper, 0.26 percent lead, 1.04 percent zinc, 48.9 g/t silver and 0.142 g/t gold from 130 to 132.3 meters depth. Drilling continues on both the SUN and S.W. SUN deposits.

GOLDRICH MINING COMPANY and partner **NYACAU, LLC** said they have received a placer mining permit for the Chandalar project in the Brooks Range. Ground preparation has begun and the companies anticipate the gold recovery plant will be set up by mid-August. Commercial production is anticipated to begin by June 2013, although limited production could begin as early as this summer. An eventual production rate of about 10,000 ounces of fine gold per season for 25 years is anticipated with the option to increase this production rate by establishing a second gold recovery plant.

Southeast Alaska

GRANDE PORTAGE RESOURCES LTD. said it has begun drilling at its Herbert Glacier gold project in the Juneau Gold Belt. The 2012 70-hole drill program will be divided into two primary objectives deeper drilling on 25-meter spacings in order to convert inferred ounces into the measured and indicated category and an additional 3000 meters of relatively shallow drilling on four of the five principle vein structures. Each structure has a surface expression of about 1,000 meters.

ARROWSTAR RESOURCES LTD. reported initial results from its first exploration program on its Snettisham iron ore prospect about 30 miles southeast of Juneau. Ten grab samples were tested for magnetic separation using a Davis Tube Test methodology with recovering ranging up to 86.7 percent of the magnetite in pyroxenite host with an over-all iron content of 57. A bulk sampling program is planned as the next step to concentrate the sampling in these two areas to determine the extent of each occurrence. Proposals are being reviewed for a ground based magnetic program that will be conducted prior to initial drill testing.

HEATHERDALE RESOURCES LTD. reported details of its planned 2012 exploration program at its Niblack volcanogenic massive sulfide deposit. The 2012 program will be staged from surface sites to test areas that could not be efficiently tested from existing underground workings. The 15,000-foot program mainly targets the open extensions of the Lookout and Trio deposits, as well as focusing on several other key targets along the property's six miles of prospective felsic stratigraphy, which is known to host at least six massive sulfide zones. Current resources comprise indicated resources of 5.6 million metric tons grading 0.95 percent copper, 1.75 g/t gold, 1.73 percent zinc, 29.52 g/t silver and an additional inferred resource of 3.4 million metric tons grading 0.81 percent copper, 1.32 g/t gold, 1.29 percent zinc, 20.10 g/t silver. ●

• ALASKA

Niblack garners financial, local support

Securing a C$4.4M financing, Heatherdale launches exploration at SE Alaska VMS project; eyes Ketchikan-area sites to set up mill

By SHANE LASLEY
Mining News

Despite owning a Pacific Rim deposit of gold, copper, zinc and silver worth some US$1.44 billion, Heatherdale Resources Ltd. has not completely escaped the financial paralysis gripping the junior mining sector.

While the value of Heatherdale's stake of the Niblack project has nearly doubled over the past year, its share price has plunged some 75 percent.

Notwithstanding, the Hunter Dickinson-affiliated junior has successfully pulled together the funds it needs to continue to advance the high-grade VMS deposits at Niblack toward pre-feasibility and permitting.

On July 17, Heatherdale raised C$4.4 million by selling to Rathdowney Resources Ltd. – a fellow Hunter Dickinson company focused on zinc deposits in Poland and Ireland – 22 million shares at C20 cents per share.

Rathdowney – which now owns 18.4 percent of the issued voting shares of Heatherdale – said the private placement purchase is for investment purposes only.

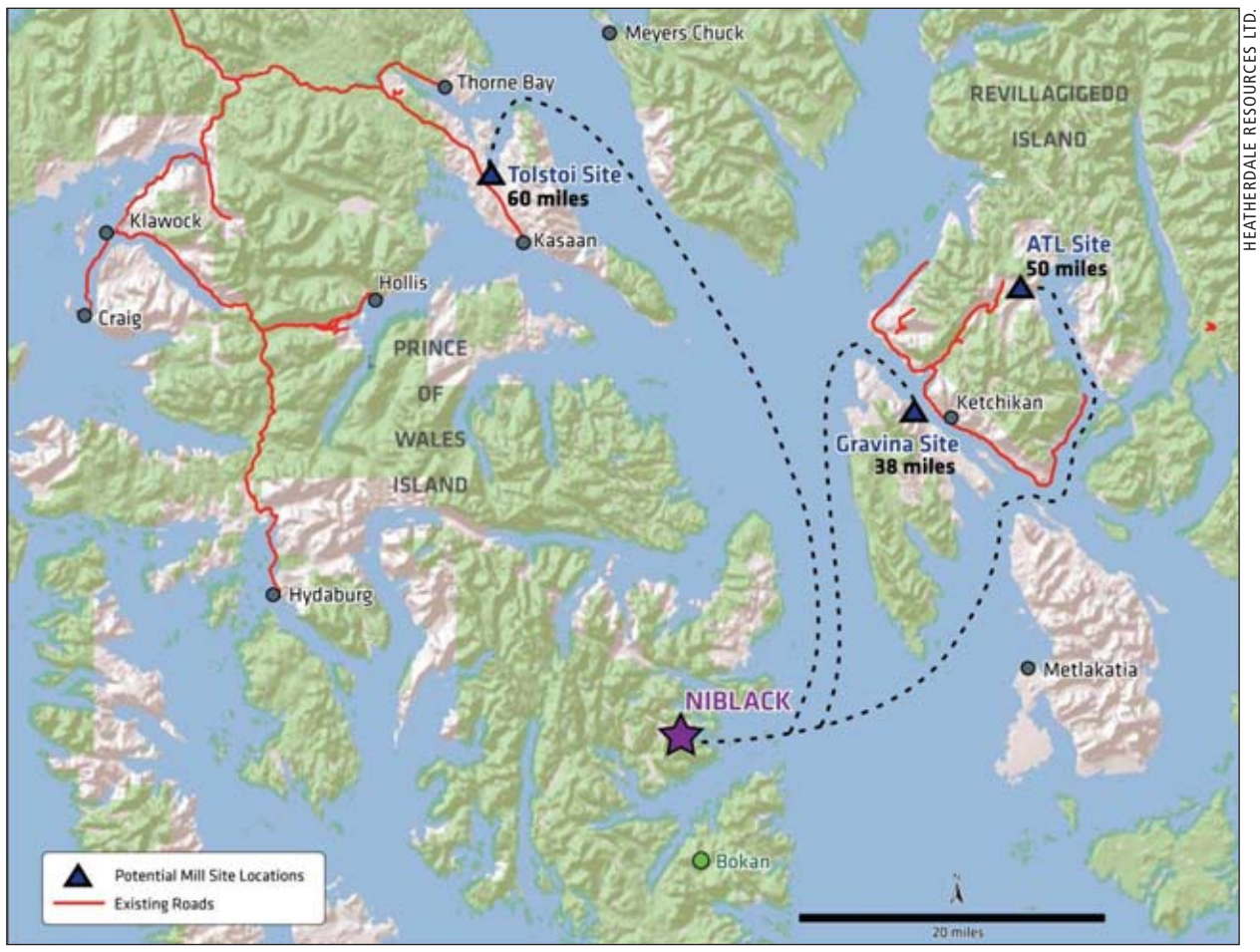
"Rathdowney is fortunate in having a very strong treasury in a very challenging market. The company completed a large financing when it went public in 2011, and we also have been able to advance drilling programs at Olza over the past year at a lower cost than anticipated," said Rathdowney President and CEO John Barry. "We also have adjusted our broader corporate strategy to take advantage of opportunities that arise under current market conditions. Hence, we see this investment as a compelling opportunity for exposure to a quality project like Niblack, which is closer to production than Olza, with metal diversification but still with a common zinc theme. There is real value available in these depressed markets, and we are in the happy position to be able to take advantage while still having sufficient funds to continue to advance our larger-scale Olza Project."

With funding from its sister company, Heatherdale has launched its 2012 drill program as it continues to complete the environmental baseline and engineering work need to complete a prefeasibility study by mid-2013.

Expanding the resource

A 1,000-meter exploration drift has provided Heatherdale with great positioning for expanding the Lookout and Trio deposits over the past three years, but as these zones are plunging deeper into Lookout Mountain, the underground development is becoming less advantageous. To trace these zones deeper Heatherdale has laid out a series of surface holes on the backside of Lookout Mountain.

"Upon reviewing all of the results from previous underground drill programs, it became apparent that a surface drill program was the most effective way to offset mineralized drill-hole intercepts and expand the resource," explained Heatherdale President and CEO Patrick Smith.



HEATHERDALE RESOURCES LTD.

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

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

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

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

Heatherdale has five holes slated to expand the Lookout deposit at depth. Hole U074 – which previously pierced the Lookout resource expansion area being targeted by this year's drilling – cut 1.46 meters averaging 3.3 g/t gold, 2 percent copper, 23 percent zinc and 90 g/t silver.

In addition to the Lookout deposit, two holes will target the Lookout West zone and six holes are investigating the Trio deposit at depth.

This drilling is designed to add 1 million to 2 million metric tons of ore to the Niblack resource.

Key exploration targets

In addition to expanding the Lookout and Trio deposits, the some 4,600 meters of drilling planned for 2012 will test several other key targets along a six-mile (10 kilometers) belt of prospective stratigraphy at Niblack.

"We were not able to access those important drill locations last September due to poor weather conditions, so I am very pleased to finally get out there and drill-test these obvious targets and demonstrate this property's further resource potential," Smith said.

The 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 Mine, Dama and Lindsy zones are planned 2012 exploration targets along this prospective stratum.

From 1905 to 1908 miners extracted some 20,000 tons of ore averaging 4.9 percent copper, 2.2 g/t gold and 30 g/t silver from the historical Niblack Mine. One hole is planned to test for additional high-grade VMS mineralization in this area.

Lindsy, the target of two exploration holes, is found between Trio and the historical Niblack Mine.

see NIBLACK SUPPORT page 16

NORTHWEST TERRITORIES

Copper North explores Redstone belt

Junior works to confirm 33.4-million-metric-ton historical copper-silver resource; explore enticing targets on remote property

By ROSE RAGSDALE
For Mining News

Copper North Mining Corp. July 20 reported that its application for a five-year Type 'A' land use permit, submitted in support of its 2012 exploration program at the Redstone Property in Northwest Territories has been approved by the Mackenzie Valley Land and Water Board.

A LUP has been granted to Redbed Resources Corp., a wholly owned subsidiary of Copper North. The LUP will enable the company to conduct exploration activities on the Redstone property for a period of five years from the date of grant.

The Redstone Property is located in the Nahanni Mining District of Northwest Territories, some 290 kilometers (180 miles) south of Norman Wells, Nwt. and 300 kilometers (186 miles) north of Watson Lake, Yukon Territory. The Redstone property is comprised of a discontinuous series of five mining leases and 13 mineral claims stretching over about 100 kilometers (62 miles) that extend northwest-southeast for about 180 kilometers (112 miles) in the Nahanni Mining District across known sedimentary rock-hosted copper deposits.

The property covers a broad, remote plateau of gentle relief which drops gently to Silverberry River and is accessed by airplane, equipped with floats or skis.

Copper North reported that field crews have been mobilized to a field camp where the focus of 2012 exploration program – comprised of geological mapping, ground geophysics and geochemical sampling – is to test potential deposit extensions at a high-grade, stratiform copper deposit at Coates Lake as well as to increase the company's understanding of the regional prospectivity of the project by further exploring the known copper occurrences in the claims located to the north of Coates Lake.

Strong historical evidence

In May, Copper North reported completion of a review of a historical resource estimate for the Coates Lake deposit at the Redstone property that totals 33.4 million metric tons grading 3.92 percent copper for 2.9 billion pounds contained copper and 11.3 g/t silver (0.33 oz/ton silver) for 12.15 million troy ounces contained silver over a weighted true thickness of 3.27 feet is located on the Coates Lake mining leases.

The Redstone property was extensively drilled between 1960 and 1980 by Redstone Mines Ltd. (geological mapping and 45 diamond drill holes totaling 6,902 meters); Cerro Mining Company of Canada Ltd. (three diamond drill holes totaling 1,375 meters); and Shell Canada Resources Ltd. (eight diamond drill holes for a total of 7,225 meters).

This historical resource estimate was

see **REDSTONE BELT** *page 17*

COPPER NORTH MINING CORP.

A pile of rocks rich in azurite, one of several indicator minerals for copper, on the Redstone Property in southern Northwest Territories where Copper North Mining Corp. is following up on earlier exploration this summer.

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NIBLACK SUPPORT

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 a high-priority exploration target.

Nowhere for the mill

While geologists continue to expand the resource at Niblack, engineers are designing a mine and mill to process the gold-copper-zinc-silver ore. Heatherdale currently anticipates a 1,500- to 2,000-metric-ton-per-day operation – of similar scale to Hecla Mining Co.'s Greens Creek silver mine near Juneau.

Finding a place to put the mill is one of the primary obstacles engineers need to overcome. With the slopes of Lookout Mountain plunging steeply into the Niblack Anchorage, there is little room for the mill and associated infrastructure.

Instead of attempting to master the challenging topography, Heatherdale is considering barging ore to an offsite location.

Two of the three locations identified for a mill and tailings storage facility are industrial sites near the community of Ketchikan, some 40 miles (65 kilometers) to the northeast.

Gravina Island – the location of one of the industrial sites under consideration – was made famous by the proposed "Bridge to Nowhere." This span across the passage between Ketchikan and its airport became a poster-child for excessive government spending.

While a bridge does not link Gravina to Ketchikan, regular ferry service could transport mill workers from the Southeast Alaska town to the proposed mill site. If the processing facilities were positioned at the industrial park, the lower cost hydroelectricity available there is expected to help offset some of the costs of transporting the ore.

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," according to Smith.

Heatherdale has entered talks with Alaska officials regarding financing its energy and infrastructure needs through the Alaska Industrial Development and Export Authority.

The state-owned development corporation – which has a mission to promote economic growth and diversification in Alaska by providing various means of financing and investment – has helped build other mining-related infrastructure in the state.

Notable AIDEA projects include the DeLong Mountain Transportation System (road and port facilities utilized by the Red Dog Mine in Northwest Alaska) and the Skagway Ore Terminal.

"We are working with local communities and mine developers on infrastructure projects throughout Alaska, including port facilities and energy supply," said AIDEA spokesman Karsten Rodvik. "We are interested in the development of the Niblack project and an associated mill in the Ketchikan area because these projects could have a positive economic impact in the region and would create a significant number of highly skilled year-round jobs."

Local support

Ketchikan, a logging town of some 8,000 people, has been seeking a new source of employment since the demise of the timber industry in the region.

"In Southeast Alaska, where the federal government has decimated timber jobs, the private sector is establishing a beachhead of opportunity there for new jobs," Alaska Gov. Sean Parnell said, referring to Heatherdale and other mineral companies in the region.

Since becoming involved 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 economic 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.

"In June 2012, I attended a three-day event, called the Prince of Wales Island-Wide Mining Symposium II, put on by the Organized Village of Kasaan – a forum that was focused on opportunities for economic development," said the Heatherdale CEO. "From that forum and many other engagements we've had in the region, it is abundantly clear that there is strong local support for responsible resource development in Southeast Alaska. We are proud to be working in partnership with local communities and local people to deliver a project that meaningfully addresses their priorities and concerns."

In addition to support from local residents, state and local lawmakers have put their weight behind the development of Niblack.

A bill to authorize the establishment of a Niblack mining-area road corridor was introduced in the U.S. Congress last June by Sen. Lisa Murkowski, R-Alaska, and co-sponsored by Sen. Mark Begich, D-Alaska. The road initiative is the result of a grassroots effort led by the communities on Prince of Wales Island.

The Niblack Project has also received support from elected officials, business and community leaders throughout Southeast Alaska as a potential solution to the employment and economic challenges facing the region.

"We gratefully acknowledge the support and proactive involvement of local communities, political leaders and government agencies like AIDEA," Smith said. "For its part, Heatherdale is committed to continuing to work with the people of Southeast Alaska to find ways to optimize local benefits associated with development at Niblack." ●

continued from page 15

REDSTONE BELT

calculated in 1978 by Shell Canada Resources Ltd. and was based upon an unpublished report to Shell entitled "Redstone Project, Progress Report March 1978. Drill Results as of August, 1977 and Recommendations for the 1978 Field Season, Nahanni Mining Division" by A.R., Hildebrand, March 9, 1978. The historical resource estimate prepared by Shell was not created using "Standards of Disclosure for Mineral Projects" as outlined in National Instrument 43-101.

In 2005, however, a technical report by A.W. Gourlay (P.Geol) titled "Technical Report on the Coates Lake Copper Deposit, Nahanni Mining District, Western Northwest Territories for Lumina Resources Corp.," referred to the historical resource estimate from the report for Shell. According to the report, Gourlay considered the calculation of the estimate by Shell to conform with requirements of an inferred resource as defined by NI 43-101.

In 1990 Redstone Mines Limited carried out a complete data review along with confirmation mapping, identification of drill targets and location of potential drill sites.

In 2005 Lumina Resources Corp. completed an exploration program and a regional geological evaluation of the Redstone copper belt.

Need for more drilling

Western Copper Corp. acquired Lumina Resources in November 2006, and spun out the Redstone property into Copper North along with its Carmacks copper project in central Yukon in October. Copper North expects to complete a feasibility study for the Carmacks Project in the third quarter, which will subsequently enable it to complete and submit a revised project proposal to the Yukon Environmental and Socio-economic Assessment Board. An earlier proposal by Western Copper was rejected by the Yukon Water Board in 2010 though it had been approved by YESAB.

At the Redstone property, no exploration drilling has been conducted since the Shell drill program in 1977, which was successful in proving the continuity of the mineralized beds to depth.

Copper North said it does not consider the historical resource estimate as current and further drilling is recommended in order upgrade the historical resource estimate at the Coates Lake deposit. Confirmation drilling is required to verify the historic drill-hole data; once data verification has been achieved, drill-hole lines and spacing would be reduced to about 1,000 meters apart.

Talks with First Nations

Local community engagement in the Northwest Territories was initiated by Copper North in early 2012, in advance of the submission of its application for a land use permit.

In the Sahtu Region, the company has completed a traditional knowledge study, conducted in partnership with the Tulita Renewable Resources Council, the Fort Norman Metis Land Corporation, the Tulita Land and Financial Corporation, and the Tulita District Land Corporation. In the Dehcho Region, the company has met with board representatives of the Pehdzeh Ki First Nation Development Corporation as well as senior representatives of the Liidli Kue First Nation, Fort Simpson (Fort Simpson is the regional centre of the Dehcho).

In a July 20 statement, Copper North President and CEO Sally Eyre, Ph.D., said, "I am very satisfied with our progress as we continue to systematically advance Carmacks and Redstone. Efficient processing of the Redstone LUP application has enabled us to successfully execute our 2012 exploration program, and as a result, we are able to start planning field activities for 2013."

COPPER NORTH MINING CORP.

Geologists canvass a slope on the Redstone Property in southern Northwest Territories. Copper North Mining Corp. is exploring the copper-rich area in hopes of confirming historical resource estimates and identifying new exploration targets.

Promising mineral claims

Eyre said the Coates Lake mining leases represent a small proportion of the total area of mineral claims within the Redstone Property.

"Our planned field program this summer will further investigate the potential for extensions to the stratiform mineralized beds within the Transition zone," she explained.

The geophysical work this season will include induced polarization surveys and additional ground-based extremely-low frequency-electromagnetic surveys. The program is focusing on assessing the lateral and vertical extent of copper mineralization around known mineral occurrences and newly-delineated prospective areas. The geophysical surveys are being guided by detailed geological mapping of the structures and stratigraphy that control the location of copper mineralization.

Previous field work has been successful in identifying stratiform copper mineralization, structures and stratigraphy using IP surveys at the Coates Lake deposit. Further exploration is intended to locate potential chargeability and resistivity anomalies associated with copper mineralization, particularly in areas that are covered by overburden.

Copper North said the ground-based ELF-EM system is highly portable, requiring no cut grids or wire loops and is a low-cost means of providing electrical resistivity data to depths of up to one to two kilometers. The ELF-EM data is relatively rapid to collect and will allow follow-up IP surveys to be more strategically located. The junior has been working closely with the Mineral Deposit Research Unit of the University of British Columbia to improve regional- and deposit-scale exploration strategies at Redstone. The collaboration has enabled the company to plan a focused field campaign, which will primarily test potential deposit extensions at the Coates Lake deposit; as well as significantly increase the explorer's understanding of the regional prospectivity of the project.

Subhed: Seeking drill targets

The 2012 exploration program will focus on the Coates Lake deposit, Johnson Vein, Hayhook Basin and Hidden Valley areas of the property. The key objectives of the program include testing the potential extensions to the Coates Lake deposit by IP and ELF-EM ground geophysical surveys and geochemical surveys; conducting soil geochemical surveys, biogeochemical surveys, IP surveys and ELF-EM surveys on the Johnson Vein, Hayhook Basin and Hidden Valley claims and leases; and defining new regional exploration targets by prospecting and stream sediment sampling. The Coates Lake deposit is located within the southeastern portion of the Redstone property, about 116 kilometers (71 miles) northeast of North American Tungsten Corporation Ltd.'s Cantung Mine located near the Yukon border in southwest Northwest Territories.

Copper mineralization at Coates Lake is primarily a high-grade, laterally continuous zone that has a 6,100-meter north-south strike length that extends down-dip to the west for at least 2,400 meters. The deposit is inferred to be open to the north, where the prospective stratigraphy is believed to extend beyond the limit of historic drilling beneath the cover of glacial sediments, and it is inferred to be open at depth to the west and southwest.

Mineralization is disseminated throughout the Coates Lake Group and Rapitan Formation, but the most economically significant mineral occurrences are found in the Transition Zone (a sequence of rocks up to 110 meters thick, containing up to eight copper-bearing beds). At the Coates Lake deposit, the lowermost bed (B1) has the highest grades, although the third bed (B3) has the greatest thickness. Mineralization of the B1 bed at Coates Lake comprises disseminated, inter-grown chalcocite-bornite assemblages with local occurrences of bornite-chalcopyrite in the southeast.

Encouraging samples

The Hayhook Basin located about 80 kilometers (50 miles) north-northwest of Coates Lake has more than 10 known copper occurrences and contains the prospective stratigraphy for laterally-continuous, reduced-facies, stratiform copper-silver deposits. Much of the prospective stratigraphy in the Hayhook Basin is covered by glacial sediments. Field work this season is intended to target potential anomalies associated with bedrock mineralization under the overburden. Grab samples of chalcocite-rich dolostone from the 2010 field season have returned grades of over 13.8 percent copper and 15.6 g/t silver. The Johnson Vein is a carbonate rock-hosted, fault-related, polymetallic vein copper-silver-zinc-nickel-cobalt occurrence located on a lease about 40 kilometers (25 miles) north-northwest of Coates Lake. Two grab samples from the 2011 field season taken from historic trenches of massive to semi-massive sulphide rock, returned grades of 16.25 percent copper, 21.1 g/t silver, 0.07 percent zinc, 0.16 percent nickel, 0.026 percent cobalt; and 20.1 percent copper, 123 g/t silver, 0.16 percent zinc, 0.23 percent nickel, 0.041 percent cobalt. The Johnson Vein has never been drilled and can be traced laterally as talus for at least 450 meters. The Hidden Valley lease, located about 30 kilometers (19 miles) north-northwest of Coates Lake, covers an area that contains vuggy, hydrothermal dolomite-calcite-quartz-tetrahedrite-chalcopyrite-pyrite breccias that are related to faults within carbonate rocks. Copper sulphides occur as massive lenses, pods or disseminated tetrahedrite-chalcopyrite. Although not representative of the breccia rock mass as a whole, samples of massive tetrahedrite lenses from the 2011 field season returned grades as high as 35 percent copper, 1,800 g/t silver, 0.65 percent zinc and 0.45 percent bismuth. Copper North has said the potential quality and grade of the mineral occurrences at Hayhook Basin, Johnson Vein and Hidden Valley are conceptual in nature because exploration has been insufficient to date to define mineral resources, and it is uncertain whether future exploration will result in the targets being delineated as mineral resources.

Geological similarities

The junior also said the Coates Lake deposit and Hayhook Basin copper occurrences are situated within the 300-kilometer- (186 miles) long and 15-kilometer- (9 miles) wide Redstone Copper Belt which is geologically similar to the large, well-known copper deposits of the Kupferschiefer in north-central Europe and the copper deposits of the Central African Copper Belt in the Republic of Zambia and Democratic Republic of Congo.

Copper occurrences at the Johnson Vein and Hidden Valley properties, also within the Redstone Copper Belt, exhibit different characteristics and can be classified as carbonate-hosted, polymetallic copper-silver-zinc-bismuth-cobalt deposits, according to Copper North.

The junior's exploration program is being supervised by Jack Milton, M.Sc, a University of British Columbia Ph.D. candidate currently working on the Redstone Copperbelt project. The 2012 exploration program is expected to cost about C$800,000. Copper North had a cash balance of C$1.88 million as at Dec. 31, and June 1 reported that it raised about C$1 million in a private placement. ●

NORTH OF 60 MINING NEWS

Companies involved in Alaska and northwestern Canada's mining industry

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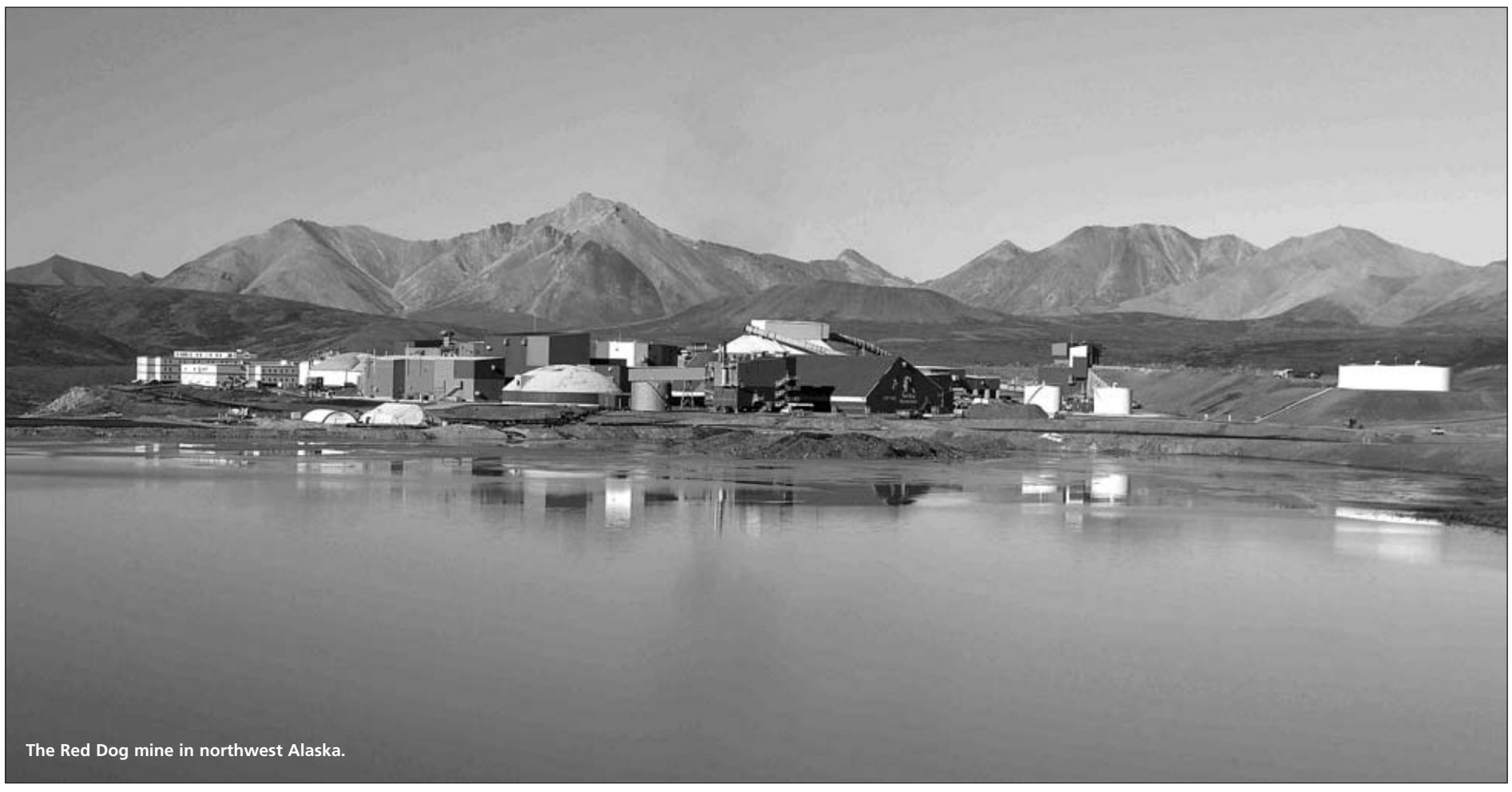

The Red Dog mine in northwest Alaska.

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EPA ASSESSMENT

gold-molybdenum project in 2012, with the objective of preparing to initiate permitting under NEPA – a process estimated to begin by mid-2013.

The EPA contends that it has not decided whether it will attempt to circumvent Pebble's permit application.

"Our goal is the finalization of a robust, technically sound assessment. Only upon its completion will the agency examine regulatory options, including application of 404(c), if appropriate," Jackson wrote in letter to Sen. Murkowski.

Unprecedented move

EPA has exercised its CWA 404(c) veto authority only a handful of times in the past and never before a permit was filed.

Geraghty is one of many to point out that the absence of a CWA 404 permit application by Pebble precludes EPA's authority to veto.

The environmental agency believes the federal water regulations provide it with the authority to take this unprecedented action, a power that worries resource development advocates.

"Our members are fearful that once this precedent is established, EPA will exercise its misguided pre-emptive strike to attempt to control land use and block resource and infrastructure development where it has neither the mandate nor the authority to do so," Resource Development Council for Alaska Executive Director Rick Rogers testified on June 4.

"If the EPA were to deny any project access to the state and federal permitting process, such action would be an assault on Alaska sovereignty," he added.

Rogers' concerns of an over-reaching federal agency were shared by a sizable crowd who attended the EPA hearing wearing "Hands off of Alaska" pins.

Alaskans are not the only ones that believe the EPA is overstepping its bounds. The U.S. House Committee on Oversight and Governmental Reform is also keeping an eye on the direction the agency is taking in Bristol Bay.

"Logic dictates that the merits of a project should be determined only after its proprietors complete the NEPA analysis and Section 404 permit application process," Oversight Chairman Darrell Issa, R-Calif., and subcommittee chairman Jim Jordan, R-Ohio, wrote in a May letter to EPA Administrator Jackson.

The watchdog panel questioned the environmental agency's legal authority to make a CWA 404 determination before permits are sought.

Responding to the oversight committee's concerns, EPA Associate Administrator Arvin Ganesan wrote, "The Administrator is provided broad authority under the statute to prohibit or otherwise restrict a site 'whenever [she] determines' that the discharge of dredged or fill material 'will have an unacceptable adverse effect' on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas."

In a July 19 staff report, the House Oversight Committee informed the public that, "It appears that the Environmental Protection Agency is considering using an unprecedented and legally questionable interpretation of the Clean Water Act to pre-emptively veto permits for the Pebble Project. In apparent preparation of this veto, EPA released a draft Watershed Assessment on May 18, 2012. This watershed assessment may be used as justification to deny permits to the Pebble Mine before a plan is even submitted to the agency."

More concerns

In addition to addressing the motives behind the federal agency's rush to judgment, Geraghty's letter to the EPA outlines a number of legal issues and concerns of the State. They include:

- Whether the EPA's decision to prepare the assessment and related efforts are an unlawful expansion of its Section 404(c) authority;
- Whether the assessment is based on outdated guidance that illegally circumvents other state and federal regulatory authorities;
- Whether conclusions drawn by the assessment will influence future regulatory decisions in regards to Pebble; and
- Whether the credibility of the assessment is undermined by the rushed nature of its development and review process.

In addition to Geraghty's legal concerns, the Alaska Department of Natural Resources submitted 89 pages of comments addressing the technical merits of the draft Bristol Bay Watershed Assessment.

While the state's technical comments number in the hundreds, they fall roughly into eight categories:

- The assessment draws speculative conclusions about potential impacts from a hypothetical large mine;
- Insufficient technical and scientific support for conclusions based on groundwater/surface water interconnections in the study area;
- Inadequate consideration of mitigation measures;
- Unclear risk assessment methodology;
- Inconsistent scale and scope of project area; and
- Non-scientific presentation of the assessment.

"In short, Alaska believes this premature assessment and the highly accelerated process that EPA is embarked upon is not well-founded in law and simply inadequate, when compared to the rigorous environmental reviews that are assured with a specific mine proposal and permit application, a review that would require several years and the expertise of multiple agencies at the state and federal levels (including by EPA)," Geraghty wrote. ●

Editor's Note: In its entirety, Section 404(c) of the Clean Water Act reads: "The Administrator is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. Before making such determination, the Administrator shall consult with the Secretary. The Administrator shall set forth in writing and make public his findings and his reasons for making any determination under this subsection."

"Administrator" refers to the EPA Administrator. "Secretary" denotes the Secretary of the Army, acting through the Chief of Engineers.

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YUKON PROSPECTS

The junior, formerly Ethos Capital, planned a C$7.3-million, 16,000-meter exploration program this season for its Betty gold project located next door to the Coffee project in the White Gold district.

Ethos June 26 reported assay results from 22 drill holes, representing the first half of the planned reconnaissance phase 1 drill program at the Betty property. These RC holes tested five sub-areas of the 17-square-kilometer (4,200 acres) Mascot Creek gold-in-soil anomaly that yielded prospecting rock grab samples up to 24.8 g/t gold and intervals in trench pits with the best result averaging 7.3 g/t gold over 50 meters.

Intervals of intense alteration containing gold mineralization have been discovered in all five sub-areas of the Mascot Creek anomaly tested. The best results to date occur in BETR-022 which cut 7.1 g/t gold and 209 g/t silver over 13.7 meters at the Marshall target and in BETR-012 which 29.8 g/t gold over 3.1 meters at the Perrault target. True width is unknown for all intercepts.

"We are excited to have made several new and substantial gold discoveries during the first drill test program on the Betty Property, which is confirmed to have potential to host large gold deposits," said Ethos President and CEO Gary Freeman. "We are looking forward to continued success, as the drill completes the remainder of the reconnaissance program and begins follow-up drilling in July."

At June 26, a total of 30 of 44 planned phase 1 holes had been completed using an RC drill rig contracted from Northspan Explorations Ltd. The RC rig completes an average of one hole per day to an expected target depth of 150 meters. All holes have been drilled at a 50-degree angle. True width is unknown for all intercepts. About 4,000 meters of drilling had been completed, and 3,000 samples weighing some 6 metric tons have been submitted for assay. The drill program is currently operating on schedule and under budget. The principal objective of phase 1 reconnaissance drilling is to identify gold grades over width in bedrock beneath gold-bearing surface trench pits or anomalous gold soils.

Most RC holes to date have intersected limonite and clay alteration and arsenopyrite mineralization, with or without quartz veining and silicification. There appears to be several phases of progressive or overprinting alteration and mineralization which is a very positive exploration indication. Some holes have intersected mineralized andesite and felsite dykes within alteration zones. A total of 14 of 22 holes so far have gold-bearing intervals. "The sizeable intersections of both higher and lower gold grades, as well as the presence of intense widespread alteration is very encouraging at this early stage of exploration," observed Ethos COO Peter Tallman. ●

● NORTHWEST TERRITORIES

Devolution talks engage northerners

Territorial leaders seek public input on vision for managing lands and resources; engage Aboriginal governments in discussions

By ROSE RAGSDALE
For Mining News

For more than 30 years, devolution – the authority to manage one's own public lands and natural resources – has been a goal of the Government of Northwest Territories. With a final devolution agreement currently being negotiated with Canada's federal government, the northern territory is now laying the groundwork for effectively managing its land and natural resources once the devolution process is complete.

Northwest Territories, which is slightly larger than the Province of Ontario, covers 1.183 million square kilometers (456,792 square miles). But unlike the populous southern province that is home to Canada's largest city and its national capital, Northwest Territories has a tiny population numbering less than 41,500 residents who have had little control over the territory's destiny.

All that is about to change when the current negotiations for devolution are concluded – expected by year's end – and the administrative authority and control over public lands, resources and rights in respect of water in the Northwest Territories is transferred from the federal government to the territorial government.

Issues under negotiation include an oil and gas cooperation agreement, how existing environmental hazards will be managed, and determining the line between the onshore and offshore areas of the Northwest Territories. In side negotiations, the GNWT is also finalizing an agreement with participating Aboriginal governments that will enable a cooperative approach to the management of lands and resources on both public and settlement lands. A final agreement on resource revenue-sharing between the territorial and Aboriginal governments is also nearing completion.

After devolution, the GNWT will share up to 25 percent of its royalties with Aboriginal governments within the territory's borders – a sharing that is unprecedented in Canada.

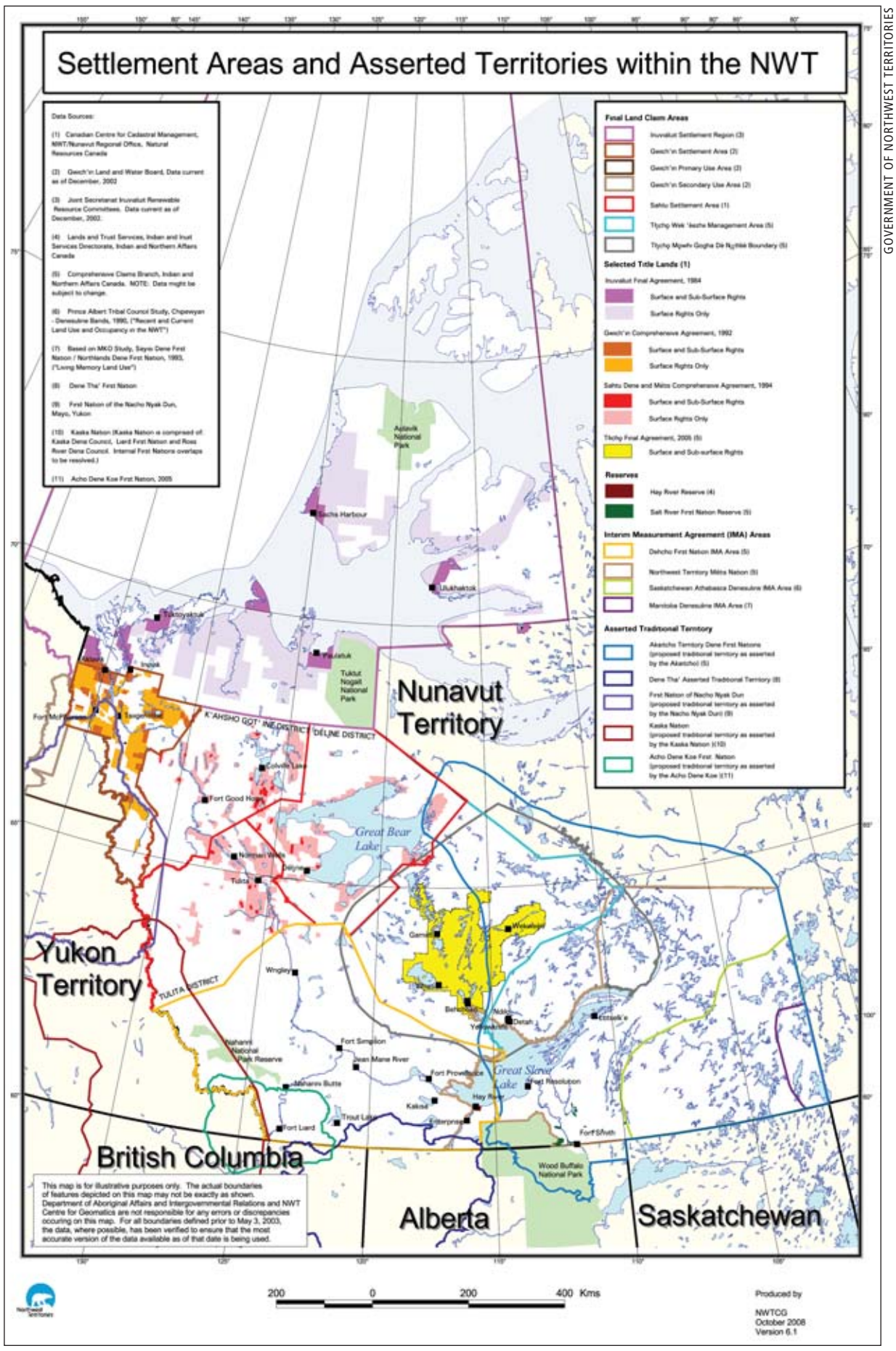
In June, the territorial government published "Towards A GNWT Land Use and Sustainability Framework," a discussion paper that describes its public interests and current thinking on managing public lands, water and resources after devolution and invited public input and assistance in crafting the final framework.

"I see this document as an important tool for engaging with Canada, Aboriginal governments, and others to get input on what will eventually become the 'GNWT Land Use and Sustainability Framework'," said Northwest Territories Premier Robert R. McLeod in introducing the discussion paper. Comments are due by Sept. 30.

New Aboriginal talks

GNWT leaders, led by McLeod, meanwhile, have been making inroads in building stronger ties with Aboriginal governments. McLeod met July 19 with the newly-elected Gwich'in Tribal Council President Robert A. Alexie, Vice-President Norman Snowshoe and Chief Operating Officer

see **DEVOLUTION TALKS** *page 23*



GOVERNMENT OF NORTHWEST TERRITORIES

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DEVOLUTION TALKS

Fred E. Koe in Yellowknife in what is described as a first step in opening doors for an ongoing and productive partnership between the GNWT and the new Council leadership, "one that aims at delivering real benefits to the Gwich'in."

"We have a small territory, and we need to pull together if we want to achieve our shared vision of a strong, self-sufficient Northwest Territories," McLeod in a statement. "Our government is committed to working with this territory's Aboriginal governments in the spirit of respect, recognition and responsibility. I believe the Government of the Northwest Territories and the GTC share many of the same priorities, and I look forward to working with President Alexie and the new GTC executive to advance the interests of all NWT residents, including the Gwich'in."

GTC President Alexie said he was pleased at the outcome of the preliminary talks.

"We are pleased to have this early meeting with Premier McLeod today," he said. "As elected leaders, we have a joint and community responsibility to work together in a productive and transparent way. We look forward to a more productive partnership between the GNWT and the new GTC leadership, one that aims at delivering real benefits to the Gwich'in."

MOU with the Tłı̨chǫ

The GNWT government's 17th Legislative Assembly met June 29 with members of the Executive Councils of the Tłı̨chǫ Government for the second time to discuss issues of shared importance and to sign "Working Together", a memorandum of understanding recognizing the importance of their government-to-government relationship. The MOU acknowledges the unique and evolving relationship between the two governments and identifies areas of cooperation including housing, income support and infrastructure. After signing the memorandum, which formalizes the territorial government's relationship with the Tłı̨chǫ Government, McLeod said, "The people of the Northwest Territories need their governments to work together to help create a strong and prosperous territory that provides benefits to all of them. The Government of the Northwest Territories is committed to strengthening our relationships with Aboriginal governments, and the agreement we have signed today demonstrates that commitment," he added.

Tłı̨chǫ Grand Chief Edward Erasmus said, "I, too, am pleased to be able to sign this memorandum of understanding with the leaders of the GNWT today. This MOU is an agreement to work together – government-to-government. The MOU sets out the reasons we want to work together and how we will go about doing so. It is important that as the leaders of the two governments we work together for the good of our people in our communities. There are so many areas where we have overlapping interests, and if we don't work together, it is our people who suffer in the end."

Sahtu rejoin talks

A little over a month earlier, the Sahtu Secretariat Incorporated rejoined the devolution negotiations, signing an agreement in principle May 22.

"The Sahtu Dene and Métis have been important participants throughout the devolution negotiations process since 2001, and we are pleased that SSI has joined us again to help shape the final agreement," said McLeod. "We welcome all NWT regional Aboriginal governments to participate at the negotiations table and ensure the voices and priorities of their people are reflected in this historic agreement. While devolution does not affect Aboriginal and treaty rights, Aboriginal governments should take the opportunity to work together and help ensure the best possible devolution agreement for everyone in the NWT," he added.

Canada's Minister of Aboriginal Affairs and Northern Development John Duncan also hailed the move by the Sahtu. "The Government of Canada is pleased to see the Sahtu seize this opportunity to help shape the future of the territory and share in the benefits that will flow from devolution," Duncan said. "The Government of Canada's Northern Strategy envisions putting greater decision making in the hands of the people of the Northwest Territories. Working together through devolution, land claim and self-government negotiations and other initiatives, we will achieve remarkable progress towards this objective."

Nellie Cournoyea, chair and CEO of Inuvialuit Regional Corporation, said, "The participation of the Sahtu will bring additional depth and strength to the Aboriginal voice in these important negotiations, and will contribute to a more productive relationship with the GNWT and the development of a devolution agreement that will work for all regions of the NWT."

Both the IRC and the Métis Nation signed agreements in principle to participate in the negotiations in early 2011.

Norman Yakeleya, MLA Sahtu, said, "It is important for the Sahtu to be at the table to have their views represented. It's always better to negotiate your own fate than to have others do it for you. The Sahtu are now owning up to 100 percent of our responsibility to determine our destiny," he added.

For more information or to provide comments on the framework discussion paper, contact Catherine Boyd at (867) 873-7541 or Catherine_boyd@gov.nt.ca. ●

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REE SURVEY

and poses no new metallurgical challenges.

The Spooky claims held by CORE are also found in the Ray Mountains region of the Ruby Terrane.

Explorers laud state

The DGGS REE assessment of the Ruby Terrane in Interior Alaska is part of the Parnell administration's five-part strategy on strategic minerals. This plan, which focuses heavily on rare earths, involves:

• Undertaking a statewide assessment of strategic mineral potential;

• Providing incentives for the development of known, or highly-prospective, strategic mineral occurrences;

• Making improvements in the structure and efficiency of Alaska's permitting processes;

• Strengthening partnerships and cooperation with other government entities, Alaska Native corporations and potential developers; and,

• Attracting new investments and markets for Alaska's mineral resources.

"The timing is right for rare-earth development," Parnell said. "We're on track to assess, incentivize and develop the rare earth elements we can provide the world."

Companies interested in developing Alaska's rare earths are lauding the governor on this initiative.

"The State of Alaska continues to take an active role in the development of its enormous rare earth and critical minerals potential," said Ucore's McKenzie. "The allocation of substantial funding specifically targeting rare earth and strategic resource development at Bokan Mountain and across the state is a tremendous advantage for a very young industry with immense upside potential for employing Alaskans and adding to the state's export revenue. We applaud Gov. Parnell's initiatives and look forward to working with the state to advance its critical metals revenue base."

"It is nice to see the state take that first step to have a program on the rare earths," Freeman said. "I take my hat off to the state for getting out in front of the curve and trying to get some new information generated – whether it is rare earths or other elements."

The Avalon Development president is among a growing group of exploration geologists who have told Mining News that the geological and geophysical surveys being conducted by the state provide the private sector with information vital to unraveling the complex geology of Alaska's vast expanse.

"I think we are going to have to use more remote-sensing exploration technology – geophysics, airborne surveys – and I think we are going to have to build up our regional database," NovaCopper Inc. President and CEO Rick Van Nieuwenhuyse told Mining News. "Certainly the state has been active in that in the past, and I hope they continue to do so because it really does form good baseline information for exploration geologists to use." ●