



NORTHERN NEIGHBORS

Compiled by Shane Lasley



Agnico hits record gold in 2015

Agnico Eagle Mines Ltd. Feb. 11 reported 1,429,288 ounces of payable gold for 2014, marking the fourth straight year of record gold production from the company's nine mines. Agnico attributes its improved gold production, which is 30 percent greater than the 1.1 million oz in output it reported in 2013, to strong operating results from all of its operations. The company's Meadowbank Mine in central Nunavut produced 452,877 oz of gold in 2014. Gold output at this operation is currently forecast to decline during the next three years. A decision to mine the Vault Pit, however, would change the 2016-2018 production profile for Meadowbank. In the longer term, the Amaruq project, located roughly 50 kilometers (31 miles) northwest of Meadowbank, may be developed as a satellite operation. In 2014, a C\$10 million exploration program at Amaruq included 31,598 meters of drilling (144 holes) and collection of environmental baseline data. As a result, Agnico reported a maiden inferred resource for Amaruq of 6.6 million metric tons grading 7.1 grams per metric tons (1.5 million ounces) gold. Roughly 1.4 million ounces of these ounces are contained in the Whale Tail deposit, where the bulk of the 2014 drilling took place. A 50,000-meter drill program, estimated to cost roughly C\$20 million is expected to begin at Amaruq in March and a resource update is expected in the second half of 2015. Permitting and preliminary engineering for the possible construction of an all-weather exploration road linking Meadowbank to Amaruq is ongoing. At the Meliadine project, also in Nunavut, Agnico is anticipating a capital budget for 2015 of roughly C\$64 million. Of this total, about C\$21 million is allocated toward 2,500 meters of underground development that will allow for cost-effective exploration and conversion drilling aimed at optimizing potential mining plans. In January, the federal government accepted the Nunavut Impact Review Board's recommendation to approve Agnico's plan to develop a mine at Meliadine. The Review Board will now convene all of the regulatory agencies for a final workshop, which is expected to lead to issuance of the project certificate within the next two months. This would enable Agnico to apply for the per-



SEAN BOYD

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PRODUCTION

AK mines top \$3B

Higher zinc prices, Red Dog output offset lower gold values in 2014

By SHANE LASLEY

Mining News

Galvanized by higher zinc prices and strong production at Teck Resources Ltd.'s Red Dog Mine, the value of Alaska's mineral production topped US\$3 billion for the fifth year running.

Larry Freeman, chief of Minerals Resources at the Alaska Division of Geological & Geophysical Surveys, told an audience at the AME BC Mineral Exploration Roundup that production of zinc, lead and silver – all metals produced at Red Dog – climbed in Alaska during 2014. Gold production, on the other hand, fell slightly last year.

During his Jan. 26 presentation at the Vancouver, B.C. gathering, Freeman said his calculations show that the combined value of the four metals is about US\$3.3 billion, and does not include the values of coal, sand and gravel mined in the state. The figure, however, will likely be refined slightly, once all final production results become available.

Similar to Freeman's appraisal, the U.S. Geological Survey estimates that mineral production in Alaska for 2014 totaled more than US\$3.5 billion, slightly higher than US\$3.4 billion in materials mined in the 49th State during the previous year.

This ranks Alaska as the nation's seventh-largest mineral producing state – behind Arizona, Nevada, Minnesota, Texas, Utah and California.

The USGS published its findings in the "Mineral Commodity Summaries 2015", an annual report that is considered to be the first comprehensive source of 2014 mineral production data for the world.

"Decision-makers and policy-makers in the private and public sectors rely on the mineral commodity summaries and other USGS minerals information publications as unbiased sources of information to make business decisions and national policy," noted USGS National Minerals

Moreover, with existing operations continuing to add reserves, along with new mines on the horizon, the US\$3-billion benchmark may prove to be a stepping stone to even greater production for a growing mining sector in Alaska.

Information Center Director Steven Fortier.

Zinc reigns

Zinc has reclaimed its reign as the top commodity mined in Alaska.

Roughly 717,000 short tons of zinc was produced in Alaska during 2014. This accounts for roughly US\$1.4 billion, or 42 percent, of Alaska's metal production value for the year.

Red Dog produced 657,000 tons (596,000 metric tons) of zinc during 2014. This is not only the bulk of zinc produced in Alaska, but accounts for more than 70 percent of the zinc mined in the United States and roughly five percent mined globally.

"Domestic zinc mine production increased by five percent in 2014 from that of 2013, owing to increased production at the Red Dog Mine in Alaska; mill throughput at the mine rose significantly as a result of processing softer ores from the Aqqaluk deposit," according to the USGS commodities report.

This assertion of increased throughput at Red Dog is affirmed by the upper management of Teck Resources, which operates the Northwest Alaska mine.

"Our experience with the Aqqaluk is new within the last three years, and there is more barite in the (deposit). The softer grinding ore is an unexpected upside surprise to us. So, that's what accounts for the additional zinc production from Red Dog this year," Teck Senior Vice President of Zinc Rob

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● MARKETS

In sync for zinc

Analysts: Most metals could see higher prices if factors align

By ROSE RAGSDALE

For Mining News

While many analysts are betting that most metals prices will at least hold their own, those who follow zinc say 2015 could be a breakout year for the gray metal.

China is expected to see lower growth of zinc output due to tightening ore supply worldwide and acceleration of inefficient capacity elimination in China, according to industry watchers.

Zinc demand in China, reflected by high output of galvanized plate/sheet, is strong. Production of galvanized plate/sheet hit a new record high of 4.82 million metric tons in December, thanks to growing consumption in the automobile sector and robust exports. Moreover, exchange inventories have been falling, which also should give a boost to zinc prices.

Analysts note that the market is already in deficit, and that deficit should get bigger following closures of at least two mines this year.

"We believe the lack of funding in zinc mine development and exploration has now caught up with the marketplace, and zinc prices will respond in 2015," observed analyst Mike Bandrowski of Clarus Securities Inc., who also noted that the market is already in deficit, and that deficit should get bigger following closures of two large mines this year.

Analyst Stefan Ioannou of Haywood Securities Inc. agreed.

While copper is off to a rough start in 2015 and other base metals also have shown price weakness, zinc could finish 2015 strong, he told "The Mining Report," recently.

Ioannou predicted that zinc prices will average US\$1.10 per pound in 2015, which is a notable move up from the current price, which is hovering just below US\$1/lb.

"Then in 2016 and 2017, we could see zinc prices really run, as in 2007, when zinc rose to \$2/lb. Any company with zinc in its name or zinc in its business plan stands to do well. Looking further ahead, we anticipate higher pricing will prompt more production, in turn moderating the market. Hence, we continue to use a long-term zinc price of \$1.15/lb.," he said.

For copper, Ioannou envisions prices averaging \$2.50/lb. in 2015, which is in line with current spot pricing. But he added that "there is room for the copper price to go lower."

Copper steadied in mid-February as some investors bet that a floor had been reached after heavy losses. Prices for the red metal stabilized after hitting a five-and-a-half-year low in January.

"Copper is trying to look for a bottom, but there are plenty of things that can go wrong, revolving around Ukraine and Greece, in particular, and in the background the concern about the extent of the slowdown going on in China," Stephen Briggs, metals strategist at BNP Paribas in London, told reporters recently.

Analyst says copper's climb off its lows was not driven by improving fundamentals, but by oil's partial rebound from steep losses and expectations of more Chinese stimulus.

Gains were capped as physical demand in top metals consumer China

was still soft and sentiment bearish ahead of the Chinese New Year. China is the world's top producer and consumer of refined copper.

Divided outlook for gold

What lies ahead for the price of gold depends on who you ask.

Industry analysts remain split over what 2015 will hold for the precious metal and where its price will end up by year's end.

Gold prices topped US\$1,300 per troy ounce in early 2015 for the first time since the third quarter last year, as the euro tumbled to an 11-year low after the European Central Bank's new stimulus plans were revealed.

Jeffrey Nichols, senior economic advisor to Rosland Capital, said 2015 promises to be a good year for gold investors despite an "uncertain" near-term price outlook.

Nichols noted several drivers: U.S. economic performance and monetary policy, stock and bond markets, the insatiable appetite for gold in China, India, and other East Asian markets, and a growing number of central banks buying gold.

Some analysts even predict gold prices roaring to US\$3,648/oz by 2018 and to US\$7,829/oz by 2023, driven by money supply and the monetary base.

BMO Chief Economist Doug Porter, on the other hand, warned that interest rates could move higher sooner rather than later in 2015. Thus, his assumption for the next year is \$1,190/oz, roughly the same as current prices.

Erica Rannestad, senior analyst, precious metals demand, Thomson Reuters GFMS, said gold prices will likely be lower in the first half of the year because of the Federal Reserve's expected move to raise interest rates in June. She called the Fed's actions "the top driver" for gold-price direction, and predicted that gold prices will likely consolidate in 2015 to average US\$1,175/oz, with prices trending higher in the second half of the year.

Will silver follow gold?

Julian Jessop, head of commodities research at Capital Economics, said he expects to see the price of gold rise to US\$1,400 by the end of 2015 and US\$1,470 in 2016, but expects the price of fellow precious metal silver to outperform gold.

Silver is currently trading near all-time lows and has toyed with a rebound for months. While silver prices typically follow in gold's footsteps, silver has fared worse than gold recently. Gold is down 37 percent since it peaked at \$1,900 per ounce in 2011. Silver has shed 67 percent since topping US\$49 per ounce that same year. It was down 12 percent in 2014 alone, compared to gold's 1 percent drop.

A dearth of new supply through 2019, increasing use in industrial activity and narrowing of the silver-to-gold ratio should drive silver's price. After more than three years of a brutal correction and subsequent consolidation, however, some money managers believe silver is set to rise in 2015. They expect the silver spot price to increase by more than 30 percent to US\$22 per ounce in late 2015.

● COLUMN

Miners exude real optimism in Vancouver

Industry looks forward to another turn at bat in 2015, in hopes of rebounding from recent, prolonged slump in prices and capital

By **CURT FREEMAN**
For Mining News

Amid the volatile metals markets that have become the norm in the past year, miners, developers, explorers, prospectors and investors met in Vancouver at the end of January for the annual Cordilleran Roundup mining convention.

The mood was decidedly positive, and having seen a lot of “whistling in the cemetery” at this convention in the past, I know the difference between false bravado and contagious optimism. Perhaps it was the stabilization of copper prices after a nine month down-trend, or the relative stability of gold prices, which many prognosticators saw falling to the sub-\$1,000 per ounce level, or perhaps it was the feeling that was often repeated at the convention: the only way out of a slump is to swing the bat, to do what this industry has done many times in the past, to re-invent itself and rise from the slag heap again. Regardless of the reasons behind the up-beat mood, the excitement in Vancouver was real for the first time in four years. How much of that excitement will result in new acquisitions, new discoveries and new strategies? Only time will tell. But one thing is certain: without that excitement, new acquisitions aren’t made, new discoveries can’t occur and new strategies aren’t

The author

The author Curt Freeman, CPG #6901, is a well-known geologist who lives in Fairbanks. He prepared this column Feb. 16. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his website is www.avalonalaska.com.



CURT FREEMAN

developed.

Northwestern Alaska

TECK RESOURCES LTD. and partner **NANA REGIONAL CORP.** reported fourth quarter and year-end 2014 results from their Red Dog mine. In the fourth quarter the mine produced 155,100 metric tons of zinc in concentrate and for the year, a record 596,000 metric tons of zinc in concentrate. Zinc ore grade for the year was down slightly at 16.7 percent and mill recoveries were up slightly to 84.6 percent. The mine also produced 37,300 metric tons of lead in concentrate during the fourth quarter and 122,500

metric tons of lead in concentrate for the year, both significant increases over the previous year’s output. Lead ore grade for the year increased to 4.3 percent while mill recoveries increased to 78.9 percent, compared with the average grade in 2013. Gross operating profit for the fourth quarter was US\$200 million, compared with US\$94 million in 2013. Gross operating profit for the year was US\$574 million, compared with US\$364 million in 2013. Mill throughput for 2014 was a record 4.3 million metric tons due in part to softer ore, which also contributed to the better recoveries for zinc and lead. During 2014, the mine paid **NANA DEVELOPMENT INC.** and the State of Alaska royalties of US\$215 million versus royalties of US\$125 million in the year-previous period. Sale volumes for both zinc and lead were both 21 percent higher in the fourth quarter compared with a year ago, reflecting the record production levels and a successful shipping season. The mine’s expected production of contained metal in 2015 ranges from 540,000 to 565,000 metric tons of zinc and 90,000 to 95,000 metric tons of lead.

GRAPHITE ONE RESOURCES INC. provided operational guidance for 2015 on its 100 percent owned Graphite Creek project located near Nome. Final results from its 2014 drilling program was expected in mid-February and was to be

incorporated into an updated NI 43-101-compliant mineral resource estimate. The 2014 program increased confidence in the continuity and distribution of the graphite mineralization over one kilometer of the deposit’s 4.8-kilometer-long strike. In November five bulk samples of grades ranging from 2.5-9.4 percent graphite carbon were composited from one half-drill core from hole 12GC005, which is located in the main resource area. These samples include mineralization from the graphite-garnet-sillimanite-biotite schist and from the biotite-graphite schist. The five head samples are being tested by flotation and gravity separation techniques, with the goal of optimizing the process flow sheet for the potential processing facility. Separation of the waste material from the graphite is being designed with the goal of retaining as much of the large graphite flake particles as possible. The results of this work, expected to be completed by the end of the first quarter of 2015, will be incorporated into the company’s preliminary economic analysis, which is anticipated for release in the second quarter.

Western Alaska

NOVAGOLD RESOURCES INC. provided a year-end 2014 progress report on its Donlin gold project, a 50:50 joint

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METALS PRICES

Analysts forecast a modest increase to US\$16.76/oz, with prices expected to trade in a range of US\$13.91 to US\$19.36.

Negative price factors include expected strengthening of the dollar, disinflation and slow growth from China and the Eurozone affecting industrial demand for the metal. But positive factors could lend support to prices, including expected additional global investment in solar power, continued support of silver exchange traded funds (ETFs) and expectations that retail investors may take advantage of attractive prices.

Because the market for silver is smaller and because the metal is mined along with other metals, the commodity’s price has to move by large amounts before supply is changed, Jessop explained. This makes the price of silver traditionally more volatile than that of gold.

“As a result, silver has tended to outperform gold when the prices of both are rising, but to under-perform when both are falling,” Jessop added.

Changing REEs

Sluggish demand downstream is blamed for a recent drag on rare earth prices.

Following a World Trade Organization ruling, China in January said it is abolishing its decade-old export quota system for rare earths.

China produces nearly 90 percent of the world’s REEs and consumes 70 percent of global production, making it the top consumer of the 17 elements used in a variety of hi-tech industries, including renewable energy, medical devices and defense applications.

But even before the lifting of quotas, the country’s rare earth exports started to expand rapidly. Customs data show export volumes grew 27.3 percent in 2014 to 28,000 metric tons due mainly to improving U. S. manufacturing demand, according to a China News Service report.

The average export price of rare earth products, meanwhile, plummeted nearly 48 percent to only 83,000 yuan (\$13,000) per metric ton, marking a third consecutive year of sharp declines.

Japan was the No. 1 buyer receiving nearly 43 percent of outbound shipments,

while the United States ranked second.

Only two mines produce rare earths outside China, MolyCorp’s Mountain Pass mine in California and Lynas’ Mount Weld mine in Australia.

Buyers of rare earth minerals are still refusing to pay a premium for secure rare earth supplies. Buying from the Chinese is still cheaper. As a result, say analysts, MolyCorp and Lynas are struggling.

The best bet for investors looking to profit from rising rare earth demand, said

one analyst, is junior rare earth mining companies such as Ucore Rare Metals, which is focused on developing the Bokan-Dotson Ridge property in Southeast Alaska. Ucore’s project has an estimated timeline to production of three years, about 40 percent of its resource, by weight, in heavy rare earth elements, and the U.S. Department of Defense, under the Defense Logistics Agency, working with the company on the development of its Bokan project. ●

Contact North of 60 Mining News:

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



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Shane Lasley PUBLISHER & NEWS EDITOR
Rose Ragsdale EDITOR-IN-CHIEF (contractor)
Mary Mack CEO & GENERAL MANAGER
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Renee Garbutt CIRCULATION MANAGER
Mapmakers Alaska CARTOGRAPHY

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

NEWS • 907.229.6289
publisher@miningnewsnorth.com

CIRCULATION • 907.522.9469
circulation@petroleumnews.com

ADVERTISING
Susan Crane • 907.770.5592
scrane@petroleumnews.com
Bonnie Yonker • 425.483.9705
byonker@petroleumnews.com

FAX FOR ALL DEPARTMENTS
907.522.9583

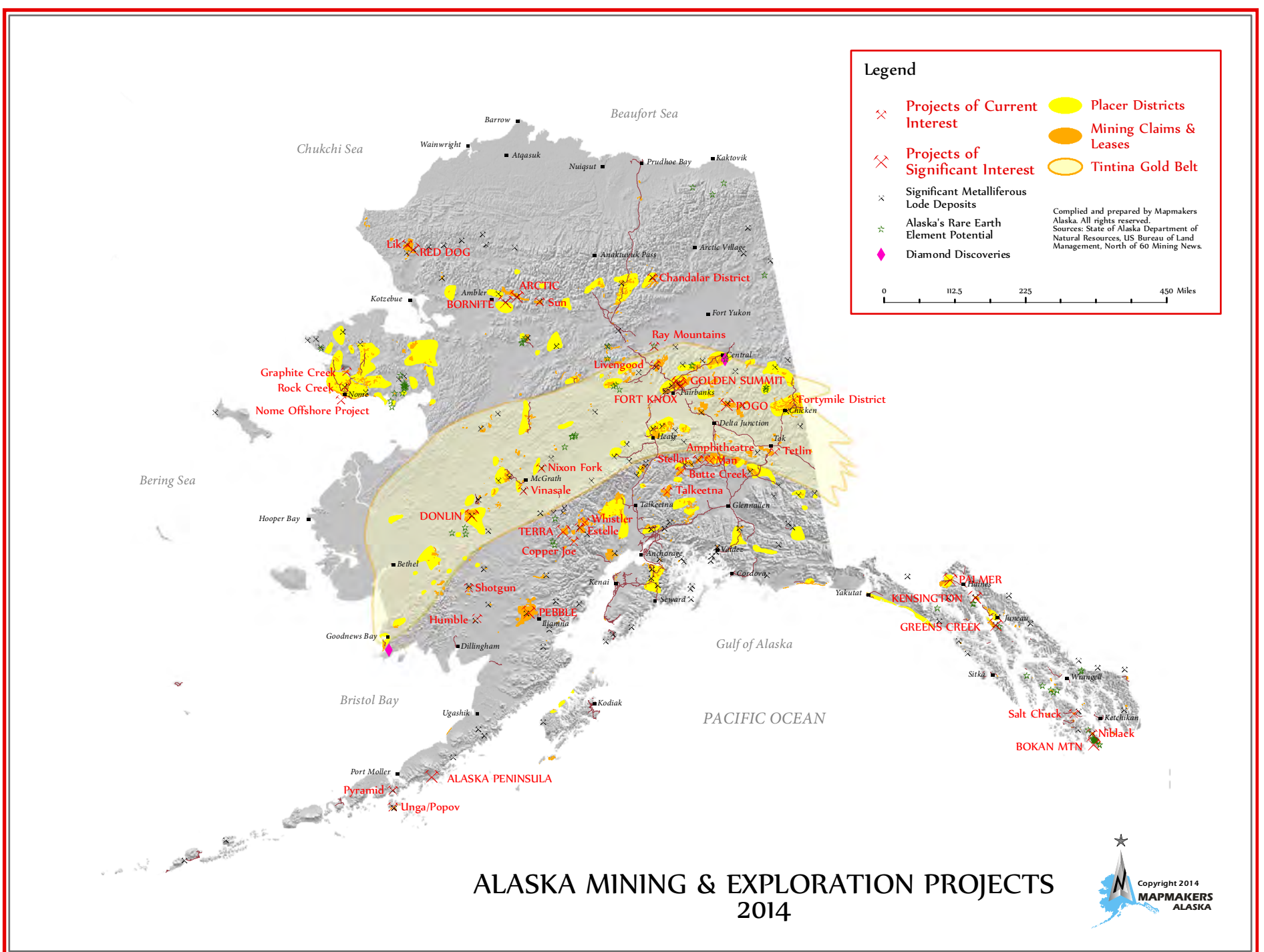
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2014 OUTPUT

Scott informed investors in October.

In addition to increased production, Teck and its fellow zinc producers are enjoying higher prices for the metal.

For 2014, zinc averaged US98 cents per pound, a 12.6 percent increase over the US87 cents per lb. realized during 2013.

While Red Dog dominates Alaska zinc production, Hecla Mining Co.'s Greens Creek Mine in Southeast Alaska produced 59,810 short tons of the grey metal last

year.

Though considered by-products; zinc, lead and gold play important roles in keeping the costs of mining silver at Greens Creek very low.

During the third quarter of 2014, zinc accounted for 34 percent of revenue at Greens Creek, nearly as much as silver at 37 percent. Gold, at 20 percent, and lead, at 9 percent, made up the rest of the revenue for the underground mine.

Gold slips

Though production and prices for gold

decreased in 2014, the precious metal ran a close second in terms of Alaska metals production value.

Freeman told listeners at Roundup that Alaska's mines produced roughly 960,000 ounces of gold in 2014, compared to slightly more than 1 million oz recovered in 2013. The value of the gold recovered in Alaska last year comes to roughly US\$1.22 billion based on an average price of US\$1,266 per oz for the precious metal in 2014. This compares with a production value of US\$1.55 billion in 2013, when both gold production

and prices were higher.

The drop in Alaska gold production largely reflects the 42,000-oz decrease in the precious metal recovered at Kinross Gold Corp.'s Fort Knox Mine near Fairbanks.

During 2014, Fort Knox produced 379,453 oz of the yellow metal, down 10 percent from the record 421,641 oz recovered from the Interior Alaska mine in 2013. Kinross attributes the drop in production and an associated rise in mining costs primarily to higher operating waste and lower gold grades mined last year.

"Fort Knox had a strong year, despite challenges resulting from a wall failure, which occurred (at) the end of 2013. This restricted access to the high-grade portion of the pit, increased operating rates and haulage distances, which impacted costs in the second and third quarters," Kinross Chief Operating Officer Warwick Morley-Jepson explained during a Feb. 11 presentation.

In the coming year, Kinross is looking to invest roughly US\$60 million on a pit expansion that will add years to the Interior Alaska gold mine.

"In 2015, we plan to initiate stripping of the Phase 8 pushback, which is forecast to extend mining through 2018 and beyond," Morley-Jepson added.

At the end of 2014, the Fort Knox area had 2.4 million oz of gold in 163.84 million metric tons of proven and probable reserves grading 0.46 grams per metric ton.

Sumitomo Metal Mining's Pogo Mine, located roughly 60 miles southeast of Fairbanks, contributed another 344,000 oz or so to gold produced in Alaska last year, slightly more than the 337,393 oz recovered from the underground operation in 2013.

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2014 OUTPUT

Alaska's third primary gold producer, Coeur Mining's Kensington operation in Southeast, produced 117,823 ounces of gold in 2014, well above the company's guidance of 107,000-112,000 ounces for the year.

Recent drilling at Kensington has tapped into newly discovered zones of high-grade gold mineralization at Kensington South, just beneath areas currently being mined, and the neighboring Jualin Mine. Both of these areas that have returned drill intercepts of more than 1.0 oz per short ton gold are expected to increase average grades mined at the underground operation in the near future.

Coeur has yet to forecast how much gold it anticipates Kensington to produce in 2015. The Chicago-based miner, however, said it will release a new mine plan soon that is expected to reflect higher-grade, higher-margin production over the life of the Southeast Alaska gold mine.

According to early data compiled by DGG's Freeman, the 300 or so placer mining operations across Alaska collectively produced roughly 75,000 oz of gold in 2014, a slight drop from the 82,591 oz of alluvial gold recovered from these small mines a year earlier.

The 2015 startup of mining at the Chandalar property some 200 miles north

of Fairbanks is expected to contribute significantly to future placer production in Alaska.

Goldrich NyacAU Placer, LLC – a joint venture placer mining company owned equally by Goldrich Mining Company and NyacAU, LLC – is targeting recovery of up to 20,000 oz of gold from a 10.5-million-cubic-yard drill-delineated deposit averaging 0.025 oz/per cubic yard (250,000 oz) gold.

While the partners plan to start mining this year, the placer mine is not expected to achieve full capacity until 2016.

Hecla's Greens Creek Mine contributed another 58,753 oz of gold to the state's tally in 2014.

Long-lived Usibelli

While zinc and gold have vied for top billing in recent years, Alaska's longest lived mining operation is the Usibelli Coal Mine nearly Healy, roughly 100 road miles south of Fairbanks.

Usibelli mined 1.5 million tons of coal during 2014, its 71st year of operation. Roughly 1 million tons of the ultra-low sulfur subbituminous coal in Usibelli deposits were delivered to six power plants in Interior Alaska, while the balance was transported by rail to Seward and shipped to overseas customers in the Pacific Rim.

Though family-owned Usibelli Coal Mines has been delivering a local source of low-cost fuel for power and heat to Alaska

for more than 70 years, the company's properties still host some 700 million tons of coal in reserves, plenty for the operation to continue its tradition well into the future.

Other Alaska coal projects on the horizon are Usibelli's Wishbone Hill and Riverdale Resources' Jonesville projects, both in the historic Matanuska Coal Field about 50 miles north of Anchorage, and Chuitna, a 300-million-ton coal project situated on the west side of Southcentral Alaska's Cook Inlet.

Stepping stone

With Red Dog forecast to produce another 550,000 metric tons of zinc and Alaska's gold miners on pace to test the 1-million-oz milestone again in 2015, the state's mining sector could well top the US\$3 billion for a sixth year running.

Moreover, with existing operations continuing to add reserves, along with new mines on the horizon, the US\$3-billion benchmark may prove to be a stepping stone to even greater production for a growing mining sector in Alaska.

Freeman said the number and quality of mineral resources found across Alaska demonstrates that the Far North State is a maturing frontier mining jurisdiction rich in a diversity of metals.

This vast potential is reflected in the roughly 28 million ounces of gold, 6 billion pounds of copper, and significant deposits of graphite and rare earth elements added

as resources at projects across the state since 2008.

Novagold Resources' Donlin Gold project alone is set to boost Alaska's gold production by more than 1 million ounces per year when it comes on line. Donlin would add roughly US\$1.3 billion to the state's total metal production value at current gold prices. More than halfway through a four-year permitting process, the nearly 40-million-ounce gold deposit could begin production as early as 2021.

As large as Donlin Gold is, it pales in comparison to Northern Dynasty Minerals Ltd.'s embattled Pebble deposit. A preliminary economic assessment completed in 2011 envisions a mine that would produce 690 million pounds of copper, 667,000 ounces of gold, 31,000 pounds of molybdenum, 27,000 kilograms (58,000 pounds) of rhenium and 20,000 pounds of palladium. At this output, the value of the metals mined at Pebble alone would top US\$3 billion annually at today's prices.

The next generation of projects to enter Alaska's permitting process is likely to include polymetallic deposits such as NovaCopper's Arctic deposit in Northwest Alaska, Constantine Resources' Palmer project on the Southeast Panhandle; graphite from Graphite Resources' Graphite Creek deposit near Nome; and rare earth elements from Ucore Rare Metals' Bokan project on Prince of Wales Island. ●

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FREEMAN

venture with **BARRICK GOLD**. Permitting efforts moved beyond the halfway mark in the process with the **U.S. ARMY CORPS OF ENGINEERS** completing the initial draft of the environmental impact statement. The partners also secured key agreements related to the project's surface rights and formed important alliances aimed at protecting Alaska's fish and wildlife. The partnership sustained its strong financial position with about US\$165 million in cash and term deposits, sufficient to advance the project through permitting. The Corps is now considering all the permit comments and is expected to incorporate the relevant changes into the draft EIS, which is on schedule to be published for public comment in 2015, with a final EIS anticipated to be issued in 2016.

The project continues to work simultaneously with other agencies on major permit applications, such as air quality, water discharge and usage, gas pipeline, wetlands, rights-of-way and dam safety. Total expenditures at the project in 2014 were roughly \$27.8 million. Anticipated expenditures for 2015 will be about \$28 million and will focus on advancing the project through the EIS phase toward a construction/production decision and maintaining strong relationships with all stakeholders in the region. The partners also announced release of the first segment of a four-part video series on a way of life in Alaska – Yup'ik Language and Culture. The films tell a story about the people of the Yukon-Kuskokwim region where the Donlin gold deposit is located, their heritage and subsistence way-of-life, as well as the challenges they face living in a remote community. The first video is now available at www.novagold.com/info. The three subsequent parts of the Alaska Video Series will be released sequentially throughout 2015.

‘ announced an update on its 2014 exploration program on the Unga Island gold project near Sand Point. The com-

pany completed surface sampling programs testing two prospective areas along the Shumigan Trend, both known to host previously-documented mineralization: the Shumigan and Aquila prospects. At the Shumigan Prospect, a soil sample grid of about 750 meters by 200 meters revealed a gold and silver geochemical soil signature of 20-50 parts-per-billion gold (up to 615 ppb gold) and greater than 0.5 grams per metric ton silver (up to 6.8 g/t silver) that has been defined over areas of historical trenching as well as extending an additional 400 meters to the southwest. Rock chip sampling produced results of up to 9.93 g/t gold and 74.4 g/t silver from quartz vein breccias and stockwork that occur in surface outcrops. At the Aquila Prospect, at the far western end of the Shumigan Trend, a series of

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NORTHERN NEIGHBORS

mits needed to begin mine construction at Meliadine. At the end of 2014, Meliadine has 3.34 million oz of gold in proven and probable reserves averaging 7.4 g/t gold. “Given the strong potential to expand the initial 1.5 million-ounce resource at Amaruq, and the recent positive permitting news at Meliadine, we expect to unlock additional value from our Nunavut platform in 2015,” said Agnico Eagle President and CEO Sean Boyd.

Goldstrike raises \$1M for 2015

Goldstrike Resources Ltd. Feb. 17

reported the closing of a C\$1 million non-brokered private placement. The net proceeds from the financing will be used to fund 2015 exploration program at the company's Yukon mineral properties, including follow-up drilling at the Plateau gold project, and for general working capital. On closing, Goldstrike issued 14.92 million non-flow-through units and 5.08 million flow-through units, all of which were priced at C5 cents. Each non-flow-through unit includes one common share and one warrant exercisable to purchase one additional share at C6 cents for five years. Each flow-through unit includes one flow-through share and one-half of a warrant exercisable to purchase one additional non-flow-through share at C10 cents for two years. ●



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The Red Dog mine in northwest Alaska.

Mining Companies

Kinross Fort Knox/Fairbanks Gold Mining Inc.

Fairbanks, AK 99707

Contact: Anna Atchison, Manager,
Community and Government Relations
Phone: (907) 490-2218 Fax: (907) 490-2290
E-mail: anna.atchison@kinross.com
Website: www.kinross.com

Located 25 miles northeast of Fairbanks, Fort Knox is Alaska's largest producing gold mine; during 2011, Fort Knox achieved 5 million ounces of gold produced, a modern record in Alaska mining.

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Contact: Bill Brophy, VP Customer Relations
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Email: info@usibelli.com
Website: www.usibelli.com

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 Richard.Hansen@gci.com
 Mark Johnson, Business Development Manager
 Mark.Johnson@gci.com

Deadhorse:

Aurora Hotel #205
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 Phone: (907) 771-1090
 Mike Stanford, Senior Manager North Slope
 Mike.Stanford@gci.com

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continued from page 13

FREEMAN

reconnaissance soil lines placed within upland areas covering strong argillic alteration zones produced scattered results of about 50 ppb gold (up to 197 ppb gold) and 0.5-1.3 g/t silver (up to 3.51 g/t silver). A single select rock sample of a narrow breccia vein sampled within an intense argillic alteration zone produced results of 90.2 g/t silver. The company's efforts have revealed the possible presence of a phreatomagmatic (hydrothermal-magmatic) breccia system interpreted to be intimately associated with a nearby dacitic, hypabyssal dome mapped along Bloomer Ridge. At depth, hanging wall quartz-feldspar-biotite phyrlic dacite gradually changes into a 5- to 40-meter wide zone of steeply-dipping, multiphase breccia bodies that are localized along the Shumigan Scarp. The Shumigan Scarp is interpreted as a pre-existing structure that facilitated emplacement of the breccias. The breccias contain a variety of lithic fragments consisting of primary igneous rock, fragments of silicified country-rock, phyllic-altered country rock, older breccia bodies, and a variety of hydrothermal vein types. Matrix material to the breccia phases vary from hydrothermal to intrusive, but most matrix phases exhibit euhedral biotite and fine grained black-gray hydrothermal quartz ± adularia. A protracted multi-phase, anastomosing and bifurcating, precious metal-bearing quartz ± rhodochrosite + adularia hydrothermal system is part of, and is superimposed upon the breccia phases. Variable levels of intensity within the hydrothermal system either intensely replaced and/or re-brecciated the phreatomagmatic breccias by open space veins, vein breccias and stockwork zones exhibiting crustiform, cockade and banded textures. At depths of between 30 meters to 105 meters below sea level, the hydrothermal system (as well as the breccia bodies) widens and bifurcates and exhibits an increase in stockwork veining within the hanging wall to the breccia system. Above this level, the hydrothermal system narrows and has been telescoped up section along the footwall and along specific breccia phases. Sulfide minerals are not common; however, when present they occur as very fine-grained pyrite, sphalerite, galena, visible gold and blue-grey metallic sulfides locally within crustiform layers or in stockwork and crackle breccia systems. Pervasive phyllic alteration (quartz-sericite-pyrite), zones of variable silicification, quartz-adularia-carbonate stockworks and patchy disseminated pyrite occurs throughout the breccia and outbound into the hanging wall overprinting epiclastic sediments and dacite. These results are helping the company to plan a core drilling program on the project in 2015.

Interior Alaska

KINROSS GOLD CORP. reported fourth-quarter and year-end 2014 results from its Fort Knox mine. The mine produced 379,453 ounces of gold at a cost of US\$712 per oz versus 421,641 oz gold produced at a cost of US\$561/oz in 2013. During the fourth quarter of 2014, the mill processed 3.261 million metric tons of ore grading 0.86 g/t gold. Mill recoveries were 84 percent for the quarter. During the fourth quarter, the mine placed 8.782 million metric tons of ore grading 0.30 g/t gold on the valley leach facility. The higher year-on-year costs were due to sequencing into parts of the deposit with more operating waste and lower grades during the first three quarters of the year. The mine also announced year-end revised resources, including a decrease of 460,000 ounces of mineral resources due primarily to depletion. Proven and probable reserves at the mine were 163.844 million metric tons grading 0.46 g/t gold (2.398 million oz). Measured and indicated resources at the mine were 105.453 million metric tons grading 0.43 grams of g/t gold (1.446 million oz). Inferred mineral resources were 13.5 million metric tons grading 0.44 g/t gold (189,000 oz).

Alaska Range

WESTMOUNTAIN GOLD INC. released preliminary pilot production numbers for the 2014 season at its Terra project in the western Alaska Range. The company processed about 500 short tons of ore from the Fish and Ben Veins in the pilot mill. The processing produced roughly 2,250 oz gold doré equating to about 1,350 oz gold bullion for the season. The 2014 production was a 500 percent increase in production from the previous year. Based on the preliminary numbers, an estimated 2.1 oz/t gold was recovered from the Ben

“Regardless of the reasons behind the up-beat mood, the excitement in Vancouver was real for the first time in four years.”

—Curt Freeman, columnist

Vein. The gold doré processed resulted in an average content of about 60.5 percent gold and 24.5 percent silver and 15 percent other metals. With mill improvements and adjustments to the pilot processing method toward the end of the 2014 season, the gold concentration in the doré increased to 65-70 percent gold content. The company is planning additional bulk sampling in the 2015 field program.

Northern Alaska

NOVACOPPER INC. provided a 2014 year-end update on its Bornite and Arctic deposits at its Upper Kobuk Mineral project in the Ambler District. At Bornite, the company completed a re-logging program of about 13,000 meters in 37 historical drill holes from Bornite previously drilled by **KENNECOTT COPPER CO.** Targeted historical holes were located within the near-surface Ruby Creek zone of the Bornite deposit. Of the 37 holes sampled, five holes had intervals of copper grading more than 0.5 percent copper, and 21 holes contained mineralization grading more the 0.2 percent copper demonstrating continued success from a similar effort in 2013. Environmental baseline data collection continued in 2014 and annual maintenance of the stream gauges and the meteorological station on the property were performed. Water quality sampling continued marking 7 years of continuous environmental baseline data collection. The company also held 37 meetings in the **NANA INC.**, region during 2014 bringing the cumulative in-region meetings to about 140. During 2014, the company focused considerable effort on supporting the **ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY** with its activities towards advancing the Ambler Mining District Industrial Access Road, which is anticipated to provide access to the mineral district. AIDEA continued to collect community input at meetings held through the winter of 2013/2014 in various local villages. In late April 2014, AIDEA's board of directors approved a resolution authorizing AIDEA to proceed with an application for the Ambler road to the federal agencies that have jurisdiction over the AMDIAR project and to engage a firm to prepare the environmental impact statement for the project under the direction of the federal agencies. Environmental baseline studies were conducted during the summer field season in preparation for the submission of the environmental impact statement. The **ARMY CORPS OF ENGINEERS** selected a third-party environmental engineer to manage the environmental impact statement process on behalf of the Corps. During 2014 the company spent US\$2.5 million on the Upper Kobuk Mineral Project for cumulative project expenditures of US\$53.8 million. The company plans to shift its focus in 2015 to the Arctic massive sulfide deposit, where it plans to advance the project to feasibility with a total investment of roughly US\$20 million. Subject to obtaining financing, NovaCopper hopes to invest about \$8 million to \$10 million during the 2015 field season, mainly for drilling the Arctic in-pit resource from inferred to measured and indicated confidence levels to support the classification of resources and collect Arctic in-pit geotechnical and metallurgical data. Funds also will pay for environmental and engineering studies to gather information in preparation for a feasibility study. At the same time, sufficient work will be completed to assess the viability of a mining operation at Bornite, specifically with evaluating potential synergies between Bornite and Arctic.

Southeast Alaska

HECLA MINING CO. reported 2014 exploration and year-end resource estimates for its Greens Creek mine on Admiralty Island. On the exploration front, mine definition drilling during 2014 replaced or added reserves at the NWW and Deep 200 South, while definition and exploration drilling made progress in refining the NWW and West Wall resources, extending the Deep 200 South trend and defining a potential resource at the Gallagher Fault Block area. Drilling of the Deep 200 South has defined three stacked folds of high-grade mineralization that represent up to 600 feet of down-dip continuity. The 200 South and Deep 200 South zones currently represent a mineralization trend that extends over 3,000 feet along strike and over 1,000 feet of dip. Recent drill intersections of the Deep 200 South, which

remains open to the south, include 49.8 oz/ton silver, 0.08 oz/t gold, 3.4 percent zinc and 1.6 percent lead over 11.1 feet and 30.5 oz/t silver, 0.05 oz/t gold, 15.5 percent zinc and 8.0 percent lead over 13.9 feet. Definition drilling tested the lower limits of both folds of the NWW Zone and confirmed the fold limbs below the current resource. Recent drilling of the NWW Zone includes 21.0 oz/t silver, 0.34 oz/t gold, 30.3 percent zinc and 8.4 percent lead over 14.9 feet and 25.8 oz/t silver, no gold, 1.9 percent zinc and 1.0 percent lead over 8.0 feet. Drill intercepts of the West Wall Zone suggest thicker and more consistent mineralization than currently modeled, and intercepts, including 29.9 oz/t silver, 0.23 oz/t gold, 19.7 percent zinc and 6.7 percent lead over 11.0 feet are 400 feet further down dip than the previous resource model. For 2015 an underground drilling program is anticipated for three drills to be active all year. Definition drilling is budgeted at \$5.8 million and includes 126,700 feet that concentrate on the Lower NWW, Deep 200 South, East Ore, Deep Southwest and 9a zones and will consist mainly of in-fill drilling in order to develop mine plans in all of these areas. Exploration drilling includes 46,000 feet of drilling and budgeted at US\$2.4 million in order to test for mineralization: along the Deep 200 South, 5250 and 9a zones trends, down-plunge of the Central West and East ore zones, and along the Southwest Bench upper contact and Gallagher Fault Block area. A planned 10,000-foot surface drilling program should continue to evaluate a broadly defined, mineralized stockwork veins and horizons at Killer Creek which is about a mile west-northwest of the mine. This surface program is also expected to assess the High Sore target which has surface base metal mineralization and is less than a mile southeast of the mine. The company also reported year-end 2014 reserves and resources for the mine, including proven and probable reserves of 7.796 million tons grading 12.2 oz/t silver, 0.10 oz/t gold, 3.1 percent lead and 8.3 percent zinc. In addition, the mine contains measured and indicated resources of 823,000 tons of indicated resources grading 11.0 oz/t silver, 0.12 oz/t gold, 3.5 percent lead and 8.0 percent zinc. The mine also reported inferred resources of 3.452 million tons grading 13.6 oz/t silver, 0.09 oz/t gold, 2.8 percent lead and 6.6 percent zinc. I know we are not supposed to do this, but if you add up the silver in all resource categories, the mine is carrying almost 150 million ounces of silver in resource!

CONSTANTINE METAL RESOURCES LTD. reported final drill results from its Palmer volcanogenic massive sulfide deposit and that it had received a US\$250,000 option payment joint venture partner from **DOWA METALS & MINING CO., LTD.**, bringing the total option payments received from Dowa to date to US\$1 million. Dowa has indicated its participation in year three of its earn-in, having spent about US\$10 million to date. New results include three massive sulfide intersections; two from the new South Wall EM target discovery and a third located one kilometer to the northwest at the RW Zone. South Wall massive sulfide (EM plate target) was intersected in drill holes CMR14-64 (4.1 meters grading 0.55 percent copper, 4.98 percent zinc, 21.1 g/t silver, 0.16 g/t gold) and CMR14-66 (11.3 meters grading 0.30 percent copper, 3.95 percent zinc, 27.2 g/t silver, 0.23 g/t gold; including 1.5 meters grading 0.21 percent copper, 7.01 percent zinc, 128.4 g/t silver, 0.87 g/t gold) along the western, up-dip edge of the EM plate target. These large step-outs, which are in the zinc-barite rich part of the massive sulfide lens, are located 215 meters and 140 meters, respectively, west of copper rich CMR14-54 (22.1 meters grading 2.48 percent copper and 4.05 percent zinc). The widest and highest grade intersections are on the edge of the area drilled and are entirely open to expansion. RW Zone drilling intersected massive sulfide mineralization in hole CMR14-67 (3.9 meters grading 0.19 percent copper, 5.11 percent zinc, 92.5 g/t silver, 0.37 g/t gold, within a broader 15.3 meter zone of 0.13 percent copper, 3.12 percent zinc, 30.7 g/t silver, 0.14 g/t gold). The step-out intersection is located 220 meter northwest of the RW Zone resource (Figure 3), and 125 meters down-dip of a surface occurrence where past chip sampling includes 4.6 meters grading 7.0 percent copper, 13.0 percent zinc, 219 g/t silver and 0.63 g/t gold. The new intersection substantially expands the RW Zone footprint, and extends the total unfolded length of continuous RW-South Wall mineralization to more than 1,500 meters. Dowa has notified Constantine of their expenditure commitment for this year's program, with budget and program scope to be finalized early in 2015.●