



NEWS NUGGETS

Compiled by Shane Lasley

Cohen to review EPA fairness in AK

Former U.S. Defense Secretary William S. Cohen March 24 said he and his firm, The Cohen Group, assisted by law firm DLA Piper, will conduct an independent review of whether the U.S. Environmental Protection Agency acted fairly in connection with its evaluation of potential mining in the Bristol Bay watershed in Southwest Alaska. "An investigation being conducted by the EPA's Office of Inspector General; inquiries and hearings into EPA actions by the House Committee on Oversight and Government Reform; and, more recently, an inquiry by the Senate Environment and Public Works Committee, as well as documents produced in response to Freedom of Information Act requests, have each raised questions as to whether the EPA proceeded fairly in its activities surrounding potential mining in the Bristol Bay watershed," said Cohen. The former secretary of defense has been retained by the Pebble Limited Partnership, owner of the Pebble copper-gold-molybdenum project located on state of Alaska mining claims in this area. Secretary Cohen said he will evaluate the fairness of EPA's actions and decisions in this matter based upon a thorough assessment of the facts and informed by his experience as secretary of defense as well as his 24 years as a member of the U.S. House of Representatives and Senate. "Our review will focus on the fairness of the EPA's actions. We are not evaluating and will not express an opinion as to whether the Pebble Limited Partnership ultimately should be granted permission to mine the Pebble deposit. And, as was well documented during my years in public service, I have been a strong supporter of the EPA's mandate to protect the environment and keep our nation's waterways safe for human health as well as fish and wildlife," Cohen explained. He said he has taken steps to ensure the review is thorough and unbiased. "A condition of accepting this assignment is that I have complete independence and discretion as to how this work will be conducted. I will follow the evidence wherever it might lead, and I will conduct this independent review as fairly and thoroughly as possible.

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EXPLORATION

Fighting headwinds

Alaska mineral explorers work to retain their footing on slippery slope

By SHANE LASLEY

Mining News

Slipping metals prices and investors' ongoing reluctance to risk venture capital in the junior mining sector is hitting Alaska's mineral exploration sector hard; and the Far North state is not the only mining jurisdiction reeling from this one-two punch.

"After another year of strong headwinds in 2014, and with lower demand and overproduction continuing to depress metals prices, the mining industry's outlook for 2015 is unpromising at best," SNL Metals & Mining wrote recently in "World Exploration Trends," its annual report.

According to the research firm's estimates, global mineral exploration spending during 2014 totaled US\$10.7 billion, about half of the US\$20.5 billion in comparable expenditures tallied just two years earlier, and SNL does not foresee the sector recovering any time soon.

"Most metals prices are expected to fall further in 2015, albeit perhaps not by as much as over the past two years. As a result, SNL does not expect a rebound in the industry's total exploration budgets in the near-to-medium term," the research firm predicts.

Magnified by the Donlin Gold project transitioning from permitting to development and the lack of funding at the contentious Pebble project, the drop in Alaska's mineral exploration sector has been steeper than the global average. Since reaching an apex of US\$365 million in 2011, exploration spending in the state fell to US\$175 million by 2013 and last year tumbled another 47 percent to



MILLROCK RESOURCES INC.

A First Quantum Minerals geologist pauses alongside a copper-stained outcrop during an initial US\$600,000 exploration program completed at Millrock Resources Inc.'s Alaska Peninsula project in 2014. This year, First Quantum and Millrock plan to complete roughly 2,400 meters of drilling at three of the most advanced prospects on the project.

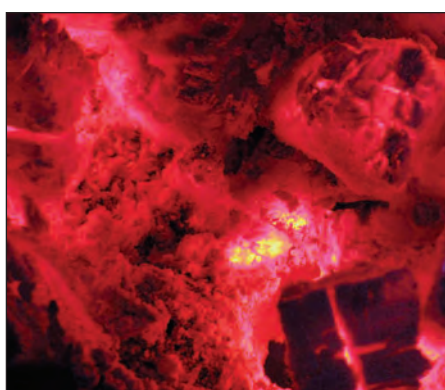
about US\$92 million.

Though money still needs to be raised, exploration plans ironed out and budgets finalized, Alaska's mineral exploration sector is attempting to hold its footing in 2015 on the slippery downward slope of world exploration trends.

Major exploration

The owners of Alaska's five large mines accounted for nearly half the exploration spending

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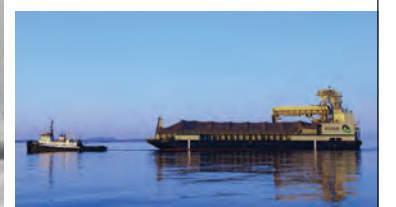
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• PRODUCTION

Chandalar remains on pace for 2015 start

At a projected 30,000 ounces a year by 2017, this northern operation is set to move the dial of placer gold production in Alaska

By SHANE LASLEY

Mining News

The Chandalar Mine in Alaska's Arctic is on track to begin commercial production this summer, a milestone that is expected to significantly move the dial of placer gold production in Alaska.

Goldrich Mining Co., which owns 50 percent of a venture to mine gold in the Chandalar district, provided a forecast of anticipated gold recoveries from the mine over the next five years that includes 16,500 ounces of the precious metal this summer.

Considering that the 300 or so placer mining operations across the 49th state collectively produced roughly 75,000 oz of gold in 2014, this mine will be a significant contributor to Alaska's alluvial aurum production in 2015 and the operation is slated for upgrades that will nearly double its output in the coming years.

Gold-rich deposit

Located on the southern slopes of the Brooks Range roughly 200 miles north of Fairbanks, the Chandalar property has long been known to host rich gold deposits. Since 1906, sporadic mining operations in the district have recovered roughly 85,000 oz of gold from placer and high-grade lode deposits.

Most of the placer mining in the district was carried out in areas where frozen overburden and gravels provided stability for underground mining.

In 2007, Goldrich set out to quantify the placer deposit for commercial production. An exploration program that included 107 holes of drilling outlined 10.5 million cubic yards of pay gravels in Little Squaw Creek averaging 0.025 oz/per cubic yard (258,000 oz) gold.

This US\$300 million placer deposit, at US\$1,160 per ounce gold, is divided into two distinctive zones. A narrow canyon section of upper Little Squaw Creek contains nearly 3.2 million cubic yards of material averaging more than 0.025 oz of gold per yard, or roughly 87,600 oz of gold. Where the creek valley widens into a fluvial fan lies another 7.3 million yards of pay material averaging about 0.024 oz of gold per yard, or about 170,750 oz of the precious metal.

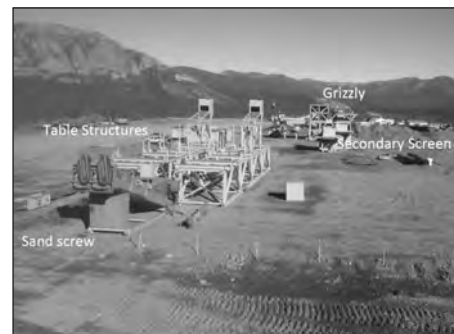
Aside from being slightly higher grade, the canyon section has the advantages of not being permanently frozen and having less overburden material to strip off of a thick pay-streak.

The pay-zone in the canyon averages about 86.7 feet (26.4 meters) thick and lie under about 41 feet (12.5 meters) of overburden.

Following up on the deposit outlined by drilling, the company opened up a small pit at the mouth of the canyon for test mining in 2009. This trial run produced a total of 593.5 oz of gold.

The narrow canyon area provided little room to establish the size of ponds needed to settle sediments out of the production water before being used again, which was a limiting factor for the trial run.

Water circulated back to the production plant caused the spray jets to plug and increased the density of the water, decreas-



The placer gold recovery plant at Chandalar is expected to process 600 cubic yards of gravel per hour, which will be realized as gravel screens and gold recovery tables are added in stages through 2016.

ing the effectiveness of the gravity plant's recovery.

A second run in 2010 produced another 1,522 oz of gold and 259 oz of silver.

Enter Nyac

To further the development of Chandalar placers, Goldrich forged a partnership with NyacAU LLC in 2012. The resulting company, Goldrich NyacAu Placer LLC, is a 50-50 joint-venture to operate the Chandalar placer mines, with NyacAU acting as managing partner.

The agreement covers production from all placers on Goldrich's 22,850-acre Chandalar property including: Little Squaw Creek, Big Squaw Creek, Big Creek and Tobin Creek. The partnership also covers placer production from future properties within two miles of the Chandalar property or any creeks draining the claim block.

A private mining company owned by Anchorage-based physician and fourth generation Alaskan Dr. J. Michael James, Nyac offers the partnership more than two decades of placer mining experience and the financial wherewithal to potentially develop the largest placer gold operation in the United States.

In 2013, the U.S. Bureau of land management awarded Nyac Mining Co., a placer mining venture also owned by James, the "BLM Hardrock Mineral Small Operator Award" for the high standards it executes at its placer mine in Southwest Alaska.

BLM said the systematic approach Nyac takes to mining and reclamation is more typical of much larger companies.

"The sustainable manner in which Nyac operates helps it shine amongst its peers," said the land management bureau. "The company has perfected a reclamation process that ensures soils are stabilized and re-vegetation takes place as early as possible. Nyac employs a holistic water management and reclamation system that recycles its process water and recovers fine sediment for use in reclamation. The system ensures no unsettled waters leave the mine site, and results in high-quality reclamation of disturbed lands."

It was this attention to detail that prompted Goldrich to choose this Alaska-based company as a placer mining partner.

"After spending almost a year interviewing and evaluating various major placer miners, we believe the managers of NyacAU are the partners of choice for their production ability, attention to the environment, and sincere concern for community

• COLUMN

Exploration expenditures drop in 2014

Combined double whammy of decreasing commodity prices and lackluster investor confidence has forced further reductions in 2015

By **CURT FREEMAN**
For Mining News

The state of the world's exploration industry was recently summarized in SNL Metal & Mining's annual "World Exploration Trends" publication, released at the Prospectors and Developers Association of Canada convention in Toronto. Not surprisingly, it painted a grim picture of 2014, a year we are all glad to have behind us.

The statistics indicate that worldwide exploration expenditures declined a further 26 percent to \$11.4 billion, compared with \$15.2 billion in 2013 and record expenditures of \$21.5 billion in 2012. The combined double whammy of decreasing commodity prices and lackluster investor confidence that continued into 2015 forced further reductions in exploration budgets worldwide. The decline in Alaska's exploration spending was nearly identical in scale to that of the worldwide scene. As in years past, Latin America was the dominant exploration destination of choice, pulling in 27 percent of the exploration funds spent around the globe. Africa was a distant second at 16 percent, followed by Canada at 14 percent, Eurasia at 13 percent and Australia at 12 percent. Exploration in the United States amounted to only 6 percent of the global spend, with three states, Nevada, Arizona and Alaska accounting for 71 percent of the country's spending in the sector. As a result of this dessication of exploration budgets, the number of new discoveries and the volume and value of new resources announced have declined steadily in the past three years. For example, only 50 new resource estimates were released in 2014, compared with 68 in 2013 and 168 in 2012, and the value of these resources totaled \$130.6 billion, \$87.1 billion and \$366.5 billion for 2014, 2013 and 2012, respectively. SNL's forecast for 2015 was not encouraging: more of the same. But gloom and doom does not appear to be the only items on Alaska's plate for 2015. Compared to this point in 2014, significantly more and larger exploration budgets have been approved and more exploration programs are moving forward when compared to 2014. Like the sound of that!

Western Alaska

GRAPHITE ONE RESOURCES INC. reported final 2014 drill results and a new resource estimate for its 100 percent-owned Graphite Creek project located near Nome. The results of the final 10 diamond core holes from 2014 include 42.81 meters of 6.27 percent graphite carbon, including 6.78 meters of 9.14 percent graphite carbon and 9.86 meters of 12.46 percent graphite carbon in hole 14GCH102, 24.56 meters of 6.76 percent graphite carbon including 18.31 meters of 8.11 percent graphite carbon in hole 14GCH120 and 38.80 meters of 7.80 percent graphite carbon, including 17.92 meters of 13.37 percent graphite carbon in hole 14GCH016. All 10 holes intercepted significant widths of near-surface graphite mineralization along 700 meters strike and drilling continued to show good continuity along strike and down dip. The company also updated its resources at the project which now

The author

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include indicated mineral resource of 17.95 million metric tons at 6.3 percent graphite carbon and an inferred resource of 154.36 million metric tons of 5.7 percent graphite carbon, both at 3 percent cutoff grade. This resource is 14 percent higher grade than the previously announced resource and makes the Graphite Creek deposit the largest published graphite resource in the United States. Geological interpretation and estimation utilized 48 drill holes, totaling 7,494.35 meters of drilling and constrain the resources to a block measuring 730 meters long strike, 185 meters across strike and 200 meters below surface. The deposit remains open along strike in both the east and west directions, as well as down dip. The company will utilize this mineral resource estimate to prepare an initial preliminary economic assessment for the project, expected to be released in the second quarter of 2015.

Interior Alaska

Alaska newcomers **NORTHERN EMPIRE RESOURCES CORP.** and **SONORO METALS CORP.** said they had signed an option agreement on the Hilltop prospect on the western end of Empire's Richardson gold project southeast of Fairbanks. Under terms of the agreement, Sonoro can earn a 60 percent interest in the 31,720-acre Hilltop project by spending C\$3 million on exploration activities and issuing to Northern Empire 1 million Sonoro shares prior to Dec. 31, 2019. Immediate plans for the project were not released. Welcome to Alaska Northern Empire Resources Corp. and Sonoro Metals Corp.!

Alaska Range

STRONGBOW EXPLORATION INC. said it has entered into an agreement to acquire all the outstanding shares of **THOR GOLD ALASKA, INC.** and, thereby, a 100 percent interest in each of the Sleitat and Coal Creek tin properties. Under terms of the deal, Strongbow will acquire Thor in exchange for a total of 6,500,000 common shares of Strongbow and a 2 percent NSR royalty on the properties. The Sleitat property consists of 1,425 hectares of State mining claims located about 137 kilometers northeast of Dillingham. Past evaluation of the property was conducted by **COMINCO AMERICA INC.** in the mid-1980s and **SOLOMON RESOURCES** in the mid-2000s. Exploration work has consisted of mapping, sampling, geophysical surveys, 4,680 feet of drilling (14 holes) and initial metallurgical studies. In 1989,

The United States Bureau of Mines estimated the Sleitat prospect to contain an "inferred resource" of 25.9 million metric tons at an average grade of 0.224 percent to 0.37 percent tin. The Coal Creek property consists of 971 hectares of state claims in the Chulitna District north of Anchorage. Past evaluation of the Coal Creek property was conducted by **HOUSTON OIL AND MINERALS** in the early 1980s and **BRETT RESOURCES** in the late 2000s. Exploration work consisted of mapping, sampling, geophysical surveys, 19,520 feet of drilling (46 holes) and initial metallurgical studies. In 1982, Houston Oil and Minerals estimated a "preliminary geologic resource" of 4.77 million metric tons grading 0.27 percent tin.

MIRANDA GOLD CORP. provided an update on its activities in the Willow Creek project near Anchorage. Project operator **GOLD TORRENT** plans to move the Coleman deposit to the production stage in 24 to 30 months. Initial production estimates are for 21,000 ounces of gold annually from the mining and milling of 150 tons per day. The company anticipates achieving +80 percent gold recovery through use of gravity tables and spiral concentrators, thereby avoiding the use of chemicals to expedite permitting. The partners hope to complete an update mineral resource estimate and utilize it to complete a preliminary feasibility study by mid-2015. In addition, the companies are conducting mine planning, mill scoping and permit planning exercises. No drilling is planned for 2015 however the companies are modeling the old underground workings, drill holes and underground samples to provide targets for 2016. Both companies agree that with the rehabilitation of the Enserch tunnel, targets can be best drilled from underground drill stations.

MILLROCK RESOURCES INC.

announced that it has entered a collaboration agreement with a major gold mining company to explore for high-grade gold deposits in Alaska. Under the terms of the agreement the major will fund research and reconnaissance exploration efforts designed to focus on specific target areas in Alaska which the major and Millrock consider have the potential for high-grade gold deposits. Projects approved by the technical committee will each be subject to separate farm-in and joint venture agreements. Such agreements will provide for the major to acquire up to 80 percent of each project, after meeting minimum expenditure obligations, payments and certain other conditions.

Alaska's only operating coal mine, **USIBELLI COAL MINE**, recently released updated economic impact numbers for its Healy mine operations. The privately-owned mine, in its 72nd consecutive year of operations, employs 140 full-time direct employees and creates 278 indirect jobs, along with 222 downstream coal-fired power plant jobs. It pays \$14.7 million in direct wages and is responsible for \$48.7 million in combined direct, indirect and downstream wages. An impressive 100 percent of its employees are Alaska residents! The operation pays \$3 million per year in state rents and royalties, contributes \$618,000 per year to the Alaska Permanent Fund, and pays \$130,000 per year to seven local and borough governments. Its operations provide coal to six coal-fired power plants and its rail shipments generate about 20 percent of the Alaska Railroad's freight revenue. The mine produces about 2 million tons per year of low-sulfur, low-ash, low-mercury coal, with about half of this production consumed in Alaska and the other half exported through the Seward export

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FREEMAN

facility.

PACRIM COAL recently presented an update on its Chuitna coal project in south central Alaska. The project is looking to recover an estimated 300 million tons of sub-bituminous ultra-low-sulfur, low-ash, low-mercury coal. The market for this coal is the Pacific Rim where it will be used to blend with other sources of coal to improve air quality and combustion aspects. The project, located on the state's Mental Health Trust land, is expected to provide up to 500 direct jobs during construction, up to 350 direct, full-time, year-round jobs during a 25-year operating life of the mine and up to an estimated 1,200 indirect jobs. Production is expected to average 12 million metric tons per year from a surface mining operation linked to a loading port on Cook Inlet by an innovative, low-impact overland conveyor system. This new design will result in a reduction of affected wetlands from 103 acres down to 29 acres, a 72 percent reduction. One of the most impressive segments of

the presentation is related to a wetland survey recently undertaken by the company. The professional wetlands survey team identified a pond within the project footprint as a high-priority wetland area, not realizing that the pond and nearby environment was a reclaimed coal test pit from a 1980s testing program. The project is currently in the advanced permitting stages.

Northern Alaska

GOLDRICH MINING CO. announced that its 50 percent-owned subsidiary, **GOLDRICH NYACAU PLACER LLC**, will commence mining this month at the Chandalar gold project. The company also released estimated production guidance information through 2018. Goldrich NyacAU will begin removing overburden this month and plans to transport seven additional 40-ton rock trucks to the mine in the next few weeks with mining of pay gravel expected in May. The company has completed about 15,000 feet of drilling to date on the upper half of the Little Squaw Creek placer deposit and outlined 10.5 million cubic yards of mineralized material, at an average head grade of 0.025 ounces

of gold per cubic yard for an estimated total of roughly 250,000 contained ounces. The company also released projected gold production and cost information for 2015 through 2018. Estimated per-ounce production costs using a flat \$1,200 per ounce gold price were \$713, \$623, \$489, \$451 and \$450 for annual production of 16,500, 23,100, 30,200, 32,000 and 32,000 ounces, respectively. Expected annual before-tax profits range from \$12.9 million to \$33.5 million, and, as is the case with every gold mine, operating profits are highly sensitive to the price of gold.

Southeast Alaska

HECLA MINING CO. reported year-end 2014 operating results for its Greens Creek mine on Admiralty Island. The total cash cost per ounce of silver produced for the year was \$2.89 per ounce versus \$4.42 per ounce in 2013. The average grade of ore mined during the year was 13.24 ounces per ton of silver, up slightly from the average grade of 13.04 ounces per ton in the year previous. For the year, the mine produced 7,826,341 ounces of silver, 58,753 ounces of gold, 20,151 tons of lead and 59,810 tons of zinc. The mill operated

at an average of 2,236 tons per day in 2014, which is the highest daily average since the mine began operations in 1989. Improved economics were the result of lower milling costs and higher by-product credits and silver production. Milling costs decreased in 2014 compared to 2013 due to increased availability of less expensive hydroelectric power. The value of by-product metals produced increased as a result of higher zinc and gold production and higher zinc prices, partially offset by lower gold prices. The mine is forecasting 2015 production of 7.3 million ounces of silver and 55,000 ounces of gold at a silver equivalent cash cost of \$4.50 per ounce.

COEUR MINING INC. reported year-end 2014 reserves and resources at its Kensington mine near Juneau. The mine reported proven reserves of 400,000 tons grading 0.180 ounces of gold per ton (72,000 ounces) at the Kensington deposit and an additional 17,000 tons grading 0.412 ounces of gold per ton (7,000 ounces) at its newly defined Raven deposit. Probable reserves at Kensington came in at 2,824,000 tons grading 0.181 ounces of gold per ton (512,000 ounces), while Raven came in at 162,000 tons grading 0.241 ounces of gold per ton (39,000 ounces). Total combined measured and indicated resources at Kensington and Raven were of 1,566,000 tons grading 0.244 ounces of gold per ton (382,000 ounces), while total combined inferred resources at Kensington and Raven were 1,622,000 tons grading 0.351 ounces of gold per ton (570,000 ounces).

CONSTANTINE METAL

RESOURCES LTD. announced that joint venture partner **DOWA METALS & MINING CO. LTD.**, has approved a \$5 million 2015 budget for the Palmer volcanogenic massive sulfide project. This year's drill program will focus on extensions of the encouraging drill results encountered in last year's drilling program. Drill hole CMR14-65, which intersected 89 meters grading 0.8 percent copper and 5.0 percent zinc, the most significant intersection to date, is on the extremity of known South Wall mineralization. The company is also working on an updated mineral resource estimate due out soon.

UCORE RARE METALS INC. reported that it has entered into an agreement with **IBC ADVANCED TECHNOLOGIES INC.** to acquire the exclusive rights to IBC's SuperLig™ Molecular Recognition Technology for rare earth metal separation, recycling and tailings processing applications at its Bokan-Dotson Ridge rare earth project. Under the terms of the license agreement, Ucore has agreed to pay a one-time licensing fee to IBC in the amount of \$2.9 million subject to the delivery by IBC of a fully operational rare earth SuperLig pilot plant and due diligence review by Ucore. The Pilot Plant will be constructed at IBC's wholly owned subsidiary in Houston, Texas. Following completion of the above terms, the companies will form a joint venture, with Ucore having a controlling interest (60 percent) in the joint venture, while IBC will retain a 40 percent beneficial interest. IBC's SuperLig Molecular Recognition Technology is designed to recover 99 percent of rare earth elements in a clean separation from other metals while using far fewer steps than standard solvent extraction processes. The environmentally friendly process has been used at commercial scales in other sectors of the mining industry and should reduce both capital and operating costs at Bokan-Dotson Ridge. For those interested in learning more about molecular recognition technology, see <http://mrt.ucore.com/#mrt-summary>. ●



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We thank these businesses for sharing our vision of a healthy environment and a vibrant economy for many generations to come.

Photo: Volunteers from ConocoPhillips help to restore a salmon stream in the Mat-Su. © Clark James Mishler

Conserving the lands and waters on which all life depends



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FIGHTING HEADWINDS

in the state during 2014 and continued investments by these companies will be key to holding the sector steady this year.

Sumitomo Metal Mining Pogo LLC – a joint venture between Japanese firms Sumitomo Metal Mining Company (85 percent) and Sumitomo Corp. (15 percent) – accounted for US\$17 million or about 20 percent of the exploration spending in Alaska during 2014.

The Japan-based owners of Pogo invested this money primarily on defining and expanding East Deep, North and South Pogo, three zones of high-grade gold mineralization adjacent to the current underground workings at their high-grade underground gold mine located some 60 miles east of Fairbanks.

Building on its recent success in finding zones of high-grade gold at Pogo, SMM Pogo has budgeted roughly US\$15 million for a 2015 exploration program that includes roughly 168,000 feet (51,200 meters) of drilling.

“This funding shows the tremendous confidence that Sumitomo has in the Pogo deposit and our ability to find additional resources for many years to come,” said Lorna Shaw, external affairs manager, SMM Pogo.

A roughly 140,000-foot (42,650 meters) surface drill program started earlier this month; the balance of drilling will be from underground stations.

The 82 surface and 19 underground holes planned will focus on near-mine targets and expansion of the South Pogo, North Zone, and north East Deep areas.

In Southeast Alaska, Hecla Mining Co. is planning to invest US\$8.2 million in some 172,700 feet (52,600 meters) of drilling at its Greens Creek silver mine during 2015. Much of this work will focus on definition drilling at the Lower NW, Deep 200 South, East Ore, Deep Southwest and 9a zones of the underground mine.

The company is particularly excited about the potential of Deep 200 South where drilling has recently cut 49.8 oz/ton silver, 0.08 oz/ton gold, 3.4 percent zinc and 1.6 percent lead over 11.1 feet (3.4 meters) and 30.5 oz/ton silver, 0.05 oz/ton gold, 15.5 percent zinc and eight percent lead over 13.9 feet (4.2 meters).

Underground exploration drilling will test for extensions of this and a number of other zones at Greens Creek.

A 10,000-foot (3,000 meters) surface drilling program is planned to explore Killer Creek, a zone about a mile west-northwest of the mine where drilling has intersected broad mineralized zones up to 120 meters with stringer veins locally grading as high as 10 percent copper and 10.4 percent combined lead-zinc.

At US\$9.1 million, Kensington accounted for a large percentage of the exploration funds allocated by Coeur Mining Inc. in 2014. This healthy portion of Coeur’s exploration dollars doled to the Southeast Alaska gold mine is the result of a strategy that rewards exploration success with a boost in funds.

The company is particularly excited about the high-grade gold tapped at Jualin, a historic mine adjacent to Kensington. At the end of 2014, Coeur reported 289,000 tons of inferred resource at Jualin averaging 0.619 oz/t (179,000 ozs) gold. This is roughly double the average resource grade at Kensington.

While Coeur has cut its overall exploration budget in 2015, Kensington is expected to again get a healthy share of what is allotted.

“Our 2015 drilling efforts will keep the focus on expanding the size and quality of

higher-grade zones at existing operations such as the Jualin deposit at Kensington and the Guadalupe/Independencia corridor at Palmarejo,” said Coeur President and CEO Mitchell Krebs.

Kinross Gold (Fort Knox) and Teck Resources (Red Dog) also continue exploration at and around their respective mines.

Optimistic juniors

2015 is shaping up to be another tough year for junior mineral explorers in Alaska, and around the world.

“More than two years of investor caution has created an unenviable position for many junior explorers, forcing them to slash spending, renegotiate agreements, settle for unfavorable terms or leave the industry altogether. Although the amount of funding raised by the juniors is up slightly in 2014 as those with more promising projects are able to attract some funding, it is insufficient to reverse the trend towards further reductions in exploration spending by the sector,” according to SNL.

Despite this dour outlook, a handful of junior explorers are expecting multi-million-dollar exploration programs on their Alaska projects this year.

This positive outlook is reflected in a letter Millrock Resources Inc. President and CEO Greg Beischer recently sent to shareholders.

“While we will not under-estimate the potential difficulties that the market will bring throughout the remainder of 2015, we head into the rest of the year with a spirit of optimism,” he wrote.

Millrock anticipates roughly US\$2.5 million of exploration in Alaska this year, including a US\$2 million program funded by First Quantum Minerals to further exploration at the aptly named Alaska Peninsula project.

Millrock came by this 500,000-acre highly prospective land package on the Alaska Peninsula through an exploration and option-lease agreement signed with the Bristol Bay Native Corp. in 2012.

After funding a US\$600,000 reconnaissance program in 2014, First Quantum entered into an option to earn up to an 80 percent joint venture interest in the property.

The 2014 program identified drill targets at three prospects – Mallard Duck

see **FIGHTING HEADWINDS** page 16

NORTHERN NEIGHBORS

Compiled by Shane Lasley



Seabridge swells Deep Kerr at KSM

Seabridge Gold March 23 reported significant growth of the mineral resource for the Deep Kerr copper-gold deposit at its KSM Project in north-western British Columbia. Based on roughly 50,000 meters of drilling in 45 holes drilled since 2012, Deep Kerr has an inferred resource of 782 million metric tons grading 0.54 percent (9.3 billion pounds) copper and 0.33 grams per metric tons (8.2 million ounces) gold. Deep Kerr was treated as a block cave (bulk underground) mining target and a net smelter return cutoff value of \$20 was used to calculate the resource. Seabridge said the lateral and vertical continuity of the zone provides a geometric configuration that is likely to be amenable to block cave mining. The company has retained Golder Associates, a leading industry expert in underground mining, to undertake bulk underground mining studies for Deep Kerr. Seabridge Chairman and CEO Rudi Fronk said the company has “every confidence that Deep Kerr represents an outstanding opportunity for a large, high-margin operation attractive to major base metal miners and gold producers.” Seabridge says the limits of Deep Kerr have yet to be identified, and the company plans to continue exploration at KSM this year using the proceeds of a C\$14.2 million bought-deal flow-through equity financing announced earlier this month. The company expects to report an inaugural resource estimate for the new Iron Cap Lower zone shortly.

\$3M program slated for Rackla Gold

Atac Resources Ltd. March 24 reported plans for the initial phase of the 2015 exploration and drill program at its Rackla Gold project in the Yukon Territory. The majority of this C\$3-million program will be conducted within the Nadaleen Trend and will focus on expanding the Conrad zone and advancing the Carlin-type gold discoveries within the Anubis Cluster. The objectives of the phase-1 exploration include: shallow diamond drilling to continue testing the eastern portion of the Conrad Upper zone; drilling target at the untested area between the Conrad Upper and Middle zones; step-out drilling from hole OS-14-230 which intersected 42.67 meters of 3.03 grams per metric ton gold at the newly discovered Conrad Lower Zone; and rotary air blast drilling targeting the more than 20 geochemical anomalies and structures that lie beneath a thin cover of overburden within the Anubis Cluster. The Rackla Gold Project, which covers roughly 1,700 square kilometers (656,400 square miles), hosts Canada’s first Carlin-type gold discoveries. The property is divided into two distinct trends: the Nadaleen trend, which hosts drill-confirmed Carlin-type gold mineralization at the Conrad, Osiris, Ibis, Sunrise and Anubis zones’ and the Rau trend, which hosts the Tiger Gold deposit and Ocelot silver-lead-zinc-tin discovery.

Al-Joundi named Agnico president

Agnico Eagle Mines Ltd. March 20 announced several senior management changes, including the appointment of Ammar Al-Joundi as the company’s new president. Al-Joundi, a former chief financial officer of Agnico Eagle, most recently served as CFO and senior executive vice-president of Barrick Gold Corp. from July 2012 until February of this year. With Al-Joundi serving as

see **NORTHERN NEIGHBORS** page 15



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NORTHERN NEIGHBORS

president, Sean Boyd's title will change to vice-chairman and CEO. Al-Joundi will report to Boyd and assist him and the senior management team in setting and executing on Agnico Eagle's corporate strategy, optimizing the corporate structure and management processes, developing the next generation of senior management and building asset value through effective capital allocation and risk management. Other appointments include: Dominique Girard as vice-president, technical services and Nunavut operations; Nancy Guay as senior corporate director, technical services, reporting to Dominique; Michael Timmins as vice-president, corporate development; Carol Plummer as vice-president, project development, USA and Latin America; and Michel Julien as vice-president environment. "As our gold mining business continues to grow and the number of opportunities to improve the quality of our business expands we have strengthened our senior management team with several new additions. These appointments add to our current bench strength and will allow us to improve and grow

our business in a very measured and steady manner, while we continue to develop our leadership team," said Boyd

Copper North bolsters treasury

Copper North Mining Corp. March 19 reported the completion of a C\$318,000 financing. The non-brokered private placement consists of 5.3 million units priced at C6 cents per unit. Each unit consists of one Copper North common share and one half of a warrant. Each whole warrant is redeemable for the purchase of an additional share at for C9 cents until March 19, 2017. Copper North Chairman Dale Corman bought 1.7 million of the units. The company intends to use the proceeds from the financing for resource expansion and engineering of its Carmacks copper-gold-silver project in the Yukon Territory; exploration at the Thor copper-gold property in northern British Columbia; and for working capital and general corporate purposes. In connection with the financing, Copper North paid finders' fees of C\$7,140 in cash and issued 170,000 finders' warrants with the same terms as the private placement warrants. ●



Mining Spotlight



Granite wins ethical leadership honors

Granite Construction Inc. said it has been recognized by Ethisphere Institute as a 2015 World's Most Ethical Company®.

Ethisphere is a global leader in defining and advancing the standards of ethical business practices. The World's Most Ethical Companies designation recognizes those organizations that have had a material impact on the way business is conducted by fostering a culture of ethics and transparency at every level of the company. The World's Most Ethical Company assessment is based upon the institute's Ethics Quotient™ framework developed over years of research to provide a means to assess an organization's performance in an objective, consistent and standardized way. The information collected provides a comprehensive sampling of definitive criteria of core competencies, rather than all aspects of corporate governance, risk, sustainability, compliance and ethics. Granite is one of only two companies in the construction and building materials category honored this year.

"We are extremely proud to be once again named as one of the World's Most Ethical Companies," said James H. Roberts, president and chief executive officer of Granite Construction. "This recognition exemplifies the strength of Granite's team. I applaud and congratulate our employees. Our people are living the Granite code of conduct each and every day, and it is our continuing commitment to foster a strong culture of ethics and integrity for generations to come."

For the full list of 2015 World's Most Ethical Companies, visit <http://ethisphere.com/worlds-most-ethical/wme-honorees/>.

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CHANDALAR

matters,” Goldrich President and CEO Bill Schara said at the time of the deal.

Return on investment

NyacAU also is fronting all the capital needed to get a commercial operation going at Chandalar. Through the end of 2014, the company had invested roughly US\$17.3 million into developing the operation and another US\$5 million of capital expenditures have been budgeted for this year. Nyac is to be repaid this initial investment from the gold produced at the coming placer operation.

According to Goldrich’s production projections, the return on Nyac’s investment is

coming soon. The company forecasts that the Chandalar Mine will produce 16,500 oz of placer gold in 2015, worth US\$19.8 million at US\$1,200/oz gold. With this year’s production costs expected to average US\$713/oz, this results in a pre-tax net profit of roughly US\$8 million.

The JV expects production to rise and costs to fall as it expands operations over the next three years.

During the past two years, the partners have expanded the recovery plant, moved it to a lower and broader part of the valley; and built new water recycling ponds.

“Commercial production at Chandalar in 2015 is the culmination of three years of work by GNP,” said Schara. “GNP completed initial construction and a successful test plant in 2012, acquired a significant mining permit for expanded operations in

2013, and relocated and expanded facilities in 2014. All this was accomplished during one of the most difficult periods in the industry over the past 30 years.”

The expanded facility includes a new grizzly feeder with an expected capacity of about 600 cubic yards per hour, which will be realized as gravel screens and gold recovery tables are added in stages through 2016.

To keep up with the needs of the expanded operation, Goldrich NyacAU Placer is transporting seven 40-ton rock trucks to the northern Alaska placer gold mine in the next few weeks, increasing its fleet to 13 such vehicles.

As a result, alluvial gold recoveries are expected to jump to 23,000 oz in 2016; 30,000 oz in 2017; and reach 32,000 oz by 2018. As production rises, the costs are

expected to decrease to about US\$450 per oz.

At \$1,200 gold, pre-tax net profits are anticipated to soar to US\$13.2 million in 2016; US\$21.5 million in 2017; peaking at roughly US\$24 million by 2017. Every US\$100 per oz swing in the gold price equates to about a US\$3 million change in net profits once the operation reaches full capacity.

To be ready for the upcoming inaugural season of commercial mining of the Chandalar placers, stripping the overburden from gold-rich gravels is now underway.

Mining of pay gravel is expected to start in May and initial gold processing is planned for late June. Weather permitting, the plant is expected to run through mid-September. ●

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FIGHTING HEADWINDS

Bay, Kawisgag and Bee Creek – and this year’s program is expected to include at least 2,400 meters in drilling in six to eight holes.

Millrock is currently working with local Native village corporations to secure access and the company hopes to start drilling in June.

Constantine Metal Resources Ltd. is another company with plenty of reasons to be optimistic.

Earlier in March, this exploration company reported that Dowa Metals & Mining Co. Ltd. allocated US\$5 million to continue exploration at Constantine’s Palmer volcanogenic massive sulfide project in Southeast Alaska.

Dowa, which has an option to earn 49 percent in Palmer by investing US\$22 million over four years, had spent roughly US\$10 million at the project through the end of 2014, the second year of its earn-in agreement.

This year’s drilling will focus on continued expansion of Palmer’s South Wall zone, where one hole drilled last year cut the widest intersection of VMS mineralization encountered at the project to date.

This hole, CMR14-65, cut 89 meters grading 0.8 percent copper, 5.0 percent zinc, 21.1 grams per metric ton silver and 0.32 g/t gold. The center of this intersection is located roughly 50 meters east and 50 meters above where CMR14-54 cut

22.1 meters grading 2.48 percent copper, 4.05 percent zinc, 24 g/t silver and 0.39 g/t gold.

A resource update that incorporates the results from drilling completed in 2010, 2013 and 2014 is currently being calculated for Palmer.

Constantine President and CEO Garfield MacVeigh said, “2015 is poised to be a promising year for Constantine and the advancement of the Palmer project. With an updated resource estimate underway, and our thickest mineralized intersections open to expansion, the opportunity has never been more compelling.”

At the opposite end of the state, NovaCopper Inc. plans to carry out an US\$8- to US\$10-million program at the Upper Kobuk Mineral Projects in 2015. This work, slated to begin by June, will focus primarily on infill drilling aimed at upgrading inferred resources at its Arctic VMS deposit to the measured and indicated categories.

In addition to roughly 4,400 meters of drilling needed to upgrade the resource, about 4,000 meters is necessary to gather the geotechnical, hydrological and metallurgical data needed to complete a feasibility study scheduled for completion as early as 2016.

NovaCopper, which ended its 2014 fiscal year (Nov. 30) with US\$4.8 million in working capital, has enough funds to start this program but will need to raise additional capital to complete all of the drilling and other programs on the docket for

2015.

In August, First Quantum increased its exploration profile in Alaska by cutting another tentative deal on Kiska Metals Corp.’s Copper Joe property located roughly 110 miles (175 kilometers) northwest of Anchorage.

Situated roughly 20 miles (30 kilometers) southwest of both Kiska’s Whistler and Millrock’s Estelle projects, Copper Joe is in a region of Southcentral Alaska known for its copper-gold potential.

If the copper miner chooses to pursue an option at Copper Joe, it can earn an initial 51 percent interest by investing US\$5 million in the project by 2017, a stake that would increase to 80 percent if Copper Joe was advanced to a production decision.

First Quantum has until the end of March to notify Kiska of its intentions regarding the option to enter a joint venture on the Copper Joe project.

New players

One of the more promising signs for mineral exploration in Alaska this year is that a number of new companies have cut deals on projects in recent months.

Among the most notable of these new arrivals is Royal Gold, which has inked a joint venture agreement with Contango Ore for the continued exploration of the Tetlin gold properties near the crossroads community of Tok in eastern Alaska.

Royal Gold has the opportunity to earn up to 40 percent interest in the JV by investing US\$30 million in the Tetlin

properties by October 2018 – an average seasonal investment of about US\$7.5 million. To get the ball rolling in 2015, Royal Gold has agreed to invest an initial US\$5 million in Peak Gold, a limited liability JV that holds the extensive package of Tetlin properties.

Royal Gold Vice President of Corporate Development Bill Heissenbuttel told shareholders that the Tetlin JV agreement is reminiscent of the company’s original focus and pairs with the royalties the company purchased separately on the project.

Royal Gold lists near-surface mineralization, attractive grade, numerous undrilled targets and great accessibility among a list of unique attributes that attracted the royalty company to Tetlin.

Despite the continued shortage of exploration funds, Millrock Resources said it is collaborating with a major mining company to explore for high-grade gold deposits in Alaska.

“We plan to do a lot of field exams this summer, and are actively soliciting other claim holders that may wish to present their project for consideration by Millrock and its strategic collaboration partner. Additionally, we will likely carry out reconnaissance work on gold targets that Millrock has developed on open ground,” Beishcher explained in a recent email to Mining News.

This early stage work will likely run about US\$300,000.

While the name of its strategic partner is currently being withheld, Millrock said the gold miner is new to the state, further shrinking the field of candidates.

Other new exploration companies expanding into Alaska in 2015 include: Strongbow Exploration Inc., which is finalizing a deal on two tin projects in the state; and Sonoro Metals Corp., which has signed an option agreement to earn a 60 percent interest in Northern Empire Resources Corp.’s Hilltop Gold project located some 70 miles south of Fairbanks. ●

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NEWS NUGGETS

Any conclusions that I draw from this review will be based upon the facts that I find and my judgment based on years of experience in government,” Secretary Cohen explained. “To ensure a comprehensive and unbiased evaluation, I welcome hearing from, and will be reaching out to, interested stakeholders, and I will carefully consider all points of view. I invite those who have information relating to the issues under review to meet with my team so that we might receive all relevant information for consideration.” ●



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