



## NEWS NUGGETS

Compiled by Shane Lasley

### Bokan REE resource gets an upgrade

Ucore Rare Metals Inc. May 11 reported a significant upgrade and expansion of the mineralized resources at the Dotson-Ridge deposit of its Bokan Mountain rare earths project in Southeast Alaska. The deposit now contains an estimated indicated resource of 4.79 million metric tons averaging 0.6 percent (63.54 million pounds) total rare earth oxides, a roughly 63 percent increase over the 2.94 million metric tons of indicated resource included in a 2013 estimate. Additionally, the deposit has 1.05 million metric tons of inferred resource averaging 0.6 percent (13.96 million lbs.) TREO. About 39 percent of the TREO in both categories are the higher valued heavy rare earths. "We're pleased to announce this important resource upgrade as Ucore continues its progress toward production," said Ucore President and CEO Jim McKenzie. "This resource upgrade, together with our recent advances in molecular recognition technology for refining applications, makes for a compelling mine-to-metal story at Bokan."



JIM MCKENZIE

### Insiders back US\$1.5M Zazu financing

Zazu Metals Corp. May 8 reported completion of the final tranche of a US\$1,497,800 million non-brokered private placement financing. In a second tranche, Zazu sold more than 3.46 million common shares of the company at US20 cents each for gross proceeds of US\$692,800. Zebra Holdings and Investments S.a.r.l., a company controlled by a trust settled by the late Adolf H. Lundin, purchased more than 2.16 million of these shares. Zebra, which previously owned or controlled 8,860,280 Zazu shares, owns roughly 19.9 percent of the company's issued and outstanding shares upon completion of the offering. Zazu Chairman and CEO Gil Atzmon bought 1 million of the shares offered in the second tranche. Atzmon, which previously owned or controlled 5,789,500 Zazu shares, owns roughly 12.3 percent of the company's issued and outstanding shares upon completion of the offering. Zazu intends to use proceeds from the offering for development expenditures related to its Lik zinc-lead-silver project in Northwest Alaska and general working capital purposes.

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### Ruptured line spills tailings at Pogo

Sumitomo Metal Mining Pogo May 7 reported to Alaska Department of Environmental Conservation that a ruptured line spilled roughly 90,000 gallons of paste backfill at the Pogo gold mine in Interior Alaska. The 8-inch line delivers paste backfill, a mixture of tailings and cement, into the underground mine for disposal. Once underground, the concrete created from the tailings fills mined-out areas, providing support for continued mining. The backfill material is reported to contain 1-3 parts-per-million cyanide but is rendered inert by the high pH of the concrete mixture. Once hardened, the spilled tailings are being removed with heavy equipment and hand tools.

*The 8-inch line delivers paste backfill, a mixture of tailings and cement, into the underground mine for disposal.*

## EXPLORATION

# Palmer doubles in size

Tough markets fail to slow resource expansion at SE Alaska VMS project

By SHANE LASLEY

Mining News

While many of its peers are struggling to find money to continue exploration at their promising mineral prospects and deposits, Constantine Metal Resources Ltd. has managed to forge ahead with hefty programs at its copper- and zinc-rich Palmer project in Southeast Alaska. This includes C\$7.13 million invested in exploring the volcanogenic massive sulphide deposit in 2014.

Last year's program, funded by Dow Metal & Mining Co. Ltd., along with drilling completed at Palmer in 2010 and 2013, have culminated in a 97 percent expansion of the resource, compared to the last time a calculation was completed for the deposit in 2010.

The results of the resource estimate published by Constantine on May 11 outlines an inferred resource of 8.125 million metric tons averaging 1.41 percent (252.6 million pounds) copper, 5.25 percent (940.4 million lbs.) zinc, 0.32 grams per metric ton (83,600 ounces) gold and 31.7 g/t (8.3 million oz.) silver for Palmer.

"The resource estimate significantly increases the size of the deposit, highlighting the tremendous success of recent drill campaigns and the growing potential of the project," said Constantine President and CEO Garfield MacVeigh. "It is open to expansion in most areas with the thickest part of the deposit located at the current down-dip limit of the South Wall Zone where mineral zoning and geophysics support potential for a high-grade copper core within a more extensive area of zinc-copper-barite mineralization."

Constantine and Dow are continuing to explore this growth potential with a US\$5 million program budgeted for this year.

### Good deal

Most of the new resource reported by Constantine has been added since Dow joined as a funding partner at Palmer in 2013.

According to an agreement inked between Dow and Constantine in February of that year, the Tokyo-based smelting and mining company can earn a 49 percent stake in Palmer by investing US\$22 million in the VMS project over a four-year span.

At the time, some analysts felt that Constantine was giving up too large a portion of the Palmer project for the money. Following two years of resource expansion in tough equity markets, however, the deal has worked out well for both parties.

"We felt from the beginning the scale of investment Dow is making to earn 49 percent would give us a good chance to establish a resource at Palmer with potential for mine viability," Constantine Vice President of Exploration Darwin Green told Mining News.

Dow, which got its start from mining Kuroko deposits in northern Japan, has more than 120 years of experience exploring for, mining and smelting ore from VMS deposits like the one at Palmer. This makes the Southeast Alaska project an ideal fit for the Tokyo-based company's expertise.

Additionally, being located only 33 miles from



Drilling at Palmer in 2014 cut copper- and zinc-rich mineralization at a 400-square-meter conductive plate identified with downhole geophysics.

CONSTANTINE METAL RESOURCES LTD.

a Pacific Rim deep-sea port at Haines, a mine at Palmer would be well-situated to provide zinc and copper concentrates to Dow's state-of-the-art smelters in Japan.

For its part, Constantine is benefiting from Dow's vast VMS experience and a partnership deal that is structured in a way that allows it to complete multimillion-dollar exploration programs, while avoiding a significant dilution from selling shares in a market that has been unkind to junior mining companies.

"It has been very refreshing to be able to focus near 100 percent of our efforts at growing and building the asset at Palmer, and avoid the distraction of constantly chasing financings, which in this market has become a Herculean task," Green said.

As part of the agreement, Constantine receives annual cash payments totaling US\$1.25 million over four years. This, along with any other option payments and management fees received, has allowed the company to maintain a healthy bank account.

"We are currently cash-flow positive, which is a bizarre and privileged position to be in," observed Green.

At the end of January, the company had C\$636,135 in cash and its working capital totaled C\$664,811.

### Continued expansion

Over the previous two years, Dow has invested roughly US\$10 million in advancing the VMS deposit and has agreed to invest another US\$5 million in 2015.

This work is primarily targeting expansion of Glacier Creek, a region of the project that consists of five inter-related subzones of massive sulfide mineralization – RW East, RW West, and South Wall zones 1, 2 and 3.

The South Wall zones are parallel layers of nearly vertical VMS mineralization. At the upper extent

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## NORTHERN NEIGHBORS

Compiled by Shane Lasley



### Rickford: Mining matters to Canadians

Canada Minister of Natural Resources Greg Rickford May 11 commemorated the 19th National Mining Week, which ran from May 11 to 17. "National Mining Week is an opportunity to recognize Canada's international leadership and innovation in the mining sector and to underscore the importance of mining to communities across the country," he said. One of the largest mining nations in the world, Canada produces more than 60 minerals and metals. "Quite simply, mining matters to Canadians. It is a cornerstone of our economy and provides benefits from coast to coast to coast. The mining and mineral processing industry generates close to \$60 billion for Canada's GDP, employs more than 380,000 Canadians, including 10,000 Aboriginal Peoples, and accounts for one-fifth of Canada's merchandise exports," said Minister Rickford. In Economic Action Plan 2013, the Government of Canada committed \$100 million over seven years to renew the Geo-mapping for Energy and Minerals program to significantly advance and modernize geological knowledge in the North. Economic Action Plan 2015 proposes spending C\$22 million over five years on a geo-science initiative focused on deeper deposits; and C\$23 million on another five-year program looking into the technological innovation needed to separate and develop rare earth elements and chromite. "Our government's plan for responsible resource development is enhancing Canada's position as a global mining and exploration giant, creating jobs and opportunity for Canadians," said Rickford.

### Seabridge targets Deep Mitchell at KSM

Seabridge Gold Inc. May 12 said the 2015 exploration program at its KSM Project in northwestern British Columbia is planned to begin with drilling at the lower elevations of the Mitchell valley and then proceed to Kerr and Iron Cap. Over the past two years, Seabridge has targeted higher grade core zones beneath KSM's near surface porphyry deposits, resulting in the discovery of Deep Kerr and the Iron Cap Lower Zone, two copper-rich deposits that have added nearly one billion metric tons to project resources. This year's main target is a possible higher grade core zone beneath Mitchell, the largest deposit at KSM. A high resolution airborne magnetic survey has recently been completed to aid in refining the drill targets, particularly at Mitchell. "The potential under Mitchell has been our top exploration target for more than four years but earlier attempts to drill it ran into technical difficulties. We believe we now have a reliable solution that will enable us to complete holes into this high value target," explains Seabridge Chairman and CEO Rudi Fronk. This year's program at KSM is considerably smaller than previous years, reflecting the completion of an environmental assessment process which culminated in provincial and federal approvals in 2014. The company said the C\$16.4 million financing completed last month will provide plenty of funds to complete its planned 2015 program.

### Schaft Creek JV continues optimization

Copper Fox Metals Inc. May 6 said the summer field program for the Schaft see **NORTHERN NEIGHBORS** page 11

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## OPINION

# Solons seek clarity on 'waters of U.S'

*Though it is too soon to break out the champagne, Congress hopefully will pass bipartisan legislation to bring the EPA to heel*

By J. P. TANGEN

Special to Mining News

After six years of lackluster performance under the leadership of Sen. Harry Reid, D-Nev., Congress now appears poised to seize the initiative and rein in the U.S. Environmental Protection Agency's ambitious assertion of jurisdiction over the waters of the United States. The EPA has long used the Clean Water Act as a federal zoning tool and implicitly asserted jurisdiction over virtually everything that is wet, ever has been wet or ever will be wet. In Alaska, because permafrost comes within the agency's definition of something wet, tens and tens of millions of acres within the state have been regarded as wetlands and, therefore, waters of the United States that EPA feels justified in attempting to regulate.

The definition of what constitutes waters of the United States has been controversial since the early 1970s and the EPA has been persistent in pushing the envelope at every opportunity, taking the question twice to the Supreme Court of the United States, without having the matter meaningfully resolved. Most recently, the EPA promulgated an extremely aggressive definition of what comprised the waters of the United States; however, because the EPA took the position that its definition did not constitute a change in the law, it argued that it was not subject to the numerous fail-safes that Congress had enacted to ensure that the Agency's interpretation of its jurisdiction did not subvert the mandates of other agencies of government.

States that produce the commodities upon which we all rely are frequently sparsely populated and depend on vast tracts of land, often public land, to produce the corn and cattle and timber and copper that our society demands. The economies of those states generally are dependent upon the availability of water and access to land that is sometimes wet. Although the EPA commonly gives passing weight to the economic impact of its regulations, the focus of its regulatory efforts is invariably to control and restrict rather than foster and encourage resource development and commodity production.

Alaskans have long suffered from this singular bias; however, we are not alone. In the land between the Appalachians and the Rockies, farmers and cattlemen have borne the unrelenting brunt of the EPA's

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## PALMER DOUBLES

of South Wall, a fault cuts and folds the three layers at which point they lay nearly flat. South Wall Zone 2 and Zone 3 are of the same age strata as two strata drilled at RW, the flat lying limb of the deposit.

When Dowa began funding the project, these zones encompassed roughly 4.1 million metric tons of calculated resource and showed the potential for significant expansion.

Of the 16 holes drilled in 2014, two stand out for the width of the mineraliza-

### Mining & the law

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J.P. TANGEN

insensitivity, and now, through their congressional delegations, Democrats and Republicans alike, they are fighting back. On May 12, the U.S. House of Representatives passed H.R. 1732 by a vote of 261-155, with the support of 24 Democrats. The U.S. Senate is also considering bipartisan legislation to require the Secretary of the Army and the Administrator of the EPA to propose a regulation revising the definition of the waters of the United States and this time to comply with the Administrative Procedures Act, the Regulatory Flexibility Act, the Small Business Regulatory Enforcement Fairness Act, the Unfunded Mandates Act, and Executive Orders 12866, 13563 and 13132; all things the EPA decided that it did not have to do when it proposed its rule last year.

The legislation consistently is an effort to leverage the EPA into a mode wherein it is regulating pollution of traditional waterways and not underground hydrology or isolated water bodies. It is legislation that bodes well for resource developers throughout the nation and especially in Alaska and bears watching.

Assuming that the legislative process is now working again, and that the House and Senate will agree on a bill that has strong bipartisan support, all that remains is for the President to sign it into law. The current proposals are reasonable on their face, are consistent with the best interests of the national economy and should be met with the President's approval.

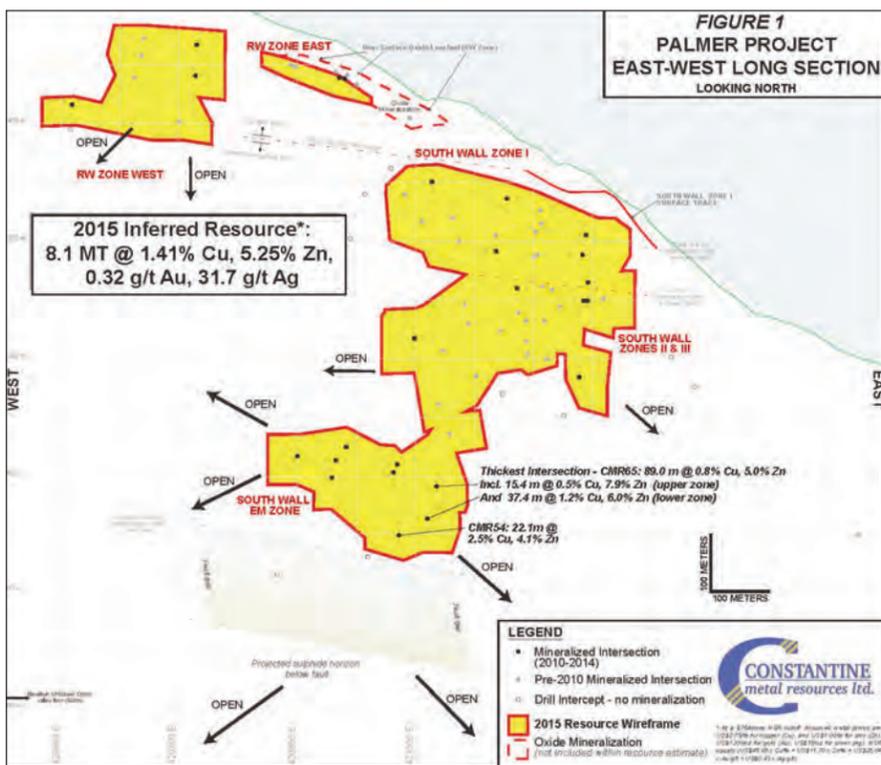
For the first time in more than six years, the light of hope is appearing on the distant horizon. Let this be the first of many measures that meet the needs of the nation. ●

tion cut and the zinc and copper grades of the thick intercepts.

Hole CMR14-54, the first hole to intercept the large conductive plate identified with downhole geophysics, cut 22.1 meters grading 2.48 percent copper, 4.05 percent zinc, 24 g/t silver and 0.39 g/t gold. This intersection, a 150-meter down-plunge step-out, provided tantalizing evidence that a large and high-grade portion of the South Wall Zone continues further down the mountain.

"Hole CMR14-54 not only expands the footprint of the South Wall zones but

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## PALMER DOUBLES

opens up the opportunity for considerable further expansion and will be a focus for ongoing drilling,” MacVeigh said at the time. “The thickness and high copper content associated with a large conductive target enhances the potential around this new area.”

While not as rich in copper, CMR14-65 cut higher grade zinc across the widest mineralized intercept to-date at Palmer.

Intersecting the conductor plate at South Wall about 50 meters east and 50 meters above hole 54, hole 65 cut 89 meters grading 0.79 percent copper, 5.03 percent zinc, 21.1 g/t silver and 0.32 g/t gold. This long intercept included 15.4 meters of 0.5 percent copper and 7.9 percent zinc in an upper zone and 37.4 meters of 1.2 percent copper and 6.0 percent zinc in the lower zone.

Both holes targeted a 400-square-meter conductive plate that has proven to be a rewarding resource expansion target at Palmer, and will be the first area targeted when drilling resumes in early June.

In addition to expanding the conductor plate, the company is looking forward to testing an area farther down the mountain.

“We are also really excited about testing the faulted offset of the zone below the Kudo fault. The zone appears to be thickening with depth up to the edge of where it intersects the fault, and mineral zoning suggests increasing copper grade and potential for a copper-rich vent center at depth,” said Green.

### Barite-rich

Upon reporting the new resource, Constantine also noted that a significant portion of this deposit is barite, a high-density material widely used as a weighting agent in drill muds to prevent blowouts during oil and gas exploration.

Common throughout most of the mineralization at Palmer, barite presents multiple benefits for the potential development of the project.

First, unlike pyrite, barite is a stable sulfur-bearing mineral that is not prone to acid rock drainage.

Second, the mineral sells for more than US\$100 per ton, providing the potential for selling a product that would normally be sent to tailings. According to the U.S. Geological Survey, the United States imports 79 percent of its barite, most of which comes from China.

The resource area at Palmer is estimated to consist of roughly 14 percent barite by volume or about 24 percent by weight,

“It has been very refreshing to be able to focus near 100 percent of our efforts at growing and building the asset at Palmer, and avoid the distraction of constantly chasing financings, which in this market has become a Herculean task.” —Darwin Green, vice president of exploration, Constantine Metal Resources Ltd.

making the Southeast Alaska project a potential domestic source for the mineral.

While the junior still has to work out whether it can economically produce a marketable product from the barite at Palmer, management is hopeful.

“Of significance is the fact we would likely be pulling any barite from the rougher tails after already being milled, and passed through the copper and zinc flotation circuits. So (there) shouldn’t be a lot of additional process cost,” Green said.

In the meantime, Constantine and Dowa will continue efforts to expand the barite-rich VMS deposit.

“We are very pleased with progress to date and, with \$12 million left to spend over the next two years, believe we are on the right track,” Green added. ●

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## NORTHERN NEIGHBORS

Creek copper-gold project in northwestern British Columbia is expected to start in early June. The Schaft Creek joint venture – 25 percent Copper Fox, 75 percent Teck Resources – is planning a 2,500-meter diamond drill program to test the depth of copper mineralization observed in veins on surface and in hydrothermal breccia at the LaCasse zone. Work on a comminution (grinding) study to determine power requirements and circuit design; modelling of the geo-metallurgical domains for the Schaft Creek deposit; and other studies related to optimization work for the Schaft Creek deposit is ongoing. If warranted by the new studies, updating of operating and capital costs, flow-sheet design criteria, and a new financial simulation are planned for later in the year. A feasibility study completed in 2013 outlined a 130,000-metric-ton-per-day open-pit mine operating for 21 years at Schaft Creek based on proven and probable reserves of 940.8 million metric tons averaging 0.27 percent copper, 0.19 grams per metric ton gold, 0.018 percent molybdenum and 1.72 g/t silver.

## Canada Zinc readies to drill Cardiac

Canada Zinc Metals Corp. May 12 outlined a 5,000-meter drill program that will focus primarily on its Cardiac Creek zinc-lead-silver deposit at its Akie project in northern British Columbia. Crews are to mobilize to the project early in June and drilling is expected to continue into September. A total of 126 holes

(53,750 meters) have been drilled on the Akie property, 78 of which contribute to an NI 43-101-compliant resource estimate for the Cardiac Creek deposit. An additional 35 drill holes test the Cardiac Creek horizon over a 7,000-meter strike length, or other exploration targets on the property. The primary goal of the 2015 program is to expand the down-dip extents of the high-grade core to the Cardiac Creek deposit. “We strongly believe the recent upturn in the price of zinc is signaling the beginning of the long-expected dramatic decline in global zinc inventories and lack of new supply. In the face of the looming zinc shortage, Canada Zinc Metals is positioned as a premier zinc explorer with a world-class zinc deposit situated in a geopolitically and financially stable jurisdiction,” said Canada Zinc Metals President and CEO Peeyush Varshney.

The primary goal of the 2015 program is to expand the down-dip extents of the high-grade core to the Cardiac Creek deposit.

## High-grade zinc cut at Prairie Creek

Canadian Zinc Corp. May 5 reported that the first four drill holes of an ongoing underground drill program cut the high-grade zinc structure targeted at the Prairie Creek Mine in the Northwest Territories. The 6,000-meter drill program is testing for new areas of mineralization in proximity to the mine workings and aiming to convert a portion of the large inferred mineral resource at Prairie Creek to the indicated category for potential inclusion in an update of the preliminary feasibility study scheduled to be completed later this year. In this particular area of the mine, the mineralization occurs either in the Main Quartz Vein – a high-grade, steeply dipping, fault structure that hosts the majority of the defined reserves and resources – or in the Stockwork Zone – a series of narrow high-grade veins occurring at an oblique angle to the MQV. All four holes intersected the MQV structure, the best of which cut 3.03 meters grading 30.5 percent zinc, 27.5 percent lead and 289 grams per metric ton silver. Three of the holes intersected the Stockwork Zone, the best of which cut 3.63 meters grading 11.9 percent zinc, 7.2 percent lead and 89 g/t silver. ●



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