



## NORTHERN NEIGHBORS

Compiled by Shane Lasley



### Independence to drill gold anomalies

Independence Gold Corp. May 20 reported plans to complete a C\$1.8 million drill program at its Boulevard and Henderson gold projects located in the White Gold district of Yukon Territory. The programs, consisting of roughly 2,350 meters of reverse circulation and 800 meters of core drilling, are expected to begin in mid-June. The company plans to test the Denali and the Sunset zones at Boulevard with reverse circulation drilling. The Denali zone is located about 14 kilometers (nine miles) west of Kaminak Gold Corp.'s Coffee deposit. RC drilling at Denali will follow-up on trench results of 4.56 grams per metric ton gold across 10 meters and a 700-meter-long gold-in-soil anomaly. The Sunset zone is a 2,200-meter-long gold-in-soil anomaly located seven kilometers (4.4 miles) southwest of Kaminak's Coffee deposit. RC drilling at Sunset is designed to test geophysical and coincidental geochemical anomalies. Trench results of up to 7.04 g/t gold across six meters and drill intercepts of up to 2.42 g/t gold across 6.26 meters have been encountered at Sunset. The Henderson project, located some 60 kilometers (37 miles) south of Dawson City, covers a placer mining area along North Henderson Creek. Cross-cutting fault structures are interpreted to underlie stretches of the creek where coarse placer gold has been recovered. The planned 800 meters of core drilling is designed to test for gold mineralization within these structures.

### Study shows feasible Back River mine

Sabina Gold & Silver Corp. May 21 reported the completion of a feasibility study for its Back River gold project in Nunavut. The study, led by JDS Energy & Mining Inc., outlines a 6,000-metric-ton-per-day mill producing an average of around 346,000 ounces of gold annually over a 10-year mine life. The ore would come from a combination of open pit and underground mining, with the bulk of the material coming from the open pit. The mine outlined in the study is expected to mill some 19.8 million metric tons of ore at an average grade of 5.7 grams of gold per metric ton and metallurgical recoveries of 93 percent. The per-ounce cost of producing the gold is estimated to be US\$535 and all-in cost, including sustaining capital is expected to total US\$671/oz of gold produced. The feasibility study estimates that such a mine at the Back River project could generate a post-tax internal rate of return of 21.7 percent and net present value (at 5 percent discount rate) of C\$539 million. The mine is expected to generate post-tax net cash flow of C\$914 million over its 10-year life with a payback period of 2.2 years. Sabina notes that the feasibility study demonstrates improved economics using a lower gold price, compared to a pre-feasibility study completed in 2013. Sabina President and CEO Bruce McLeod said "JDS has identified the potential optionality to start smaller at Back River which could kick off production on the belt. Such an opportunity would require less initial capital which in these markets may enhance shareholder value." ●

### Redstar completes round 1 drilling

Redstar Gold Corp. May 21 reported that all eight holes of a 1,500-meter phase-1 drill program successfully encountered Shumagin-style vein mineralization at expected depths at the company's Unga gold project on the Alaska Peninsula. The 30-day, phase-1 program was designed to target various structural elevations of the Shumagin vein system, ranging from sea level to 140 meters below sea level; and test for continuity of existing known mineralization along strike about 100 meters to the northeast. Redstar said the drilling further demonstrated the continuity and expansion potential for the high-grade gold vein system at Shumagin, which remains open at depth and along strike.



NEWS NUGGETS

## PUBLIC POLICY

# Vast critical minerals

REE, graphite deposits found at opposite ends of Alaska may close strategic gap

By SHANE LASLEY

Mining News

With a significant deposit of heavy rare earths in the Southeast, the largest domestic graphite deposit in the Northwest, and vast potential in the 1,300-mile expanse between the two, Alaska is a viable alternative to importing many of the strategic and critical minerals vital to national security, green energy and modern technology.

"The State of Alaska is blessed with vast mineral potential on its lands," Alaska Department of Natural Resources Deputy Commissioner Ed Fogels told lawmakers in Washington D.C. recently. "Alaska has more than 70 known occurrences of rare earth elements and multiple occurrences of other strategic and critical minerals."

In his testimony on behalf of U.S. Senate Bill 883, "The American Mineral Security Act of 2015," Fogels said Alaska is in the midst of a multiyear program aimed at further quantifying the state's strategic mineral potential and further refining its mine permitting process — efforts that could provide a blueprint for the federal government.

"Alaska's strategic minerals initiative can be instructive of how this effort might work on a national scale, and we will continue to be available to share lessons we have learned," he told those gathered at a hearing before the U.S. Senate Committee on Energy and Natural Resources.

Ucore Rare Metals and Graphite One Resources, meanwhile, hope their critical minerals deposits located at opposite ends of Alaska will soon become domestic sources for some of the high-technology and energy minerals on which the United States is currently relying on foreign countries to supply.

### Heavy rare earth

The current discussion over strategic and critical minerals vaulted into the national spotlight when China announced in 2009 that it would set restrictions on the amount of rare earths available for exports. At the time, the Middle Kingdom accounted for some 95 percent of the global supply of these 16 ingredients key to modern technology.

Due to the resulting pinch in global supply, countries around the world began seeking alternative supplies of rare earths. In the United States, this led to the re-opening of the Mountain Pass Mine in California and the emergence of several other potential sources of these metals.

Ucore Rare Metals' Bokan Mountain project in Southeast Alaska, which is on track to become a supplier of heavy rare earths found only in trace quantities at Mountain Pass, is among U.S. deposits viewed as potential domestic sources of the suite of strategic and critical minerals.

According to the most recent calculations, the Dotson Ridge deposit at Bokan contains 4.79 million metric tons of indicated resources averaging 0.6 percent (63.54 million pounds) total rare earth oxides and 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 value heavy rare earths.

Four of the heavy rare earths found at Dotson Ridge — yttrium, dysprosium, terbium and europium —

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—Ed Fogels, deputy commissioner, Alaska Department of Natural Resources

are listed as critical minerals in the United States. The deposit also has a healthy amount of neodymium, a light rare earth also on the U.S. Department of Energy's list of critical minerals.

Ucore commended Sen. Lisa Murkowski, R-Alaska, for introducing S.833 to the Senate for consideration.

"In identifying strategic resources located on U.S. soil and seeking to streamline the permitting processes related thereto, the act has important implications for the Bokan-Dotson Ridge rare earth element project," said Ucore President and CEO Jim McKenzie.

Earlier this year, Ucore announced the successful separation of the tightly interlocked rare earths at Bokan Mountain using a revolutionary technique that is considered both economic and environmentally sound.

The technique created 99.9 percent pure dysprosium and neodymium salts and a 99.1 percent pure terbium salt. All three of these heavy rare earth elements are considered critical to military, high-tech and green sector applications.

With a significant deposit of rare earths and a cutting-edge technique for separating these critical metals, Ucore is now putting the finishing touches on a plan to produce heavy rare earths on American soil.

"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," said McKenzie.

### Filling graphite demand

While considered ordinary compared to the exotic rare earth metals, graphite also is considered a critical mineral to the United States.

According to the U. S. Geological Survey, graphite is one of 19 minerals for which the United States is 100 percent-reliant on imports. Roughly 45 percent of graphite used in the U. S. since 2010 has been imported from China, most of the balance comes from Mexico, Canada and Brazil. "There has not been any graphite mined in the U.S. since 1991," said Fogels.

The DNR deputy commissioner also told the lawmakers that the largest graphite deposit in the United States is found in western Alaska.

In fact, the Graphite Creek deposit is so large that a 50,000-metric-ton-per-day mine could operate there for centuries. Recently, Graphite One has narrowed its exploration on upgrading a portion of this world-class deposit to a confidence category that it can permit.

As a result, drilling upgraded 17.95 million metric tons of the deposit to the indicated category, averaging 6.3 percent graphitic carbon.

The 1.13 metric tons of graphite proven to an indicated resource could help supply the anticipated steep climb in demand due largely to graphitic carbon's prevalence in lithium-ion batteries.