



## NEWS NUGGETS

Compiled by Shane Lasley



With South32 committing to a US\$10 million exploration program in 2018, the Bornite camp at the Upper Kobuk Mineral Projects will be a busy place during the upcoming field season.

### South32 funds \$10 million for Bornite

Trilogy Metals Inc. Dec. 14 announced that South32 Ltd. has committed US\$10 million to fund the 2018 exploration program at the Bornite copper project in Northwest Alaska. This second tranche of US\$10 million keeps South32's option to acquire 50 percent of the Upper Kobuk Mineral Projects in good standing. The 2018 program, which was recently approved by the Trilogy-South32 technical committee, will include in-fill and off-set drilling to better define and expand the high-grade copper resources at Bornite.

Bornite hosts an open-pit resource with roughly 2.7 billion pounds of copper in roughly 124.6 million metric tons of material averaging nearly 1 percent copper; and an underground resource with roughly 3.7 billion lb of copper in 57.8 million tons of material averaging 2.89 percent copper, according to a resource calculated in 2016. Going into the 2017 field season, the high-grade underground portion of this deposit remained open along a 1,000-meter wide front to the north.

To gain a better understanding of how far the copper mineralization at Bornite extends, this year's program included nine holes drilled at 300- and 400-meter step-outs to the north of the Bornite resource. The last two holes did not reach the targeted depth and will be finished in 2018.

With all seven holes that did reach target depth cutting high-grade copper, the 2017 drill program did not find the edges of the Bornite deposit. Highlights from the 2017 drilling include: RC17-0234 cut three high-grade copper intervals – 21 meters of 1.29 percent copper, 26.8 meters of 1.44 percent copper, and 36 meters of 0.72 percent copper; RC17-0236 cut two high-grade copper intervals from a depth of 720.8 meters – 27.1 meters of 0.8 percent copper, and 89.3 meters of 1.13 percent copper; RC17-238 cut four zones of copper from a depth of 579.7 meters – 10 meters of 0.61 percent copper, 4.9 meters of 2.11 percent copper, 5 meters of 0.55 percent copper, and 12.5 meters of 1.14 percent copper; and RC17-239 cut three copper zones – 16.2 meters of 1.04 percent copper, 8.2 meters of 1.67 percent copper, and 26.1 meters of 1.46 percent copper.

The results of the 2017 drilling program doubled the size of the known mineralized footprint and demonstrate that the high-grade Bornite copper resource system is open to further expansion. "We have essentially doubled the size of the mineralized footprint with an overall Bornite system now measuring 1,500 meters by 2,500 meters," Trilogy Metals President and CEO Rick Van Nieuwenhuyse said on Dec. 4.

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SHANE LASLEY



The extensive drilling completed at Pebble has outlined a massive porphyry deposit with roughly 56.8 billion pounds copper, 70.4 million ounces gold, 3.4 billion lb molybdenum and 343.6 million oz silver in the measured and indicated resource categories. First Quantum's involvement in the Pebble Partnership is helping to push this world-class asset towards development.

### PEBBLE

## Quantum Pebble leap

First Quantum enters \$1.5B deal for half of Pebble; permitting begins

By SHANE LASLEY

Mining News

In a framework agreement announced on Dec. 18, First Quantum Minerals Ltd. was revealed as the major mining company that will complete the Pebble Limited Partnership.

"We have made good progress in the partnering process and are very pleased to be in advanced-stage discussions with First Quantum, an industry leader in mine development and management," Ron Thiessen, president and CEO, Northern Dynasty Minerals Ltd., currently the sole owner of the Pebble Partnership.

While the final details of an agreement that will provide First Quantum the option to own half of the Pebble Partnership are being hammered out, the US\$1.5 billion preliminary agreement announced on Monday includes a US\$150 million investment by First Quantum the will involve four equal payments of US\$37.5 million to fund the upcoming permitting process for Pebble.

As long as the option remains in good standing, the global miner has the right to acquire 50 percent interest in the world-class Pebble copper-gold mine project by investing another US\$1.35 billion into the partnership at the end of the four-year option period.

"This initial investment by a well-established copper mining company speaks volumes about the economic opportunity Pebble represents to Alaska," said Pebble Partnership CEO Tom



TOM COLLIER

Collier. "Pebble development could make a significant contribution to Alaska's economy and provide year-round jobs for Southwest Alaska. Additionally, Pebble could provide important revenue to state and local governments."

This tentative option agreement laid the foundation for the Pebble Partnership to advance Pebble into the long-awaited permitting process on Dec. 22.

### Enter First Quantum

With seven operating mines and five mineral exploration and development projects, First Quantum is a growing, diversified miner with a particular focus on copper. Its operating mines and development projects are located in Africa, Australia, Finland, Spain, Turkey and Latin America.

First Quantum's industry-leading mine development track record, technical expertise, financial wherewithal and global growth strategy makes the company ideally suited to take on a world-class copper-gold project like Pebble.

While none of the company's operations are in North America, First Quantum has been eyeing Alaska's copper and gold potential for a few years now.

First Quantum's early interest in Alaska came as part of its 2013 buy-out of copper rival, Inmet Mining Corp., a company that had an exploration agreement with Millrock Resources Inc. on some Alaska properties.

Instead of dropping the very early staged Alaska exploration programs initiated by Inmet, which often happens to such projects following a takeover, First Quantum expanded its partnership

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## NORTHERN NEIGHBORS

Compiled by Shane Lasley



### Skeena cuts deal for historic Eskay Creek

Skeena Resources Ltd. Dec. 18 cut a deal with Barrick Gold Corp. to acquire all of the major's interest in the Eskay Creek gold mine property in the Golden Triangle region of northwest British Columbia. Barrick has also agreed to make a C\$1 million strategic investment in Skeena.

Discovered in 1988, the former Eskay Creek mine produced roughly 3.3 million ounces of gold and 160 million oz of silver at average grades of 45 grams per metric ton gold and 2,224 g/t, which at the time made it the world's highest-grade gold mine and fifth-largest silver mine by volume.

"Eskay Creek was a remarkable discovery that became an extraordinary mine," said Skeena CEO Walter Coles Jr. "It produced 3.3 million ounces of gold and 160 million oz of silver from 2.2 million tonnes (metric tons) of ore from 1994 until closure in 2008. We are honored that Barrick has given us an opportunity to investigate and potentially revitalize one of Canada's highest-grade past-producing mines."

To acquire Barrick's ownership of Eskay Creek, Skeena has agreed to: invest C\$3.5 million in exploration on the property over the next three years; pay Barrick C\$10 million once the exploration requirement has been met, all regulatory approvals have been received, and all permit transfers and underlying agreement consents have been obtained; and reimburse Barrick for reclamation expenditures incurred during the option period and assume the bond amount on the property, collectively up to a maximum amount of C\$7.7 million. Anything over the C\$7.7 million in reclamation and bond costs would be subtracted from the C\$10 million purchase price.

Barrick will retain a 1 percent net smelter return royalty on all parts of the property not already subject to royalties. In addition, Barrick will maintain a back-in right to purchase a 51 percent interest in Eskay Creek for a 12-month period following Skeena's completion of an NI 43-101 resource of at least 1.5 million oz gold-equivalent. To exercise the back-in right, Barrick will pay Skeena up to three times its cumulative expense on the property. As part of the back-in Barrick would also reimburse to Skeena the purchase price and assume any bonding requirement for its proportionate interest, following which the parties will form a joint venture.

The C\$1 million strategic investment will involve Skeena issuing 1.25 million flow-through shares at a price of C80 cents per share. The net proceeds of the financing will be used to incur Canadian exploration expenses.

Canarc Resource Corp. retains a 33.3 percent carried interest in certain mining claims adjacent to the past-producing Eskay Creek Mine. Canarc said it is pleased to see the renewed interest in this property and will benefit from any future exploration success and development that may occur on these claims.

In addition to Eskay Creek, Skeena owns the historic Snip gold mine property, another historic gold mine property acquired from Barrick; and Spectrum-GJ, a large gold-copper property the company is exploring. All three properties are located in British Columbia's Golden Triangle.



WALTER COLES JR.

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## OPINION

# Miners should follow pending reg changes

*Rules concerning mining locations on state land and state-selected land as well as maintenance requirements are up for change*

By J. P. TANGEN

Special to Mining News

For the past 20 months or so, the Department of Natural Resources (DNR) has been wrestling with some proposed changes to the regulations concerning the location and maintenance of State of Alaska mining claims. This effort has been driven by some substantial issues that have arisen with the interpretation of the regs over the past several years as well as some significant open questions. The current proposed changes can be obtained from the DNR's website, but the process is still in the scoping phase, so additional changes may be forthcoming. DNR has held public hearings in Anchorage and Fairbanks this month to solicit input. Hopefully many readers of this column have already participated and will continue to participate in the process going forward.

The subject of the proposed changes so far has been tightly focused on six topics: location of mining claims on state-selected land; locations on state land; qualification of locators; annual rent; annual labor; and abandonment. There is not sufficient space in this column to go into details with regard to each of the proposed changes, but it is appropriate to throw some flags on the field for the benefit of individuals and entities that will have to live under these regulations for many years to come. It has been over a decade since the mining regs have been amended. It may be another ten or fifteen years before any corrections can be made again.

Two principles need to be on the table in any discussion of regulatory changes – the modifications must follow the statutes and case law that is already on the books and is binding on the Department, and the modifications must do no harm. Administrative law in general is a trap for the unwary. Mom and Pop placer miners working in the field during the 100 odd days between break-up and freeze-up are

### Mining & the law

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poorly positioned to study regulations closely as they work their claims. To the extent that they rely on what they are told the regs require or what they happen to remember, they are destined for disappointment. Slight changes made for the benefit of "efficiency" are almost guaranteed to bite someone on the backside sooner or later.

For instance, the Mining Year has been set to begin at noon on September 1 and end at noon on the following September 1 for a very long time. The proposed regs would change that tradition by making the mining year begin immediately after midnight on August 31 and end at midnight the following August 31. Although the existing mining year makes no particular objective sense, it is such a subtle change as to be likely to be overlooked by someone, somewhere, sometime.

Apparently, there is confusion with regard to claims located on state-selected but unpatented or not tentatively approved for patent to the state. Almost no one is confused by the fact that until the land is conveyed to the state, the state doesn't own it, so the state cannot authorize mining on it. The real problem is that it dawned on some clever fellow that where Miner A has a federal mining claim on

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Geologists Janine Calder, Greg Beischer and Jeff Kyba investigate an outcrop at the Waterfall prospect on the Todd Creek property in northwestern British Columbia.

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### Millrock identifies new Todd Creek prospects

Millrock Resources Inc. Dec. 18 said stream sediment sampling has identified new multi-metal prospects on its Todd Creek project in the Golden Triangle region of northwestern British Columbia.

The survey, which covered a 6-kilometer- (3.7 miles) by 16-kilometer- (10 miles) area, affirmed multi-element anomalies in areas of known base and precious metal mineralization that extend for 10 kilometers (6.2 miles) along the Todd Creek valley. This valley reflects a major faults system that appears to control and localize base and precious metal mineralization. The area around the previously documented Falls Creek, Orange Mountain and Yellow Bowl occurrences in this area were found to be anomalous in gold, silver, copper, lead and zinc over an area measuring about 1,500 meters in diameter. Millrock said pathfinder elements of cadmium, barium, phosphorous and antimony were strong, and tellurium, a mineral frequently found in association with gold, was particularly anomalous in seven samples collected from a 1,000-meter-area.

Additionally, two new prospect areas – Survey and MJ – were identified.

The Surveyor area is anomalous in

gold, silver, copper, molybdenum, lead, zinc, and pathfinder elements cadmium, antimony, tungsten, sulfur and phosphorous. Millrock also noted strong nickel anomalism encountered in this area. A Versatile Time Domain Electro Magnetics (VTEM) survey and magnetic survey completed by a previous operator in 2011 were examined by Millrock. The company said several conductive zones with a strong magnetic disruption response were noted in the vicinity of the Surveyor geochemical anomaly, and are potentially indicative of porphyry-style mineralization. The coincident VTEM, magnetic and stream sediment anomalies that comprise the Surveyor prospect will be a priority for follow-up exploration in 2018.

MJ is anomalous in gold, copper, molybdenum, lead, zinc, and pathfinder elements barium, germanium, tellurium, tungsten, uranium, and niobium. Millrock said geophysical surveys also indicate possible porphyry-style mineralization at MJ. Millrock consultants familiar with historic work on the Todd Creek project report that this valley was filled with snow and ice in 2008, the last time which exploration crews were active on this project. This portion of the project is largely covered by the Todd Icefield. Millrock said the MJ area will also be a high priority for follow up in 2018.

Situated about midway between the Brucejack gold mine and the town of

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land surrounded by state land, Miner B can locate some “at risk” state claims on top of Miner A’s claims and defeat Miner A’s ability to convert his federal claims to state claims. This is probably contrary to established law; however, the proposed regulation fails to make that clear.

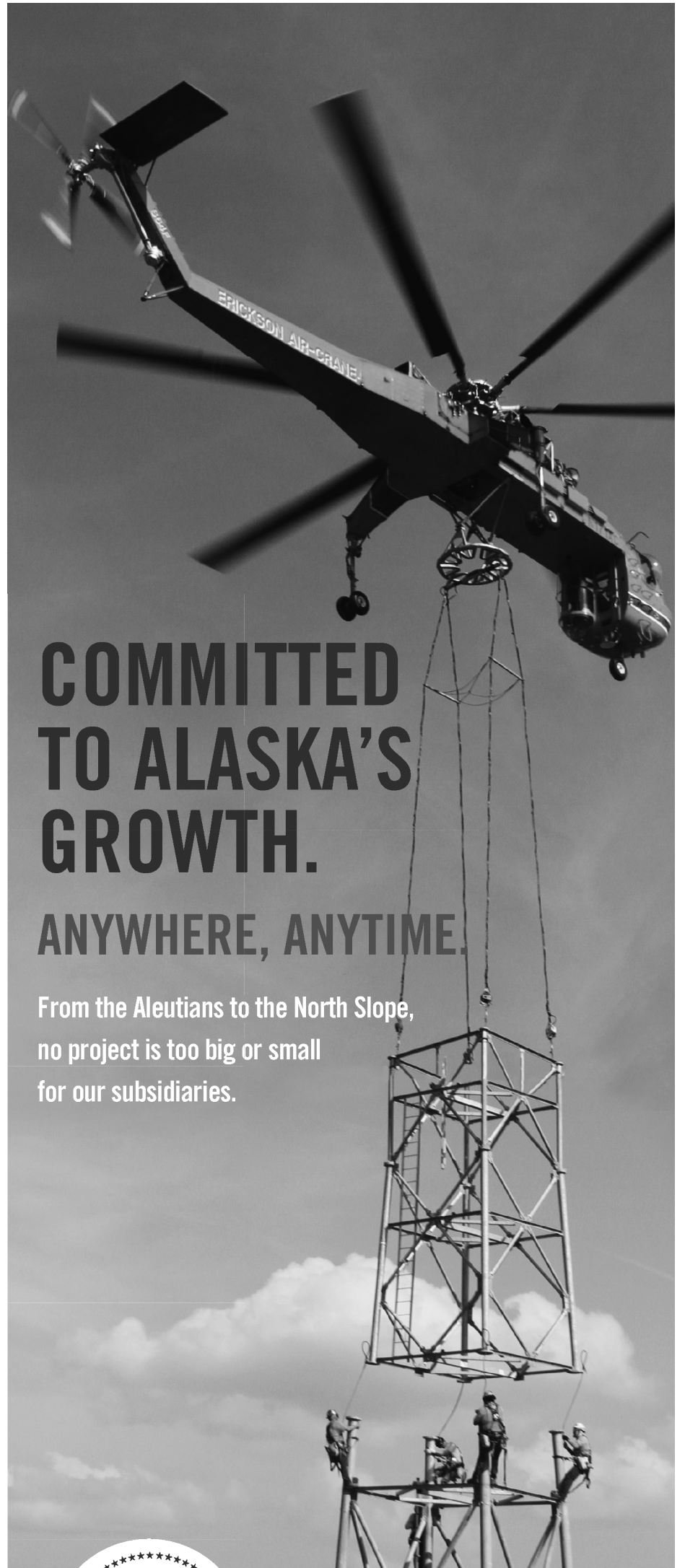
Another perpetual problem that the revisions attempt to resolve relates to what happens with regard to affidavits of annual labor where the affidavit does not comply with the regulations but the DNR after many years still regards the claims as “active”? Should DNR, upon discovery of a deficiency just declare the claims abandoned retrospectively? Should the miner who has been diligently mining his ground, paying his rent and filing his albeit defective affidavits each and every year for the past decade be euchred out of his livelihood by the stroke of a bureaucratic pen? As the Bard noted, “the quality of

mercy is not strained.”

DNR, in its proposed draft regulations, goes to great length to resolve the issues posed by deficient affidavits; and, for better or for worse, in the few cases in which the Supreme Court has weighed in, their opinions have not been helpful. Nowadays, there seems to be a routine committee of vultures waiting at the recorder’s office to prey upon the miner who gets it wrong.

DNR steadfastly declines to adjudicate disputes among conflicting claimholders, customarily sending them to the courthouse, insensitive to the cost of litigation. On the other hand predatory practices are often rewarded because there is no reasonable remedy for small miners to pursue when victimized. The proposed revised regulations simply do not mete out justice in such cases, just more complexity.

Alaska’s miners need to pay attention to these regulations as they go forward. They are deceptively complex and are likely to affect everyone in the industry, one way or the other. ●



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Additionally, Trilogy Metals Dec. 19 announced that a wholly-owned subsidiary of South32 has become a significant new shareholder by acquiring roughly 6.5 million Trilogy shares, which is approximately 6 percent of the outstanding common shares. CEO Van

Nieuwenhuyse also increased his Trilogy Metals shareholdings by approximately 1.7 million shares, bringing his total ownership of the company to 2.8 million shares or approximately 2.6 percent. South32 and Van Nieuwenhuyse purchased these shares from a previous shareholder.

Trilogy Metals has granted South32 the right to participate between 20 percent and 40 percent in future financings, private or public, to a maximum ownership

of 19.9 percent of Trilogy.

"We are excited to have South32 as a significant shareholder and joining our other large shareholders: Electrum, Paulson and Baupost. Together with our strong supportive shareholders the company expects to advance development of the Arctic and Bornite projects in the Ambler mining district. It is an exciting time to be a Trilogy shareholder and I am pleased to personally be all-in on Ambler!" said Van Nieuwenhuyse. ●

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Stewart, Todd Creek is one of three large projects Millrock owns in British Columbia's Golden Triangle. Highway 37A passes through the property.

### Golden Predator eyes new 3 Aces gold target

Golden Predator Mining Corp. Dec. 14 reported that results from 36 reverse circulation holes drilled at the 3 Aces Project in southeast Yukon have extended the mineralization has extended the Spades zone and confirmed the potential for near surface bulk tonnage type gold mineralization there.

Highlights from this batch of drill

results include: 1.5 meters of 36.33 grams per metric ton gold from a depth of 32 meters in hole 3A17-175, drilled in the North-Central Spades (formerly known as the Queen of Spades) zone; 14.5 meters of 1.06 g/t gold from a depth 16.8 meters in hole 3A17-266, drilled in the Southern Spades (formerly Nine of Spades) zone; 14.5 meters of 3.4 g/t gold from a depth of 40.4 meters in hole 3A17-275, drilled in the Southern Spades zone; and 47.3 meters of 1.11 g/t gold from a depth of 5.3 meters in hole 3A17-144, also at Southern Spades.

Golden Predator said the latest batch of results extend the Spades zone by more than 20 meters to the south and confirm the high-grade gold mineralization and near surface bulk tonnage type mineralization. Drilling on the northern extent of the

Spades zone, roughly 1,000 meters northwest of the step-out drilling, has encountered significant near surface bulk type mineralization.

Gold grades in the northern and north-central portions of the Spades Zone are thought to represent leakage into the hanging wall from a major northwest trending shear zone that controls mineralization in the Spades, Clubs and Hearts zones. This mineralization is in the form of higher angle, higher grade gold in quartz veins typical of the central Spades Zone, as well as potentially bulk minable grades. Based on the evolving geological model, Golden Predator said the holes along the northern and north-central Spades trend should be extended 50 to 150 meter to reach and properly test this identified northwest trending shear zone target which appears

to underlie most of the Spades Zone. This interpretation opens up a new target for exploration. The company also believes the shear zone accounting for the Spades Zone may be one of several such structures controlling gold deposition at 3 Aces.

"This drilling has opened our eyes to the very significant potential for disseminated mineralization in tandem with high grade veins in specific, repeating structures," said Golden Predator CEO Janet Lee-Sheriff. "With these new results from the southern end of the Spades which contain significant gold, you can see that we have successfully increased the known mineralization footprint by over 200 meters along strike to the south. The total strike of the Spades Zone is now approximately one kilometer." ●

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## FIRST QUANTUM

with Millrock to include reconnaissance copper and gold exploration on a 1.6-mil-

lion-acre tract of mineral land owned by Bristol Bay Native Corp.

The miner also partnered with Kiska Metals Corp. to explore Copper Joe, another prospective porphyry copper-gold property about 160 miles northeast

of Pebble.

### Long-term growth

While neither of First Quantum's early staged Alaska copper-gold exploration projects panned out, they established a foothold in the state that eventually led the company to cut a deal on Pebble – a permit-ready exploration project that hosts roughly 56.8 billion pounds copper, 70.4 million ounces gold, 3.4 billion lb molybdenum and 343.6 million oz silver in the measured and indicated resource categories.

Considered both the largest undeveloped copper and undeveloped gold resource on the planet, Pebble provides First Quantum with a project that potentially could provide the company the ability to supply these metals, along with the healthy portions of molybdenum and silver, for more than a century.

"This is indeed an investment in the long-term future of our company and it is sustainable growth through the next decade," said First Quantum President and CEO Philip Pascall.

In addition to robust exploration, the more than US\$762 million invested in Pebble over the past 16 years has collected all of the environmental, engineering and other studies needed to prepare the mine project for permitting.

"We consider the option on Pebble effective as an extension of our exploration program but given the geological work done it already, it requires no further geological search," Pascall added.

### Long-awaited permitting

The agreement with First Quantum opens the door for a long-awaited and major milestone for the Pebble Partnership – submitting the applications that kick off the permitting process for developing a mine at Pebble.

Pebble Partnership CEO Collier challenged his technical team to come up with an economically viable mine with a footprint of around 4.7 square miles, which is the size the U.S. Environmental Protection Agency said would be accept-

able under its proposed restrictions on Pebble.

"My target was to get us in the ballpark of what the Obama Administration EPA said is something that could be built in the Bristol Bay Watershed," the Pebble Partnership CEO told Mining News. "I figure that if your strongest critics say your project could be environmentally sound then you are in the right place."

With a footprint of 5.9 square miles, which is smaller than the Ted Stevens International Airport in Anchorage, the project the Pebble Partnership is taking into permitting lands in the ballpark.

Collier said that the Pebble Partnership team is proud of the work it has done to balance economics and environment.

"We have put forward a project that is financially sound but is very reasonable," he said.

Pascall said First Quantum believes the project being submitted to the U.S. Army Corps of Engineers, the lead agency for the Pebble permitting process under the National Environmental Policy Act, will show that a mine at Pebble can be developed in an environmentally sound manner.

"It is our belief that the Army Corp's findings will provide an important, objective and scientific validation that Pebble can be developed to meet the rigorous environmental standards enforced in the United States and Alaska," he said.

The First Quantum CEO, however, said his company is not taking lightly the high standards this project will need to meet to convince Bristol Bay residents and fisherman, as well as Alaskans at large, that Pebble can be safely developed.

"I am not underestimating the effort required to make sure that any permits received from federal and state regulatory agencies are defensible, and will give comfort to communities and industry," he said. "However, I believe this project can be developed and operate safely; can co-exist with the important fisheries resources; and will make a positive contribution to the region and the state." ●

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