



## NEWS NUGGETS

Compiled by Shane Lasley



Trilogy Metal's Bornite project in Northwest Alaska hosts roughly 6 billion pounds of copper. This year's widely spaced drilling aims to double the footprint of the high-grade carbonate hosted deposits found there.

### Drilling extends high-grade Bornite

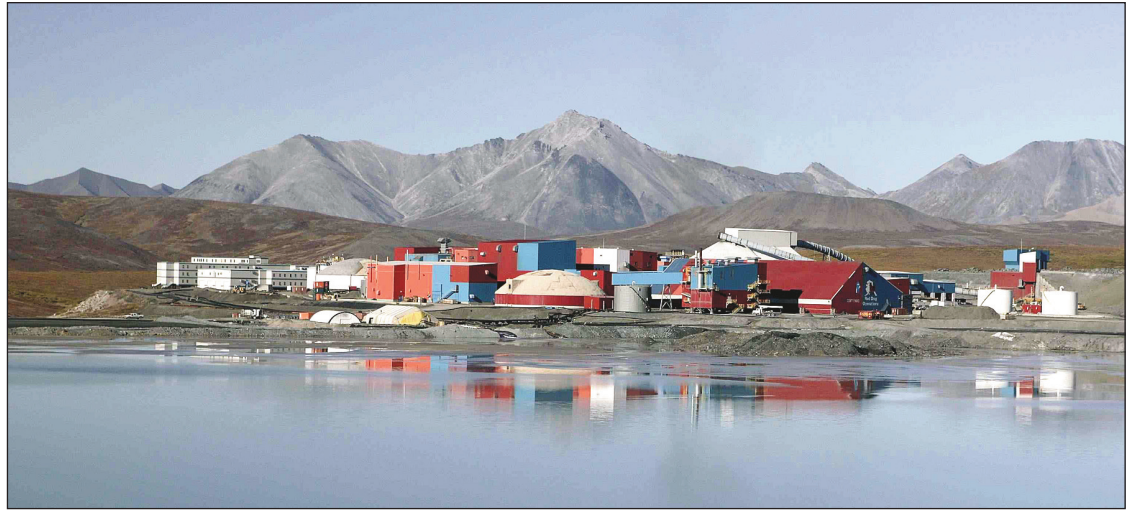
Trilogy Metals Inc. Sep. 18 reported high-grade copper results from this summer's exploration drill program at the Bornite project, part of the Company's Upper Kobuk Mineral Projects in the Ambler mining district of Northwest Alaska. This 10,000-meter program is focused on expanding upon the more than 6 billion pounds of copper Trilogy has outlined at Bornite. Roughly 2.7 billion lb of this copper is encompassed in an open-pit resource averaging roughly 1 percent copper. The remaining roughly 3.7 billion lb is located in a deeper underground resource that averages about 2.9 percent copper. It is this higher grade underground portion of Bornite that is being targeted this year. In 2013, the last year Trilogy had drills turning at Bornite, five holes cut rich copper zones along a 1,000-meter wide front to the north. Hole RC13-0220, the most northeasterly these holes, cut two high-grade intervals from 809.1 meters (at a 0.5 percent cut-off) – 45.6 meters of 1.07 percent copper; and 80.4 meters of 1.89 percent copper. RC13-0224, drilled about 800 meters west of hole 220, cut two high-grade intervals from a depth of 513.3 meters along this northern front – 229.4 meters of 1.73 percent copper; and 6.6 meters of 7.7 percent copper. The first three holes drilled this year cut thick and continuous intervals of copper mineralization up to 300 meters beyond the 2013 drilling. "The initial three step-out holes at Bornite demonstrate that high grade copper mineralization continues to the north and east of previously drilled resources," said Trilogy Metals President and CEO Rick Van Nieuwenhuysse.

RC17-0234, the first hole of the 2017 program, cut three high-grade copper intervals roughly 250 meters north of RC13-0220 – 21 meters of 1.29 percent copper; 26.8 meters of 1.44 percent copper; and 36 meters of 0.72 percent copper. The top of the Bornite mineralization in hole 234 was reached at a drill depth of 935.3 meters. RC17-235W, drilled about 250 meters west of hole 220, cut two zones of copper from a depth of 661.8 meters – 6.1 meters of 0.69 percent copper; and 26.9 meters of 0.94 percent copper. RC17-0234, drilled 300 meters north of hole 224, 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. All reported intercepts are at a 0.5 percent cut-off grade. "Our drill program is demonstrating that the Bornite mineralized system remains strong and shows no signs of letting up as we continue to drill on trend to the north and east," said Van Nieuwenhuysse. "In addition, we are starting to see new structural trends and controls on the axis of high-grade mineralization along a northwest vector. A recently completed detailed gravity survey is showing some very promising results and we will be integrating that information into our future targeting."

Trilogy also reported significant amounts of cobalt are also showing up in the assays, particularly in the higher grade cop-

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NANA REGIONAL CORP.



Located on NANA Regional Native Corp. land, the Red Dog Mine in Northwest Alaska provides roughly 5 percent of the global new zinc supply each year.

### PRODUCTION

# More Red Dog zinc

Improved recoveries up 2017 output, expanding discoveries for the future

By SHANE LASLEY

Mining News

After getting off to a relatively slow start, the Red Dog zinc mine in Northwest Alaska is finishing 2017 strong.

Teck Resources Ltd., the operator at Red Dog, said it now expects the mine to produce up to 550,000 metric tons of zinc this year, which is about 12 percent more than the company was anticipating at mid-year.

Adding to the good news for near-term production at Red Dog, Teck reported promising results from a major exploration program at Aktigiruk, a significant high-grade zinc deposit the company is exploring about 7.5 miles north of the Red Dog mill.



DON LINDSAY

"We are pleased with the significant improvements in recovery at our Red Dog Operations in the last few months and consequently production will now exceed previous guidance for the year by approximately 50,000 tonnes (metric tons)," Teck President and CEO Don Lindsay said on Sep. 18. "As well, our exploration results at our nearby Aktigiruk deposit show its potential to be one of the best undeveloped zinc deposits in the world."

### Challenging ore

By mid-year, Red Dog had only produced 230,300 metric tons of zinc. While this six months of production was already enough to make the Northwest Alaska operation among the top five zinc mines on Earth for 2017, it was a slow start for an operation that ships roughly 5 percent of the world's new supply each year.

This relatively slow start to the year was due to challenges of processing the higher grade but more complex ore from Qanaiyaq, the third pit developed at Red Dog.

During the first quarter of 2017, ore from Qanaiyaq pit was introduced to supplement declining grade ore from the Aqqaluk pit. However, mill performance was adversely affected by the metallurgically complex ores, particularly the highly

oxidized material being mined at the surface of Red Dog.

Due to the difficulties, Teck cut back how much Qanaiyaq ore it was feeding the plant and trimmed its guidance for 2017 Red Dog zinc production to 475,000 to 500,000 metric tons, which is about 12 percent less than the 545,000 to 565,000 metric tons of zinc the company had expected going into the year.

Thanks to changes in mine sequencing and improved metallurgical recoveries, which is resulting in more of the high-grade Qanaiyaq ore being fed to the mill during the second half of the year, Teck now expects to make up most of the 2017 production losses.

With the improvements, Teck is forecasting that Red Dog will produce roughly 300,000 metric tons of zinc during the second half of 2017, or 525,000 to 550,000 metric tons of the galvanizing metal for the year.

### Mill upgrades

Teck anticipates strong zinc production to continue at Red Dog in the coming years, thanks to ongoing improvements to the mill.

The company is forecasting annual zinc production at Red Dog to range between 475,000 and 550,000 metric tons over the next five years.

This assumes completion of a US\$110 million mill upgrade project that is expected to increase average throughput by about 15 percent over the remaining mine life, which will offset the challenges of processing lower grade and harder ore in the Aqqaluk pit.

These improvements to the mill are expected to be finished by the end of 2019.

While these upgrades will increase the amount of ore being fed through the mill, the current life expectancy of Red Dog remains the same. This is because more lower-grade ore from Aqqaluk and Qanaiyaq will be processed, meaning these deposits will feed the Red Dog mill until 2031.

### Decades of zinc

By the time Qanaiyaq is mined out, it seems likely that Aktigiruk on state mining claims to the

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