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Mining more, mining safely

New challenges spark
innovative solutions

Exploiter davantage, en toute sécurité

Les nouveaux défis engendrent
des solutions novatrices

Featured project |
Projet en vedette
Copper Mountain

Commodity focus | Produit vedette
Copper | Cuivre

Preliminary Program |
Programme préliminaire
COM2011 – Montreal

Project construction began in 2009. Here, workers drill at the site of the primary crusher, which was completed in the spring of 2011.

Partnerships restored

CMMC was also able to secure financial stability through its solid business relationship with Mitsubishi Materials Corporation, one of the world's largest diversified materials companies, and a leader in metal smelting and refining.

On August 19, 2009, Mitsubishi signed an agreement with CMMC to purchase a 25 per cent interest in the project for \$28.75 million. In addition to the financing commitment, Mitsubishi agreed to purchase all of the copper concentrate produced by the mine. Although operations at one of Mitsubishi's smelters in Japan were disrupted by the earthquake, the company has a second copper smelter in southern Japan and a third in Indonesia where the concentrate can be processed.

The relationship with Mitsubishi goes back many years, explains O'Rourke. "When we bought Similco in 1988, I went to Japan and confirmed with Mitsubishi Material that we would honour all the concentrate agreements [that had existed with Newmont], and as it turned out, it was the start of a good relationship," he says.

Mitsubishi thus became Princeton's buyer for its ore. When the Similco mine closed and Mitsubishi identified a copper resource in northern B.C., they brought in O'Rourke's company to develop and operate what became the Huckleberry Mine. It was only natural, then, that the relationship would continue with the Copper Mountain project. After all, it was apparent that the project would be a solid investment.

Journey to a super pit

After purchasing the site in late 2006, CMMC began one of British Columbia's largest drill exploration programs, with the goal of expanding the Indicated Resource by exploring the area between the three existing pits on site. The hope was that the three pits could be merged into a super pit.

The exploration program was a great success, says O'Rourke. "In January 2007, we had diamond drills on the site and that year, we drilled 40,000 metres. That confirmed the continuity of mineralization between the pits, which was a major breakthrough for us. On that basis, we did the preliminary economic assessment, which was positive, and that allowed us to go right into a feasibility study in the beginning of 2008. At the same time, we did another 60,000 metres of drilling, which increased our resources by about 45 per cent to a total of five billion pounds of copper."

In total, 106,000 metres were drilled, and in April 2009, CMMC reported an updated resource of 358,050,000 tons (325,213 kilotonnes) containing 2.9 billion pounds (1.32 billion kilograms of copper) [Measured and Indicated Resources of 256,610,000 tons (232,792 kilotonnes) @0.43% Cu, and Inferred Resources of 101,440,000 tons (92,025 kilotonnes) @0.34% Cu].

"The process for creating the super pit involves mining a series of 'push-backs' of the existing pits, progressively targeting deeper ore zones with higher strip ratios," O'Rourke

explains. "The advantage of mining this way allows upfront strip ratios to be reduced and higher profit margin ore to be targeted, thus maximizing the net present value of the project. The challenges arise as a result of having to mine around pre-existing pits with respect to mining widths and access. Careful consideration needs to be given to the design of the push-backs to ensure that future development is not compromised." The drill exploration program only covered a small area of the 7,200-hectare property, and CMMC is planning to continue exploring with an aggressive drilling campaign.

Copper Mountain will produce approximately 48,000 tonnes of copper a year for the first 12 years. With a projected 17-year life, overall copper production of the mine is estimated at 682,000 tonnes, with gold credits at 450,000 ounces and silver credits at 4.5 million ounces.

Once fully operational, the project will make use of a fleet of thirteen 240-tonne capacity Komatsu haul trucks, which will truck ore from the super pit directly to a 1.5-metre primary crusher. Processing will be completed on site in a 35,000 tonnes-per-day mill. The copper concentrate will then be trucked to the port of Vancouver and shipped to Japan for treatment and refining by Mitsubishi Materials.

Now, after nearly 15 years of lying dormant, Copper Mountain has breathed new life into the area by building a new mine on an old mine site.

A good environmental legacy

According to Peter Holbek, vice-president of exploration, "no significant environmental issues were identified when the mine previously closed, and ongoing reclamation has recovered some of the previously disturbed areas." CMMC is also able to use the same tailings management facility as was used previously. "Most of the water used in the plant is reclaimed from the tailings management facility, additional 'make-up' water is taken from the Similkameen River," Holbek adds. "About 80 per cent of water needs are met through recycling."

A local success


CMMC's announcement in 2008 that the site would reopen was welcome news to residents of the Princeton area. The closing of the Similco Mine in 1996 was difficult for the town, with job losses and the subsequent dependence on a single industry – forestry. It put the town in a precarious position.

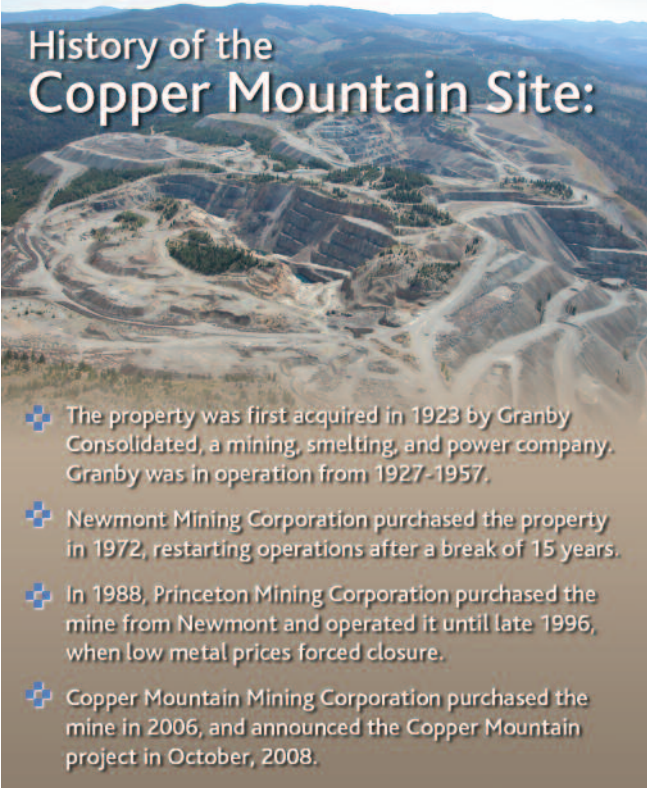
Today Princeton is booming again. The Copper Mountain Mine is already re-invigorating the economic life of the area and promises to bring economic growth for 20 years. "We've managed to hire most of our people from the town and the surrounding area," says O'Rourke. "The mayor has been extremely supportive. He's really bent over backwards to do whatever he can to help us out on the project." Many work-

ers who previously worked at Similco are returning to Princeton. By the time Copper Mountain moves into full production, the project will provide 270 jobs through direct employment, and spin-off jobs should be at least double that, according to the company.

CMMC is also working with local Aboriginal communities, and signed an impact benefit agreement with the Upper Similkameen Indian Band (USIB) in July 2010. The agreement sets out, among other things, training and employment opportunities for USIB members.

The economic spin-offs of the Copper Mountain Mine will be felt much further than just the Princeton area: the mine will be a boost to not only British Columbia, but Canada as well. Annual global consumption of copper is 18.3 million tonnes, while production from Canadian mines in 2009 was 500,000 tonnes, meeting only 3.3 per cent of global demand. The Copper Mountain project, which is set to become the third largest copper mine in Canada in 2011, will increase Canadian annual production of copper by almost 10 per cent, says Meleger.

The Copper Mountain project has been aided by a favourable economic climate, an ideal location with existing infrastructure and solid business relationships. And yet when O'Rourke was asked during a talk in Vancouver about the key components to successfully starting up a venture of this size, he responded: "People, people and people." "We were very fortunate," he says. "We've managed to assemble an excellent team." 



History of the Copper Mountain Site:

- ✦ The property was first acquired in 1923 by Granby Consolidated, a mining, smelting, and power company. Granby was in operation from 1927-1957.
- ✦ Newmont Mining Corporation purchased the property in 1972, restarting operations after a break of 15 years.
- ✦ In 1988, Princeton Mining Corporation purchased the mine from Newmont and operated it until late 1996, when low metal prices forced closure.
- ✦ Copper Mountain Mining Corporation purchased the mine in 2006, and announced the Copper Mountain project in October, 2008.

Courtesy of Copper Mountain Mining Corporation