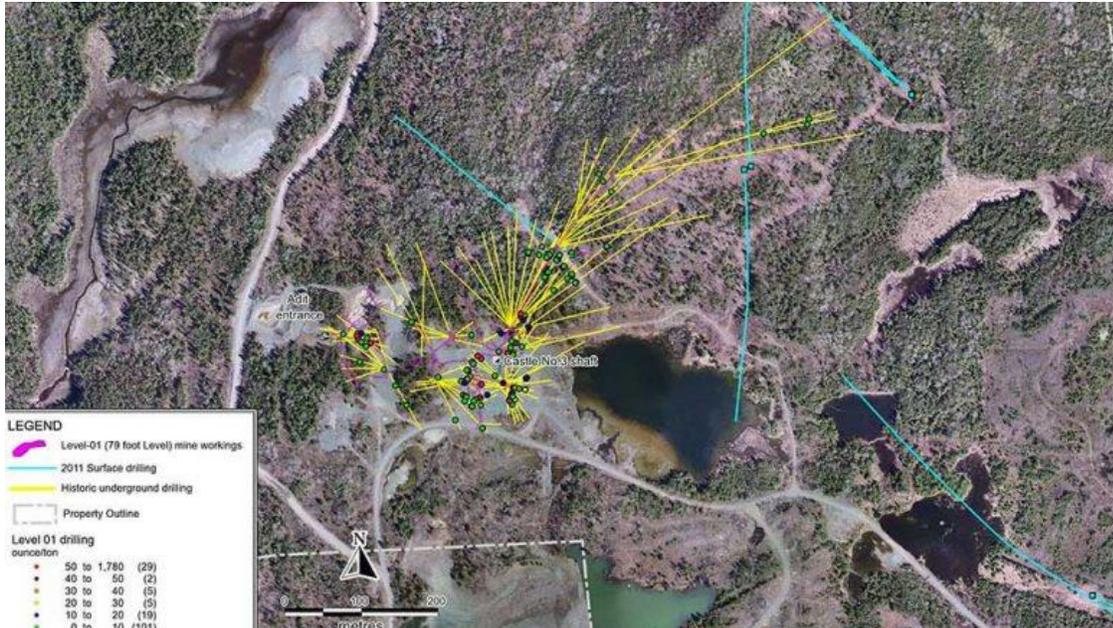


Castle Silver markets cobalt potential in Asia



The Castle Silver silver-cobalt project, near the northern Ontario community of Gowganda. Photo Credit: Castle Silver Resources.

POSTED BY: [TRISH SAYWELL](http://www.northernminer.com/) JUNE 9, 2017
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A junior with properties in northern Ontario containing past-producing silver and cobalt mines says metal traders and carmakers in Japan and battery manufacturers in China are eager to lock-up supply.

“Everyone is just scrambling to get cobalt,” Frank Basa, CEO of **Castle Silver Resources** (TSXV: CSR; US-OTC: TAKRF), says in a telephone interview from Beijing. “They are extremely aggressive and want to sign agreements with us.”

“In China the first thing they said to us was: ‘Do you need money?’ That’s the first thing they said!” he continues. “We told them we’re just at the exploration stage, but they said: ‘We’re interested.’ We said we don’t even have an NI-43-101 estimate of resources, and they’re still interested!”

In Japan, within two hours of meeting a large Japanese trading company, Basa says, he received a spec sheet for the grade of cobalt they wanted in cobalt salts that they need for lithium-ion battery production.

The Japanese are far more concerned about nailing down supplies of cobalt than they are of lithium, Basa explains, adding that the powerful island nation prefers to source its cobalt from outside of the Democratic Republic of the Congo. The DRC is responsible for around 60% of the world's mined cobalt production, according to the CRU Group.

“Cobalt is a major concern because a lot of people in Japan don't want cobalt from the DRC—they call it ‘conflict cobalt’ and they don't want it.”

Basa adds that in contrast to marketing efforts in Toronto and Vancouver, where almost no one knows who they are, in Asia the companies were well prepared and knew exactly who they were dealing with.

“We're just a little group out of northern Ontario and the Japanese companies knew everything about us,” he says. “They were so well-prepared, and they asked us how they could work with us. The same with the Chinese companies When we got here they already had our power point presentation before we talked to them. They really mean business here.”

Basa says he expects to sign an agreement to produce trial samples of cobalt concentrate from its Castle silver mine property, near Gowganda, and its Beaver silver-cobalt mine property, near Cobalt, Ontario.

“We will produce a sample for their evaluation to see if we can meet their specs,” he says. “Although the Japanese and Chinese ask for the same product the specs are different. But they will take anything with cobalt in it.”

This month the company accelerated its battery sector strategy and started an underground bulk sampling at its 100%-owned Castle Silver mine.

The company removed a large sample from a quartz-carbonate vein structure containing visible cobalt on the first level of the historic mine, which last operated between 1979 and 1989 under **Agnico Eagle Mines** (TSX: AEM; NYSE: AEM).

Some of the mineralized material is being submitted for immediate assaying while the remainder will be put through the company's proprietary Re-2OX hydro-metallurgical process to produce high purity cobalt powders for evaluation by end-buyers in the battery sector.

A series of bulk samples will be completed over the next few weeks along with the start of the first phase of underground drilling.

The Castle silver mine operated at various times between 1917 and 1989 and produced more than 9.5 million ounces of silver and 300,000 lb. of cobalt.

The 33-sq.-km (3,300 hectare) property near the northern Ontario community of Gowganda, about 85 km northwest of the historic Cobalt silver mining camp, contains three mine shafts.

In 2011, drill hole CA11-09 intersected 1.44% cobalt over 0.12 metre and drill hole CA11-08 returned a 3.09 metre intercept of 6,476 grams silver per tonne.

Preliminary metallurgical tests in 2017 showed excellent silver and cobalt recoveries, 98.5% and 70.5%, respectively, and concentrate grades of 11,876 grams silver per tonne and 10.5% cobalt.

Interestingly, Basa worked at the Castle mine in the early 1980s after graduating from university as a metallurgical engineer. At the time the mine was leased by Agnico Eagle and he worked in the mill processing ore from Castle and other mines in the Cobalt area.

“Agnico initially was not recovering the cobalt,” he recalls. “They left the cobalt in the concentrate after they extracted the silver and there was also cobalt left in the tailings.”

Basa was Agnico’s first metallurgical engineer at the mill and he told them they could separate the cobalt along with the silver. He took the cobalt waste and produced 13,000 tonnes of cobalt, which at the time, he estimates, was worth around \$52 million.

“We spent a lot of money on developing the process for doing that,” he says. “We got funding from the government. We engineered a process that separated both the cobalt and the silver from the concentrate and made the cobalt into a commercial product we could sell. That was fifty years ago.”

With low silver prices of around US\$6.50 per oz., however, Agnico stopped mining at Castle and elsewhere in the Cobalt camp in 1989, and subsequently shifted its focus to gold.

“When that happened, we picked up some of the assts that we knew to be high-grade, and we judged them to be the best for redevelopment,” Basa says.

Since then, Basa says, he has refined the separation process further into what he calls Re-20X, which the company hopes to use to produce high purity cobalt salts.

He and his team are also using the technology for test work at SGS Lakefield to see if will work for extracting cobalt, lithium, and other metals from used lithium-ion batteries.

“If we can show that it works, we could be in a position to open up a new line of business extracting cobalt and other metals by recycling spent lithium-ion batteries,” he explains. “We’ve asked around and we haven’t found anyone else in Canada doing that right now.”

In the meantime, the company has opened the main portal at the Castle mine with ministry approval following the completion of an environmental audit and financial assurances.

The underground drilling and sampling program was conducted on the first level from 21 metres where the company had been granted full access.

The first of eleven levels extends about 365 metres east-west and 360 meters north-south. An extensive network of structures and tunnels, developed by various operators in the 1900s, remains in excellent condition and only minor rehabilitation is necessary, the company says.

Castle Silver says visible cobalt in veins that pinch and swell and continue intermittently for many tens of metres on the first level are consistent with comments in a large amount of historic Agnico Eagle data acquired by the company.

The shallow dipping, 300-metre thick Nipissing diabase intrusive that underlies a large portion of the 33 sq. km Castle property is interpreted to be a heat source that mobilized silver and cobalt, but also gold, copper, zinc and nickel.

In August 2011, the junior signed a memorandum of understanding with the Matachewan First Nation in connection with exploration and development of the Castle silver mine property. The agreement remains in effect until Castle Silver and the Matachewan First Nation negotiate an Impact Benefit Agreement.

Under the MOU, Castle Silver will contribute toward the First Nation Community an amount equal to 2% of all exploration expenditures incurred on the property, issue 50,000 common shares over a period of eighteen months, and issue options to purchase 50,000 common shares.

About 80 km southeast of the historic Castle mine are the company's Beaver and Violet cobalt and silver properties, which it acquired in 2015.

The Beaver property, 5 km southeast of Cobalt, contains the former Beaver mine, which produced 7.1 million ounces of silver and 139,472 pounds of cobalt between 1907 and 1940. The property is adjacent and connected at depth to the Temiskaming mine, where silver was mined until 1989.

According to historical records, silver at the Beaver mine was mined from near-vertical silver-cobalt-nickel veins near the upper contact of a shallow Nipissing diabase intrusive. The intrusive crosscut Archean-age sedimentary and volcanic rocks.

Beaver Consolidated Mines worked the Beaver mine between 1907 and 1940 and developed two shafts, the deepest running to a depth of 487.7 metres, and 13.7 km of drifts and cross-cuts.

Between 1977 and 1989, Agnico Eagle produced 29,878 ounces of silver from the Beaver property.

In 2013, a 20-kg hand-fobbed sample from Beaver tested 7.98% cobalt, 3.98% nickel and 1,246 grams silver. The company is testing samples from tailings and historic waste-rock piles.

“We have spent \$4 million and completed a drill program in 2011 and have shown the world that you can find all these cobalt-rich silver veins that past mining left behind,” Basa says. “Past mining in the Cobalt area focused on veins with high-grade silver and ignored veins with low-grade silver even if they had high-grade cobalt.”