

THE NORTHERN MINER

THE GLOBAL
MINING
NEWSPAPER

www.northernminer.com

OCTOBER 4-10, 2010 • VOL. 96, NO. 33 • SINCE 1915

BC's power play to open province's northwest



BY ALISHA HIYATE

SPECIAL TO THE
NORTHERN MINER

Power is the missing ingredient in B.C.'s mineral-rich northwest, and the proposed \$404-million Northwest Transmission Line (NTL) could finally bring it to the remote region.

The 335-km, 287-kilovolt line, which would extend power as far north as Bob Quinn from Terrace, B.C., is nearing the end stages of an environmental assessment and the upcoming months could mark a decision to move ahead with it.

The high-voltage line, which is to follow the region's main artery, Highway 37, has seemed a certainty before.

Just a few years ago, it looked like the 287-kilovolt power line extension was a go — in 2007, **NovaGold Resources** (NG-T, NG-X) and **Teck Resources** (TCK.B-T, TCK-N) reached an agreement with BC Hydro to contribute \$158 million toward the transmission line extension.

But spiralling cost estimates at Galore Creek put both the project and the power line on hold — until a massive lobbying effort on the part of B.C.'s mining industry and the communities in the province's northwest revived the NTL.

Byng Giraud, secretary of the Northwest Powerline Coalition and vice-president corporate affairs for **Imperial Metals** (II-T), says there's a sense that this time it really is going to happen.

"It's no longer a roll of the dice, build it and maybe they'll come. It's pretty clear it's not a white elephant," he says. "Back in the '60s, you could have just built a piece of infrastructure like this and not worried about that — now, you've really got to make a business case."

Some of northwestern B.C.'s still-undeveloped mineral projects may be viable without externally sup-

THE NORTHERN MINER

THE GLOBAL
MINING
NEWSPAPER

www.northernminer.com

OCTOBER 4-10, 2010 • VOL. 96, NO. 33 • SINCE 1915

plied electric power. **Capstone Mining** (CS-T) is working on a prefeasibility study for a small, low-cost underground operation at its high-grade Kutcho Creek copper-zinc-gold-silver deposit, 120 km east of Dease Lake, powered by natural gas. And **Fortune Minerals** (FT-T) plans to use diesel power at its Mt. Klappan anthracite coal project, 330 km northeast of Prince Rupert, where it is updating a 2008 feasibility study. But there's no doubt that electric power from the provincial grid is a prerequisite for many others in a region that hosts more than a handful of large porphyry deposits.

Last year, the federal government pledged \$130 million toward the NTL under the "green infrastructure" fund, and the provincial government announced it would pick up much of the rest of the cost, with some help from the private sector.

More recently, negotiations with **AltaGas** (ALA-T) and its subsidiary, Coast Mountain Hydro, which has the Forrest Kerr hydroelectricity project near Bob Quinn Lake, yielded a \$180-million commitment in return for a 60-year electricity purchase agreement.

While the six-month environmental assessment process has been delayed by 31 days — BC Hydro asked for and received in early September, a suspension of the process to give it more time to collect information, study the possible impacts of project developments, and conduct field studies — it doesn't mean the high-voltage line will be derailed.

The process is now slated to finish in mid-November, and permits could be in place before the end of the year.

Red Chris: frontrunner

Despite the Galore Creek partners' involvement in previous plans for the transmission line, the most likely first user of the NTL is Red Chris, owned by Imperial Metals.

Imperial fought hard to buy bcMetals and its Red Chris porphyry copper-gold project in 2007, eventually besting rival bidder **Taseko Mines** (TKO-T, TGB-X).

While the transmission line extension did seem to be a reality in 2007, Imperial's chairman Pierre Lebel says power wasn't a major factor in the company's interest in the project, located about 80 km south of Dease Lake.

"Our decision to acquire the project was not driven by the power line at the time," Lebel says. "We accepted that sooner or later there would be a power line up there, so for us it was really based on the quality of that project and its potential for resource expansion."

Red Chris has proved that potential: the most recent resource



A map showing the proposed routes of the northwest transmission line, which will reach Bob Quinn Lake.

update in May 2010 (incorporating just 22 new drill holes) increased measured and indicated tonnage at Red Chris by 31% and inferred tonnage by 89%. Measured and indicated resources stand at 312 million tonnes grading 0.54% copper and 0.55 gram gold per tonne for 3.7 billion lbs. copper and 5.6 million oz. gold, with another 237.7 million inferred tonnes grading 0.46% copper and 0.5 gram gold for 2.4 billion lbs. copper and 3.8 million oz. gold.

Drilling continues to expand the deposit to the east and at depth.

A feasibility study was completed in 2004 on the assumption that power could be accessed from within 23 km at Tatogga, B.C. Imperial is currently working to update that feasibility with more realistic power assumptions, including the cost of running a line to Red Chris from Bob Quinn. The study, which is expected to be released in the fourth quarter, will also update other costs of the 30,000-tonne-per-day permitted development.

Imperial will need to build its own line to the access point at Bob Quinn, but it has some experience with that, having already built a 125-km, 138-kilovolt line to its 50%-owned Huckleberry copper-moly mine in Houston, B.C.

THE NORTHERN MINER

THE GLOBAL
MINING
NEWSPAPER

www.northernminer.com

OCTOBER 4-10, 2010 • VOL. 96, NO. 33 • SINCE 1915

Galore Creek

Power has been top of mind for NovaGold Resources since it acquired the Galore Creek porphyry copper-gold-silver project in 2003. In 2006, the company bought Coast Mountain Power (now owned by AltaGas) for its Forrest Kerr hydro power project. But president and CEO Rick van Nieuwenhuysen says the goal was not to supply Galore Creek power itself, but to prove the business case so somebody else would.

“The whole concept was to complete a feasibility study on Forrest Kerr so that a power producer would then be able to put that power into the grid,” he says. “It was to add to the intent of bringing the grid to northern B.C.”

Assuming the permits come through, Forrest Kerr is indeed going to be a supplier of power to the NTL.

The Galore Creek partners' more direct effort to bring power to the area by funding the power line fell apart when costs at the project soared as high as \$5 billion, more than double the anticipated costs. The rising estimates were largely due to the design of the tailings dam, and labour and cost competition with the Vancouver Olympics and the booming oilsands.

NovaGold and its equal partner at Galore Creek, Teck, are now working on a prefeasibility study looking at a new development plan that would expand throughput and see the tailings dam located in higher terrain, rather than in the Galore Creek valley. A 13-km-long tunnel would convey the ore to the mill, located next to the tailings pond. The study is expected to be complete in the second quarter of 2011. Some aspects of the new plan would require new permits, but the majority of permits are still good.

Galore Creek holds measured and indicated resources of 785.7 million tonnes grading 0.52% copper, 0.29 gram gold and 4.87 grams silver for 8.9 billion lbs. copper, 7.27 million oz. gold and 123.1 million oz. silver. Inferred resources stand at 522.5 million tonnes grading 0.35% copper, 0.29 gram gold and 4.79 grams silver for 4 billion lbs. copper, 4.9 million oz. gold and 80.4 million oz. silver.

Copper Fox Metals (CUU-V) is aiming to have a feasibility study for its Schaft Creek copper-gold-silver-moly project completed by the end of the year.

A 2008 prefeasibility study on the porphyry project assumed that power would be supplied from the B.C. grid from Hwy 37 near Bob Quinn, stating: “While generation of power onsite is a consideration, it is felt that it would have serious implications to the financial viability of the project.”

Currently, the closest power is 150 km south at Meziadin Junction, but if the NTL is built, Copper Fox would still need to build a 110-km access line to Bob Quinn.

With its feasibility, the company is hoping to shorten the projected payback period (from 4.9 years) and reduce initial capital costs, estimated at US\$2.95 billion.

The prefeasibility estimated that over 22.6 years, Schaft Creek would produce 4.76 billion lbs. copper, 4.5 million oz. gold, 32.5 million oz. silver and 255.2 million lbs. moly.

Measured resources stand at 463.5 million tonnes grading 0.3% copper, 0.23 gram gold per tonne, 0.02% molybdenum and 1.55 grams silver. Indicated resources come to 929.8 million tonnes grading 0.23% copper, 0.15 gram gold, 0.02% moly and 1.56 grams silver.

Geophysical surveys have indicated the deposit is open to the north, east and at depth. A recent drill hole returned visible mineralization to a depth of 450 metres, about twice as deep as other holes in the same section, and ended in visible mineralization.

Copper Fox has earned 100% of Schaft Creek from Teck Resources, subject to a 30% net proceeds interest held by Liard Copper Mines (a private company 78%-owned by Teck). By completing a positive feasibility study on its sole project, Copper Fox can earn that indirect interest. Teck has certain back-in rights that it could exercise for up to 75% of the project.

With the KSM gold project, 65 km northwest of Stewart, B.C., **Seabridge Gold** (SEA-T, SA-X) is in the enviable position of having a Plan B in case the NTL is delayed or fails to get its environmental assessment certificate. It's close enough to existing power infrastructure that BC Hydro can meet its power needs at Meziadin Junction under existing tariffs. That plan would involve an upgrade of the line from Terrace to Meziadin Junction to 287 kilovolts from 138 kilovolts — something that would happen anyway under the NTL proposal.

“We would probably need to have power available for the site by 2015 and if they can accommodate that schedule, great,” says company president and CEO Rudi Fronk. “If they can't, we can go ahead with our plans that we're working on with them now under the existing tariffs.”

The company is not planning to develop the deposit itself; it's aiming to interest a major to come in at some point as Seabridge proves its feasibility.

Building on a scoping study released in July 2009, Seabridge completed a prefeasibility study in March 2010 that estimated operating costs at US\$144 per oz. gold. The study outlined a large-tonnage, 120,000-tonne-per-day, open-pit operation with a mine life of 37 years, and startup capital costs of US\$3.4 billion (including a US\$394-million contingency). Fronk says power only represents about 3% of that.

KSM hosts reserves of 1.6 billion tonnes grading 0.59 gram gold

THE NORTHERN MINER

THE GLOBAL
MINING
NEWSPAPER

www.northernminer.com

OCTOBER 4-10, 2010 • VOL. 96, NO. 33 • SINCE 1915

per tonne in three deposits: Kerr, Sulphurets and Mitchell.

Seabridge is working on an updated prefeasibility set for March 2011, and expects to file an environmental assessment application late this year.

It's also keeping the drills going to add to reserves and to prove up a fourth gold-copper zone at KSM next to the Mitchell zone. The company says the Iron Cap target has a strike length of at least 900 metres, a width of 400 metres, and is up to 350 metres thick.

Silver Standard Resources' (SSO-T, SSRI-Q) adjacent Snowfield and Brucejack projects are near neighbours to KSM. A recent preliminary assessment of a combined Snowfield/Brucejack project put initial capital costs at US\$3.5 billion, including a US\$454-million contingency.

In a base-case scenario, the study pegged the pretax internal rate of return (IRR) at 12.4%, the net present value (NPV) at US\$2.3 billion (at a 5% discount rate) and put the payback period at 5.3 years.

The mine life of the open-pit operation at a mill feed rate of 120,000 tonnes per day, is expected to be 27 years.

Silver Standard is now deciding whether to treat the projects separately or as a single project.

Drilling this summer continued to expand deposits at both projects and the company will have updated resource estimates, incorporating 42,000 metres of 2010 drilling, in the first half of 2011.

Snowfield contains measured and indicated resources of 1.1 billion tonnes grading 0.63 gram gold, 1.75 grams silver, 0.11% copper, 89 parts per million moly, and 0.49% rhenium for 22 million oz. gold and 41.6 million oz. silver.

Brucejack hosts a measured and indicated 120.5 million tonnes grading 1.04 grams gold, and 16.9 grams silver for 4 million oz. gold and 65.4 million oz. silver.

The NTL would bring power to within 40 km of the project, at the Bell II substation (south of Bob Quinn and north of Meziadin Junction). The study assumed that Silver Standard would contribute about \$20 million of the cost of the line.

There's no doubt that **Hard Creek Nickel's** (HNC-T) Turnagain nickel sulphide project is huge, with a measured and indicated resource of 695 million tonnes grading 0.216% nickel and 0.014% cobalt.

The metallurgy, however, has proven difficult, and the company is aiming to improve the concentrate grade at Turnagain to 6-8% from the 4% predicted in a preliminary assessment released in April.

The study, which assumed the NTL will go ahead, estimated capital costs for an open-pit operation producing 77 million lbs.



SEABRIDGE GOLD

A westward view of Seabridge Gold's Kerr-Sulphurets-Mitchell gold project.

nickel per year at US\$2.92 billion. Each pound of nickel would cost US\$3.30 to produce at the project, located 70 km east of Dease Lake. The payback period was estimated at 8 years, and the mine life at 24.4 years.

Hard Creek Nickel would need to build a 190-km power line to Dease Lake (it would then transfer ownership to BC Hydro for a nominal sum); and a 65-km line into the project from there.

A preliminary economic assessment for **Skyline Gold's** (SKV) Bronson porphyry gold-silver-moly deposit, pegged capital costs at \$237 million, including the cost of building a transmission line to Bob Quinn, 70 km east.

The study, released in March 2009, put the payback period at 8.2 years and the mine life at 18.4 years. The after-tax IRR was estimated at 10% and the NPV (at a 7.5% discount rate and after taxes) was pegged at \$38.3 million.

Hoping to improve those numbers, Skyline is updating the study, this time looking at a smaller, higher-grade initial pit that would target higher returns and faster payback. It's also examining production of magnetite as a byproduct.

Bronson contains 225 million measured and indicated tonnes grading 0.36 gram gold, 2.22 grams silver, 0.14% copper and 0.0077% moly for 2.6 million oz. gold, 694.8 million lbs. copper, 16.1 million oz. silver and 38.2 million lbs. moly.