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Northern Freegold forges ahead in the Dawson range



BY MATTHEW
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SITE VISIT

VILLAGE OF CARMACKS, YUKON — It has been a season of perseverance for Yukon-centric explorer **Northern Freegold** (NFR-V). Despite tepid equity markets, the company pushed forward with a drill program at its Freegold Mountain gold project 200 km northwest of Whitehorse, and advanced towards a resource update expected during the fourth quarter.

Flying into Northern Freegold's exploration camp by helicopter, it's evident why the company is excited about a 190 sq. km land package that already boasts a multi-million ounce gold resource in two deposits. Placer gold operations, a hallmark of Yukon exploration, stand out amongst forested hills, and a rustic roadway runs north en route to **Kaminak Gold's** (KAM-V) Casino gold-porphyry project.

An aggressive 12,400-metre drill program in 2011 saw Northern Freegold establish its Revenue deposit. In early January, the company announced it had delineated an inferred resource totalling 101 million tonnes grading 0.34 gram gold per tonne, 3.14 grams silver per tonne, 0.13% copper and 0.04% molybdenum for 1.1 million oz. gold, 10.2 mil-

lion oz. silver, 287 million lb. copper and 90 million lb. molybdenum using a 0.5 gram gold equivalent cut-off.

"Revenue is hosted in a breccia, which we'll see in a moment when we take a walk out to our core shack," vice-president of exploration Paul Reynolds says, pointing at a drilling map in Northern Freegold's administrative building. "It's a rock that has basically exploded on itself a couple of times, it is sort of like peanut brittle, but it has gold in it, which is much better for us. So you have the breccia there that hosts quite a bit of mineralization, but you also have the granodiorite intrusion that the breccia has come into, and it actually has quite a bit of porphyry gold-copper-molybdenum mineralization."

The focus of a 2,300-metre program in 2012, however, has been Northern Freegold's Nucleus deposit, where the company has established indicated resources of 48 million tonnes grading 0.7 gram gold, 0.9 gram silver and 0.06% copper for 1.39 million contained oz. gold equivalent. During the 2012 drill season Northern Freegold was focused on high-priority targets designed to expand the resource in key areas, and optimize an open-pit mine plan.

The Freegold Mountain property sits in Dawson range-type granites around 75 million years old. Standing outside of Northern Freegold's core shack and looking north, it is possible to see a tree-lined hill marking the passing of the Big Creek fault — one of the major geological structures running through the region.

"You have to remember that the displacement, or the dextral faulting, which opens up areas we call dilations," Rey-

nolds comments, pointing out a flow in the regional structure during a presentation in Northern Freegold's map room. "Into those openings came the Revenue breccia and some of the younger intrusions that host the Nucleus deposit. From a geological standpoint, that's an attractive feature to have for these deposits . . . it is a nice feature to have with pretty much any deposit. If you look at the Timmins camp in Ontario, you'll see similar settings in older rocks — the main difference being those are gold-only quartz veins, whereas we're talking about a porphyry copper-gold-molybdenum system."

Northern Freegold announced results from its five-hole drill program at Nucleus on Oct. 10. The company has extended mineralization at depth, cutting promising grades from 45 metres to 170 metres below Nucleus' inferred and indicated resources.

Highlights of the 2012 drill program include: 13.2 metres grading 1.57 grams gold from 82 metres depth in hole 12-175; 27 metres of 1.08 grams gold from 216 metres in hole 12-176; and 4 metres averaging 2.64 grams gold from 382 metres in hole 12-178.

"Our exploration objectives this season were to extend our known mineralization to depth at the Nucleus gold resource and better understand the geological controls," president and CEO John Burge says, pointing out that Nucleus starts near surface and extends to a maximum depth of 280 metres. "We achieved both of these objectives," he says.

The Nucleus deposit is a low-grade, bulk-tonnage, intrusive-related low sulphidation epithermal gold deposit,

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though Northern Freegold is also excited about its potential as part of a much larger copper-gold porphyry system that could encompass Revenue and the nearby Stoddart deposit. The company is running a geological model that assumes a typical porphyry system that has been laid horizontally and faulted. A gold-rich Horizon runs through Revenue at the top of the system, and transitions into copper-rich mineralization as it runs southeast towards the Stoddart deposit.

“We do think it is one large system,” Reynolds points out over sandwiches at a rustic picnic table outside the camp mess hall. “You can see that from the soil geochemistry. The real clincher, though, is the induced-polarization work. In these classic copper-gold porphyry systems, you tend to have a halo with a lot of pyrite, and the core is where you get your orebody. You end up with these doughnut-type anomalies. Now, Nucleus is a bit of a different beast because it has the sulphide associated with the gold. We’re seeing a lot of potential there in areas we haven’t tested.”

And Northern Freegold has a big tract of land that runs 37 km north to south. It is easy to grasp the scope of the regional play hovering high above the company’s camp on a sunny August day during a helicopter tour. With that type of tonnage potential, it’s integral that Freegold Mountain lies near the all-season Klondike Highway, and 30 km away from a commercial power supply.

Another major project during 2012 has been a metallurgical study aimed at establishing the viability of an eventual operation at Freegold Mountain. Northern Freegold is hoping to combine its metallurgical results with an updated resource during the fourth quarter to build towards a preliminary economic assessment (PEA) for the



PHOTO BY MATTHEW KEEVIL

The core shack at Northern Freegold Resources’ Freegold Mountain copper-gold project, 200 km northwest of Whitehorse, Yukon.



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Core at Northern Freegold Resources’ Freegold Mountain copper-gold project in the Yukon.

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PHOTO BY MATTHEW KEEVIL

Northern Freegold's Freegold Mountain copper-gold project, seen from a distance in a helicopter.

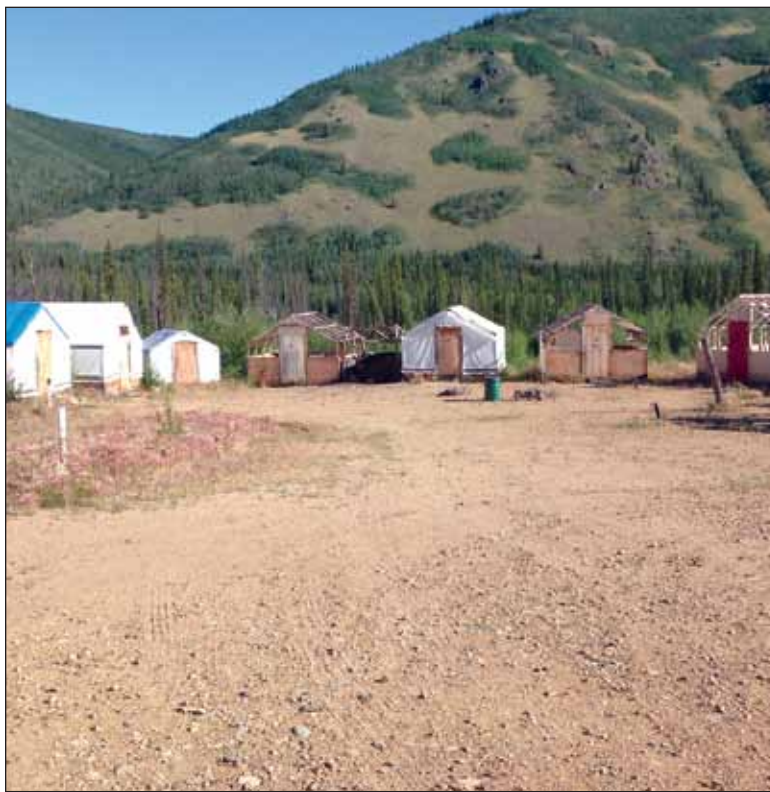


PHOTO BY MATTHEW KEEVIL

Camp facilities at Northern Freegold's Freegold Mountain copper-gold project in the Yukon.

project in the second half of 2013.

On Sept. 12, the company released polymetallic metallurgical results from its Revenue copper-gold-moly zone. The study includes compositions of granodiorite sulphide, breccia sulphide and breccia oxide. Weighted average recoveries included 92% copper, 74% gold, 81% moly and 59% silver.

The metallurgical work assumes a recovery process consisting of grinding, gravity separation for gold and silver, flotation to produce a copper concentrate and a moly concentrate. A final stage involves cyanidation of the cleaner scavenger tails for final gold and silver recovery.

Northern Freegold released metallur-

gical results on the gold-dominant Nucleus deposit on Sept. 19. The company found it could achieve 97% gold recoveries and 51% silver recoveries via whole-ore cyanide leach.

"[We're] very pleased with the excellent overall recoveries of copper, gold, molybdenum and silver through the production of copper and moly concentrates, and with additional gravity recovery of gold and silver," Burges comments, pointing out that Nucleus' recoveries also compare favourably to similar-grade gold deposits. "This is an important milestone for Revenue."

On Aug. 30, Burges closed an expedited private placement that garnered Northern Freegold gross proceeds of

US\$1 million. The company issued 10 million units at 10¢ each, bringing its cash position to \$2.2 million.

Northern Freegold is aiming to use a series of milestones over the next six months to boost its share price and supply more favourable financing conditions heading into next year's drill season. The company is working away at environmental baseline work that will form the foundation for its PEA, along with an updated resource at Nucleus and recently completed metallurgical work.

Northern Freegold has traded within a 52-week range of 8¢ and 36¢, and has 126 million shares outstanding for a \$15-million market capitalization. The company closed at 13¢ at press time.