

# A PRIME TARGET

*Underground exploration, bulk sampling and development get under way at the Eskay Creek gold property.*

*By Vivian Danielson*

**H**emlo, Ont. is a long way from Eskay Creek, B.C. Despite this and other marked contrasts, both mineral projects skyrocketed to prominence as a result of unique and spectacular discoveries that were avidly promoted by Vancouver mine financier Murray Pezim.

The two projects have other interesting parallels, including a history of exploration that spanned decades before Pezim arrived on the scene. Both projects were intermittently explored and/or drilled by a succession of companies that, for one reason or another, failed to uncover the real geological story that lay beneath the soil and rock.

Exploration at Eskay Creek dates back to 1932 when a syndicate headed by Tom MacKay first staked a remote area some 80 km north of Stewart, B.C. Since then, about 11 companies (including Texasgulf and an early predecessor to Placer Dome) explored the property; the work included drilling and underground development in several zones south of the current area of interest.

Throughout all this, Tom MacKay's widow, Marguerite, held on to the property because of her husband's belief that it would one day make a mine. Her company, Stikine Resources, signed a joint-venture deal with Calpine Resources (now a subsidiary of the Prime Resources group) to explore the property in 1988. In the fall of that year, as part of a 6-hole drill program contracted to Keewatin Engineering, a significant gold discovery was made when the last hole of the program intersected 96.5 ft. grading 0.752 oz. gold and 1.13 oz. silver per ton (29 metres grading 25.8

grams gold and 38.7 grams silver per tonne). It was a blind discovery in the sense that the zone did not outcrop.

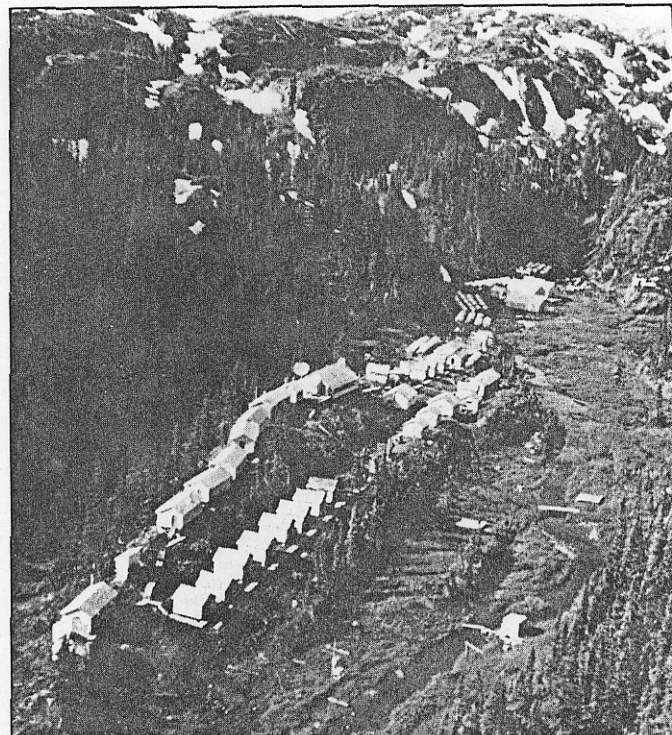
"Drilling worked at Hemlo and it worked here," Prime's field manager Gerry McArthur told *The Northern Miner Magazine* during a site visit to Eskay Creek this summer. The original drill program outlined by Prime Explorations was based on a detailed office evaluation of previous exploration results, surface geological mapping and a soil geochemistry program. As an interesting aside, important clues were gleaned by Prime after it reviewed "encouraging" results from a 4-hole drill program carried out by Kerrisdale Resources on the 21A zone in 1985. Kerrisdale was unable to raise funds to continue work and its option from Stikine was dropped.

After earning its 50% interest, Calpine continued to drill what is now the 21A zone. As the program progressed, however, some of the initial euphoria began to wane as the metallurgical complexity of the zone became evident. In the summer of 1989, drilling on the 21A deposit was suspended in favor of an accelerated program on the 21B deposit, where some widely spaced step-out holes had revealed high-grade gold and silver mineralization associated with base metals. The two de-

posits are separated by an approximately 140-metre-long weakly mineralized area.

Ongoing drilling in the 21B zone returned some of the most spectacular high-grade results ever encountered on the property, including the now-famous hole 109, a widely spaced step-out hole drilled on an induced polarization target. It returned a dazzling 682-ft. (205-metre) interval grading an average of 0.87 oz. (30 grams) gold, 0.97 oz. (33.3 grams) silver, 1.12% lead and 2.26% zinc. (From a metallurgical standpoint, an important factor in determining future project economics is the dramatic change from a complex antimony- and arsenic-dominated association in the 21A to a more conventional zinc-lead-copper sulphide association in the 21B.)

Earlier this year, a reserve calculation by Roscoe Postle Associates was announced for the 21A and 21B deposits, based on infill drilling to the end of 1989. These total 1.55 million tons grading 1.34 oz. gold and 36 oz. silver (1.4 tonnes grading 45.9 grams



***Aerial view of the Eskay Creek camp, in northwestern B.C., which has expanded considerably***



gold and 1.2 kg silver) — plus base metals — with the bulk of the reserves contained in the 21B zone. The 1990 drill program is expected to add significantly to existing reserves.

McArthur insisted the project could not have progressed to this point were it not for the winter drilling programs carried out by contractor Falcon Drilling. He estimates that operating costs per foot in winter total "significantly less" (about 25% to 30% less) than those of summer programs, when costly helicopter support is required.

"The Bombardier BR-400 snow machine was the big revolution here," he said. This tracked vehicle was used for snow removal and to assist drill moves, while snowmobiles provided quick and easy ground transport for men and equipment between the drill sites and the main camp.

### Underground Program

When *The Northern Miner Magazine* made a recent visit to the Eskay Creek property, crews had already started an underground program that will entail exploration, bulk sampling and development on the 21B zone. The first phase involves the driving of a 500-metre exploration decline to enter



**Weatherhaven Resources installs an exploration camp at Eskay.**

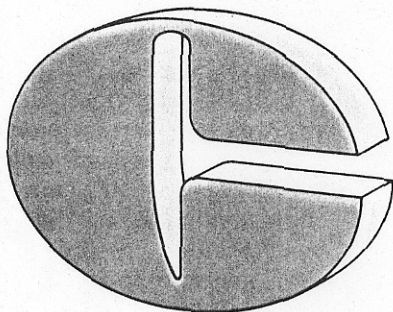
the heart of the high-grade reserves, with the work contracted to Tonto Mining, a division of Dynatec.

Ron Koebel, project superintendent for Tonto Mining, and Kel Collins of Corona Engineering could only provide the briefest of underground tours as crews were only in about 80 metres at the time of our visit. "It's going well and we should hit the zone in another

month," Koebel said, adding that the entire job should be completed sometime in October.

Mobilization for the underground program took place in June of this year. A skycrane helicopter was required to bring in heavy equipment such as compressors, etc., to the remote alpine plateau some 1,100 metres above sea level. Weatherhaven Re-

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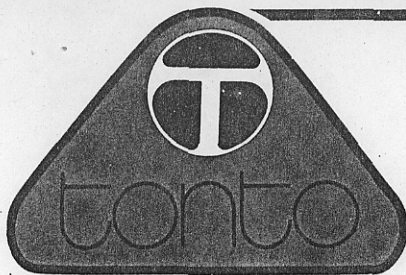
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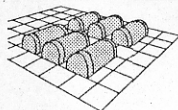


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sources was contracted by Prime to set up a second camp, now called Eskay Two, to house crews for the underground program. (The 80-person main camp houses exploration and drill crews.) This meant flying in 31,500 kg of equipment to set up the seven orange-and-white insulated fabric structures that now make up the picturesque portable camp. Site preparatory work was carried out by Jemplant Construction of Prince George, B.C.

McArthur and Ron Fenlon, also a field manager at Eskay Creek, explained that after the 21B zone is reached, underground drilling, test mining, and a bulk sample for metallurgical testing at Lakefield Research will be carried out. "This decline will provide a good look at the Pumhouse Lake zone as well as the 21B," said Fenlon. "It will also provide information on continuity, rock stability and other aspects." Later this year, a second exploration decline may be driven at a different location to investigate the north end of the 21B zone.

### High-grade Reserves

Because exploration is still continuing on the Eskay Creek property, it is too early to determine what the ultimate size of a mining operation could be. Reserves have yet to be defined on several recently discovered zones parallel to the 21B, the Pumhouse Lake and 21C, and other promising targets remain to be tested.

Still, it is obvious that the 21B deposit, with its exceptionally high-grade reserves, is an ideal place to start advanced engineering for a future mining operation. The 21B deposit presents exciting possibilities for mine development from an economic point-of-view because it provides an opportunity for a high rate of return and quick payback, MacArthur told *The Northern Miner Magazine*.

The underground program will also provide information that will help determine mining and milling methods. Some preliminary metallurgical work already has been done, which indicates gold and silver recoveries will exceed 90% with conventional grinding techniques and recovery methods (a combination of gravity and flotation). But mineralogy within the 21B deposit is complex, and the representative bulk sample is expected to provide more definitive information on recoveries (particularly for base metals) and concentrate products.

The underground program should





**Analysis is performed on core from the 21B zone, which accounts for most reserves.**

also provide a better picture of which mining methods will be the most feasible and economic. At this stage, certain portions of the 21B deposit are potentially minable by open pit, as is the newly discovered Pumphouse Lake zone. The remaining reserves are still relatively close to surface and should be accessible by underground ramp, assuming favorable ground conditions. At this stage, it is anticipated that ground conditions could be less than ideal in some portions of the 21B zone. If this proves true, and extensive ground support is required, underground mining costs could be considerably higher than what otherwise might be expected.

#### **Higher Stripping Ratios?**

Alternatively, if predominantly open pit methods are deemed more likely, future operators could be looking at higher stripping ratios, which again means increased mining costs. The weather is another factor that can't be ignored, as snow accumulations can reach nine metres in winter months.

Even taking these factors into

account, mining analysts familiar with Eskay Creek predict operating and capital costs will be relatively low. The property will also be accessible by road sometime next year, and no unusual environmental problems are anticipated. Nor is any opposition from native groups expected.

Although exploration is still far from over at the Eskay Creek property, it is increasingly evident the project has what it takes to become a mine. Major mining companies appear to agree, which sets up another parallel to the Hemlo story. Both projects were

discovered by junior companies that were later acquired by majors. In the case of Eskay Creek, each of two major companies, Placer Dome and Corona, has substantial equity positions in Stikine. Corona also has a sizable stake in Prime, which is operator of the project, and it hopes to name any future mine after Tom MacKay.

Eskay Creek still has some way to go before it can rival the truly major discoveries at Hemlo. Even so, it bears yet another similarity with Hemlo, namely overstating and claim disputes. Bring on the lawyers. □

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