

INMET MINING CORPORATION

MEMO

To:

Ian Morrison

From:

Peter Daubeny

Subject:

Month end report. "Proposed exploration in the Kootenay Terrane

portions of the Cry Lake map sheet."

Date:

June 4, 1996

Target:

A VMS deposit hosted in the Devonian-Mississippian of the Kootenay Terrane (Yukon-Tanana Terrane equivalent in BC) in the Cry Lake and McDame map sheets in Northwestern BC.

Summary:

A literature search conducted during the course of the Cordilleran VMS generative project has identified a small number of mineral occurrences hosted in a perspective belt of rocks in the Cry Lake map sheet. None of the showings have been classified as VMS occurrences. However, mineralogy and host rock association for at least one of the occurrences suggests a possible volcanogenic origin for some of the mineralization. These mineral occurrences have recently been recognized by the GSC as lying in Yukon-Tanana Terrane equivalent rocks (Open file 2779, 1994). Notice of a stream geochemical survey data release for the Cry Lake map sheet scheduled for July 4, 1996 has been received. As this may precipitate an increase in exploration in this area, it maybe prudent to examine some of the more perspective showings now, particularly in the 600 square km belt of Yukon-Tanana rocks south of McDame.

Location and infrastructure:

The Cry Lake map sheet (NTS 104I) is bordered by the Stewart to Cassiar Highway on it western edge. The towns of Dease Lake and Cassiar are located at the southwest and northwest corners of the map sheet, respectively. Road access to the Kutcho Creek deposit traverses the southern half of the sheet, while road access to the village of McDame comes within 20 km of the prospective Yukon-Tanana rocks in the northern quarter of the map sheet. Topography in the map sheet is moderately rugged. In general, irregular mountain masses are separated by deep, smoothly glaciated valleys. Elevations range from 3000 to 7000 feet with about half of the map sheet lying above tree line.

Mineral showings;

There are only four MINFILE occurrences in the Yukon-Tanana of the Cry Lake map sheet. Three of these showings, the Nizi, RN, and Keel, are listed as polymetalic base

metal vein occurrences. The GB showing is a base metal + pentlandite and asbestos prospect hosted in an ultramafic intrusion.

Northwestern BC (figure 1). A history and description of the Nizi property geology and mineralization was compiled by GSW from assessment reports and information provided by Gold Giant minerals in March 1992 (memo attached). In September of that year an eight hole, 4269 foot drill program was completed. All the drill holes were targeted on quartz vein "stockworks" hosted in a "spotted rhyolite" (GNCL #166, 173, and 187, 1992). The best intersections were 0.17 opt Au and 1 opt Ag over 45.2 feet in NZ #1 and 0.1 opt Au and 58.9 opt Ag over 3.3 feet in NZ #5. No significant assays were reported from the other 6 holes. The results were judged to be disappointing, especially in light of the high gold values obtained from surface and trench sampling (up to 94 g/t Au over 2.3m). There is no record of any work being undertaken on the property since then and the current claims expire August 13, 1996.

On the negative side:

- There are no known VMS occurrences in this recently recognized portion of the Yukon-Tanana Terrane. Two VMS occurrences, Lang Creek (27,000 tonnes grading 1.52% Cu and 0.9% Zn) and the Snowy Creek rhodenite occurrence, located 45 km to the northwest of the Nizi property, are Cyprus or Besshi type prospects and are hosted in Slide Mountain Terrane rocks.
- It has not been demonstrated that there is a VMS occurrence on the property. But early workers make reference to "massive sulfide horizons" and to zones with "zinc rich bands in pyritic rhyolitic breccia" (e.g. Cavey, Chapman, 1991).
- However, assessment report 22840 (1993) categorically states "All of [the] mineralization appears to be epigenetic [and] associated with quartz/carbonate veins controlled by shears/shear fractures".
- There appears to be only rare chalcopyrite associated with the banded zinc mineralization.
- There are no reference to copper in soils, although there are large (up to 1×1.5 km) Ag, Zn, Au, As, Sb, and Pb soil geochemical anomalies.
- Topography underlying the claims is both steep and high (4000 to 6000 feet). Outcrop exposure is about 20% above tree line and <3% below tree line.
- Although sericite alteration appears to be ubiquitous, most recent reports make no mention of chlorite alteration associated with any of the mineralization.

On the plus side:

- The property is underlain by bimodal volcanics, ultramafic intrusions and sediments. The volcanic pile includes felsic fragmentals.
- Up to 0.2% Sn is reported to occur with the stratabound massive sulfides (GSW summary).
- Traces of disseminated chalcopyrite and galena are reported to occur in brecciated and banded rhyolite (Ore Quest report, January 30 1992).

- The felsic volcanic unit is described as being "locally black-colored" and locally anomalous in gold. Could be chlorite alteration?
- DDH NZ#3 (H zone) intersected 0.4 meters of massive sphalerite, galena and pyrite and other zones of disseminated pyrite and chalcopyrite, but no assays are given. A cross section of this hole shows the massive sulfides to be distinctly strata-bound in a four meter thick felsic volcanic horizon.
- Assessment report 22840 reports that the program was essentially precious-metal oriented and while all samples were analyzed for gold and silver only a few were analyzed for lead, zinc and copper. For example, 350 soil samples taken to follow up a 1992 airborne EM survey were only analyzed for gold.
- Numerous airborne EM anomalies exist on the property. Some are unexplained and others have not been investigated.
- Barite as an accessory mineral is reported but it is unclear as to how it occurs.

Other mineral occurrences in the Yukon-Tanana of the Cry Lake map sheet:

<u>Keel</u>: (MINFILE # 104I 098). The keel showing is located 9 km southwest of the Nizi occurrence. This area is underlain by sediments, mafic volcanics and a "sericite tuff". The showing consists of small quartz-veins carrying arsenopyrite, pyrite, galena and sphalerite. No assays are given.

RN: (MINFILE # 104I 041). A <1 meter wide quartz-vein carrying galena, pyrite and sphalerite located 3 km southwest of the Nizi occurrence. This showing is hosted in the early Permian aged Nizi Creek Pluton. Chalcopyrite-rich float has also been located in this area. Best assay from the chalcopyrite zone is 2.79% Cu and 27 g/t Ag.

<u>GB</u>: (MINFILE # 104I 030). Pyrite, pyrrhotite, pentlandite, chalcopyrite and bornite occur in serpentinized peridotite 7 km along strike to the southeast of the Nizi occurrence. Best assay is 27.4 g/t Ag and 0.11% Ni.

Of these 3 MINFILE occurrences, only the Keel could possible be construed as having mineralization associated with felsic volcanic rocks. All of these showings are currently on open ground but none of them would appear to be worth visiting at this time.

VMS potential of the remainder of the Cry Lake map sheet:

The geology of the Cry Lake map sheet encompasses portions of all of the major inner Terranes of the Canadian Cordillera. Included in this collage are the Permian to Middle Jurassic of Stikinia, the Triassic and Jurassic of Quesnellia, the Mississipian to Lower Jurassic of Cache Creek, the Devonian to Triassic of Slide Mountain, the Upper Proterozoic to Mississippian of Ancestral North America (Cassiar Platform), and the Devonian to Mississippian of the Yukon-Tanana Terranes. To help assess the VMS potential of the map sheet, a MINFILE search for all mineral showings containing copper combined with at least gold or zinc was conducted. The results turned up a number of VMS showings in 30 km belt that includes the Kutcho Creek deposit. However, these occurrences can probably be dismissed as having been thoroughly explored by previous

workers in this area. Elsewhere in the Cry Lake map sheet, a few showings that maybe worth visiting if time permits are listed below.

Acme, Castle: (MINFILE #104I 077) Located 15 km east of Dease Lake. This property is underlain by intermediate and felsic volcanic and sediments of the Kutcho formation. Stratabound chalcopyrite and sphalerite occur in chlorite schists. Disseminated pyrite occurs in a 3 km long belt of rusty and cherty rhyolite. Soil sampling has outlined coincidental copper-zinc anomalies in zones up to 400×600 meters square. The geological setting of the Acme ground is very similar to the Kutcho Creek deposit 65 km to the east. The last work on this property was performed in 1990 and the ground is currently open.

T-Horn and Tanzilla showings: (MINFILE #'s 104I 022, 050) Located about 25 km southeast of Dease Lake and 9 km from the abandoned BC Rail right-of-way. The geological setting of the T-horn property is the Triassic to Lower Jurassic of Stikinia. Polymetalic mineralization associated with a mafic-felsic volcanic contact has been identified along a strike length of 5.4 km. Best assay ran 23.3% Cu, 17% Zn, 14.38 opt Ag and 0.125 opt Au (GNCL # 114, June 12, 1992). MINFILE reports somewhat lower grades and an epithermal setting.

<u>Dalvenie</u>: (MINFILE #104I 003) Located 5 km west of the Stewart-Cassiar highway and 30 km south of Dease Lake. The Dalvenie prospect is underlain by Triassic aged Stuhini Group volcanics and sediments of the Stikine Terrane. Locally, these rocks have been intruded by a Late Triassic aged ultramafic body. The Dalvenie showing is described as a fault zone up to 8 meters wide and with a strike length of 1.14 km. This structure is mineralized with pyrite, chalcopyrite, arsenopyrite, bornite, hematite, barite, magnetite, pyrrhotite and sphalerite. The wall rock consists alternately of ultramafics and sediments. The best assay from a 1968 drill program was 3.73% Cu and 4.8 g/t Au over 1.5 meters. No recent work has been recorded on the Dalvenie prospect.

Recommendations:

The favorable geological setting and ambiguous description of many of the high grade showings on the Nizi occurrence make it a high priority for an examination at the earliest opportunity. The Acme-Castle showings are a must have if we are at all interested in the Kutcho Creek belt. Other mineral occurrences in the Cry Lake map sheet are probably not priority targets, but could be examined if time permits.

Other notes:

I am including some recent photographs of the Bear Pass Property with this report.