TARGET TYPE: The property is an example of a volcanogenic massive sulphide potentially of a Besshi type affinity.

GEOLOGICAL"SEITITING: The property is underlain by the Mississppian age Milford and older Kaslo groups. The Milford may be correlative with Fennel and Slide Mountain rocks. A gradational contact exists between the dominantly sedimentary Milford rocks and the more volcanic Kaslo group. This contact occurs at approximately the 1600 metre elevation datum on True Blue Mountain. Within the Milford group are a series of agilites and interbedded pyritic to manganiferous cherts and exhalites which increase in frequency toward the upper volcanic (Kaslo) contact. Volcanic rocks include massive foliated mafic flows, chiorite schists and potentially subvolcanic ihtrusions. Felsic tuffaceous sequences are aiso identified. Geological relations in the area of the True Blue adits are shown on Figure 2.

Beds are west to southwest dipping at moderate angles, 30 to 40 degrees. Beds are isoclinally folded by two major fold events. The earliest of these (D1) generates tight fold structures which are south-southwest plunging at moderate angles, $20 \rightarrow->200$. D1 minor folds are shown on Plate 1. Smaller scale D2 structures rotate the earlier linear fabrics into moderate east or west directed plunges. D2 folds are shown on Plate 2. Sterographic data, Figure 3 clearly shows that earlier south plunging rock fabics are rotated by later smaller scale folds. It is critical to note that the overall plunge direction remains to the south-southwest at moderate angles.

MINERALIZATION AND ALTERATION: Two massive sulphide lenses are identified at the True Blue occurrence. Where they are exposed they range in thickness from 25 to 35 cm 's. Mining records suggests thicknesses of up to 1.2 m's were encountered. These lenses are very copper rich and sometimes demonstrate well defined zinc rich layers. Material which was mined had an average grade of $8.9 \% \mathrm{Cu}, 1-2 \% \mathrm{Zn},<0.5 \% \mathrm{~Pb}, 58.6$ $\mathrm{g} / \mathrm{T} \mathrm{Ag}$ and $1.3 \mathrm{~g} / \mathrm{T}$ Au. A distinctive zonation exists across all mineralized horizons on this property with Mn and Ba eontents in exhalitive horizons increasing distally to away from main showning.

Massive sulphides exposed in the west rib of the upper adit are shown in Plate 3 and a more distal manganiferous chert horizon in Plate 4.

The main massive sulphide lens is overlain by 1.0 to 2.0 m's of strongly sericitized and weakly pyritic volcanic tuffs possibly of felsic origin. Although the sulphide lenses decrease in the more distant portions of the True Blue underground workings the hangingwell alteration does not diminish. Alteration levels are similar at the collar of the adit, Plate 5 , and 40 m 's into the mine workings, Plate 6.

The underground workings at True Blue are cut by a large number of faults. Well defined thrust and extensional faults mapped in the lower adit (Figure 4) were also noted in the upper adit. Some of these structures may be partially responsible for the termination of ore at the True Blue.

PREVIOUS WORK: The True Blue has been the recipient of detailed geochemical, ground and airbourne geophysical, and geological mapping. The occurrence has produced 90 tons of high grade ore. One 135 m drill hole has been drilled on this property.

## RECOMMENDATION RATIONALE:

There are several points to consider in the evaluation of this property:

## A. Negative Parameters

1. The known massive sulphide lenses are small and have modest alteration development.
2. Geophysical and geochemical data are not definitive in defining a discrete geophysical or geochemical target.
3. The occurrence is hosted by a belt of rocks not typically associated with other VMS occurrences.
4. The single borehole driled on this property, and tested with a down hole geophysical system has met with negative results.
B. Postive Parameters
5. Although the known lenses are small, significant rock alteration persists throughout the known workings of the mine and exists in the absensce of known sulphide development. Mangeniferous horizons, sometimes with anomalous barite, are laterally persistant.
6. The sulphide lenses develope very close to a volcanic sediment contact. This conductive contact may tand to mask an EM signature related to massive sulphides.
7. Although the Kasio - Milford Groups do not have past production from known VMS deposits two other copper rich massive sulphides are known in the Kaslo area and are hosted by a similar rock package.
8. The single borehole drilled on this property has been drilled at an azimuth of 060 degrees in an attempt to intersect the down plunge extension of the True Blue mineralized zone. This azimuth is directed toward D2 fold plunges. The primary control on the distribution of sulphides at True Blue is from D1 plunges. These structures plunge 20 degrees towards 200 degrees. In essence, every foot that this borehole penetrates takes it farther away from its presumed target.
9. The True Blue zone is outlined by a large cylindical Mise a la Mass anomaly of approximately 300 m 's in strike length. I do not believe that the thin sedimentary beds intersected in the borshole drilled are the cause of this conductor. Virtually none of the core in this borehole has been split. No trace element indicators have been intersected in this borehole to suggest that the main True Blue zone has been penetrated.

The True Blue is an untested massive sulphide occurrence. It warrants drill testing. A single drill collar positioned at approximately L99+25 E and L 104+25 N could be used to initiate 3 drill holes drilled at azimuths of 015, 045, and 075 degrees. Approximately 450 metres of thin wall BQ drilling would be required.

I would estimate that this program would stand about a $10 \%$ percent chance of intersecting massive sulphides as good as, or better than, those currently known at the True Blue.


-PLANAR DATA PLOTTED AS DIP DIRECTION
$\frac{\text { WEST RIB }}{\text { LOWER TRUE BLUE ADIT }}$

1:250



Fig. 3




Plate




## -PLANAR DATA PLOTTED AS DIP DIRECTION

WEST RIB<br>LOWER TRUE BLUE ADIT<br>1:250

