1. INTRODUCTION

On October 9, 1968, the writer examined the HB showing in the company of Messrs. D. Low, R. Low and Lorne Warren, the latter acting as guide. Weather conditions were low clouds with light snow.

## 2. PROPERTY

The HB group consists of 36 claims, the HB 1-36. They are centered on a South flowing tributary of Pine Creek, 5 miles WSW of Smithers, between elevations of $3,000^{\prime}$ and $5,200^{\prime}$. The centre of the block lies at. N54 ${ }^{\circ} 45^{\prime}$ and Long. W127 ${ }^{\circ} 18^{\prime}$.

The area is heavily iorested witil many $2^{\prime}-\mathbf{3}^{\prime}$ thick windfalis.
Water is abundant in the Creek crossing the showing, which lies in a deep canyon.

Access is by a foot-trail from the Ski Club parking lot; it requires about 45 minutes to climb to the showing from this lot.

## 3. GEOLOGY

Abundant acid volcanics of the Hazelton Group underlie the claims. The general area contains more abundant copper showings than elsewhere on the slopes of Hudson Bay Mountain, and any of these showings could be related to a copper deposit of the porphyry type and should be investigated with this possibility in mind.
4. SHOWING

A shear in dark grey rhyolites carries chalcopyrite in disseminations and irregular veinlets about $1-2 \mathrm{~mm}$ wide, as well as
minor pyrite, on the West side of the creek starting a few feet above water level.

The rhyolite is brecciated and chloritized, and the chalcopyrite is often associated with fine grained black biotite. The shear can be followed for some $200^{\prime}$ and the mineralized section, mostly exposed at the base of a ledge, at the top of talus, is up to $4^{\prime}$ wide.

Strike and dip of this zone are approximately $N 45^{\circ} \mathrm{W}$ and $45^{\circ} \mathrm{SW}$.
Across the creek, a pronounced $N-S$ striking shear with a $60^{\circ} E$ dip is exposed and is unmineralized.

No assay-returns are available at this time on the writer ${ }^{\circ} s$ representative sample across up to $4^{\prime}$ chipped from the mineralized zone in various locations. The grade is estimated at about $0.5 \% \mathrm{Cu}$.

## 5. EVALUATION

The showing is definitely not ilow-top mineralization, which would be expected to have little potential.

The mineralization is introduced and accompanied by chloritization and biotitization. This type could be related to a porphyry-type and warrants further investigation. The rhyolite host rock is considered a favorable factor, as both acid and basic flows are known on the South slopes of Hudson Bay Mountain. Nearby, heavy pyrite mineralization is reported in the rhyolite, which is another favorable indication.

The showing warrants limited investigation.

## 6. RECOMMENDED PROGRAM

Immediate stream silt sampling at $500^{\prime}$ spacing of all the creeks flowing down the fB claims is recommended.

Regardless of the results of this survey, the showing area, and especially the outcrops in the Creek, should be mapped, and the drilling
of at least one vertical 150' - $200^{\circ}$ deep Winkle drill hole in the Creek is recommended to determine the extent, and the grade of the mineralization. Approximate cost of this work is estimated at $\$ 3,500.00$.

If the drill hole shows promising results, some further Winkie drilling will be justified.

As the ground is a hard rhyolite normal rods instead of the light zirconium rods are recommended, and the choice of the correct bit will be critical to drill this formation at reasonable cost. 7. SUMMARY

The HB showing consists of chalcopyrite with minor biotite introduced in a brecciated, sheared and chloritized rhyolite host rock.

This type of mineralization may reflect the presence of a more, substantial body of the porphyry type and consequently, geological mapping of the setting and drill sampling of the showisic are justified even $1 i$ ire oration does not hold promise for an open pit operation. Stream silt sampling of the various creeks on the claims should be carried out immediately, as low water conditions are favorable. Total approximate cost is.estdmated at $\$ 3,500.00$.



## LEGEND

H.B.1 tic. C LAME
(D, (B) ETC. - Stream silt sample $x$ Anomalous Cu x Zn


Scale /". $1500^{\circ}$
$\theta$
(18)
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To ski HML

# P. H. SEVENSMA CONSULTANTS LTD. 

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November 6, 1968.
Rival Mines Ltd.,
800 - 1177 West Hastings St., Vancouver 1, B.C.

## Attention: Mr. D. Low

Dear Mr. Low:

We have received the following assays from Coast Eldridge, report no. 2612, October 28, 1968:

No. 452
Representative samples of a $4^{\prime}$ exposed zone of brecciated and chloritized rhyolite on the creek, about in the centre of the HB property. Au: . $01 \mathrm{oz} / \mathrm{t}$. $\mathrm{Ag}:$ trace $\mathrm{Cu}: .75 \%$ $\mathrm{Pb}: .09 \% \quad \mathrm{Zn}$ : $.13 \%$

Further work on this showing is warranted, including prospecting, geological mapping and some drilling with a Winkie drill where the zone crosses the creek, to obtain information on its true width.

This mineralization is of a type very reminiscent of a porphyry copper; geological mapping should provide the information required to assess it more accurately.

No. 453
Representative of the Lakeview dump and consisting of random pieces picked on the dump without any regard to appearance.

Our estimate was $3-4 \%$ copper; the material consisted of epidotized rock, massive hematite, coarse splotches of chalcopyrite and disseminated sphalerite.

Au: $.02^{02} / \mathrm{t}$. Ag: $2.2^{\mathrm{oz}} / \mathrm{t}$. $\underline{\mathrm{Cu}: ~} 1.00 \% \quad \mathrm{~Pb}$; .07\% Zn : $1.01 \%$
Although much lower than estimated, this does not distract from the many high assays reported from this property. A proper assessment of the dump will require detailed and systematic sampling, as there is without any doubt much material assaying in the order of $5 \% \mathrm{Cu}$.

P.H. Seversma, Ph.D., P. Eng.

