

February 27, 1987

**MEMORANDUM**

TO: FILE  
FROM: EXPLORATION GEOLOGIST  
RE: ANALYSIS OF 1986 HEAVY MINERAL SAMPLING  
KASALKA PROJECT

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**INTRODUCTION & HISTORY**

Regional Heavy Mineral stream sediment samples have been collected by Equity Silver in the district surrounding the minesite over the past several years. They have been reasonably successful in targetting anomalous drainages which warrant more detailed exploration.

An area south of Tathsa Lake was chosen to be surveyed in 1986, due to a theory that favourable geology for hosting a bulk tonnage precious metal deposit underlies this region. The survey would hopefully target drainages for more detailed exploration.

**DISCUSSION****(i) Sampling Procedure**

The standard "Equity" heavy mineral sampling technique was used. Approximately 10 to 15 Kg of -20 mesh material was sieved from a high energy regime in the creeks. Access to the sites was by helicopter, and sampling took place on August 12, 13 and 14, 1986. Conventional silt samples were also collected at each site, and a total of 37 sites were sampled.

The bulk samples were sent to C. F. Minerals laboratory in Kelowna for break-down into fractions. Samples were split into two grain size categories, -35 +150, and -150 mesh. These were further divided by specific gravity into light (< 2.8 g/cc), intermediate (2.8 - 3.2), and heavy (> 3.2) fractions. The light fractions were then discarded. The other fractions were further divided by magnetic properties into non-magnetic, para-magnetic, and magnetic.

This results in 12 fractions returned to Equity from each of the original bulk samples. The coarse and fine intermediate magnetic fractions were discarded, and the remaining 10 were sent to Placer's laboratory in Vancouver for Mo, Cu, Zn, Pb, Ag, Au, W, F, As, and Sb analysis.

(ii) Results

The geochemical results from the samples were "eye-balled" to determine anomalous levels. Five anomaly categories were recognized ranging from best, good, moderate, weak, and worst, depending on the magnitude of the anomaly, the metals anomalous, and the expression in several fractions.

The results are as follows.

Best

- 3665 - best, high multi-element  
Mo, Cu, Zn, Pb, Ag, Au, As, Sb all high in 7 fractions
- 3706 - strong multi-element expression over 8 fractions  
Cu, Pb, Ag, Au, As, Sb all high  
lower Zn, F

Good

- 3666 - high Mo, Cu, F in 6 fractions  
lower Zn, Pb, Ag, Au
- 3720 - high Cu, Au, As, Sb in HN fractions  
lower Ag, F  
base Me's + Ag in FHN were NSS
- 3657 - high Mo, Cu, Pb, Ag, Au, F, As in CHN  
lower Sb in CHN and Au in FHN
- 3710 - high Pb, Au, As in CHN  
low Ag, F in CHN  
base Me's + Ag in FHN were NSS
- 3719 - high Au, As in FHN  
lower Cu, F, As in HN's  
lower As, Sb in CHP  
slight kick in conventional silt

Moderate

- 3704 - very high Ag, Au in CHN  
low Au in FHN
- 3660 - high Mo, Ag, Pb in HN's  
lower W
- 3709 - high Au, As in CHN  
lower Ag, F in HN's
- 3655 - high Au in CHN  
lower Cu, Zn, Pb, Ag, W, As in CHN

3662 - high Cu, Sb in CHN  
lower Ag, As, Au in HN's  
base Me's + Ag were NSS in FHN

Weak

3717 - high Ag, F in CHN, lower Au  
high W, Sb in CHP, lower Au, F, As  
low F in CHN

3664 - high Cu, in CHN, low Au in HN's  
high As in CHP, lower Sb  
base Me's + Ag were NSS in FHN

3663 - high Pb, W, As in CHN, lower Ag  
high W in FHN  
low As, Sb in CHP, low As in IP's  
weak Au in FHN

3718 - low Zn, Ag, W, F in CHN, low Ag in FHN  
low F in CIN, CHP

Worst

3661 - low Ag, Au, F in both HN's

3667 - low Cu, As, Sb in CHP

3711 - high Cu in CHN

3652 - low As in CIN and HN's

3716 - low F in CIN, CHM, CHP and FIP  
low W in FIP

The anomalous drainages are shaded by category on the accompanying map. Four general areas which warrant more detailed exploration are defined.

**CONCLUSIONS**

One of the best anomalies, 3665, is surrounded by seven of the lesser anomalies in an area north of Mount Bolom. A mineral occurrence of Cu-Zn-Pb-Ag-Au bearing massive lenses is known to occur in the immediate drainage of sample 3665. The whole area is currently open.

The other best anomaly, 3706, drains the Captain Pb, Zn, Ag, Cu, Au showing, which is currently staked. Two moderate anomalies, 3655 and 3704, drain an area north of the Captain showing, which is currently open.

Two good anomalies, 3657 and 3710, along with two of the worst anomalies drain the Swing Peak area. This area is open, although mineral claims have been previously held.

Two good Anomalies, 3720 and 3719, drain an area around Mount Baptiste. Four other lower order anomalies are also located in this area. The area is currently open, but again mineral claims have been held in the past.

All of these areas are underlain by geology favourable for the target precious metal mineralization, and the geochemical expressions in the fractions are considered good for locating this mineralization.

#### RECOMMENDATION

The four areas should be prospected in detail (mapping, soil traverses). The known mineral showing in drainage 3665 should be staked as soon as possible. A B. C. government sponsored silt sediment geochemical survey will be released in the spring of 1987, and may create a land position rush.

The follow-up work will require a helicopter supported 4-man crew for approximately 10 days, and a total budget of approximately \$ 20,000.

R. Pease

*P.S. All Data checked and merged in;*

*EQTY03\*HM. SILT  
.FRACTION*