

MEMORANDUM

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TO: FILE
 FROM: EXPLORATION GEOLOGIST, TEMPORARY
 RE: KD MINERAL CLAIMS - 1986 TRENCHING PROGRAMME

INTRODUCTION AND HISTORY

The KD claims are located 30 km south of Houston via the Buck Flats and Parrott Lakes roads. They were staked in 1984 to cover a drainage area where anomalous Ag and Au values had been determined in heavy mineral samples. The current status of the claims is listed below.

Claim Name	Record No.	No. of Units	Expiry Date
KD 1	6251	15	June 1, 1988
KD 2	6252	20	June 1, 1989
KD 3	6255	8	June 12, 1989

In 1984 a soil geochemistry survey was conducted over parts of the KD 2 and 3 claims. Results from this programme identified four Zn \pm Cu anomalies and one weak Cu-As anomaly.

Preliminary geological mapping in 1984 identified a window of pre-Tertiary pyroclastics and flows in the South Creek gorge. Rocks of this general age and type are known to be favorable hosts for bulk tonnage Ag/Au deposits.

In 1986, the soil grid was extended to the north over the KD 1 claim to close off a previous Zn anomaly.

The purpose of the 1986 trenching programme was to expose and sample bedrock underlying the geochemical zones of interest in hope of encountering sub-outcropping Au/Ag mineralization.

DISCUSSION

(i) Sampling Procedure

Test pits and trenches were dug in overburden to a maximum 4 metre depth using a backhoe attached to a John Deere 540-A skidder. The work was performed by Joe Hidber Contracting of Telkwa. A total of 55 pits and 60 metres of trenching were dug at selected locations on the 1984 soil grid.

A sample of the overburden was collected from the bottom of each pit and placed in a brown kraft paper bag. "Float" samples were also collected from each pit where possible. Bedrock was chip sampled in 3 metre intervals or less depending on lithology. All samples were sent to the Placer Development Laboratory in Vancouver for geochemical analysis.

Field notes for each pit included location; overburden sample depth, composition and color; "float" sample rock type and mineralization.

The bedrock trenches were mapped at a 1:500 scale.

(ii) Analytical Procedure

After standard preparation, all samples were analyzed for Cu, Zn, Pb, Ag, Au, As and Sb using Atomic Absorption techniques.

RESULTS

a) Area 1 2000-2200 N 3400-3750 E

Area 1 is the location of a few weakly anomalous Cu-Zn soil values. The overburden thickness varies from 1.2 to greater than 4 meters. It is generally a medium red/brown silty clay with up to 10% pebbles, 10% boulders and rare "float". The "float" are mainly angular pieces of felsite with up to 3% pyrite as disseminations and irregular fracture fillings with calcite and specular hematite. No anomalous metal values were determined in the float. Overburden sample TS074 yielded 40 ppm As.

As exposed in the trenches and pits this area is underlain by an interbedded sequence of pyroclastics and amygdaloidal andesite flows that have been intruded by an apparently thick or shallowly dipping latite dyke. The beds are oriented N-S and dip shallowly to the west. No sulfide mineralization was observed in these rocks but a sample from a distinctive, deeply weathered, black pyroclastic unit yielded 338 ppm Cu, 4.0 ppm Ag, and 208 ppm As.

- b) Area 2 2500-2750 N
2900-3100 E

Area 2 is a zone of high Zn soil values with spot highs of Cu, Pb and Au. It is covered by between 1.2 and greater than 4 metres of grey/brown clay and silty clay with up to 20% pebbles, 20% boulders and very rare "float". Sand and gravel layers occur within the till near the creek. The "float" are generally angular pieces of felsite with up to 4% pyrite as disseminations and in stringers with quartz.

Only two pits in this area encountered bedrock. Above the 3 400 ft. elevation, porphyritic andesite similar to the ridge forming tertiary volcanics was found. South of the creek, latite similar to the dyke in Area 1 was uncovered. No sulfide mineralization was observed in either case.

No "anomalous" geochemical values were found in the "float", bedrock, or till samples.

- c) Area 3 2500-2750 N
2400-2750 E

Area 3 is another zone of weakly anomalous Zn soil values with spot highs of Cu, Ag and Au. The overburden thickness varies from greater than four metres to less than one metre of medium red/brown silty clay with up to 15% pebbles, 10% boulders and very rare "float". The "float" are generally sub-rounded to sub-angular pieces of ash tuff and felsite with up to 5% disseminated and patchy pyrite. Sample RF4462 yielded 244 ppm As.

Based on the bedrock exposed in the pits, this area is underlain by the contact between the Tertiary volcanic caprock and pyroclastics of the Hazelton (?) Group. This contact occurs at approximately the 3 400 foot elevation and roughly coincides with the break in the bedrock slope. One sample of the pyroclastics (RG4123) contained 5% pyrite in fragments and interstitial to fragments.

No "anomalous" geochemical values were found in the bedrock or till samples.

- d) Area 4 1600-1900 N
2100-2500 E

Area 4 is the location of very weakly anomalous Cu-As? soil geochemistry with spot highs of Ag. It is generally covered by greater than 4 metres of medium, red/brown silty clay with up to 10% pebbles and rare "float". The "float" are mainly sub-angular to sub-rounded pieces of ash tuff, and felsite with less than 1% pyrite as disseminations or as reticulate fracture fillings with quartz.

No "anomalous" metal values were determined in the "float". Relatively high arsenic values in the soils persist at least four metres into till.

Porphyritic andesite was exposed above the 3 400 ft. elevation on the small knoll at the west end of the soil anomaly. Although weakly brecciated, these rocks can be correlated with the tertiary volcanics occurring above the 3 400 ft. elevation elsewhere on the property.

CONCLUSIONS AND RECOMMENDATIONS

The window of probable Hazelton volcanic rocks exposed in the south Creek gorge underlies most of claims below the 3 400 ft. elevation. This sequence of pyroclastics with intercalated andesite flows has a northerly trend and dips shallowly to the west. It is capped above 3 400 ft by flat lying, porphyritic andesites that can be correlated regionally to the Goosley Lake volcanics of Eocene age.

Area 1 soil and till geochemistry can be explained as a false anomaly over high background source rocks in combination with relatively thin overburden.

A number of predominately Zn soil anomalies (including Areas 2 & 3) occur just above and below the Tertiary contact. Since it is unlikely that mineralization would be localized along an erosional surface, it is assumed that these are displaced anomalies related to groundwater movement followed by down slope dispersion. The widespread nature of the anomalies suggest that they maybe due to high background source rocks (ie. Hazelton Group).

No satisfactory explanation of the soil geochemistry pattern was uncovered in Area 4. The zone of "higher" arsenic values in soils and deep till is open to the south but because of the depth and nature of the overburden no further soil sampling or trenching is recommended.

Although the majority of KD 2 and KD 3 mineral claims is underlain by favorable geology, no further work is recommended at this time. Sampling of the basal (lodgment) till and bedrock on a regularly spaced grid are the best ways to further explore this area. KD 1 should be allowed to lapse since it is underlain almost entirely by Tertiary volcanics.

D. Hanson

DH:lh

MEMORANDUM

To: Engineering Supervisor
From: Exploration Geologist

Re: Geology of the KD Mineral Claims

Introduction

The KD Claims are located in the Parrott Lakes area, approximately 30 km south of Houston. They were staked to cover an area where anomalous Ag and Au values had been determined in heavy mineral samples.

Work on the claims in the summer of 1984 included soil sampling and geological mapping. The results of the soil sampling have been documented in an assessment report, which was filed with the B. C. Ministry of Mines on Dec. 7, 1984. This assessment extended the expiry dates of the claims to those listed below.

Claim Name	Record Number	Number of Units	Expiry Date
KD 1	6251	15	June 1, 1988
KD 2	6252	20	June 1, 1989
KD 3	6255	8	June 12, 1989

The assessment report dealt only with the soil geochemistry. It purposely did not include any discussion of geology.

Geology

Outcrop is sparse on the claims. It is generally restricted to the South Creek gorge and ridge tops. The rock type exposed on the ridges is believed to be Tertiary volcanics which correlate to the Goosly Lake Volcanics. However, this correlation is not definite. They maybe correlative with the Tip Top Hill Volcanics, which would place them in the Upper Cretaceous. They are reddish brown to purple vasicular and trachytic andesites. They are assumed to be relatively flat lying.

The rocks exposed in the South Creek gorge are green to grey andesites and ash tuffs. Since they differ considerably in appearance from the rocks on the ridges, and occur at lower elevations, they are interpreted to belong to a different formation which is likely Mid to Lower Cretaceous. These rocks contain quartz/calcite veins, and occasionally disseminated pyrite. They can also display argillic alteration and more intense fracturing at certain locations. Malachite stain was noted in one location.

Four rock chip samples were collected from the more interesting locations in the gorge. The geochem results are listed below.

Sample No.	Rock Type-Description	Cu	Zn	Pb	Ag	Au	As
2008	Siliceous Ash Tuff	23	142	8	<0.2	<0.02	<2
2009	Qtz/Carb. Andesite	3	570	72	<0.2	<0.02	<2
2010	Ash Tuff	47	282	24	<0.2	<0.02	<2
2011	Andesite (mala. st.)	48	156	16	<0.2	<0.02	2

No "anomalous" or interesting metal values were found in these rocks.

Intrusive rocks on the claims were located. A large white siliceous dyke cross-cuts the South Creek gorge. A gabbro plug occurs just north of the 4x4 trail. It is exposed in outcrop over an area of approximately 300 sq. m. It is very similar in appearance to the gabbro phase of the Gabbro-Monzonite Complex on the Equity minesite property.

Recommendation

The rocks exposed in the South Creek gorge are the most likely to host economic mineralization. However, the chip samples indicate no interesting results. The South Creek gorge rocks are considered to be a window of older rocks exposed through the Tertiary cover.

The results of the soil geochemistry are not encouraging. Only weak anomalous zones were defined. However, because of the window, the soil geochemistry should be carefully examined. The zones of interest indicated from the soils should be further investigated. The claims are in good standing for at least three years, so the work does not necessarily have to be completed next year.

One of the soil anomalies is open to the northeast onto the KD 1 claim. The grid should be extended to cover this area. A ground EM survey such as VLF should be run over the three soil anomalies to check for conductors.

At present, the window is only known to occur in the South Creek gorge. It is important to try to determine the extent of the window. Trenching the soil anomalies would contribute information. It is possible that a ground magnetometer survey may help to map the extent of the window and the gabbro plug.

R. B. Pease
Exploration Geologist