

Assessment Report for the Soil Geochemistry

of the

KD 1, 2, and 3 Mineral Claims
Omineca Mining Division

NTS 93 L/2

Latitude 54 08' N, Longitude 126 39' W

Owned by: Equity Silver Mines Limited

Work by: Equity Silver Mines Limited

Report by: R. B. Pease, B. Sc.

November, 1984

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,263

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INTRODUCTION

(i) Location and Access

The KD Claims are located 30 km south of the town of Houston, British Columbia (see Fig. 1). The claims lie in the gentle, and occasionally steep, hills of the Nechako Plateau. Access is gained to the property by the Buck Flats road from Houston, and then the logging road which accesses the northern end of the Parrott Lakes (see Fig. 2).

(ii) Claim Ownership and Status

The work was conducted on the KD 1, 2, and 3 claims which are wholly owned by Equity Silver Mines Limited. Table 1 lists the records of the KD Claims.

Table 1. KD Mineral Claims

<u>Claim Name</u>	Record Number	No. of Units	Expiry Dates
KD 1	6251	15	Jun 01, 1985
KD 2	6252	20	Jun 01, 1985
KD 3	6255	8	Jun 12, 1985

(iii) Purpose

The purpose of the soil sampling programme was to follow up a Ag-Au stream sediment anomaly which had been previously determined in the area. It was hoped the sampling programme would define targets for trenching and/or drilling programmes.

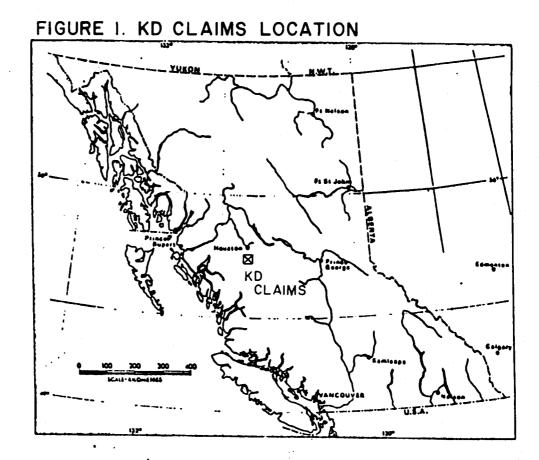
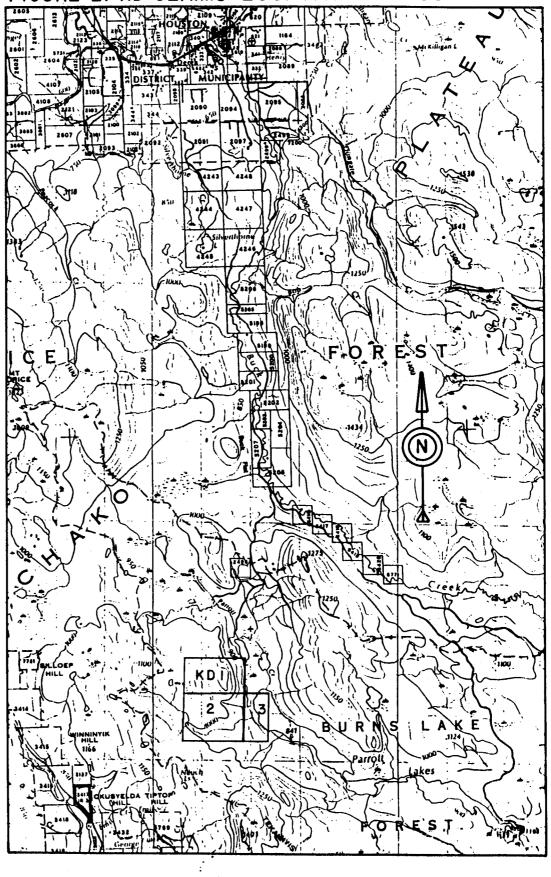


FIGURE 2. KD CLAIMS LOCATION - ACCESS



DISCUSSION

(i) Geochemical Sampling Procedure

The soil samples were collected from the reddish-brown B horizon, where available, at depths of 10 to 60 cm using a mattock. A total of 769 samples were collected every 50 m on east-west grid lines located 100 m apart. The lines were controlled by compass and hip-chain traverses from a central baseline.

Notes were taken for each soil sample regarding line and station; soil composition and colour; stream, road, and claim post locations; sample depth; percentage residual and ground slope. The samples were placed in brown kraft paper bags and sent to the Placer Development Laboratory in Vancouver for geochemical analysis.

(ii) Analytical Procedure

The soil samples were dried in a hot air sample drying unit at 50°C until dry, and then the -80 mesh fraction was sieved out for analysis. The soil samples were analyzed for the elements Cu, Zn, Pb, Ag, Au, and As. Table 2 summarizes the analytical procedure used for each element.

Element	Units	Weigh (gram		Digestion Time	Detecti Range	on Method
Cu	ppm	0.5	Conc. HC104/HN03	4 hours	2-4000	Atomic Abs.
Zn	ppm	0.5	Conc. HC104/HN03	4 hours	2-3000	Atomic Abs.
Pb	ppm	0.5	Conc. HC104/HN03	4 hours	2-3000	Atomic Abs. Bkgr. Corr.
Ag	ppm	0.5	Conc. HC104/HN03	4 hours	0.2-20	Atomic Abs. Bkgr. Corr.
Au	ppm	10.0	Aqua Regia	3 hours	0.02-4.0	Atomic Abs. Sol. Extra.
As	ppm	0.5	Conc. HC104/HN03	4 hours	2-1000	Atomic Abs. Bkgr. Corr.

Table 2. Analytical Procedures

(iii) Results

The geochemistry of the soil samples is displayed on Figures 4, 5, 6, 7, 8, and 9. These maps can be overlain on Figure 3 to reference the sample locations to the claims. The values were plotted on histograms and probability diagrams to analyze their statistical distribution and determine threshold and anomalous levels. These plots can be found in the Appendix. A summary is shown in Table 3.

Table 3. Statistical Summary

Element	<u>Mean</u>	Std. Dev.	Threshold	<u>Anomaly</u>
Cu	12.0	9.7	25.0	50.0
Zn	95.9	58.2	120.0	240.0
Pb	8.0	3.5	15.0	30.0
Ag	0.1	0.03	-	_
Au	0.01	0.02	-	_
As	0.8	2.1	-	

A correlation matrix was also calculated and is included in the Appendix. A Cu-Zn-Pb correlation was found, as well as a Cu-Ag-As correlation.

Cu, Zn, and Pb were the only elements where anomalous values could be defined. However, the Cu and Pb levels are considered to be very low when contrasted to regional values. In the case of Au, Ag, and As, most of the samples were below the detection limit of the analytical technique. Therefore, the determination of anomalous levels is difficult.

Three zones of interest can be defined. One is located on the south side of the hill in the centre of KD 1. The zone is orientated north-northwest at approximately 3000 E. It extends from 2250 to 3000 N, and is open to the north. The zone is defined by anomalous Zn values with spot samples of higher Cu, Pb, and Au.

Another zone of interest is located on the south side of the hill in the western part of KD 2. The zone is orientated north-northwest at approximately 1800 E. It extends from 2200 to 2400 N, and is 50 m wide. The zone is defined by anomalous Cu and Zn values, with a spot sample of higher Au.

The last zone of interest is located inbetween North and South creeks at approximately 2000 N. The zone is orientated northwest, and extends from 3500 to 3700 E. It is 50 m wide. The zone is defined by anomalous Zn values, with spot samples of higher Cu, Ag, and As.

CONCLUSIONS AND RECOMMENDATION

Three anomalous areas were identified in the soil sampling programme. Although the relative strength of the geochemical values is low, these zones are worthy of further investigation. The most significant zone is the first one discussed, due to it's size and relative geochemical values. Since this zone is open to the north, the soil grid should be extended to cover this projection. Short overburden trenches should be dug to cross-cut the anomalous zones. These trenches would expose the underlying bedrock, and provide more insight into the economic significance of the claims.

Table 4. Statement of Expenditures

				
1.	Salaries		<u>Sub-Totals</u>	Totals
	R. Pease	Jun 04, Aug 27,28. 3 days @\$162/day	486.00	
	D. Hanson	Jun 04,11,15, Aug 24,27,28,29 30, Sept 04. 9 days @ \$145/day	1,305.00	
	J. Young	Jun 05,06,11,12,15, Aug 24. 6 days @ \$104/day	624.00	
	C. Towell	Jun 04,06,07,11,12,15, Aug 24,27,28,29,30, Sept 04. 12 days @\$131/day	1,572.00	
	E. Matthias	Jun 04,05,07,11,15. 5 days @\$131/day	655.00	
	E. Carew	Aug 24,27,28. 3 days @\$119/day	357.00	
2.	Transportation		4,999.00	4,999.00
		zer, Rental and Fuel 13 days @\$60/day	780.00 780.00	780.00
3.	Geochemical Ana	alysis	, 55.00	, 60 , 60
	Sample preparat Copper analysis Zinc analysis Lead analysis Silver analysis Arsenic analysis Gold analysis	5 : 769 @ \$2.00 : 769 @ \$0.90 : 769 @ \$0.90 5 : 769 @ \$0.90	576.75 1,538.00 692.10 692.10 692.10 692.10 3,845.00	
5.	Report Preparat	tion	8,728.15	8,728.15
<u> </u>		/Drafting/Reproduction	5,000.00	
	••		5,000.00	5,000.00
		TOTAL EXPENDI	TURES	19,507.15

AUTHOR'S QUALIFICATIONS

The author graduated from the University of Waterloo, Waterloo Ontario, in the spring of 1981 with an Honours Bachelor of Science degree in Earth Sciences. As a student, he spent some 20 months employed in the mineral exploration field with several mining companies. After graduation, he was employed as an exploration geologist with Duval International Corporation, Vancouver. Since February of 1982, he has been employed as an exploration geologist with Equity Silver Mines Limited, Houston, British Columbia.

Respectfully Submitted,

EQUITY SILVER MINES LIMITED

R. B. Pease, B. Sc. Exploration Geologist

RBP/dms

Distribution:

Original : Exploration Files
1 Copy : Mine Manager

2 Copy : Mine Superintendent
3 Copy : Engineering Supervisor

4 and 5 Copy : British Columbia Ministry of Mines & Petroleum Resources

<u>Appendix</u>

Soil Sample Statistics

Correlation Matrix

Histograms and Probability Plots

PLASER DEVELOPMENT LTD

PLACER SATA ANALYSIS SYSTEM - STATS
RUN ON 64:10:15 AT DR:52:29
PAI SECCHEM FILE: KD CLAIMS/ SOIL GPID

SUMMARY OF DATA FROM FILE : ECTY03*KO-CAES.

THIS DATA FILE CONTAINS AN INTERNAL HEADER: (5 RECORDS)
DATA GROUPED INTO 2 FIELDS
WITH FORMAT: (A5,1X,F7.2,1X,F7.2,1X,3F5.0,F5.1,F5.2,F5.1)

CHARACTER ID FIELDS: SAMP

COORDINATE FIELDS: EAST NETH

OTHER DATA FIELDS: CU ZN PB AG AU AS

MISSING DATA INDICATED BY NULL VALUE .000000

BASIC STATISTICS OF SELECTED DATA FIELDS:

NAME	NDATA NULLS	MUMINIM	MAXIMUM	MEAN	STO. DEV.	GEOM. MEAN	DISPERSION	
UN 220 240 25	7666 7666 7745 7745	2.30309 11.00309 1.30309 .130309 .130309		11.9791 95.8577 3.01323 .134347 .140377	9.58049 58.1950 3.51355 -269349-001	9.74023 95.5191 7.49842 .102389 .1133376	5.34480 53.9812 5.24453 .831513-001 .118927 .7131210-302 .130174-304	1

CORMAT: RUN ON 34:10:15 AT 33:52:29 DATA FROM FILE: EQTYC7*60-D4FS.

PAI GEOCHEM FILE: XD CLAIMS, SOIL GRID CORRELATION MATRIX FOR 769 RECORDS WITH 3 VARIABLES

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ŽŇ	765	765	765	706	743	765
CU ZN PB AG AU AS	765	736	765	765	743	765
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PREPLY: PAI GEOCHEM FILE: KO CLAIMS, SOIL GRID

FIELD NAME: ZN

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MIN = 11.000 MAX = 1000.0 MEAN = 95.353 STD DEV = 53.195 NUMBER OF DATA PLOTTED = 756 (3 NULLS 0 < YMIN 0 > YMAX) 436 165 165-56.3 27.1 19 30 50 70 90 98 99

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PAURLE: TWO WINDHAM FILE: KO FLACMS, SOIL GRID PUN ON 84:11:23 AT 15:23:45 MEAN = 3.0123 STD DEV = 3.5105 5 NULLS O < YMIN O > YMAX) 31.0 21.0 11.0

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PRSPLT:

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